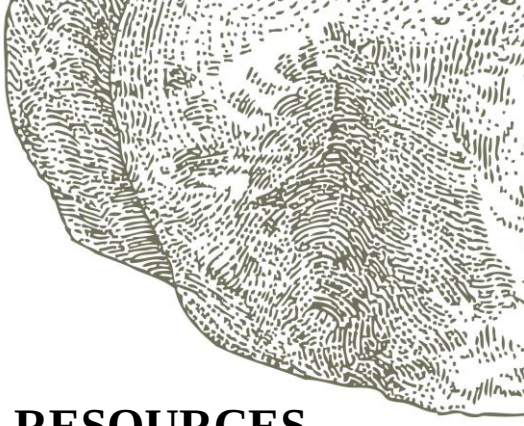
Appendix D: Cultural and Paleontological Resources Study

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY



CULTURAL AND PALEONTOLOGICAL RESOURCES ASSESSMENT REPORT FOR THE LOMITA GENERAL PLAN UPDATE PROJECT, CITY OF LOMITA, LOS ANGELES COUNTY, CALIFORNIA

Prepared for:
De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 9576

Authors:
Sandy Duarte, B.A., , Shannon Lopez, M.A., Eric Scott, M.A.,
Kelly Vreeland, M.S., and John Gust, Ph.D.

Principal Investigators:
John Gust, Ph.D, RPA
Eric Scott, M.A.

Date
March 2024

Cogstone Project Number: 5805
Type of Study: Cultural and Paleontological Resources Assessment
Sites: P-19-000110 (CA-LAN-110); P-19-190005 (San Pedro Defense Fuel Support Point [DFSP] Historic District)
USGS Quadrangle: Torrance (1981)
Area: 1.92 square miles
Key Words: Cultural and Paleontological Resources Assessment, Gabrielino/Tongva Territory

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

SUMMARY OF FINDINGS

This study was conducted to determine the potential impacts to cultural and paleontological resources during the Lomita General Plan Update Project (Project) in the City of Lomita (city), Los Angeles County, California. The city is the lead agency for the Project under the California Environmental Quality Act (CEQA).

The City of Lomita is located in the South Bay area of Los Angeles County, approximately 16 miles southwest of downtown Los Angeles. The city is approximately 1,228 acres (1.92 square miles) and is bounded by the City of Torrance to the north and west, the City of Los Angeles (Harbor City neighborhood) to the east, the City of Rolling Hills Estates on the southwest, and the City of Rancho Palos Verdes on the southeast. Regional access to the city is provided by Interstate 110 via Pacific Coast Highway, which provides access to Lomita and the greater Los Angeles region.

A paleontological record search of the Project was obtained from the Natural History Museum of Los Angeles County. Additional records from the University of California Museum of Paleontology database, the PaleoBiology Database, and print sources were searched for fossil records. One previously recorded paleontological locality producing vertebrate fossils was noted as potentially occurring within the Project Area. This locality, LACM VP 3249, has yielded remains of extinct taxa including mastodon (*Mammut pacificus*), bison (*Bison* sp.), camel (*Camelops* sp.), llama (*Hemiauchenia* sp., reported as *Tanupolama* sp.), ground sloth (*Megalonyx* sp.), horse (*Equus* sp.), tapir (*Tapirus* sp.), and sea lion (*Eumetopias* sp.), as well as a variety of birds, bony fish, and numerous invertebrates. No previously recorded paleontological localities from the San Pedro Formation occur within the Project Area; however, two localities (LACM IP 31444 and LACM VP 3268) have produced fossils from the near vicinity, including an indeterminate proboscidean from LACM VP 3268. There are no previously recorded paleontological localities known from the Monterey Formation within the Project Area.

Cogstone requested a search of the California Historical Resources Information System (CHRIS) from the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton on June 13, 2023 which included the entire proposed city. Results of the record search indicate that 12 previous studies have been completed within the city. Two cultural resources consisting of one prehistoric archaeological site (P-19-000110) and one historic district, the San Pedro Defense Fuel Support Point (DFSP) Historic District (P-19-190005), have been recorded within the city. The Historic District has been evaluated and determined eligible for listing in the California Register of Historical Resources (CRHR). In addition to the SCCIC results, a search of the Built Environment Resource Directory (BERD) identified two additional CRHR listed resources, the Eshelman Avenue Elementary School (Property Number 97751) and the Harbor Hills Housing Project (Property Number 103214).

A search of local inventories found that the 1998 City of Lomita General Plan includes one resource that is considered significant at the local level (The Lomita Railroad Museum) and two

resources that are potentially significant at the local level (Lomita Elementary School located at 2211 247th Street and the Old Fire House, address unconfirmed).

PALEONTOLOGICAL RESOURCES SENSITIVITY

Cogstone reviewed the results of the records search and pertinent paleontological literature, and determined that sediments of the Monterey Formation and the San Pedro Formation mapped at the surface and present at depth within the boundaries of the Project are assigned moderate paleontological sensitivity (= PFYC 3). These units have previously yielded scientifically important fossils, but such remains are distributed somewhat sporadically and can be widely scattered. Similarly, Quaternary older alluvium, older eolian sediments, and the Pleistocene component of the younger alluvial fan deposits are assigned moderate sensitivity (= PFYC 3). However, in these latter cases, this sensitivity assessment is assigned only to sediments below five feet in depth; middle to late Pleistocene and Holocene sediments above five feet in depth have low paleontological sensitivity (= PFYC 2).

ARCHAEOLOGICAL RESOURCES SENSITIVITY

Cogstone reviewed the SCCIC record search results, the negative Sacred Lands File results, and historic USGS topographic quadrangle maps to assess the archaeological sensitivity of the city. Due to the presence of only one previously recorded archaeological site within the city, the negative SLF search results, and lack of information gained from review of the USGS maps, this analysis was primarily based on two factors, distance to water courses and whether the sediments in the area were of the requisite age range and have the capability to preserve buried resources. Based on these data, the archaeological sensitivity of the city is estimated to be generally low to moderate with small areas of high sensitivity near the southwest and southeast corners of the city. The minimal contribution of documented cultural resource data unfortunately limits Cogstone's confidence in this analysis.

CONCLUSIONS AND RECOMMENDATIONS

Based upon anticipated impacts to paleontologically sensitive sediments within the Project Area, a qualified paleontologist must be retained to develop and implement a Paleontological Resources Impact Mitigation Plan, which should include development of a paleontology Worker Environmental Awareness Program (WEAP) and paleontological monitoring. In the event of unanticipated discoveries, all work must be suspended within 50 feet of the find(s) until a qualified paleontologist can evaluate the find(s) and make recommendations.

Sensitivity for buried archaeological resources varies from low to high within the city. Cogstone recommends that the city require either a site-specific assessment prior to ground disturbance within any area with moderate or high archaeological sensitivity or require full-time cultural resources monitoring during ground-disturbing activities.

There are three resources in the city that are listed in the CRHR; the San Pedro DFSP Historic District (P-19-190005), the Eshelman Avenue Elementary School (Property Number 97751), and the Harbor Hills Housing Project (Property Number 103214). The Lomita Railroad Museum has

been designated as significant and both the Lomita Elementary School and the Old Fire House are considered potentially significant at the local level.

The possible effects of construction to these resources, resulting from changes to the resource (maintenance, seismic retrofitting, etc.) or due to nearby construction that affect their integrity (vibration, noise, changing viewshed, etc.) should be considered during future planning.

Intact buildings, structures, and objects within the city that are over 45 years old should be evaluated for eligibility for listing in the NRHP and CRHR prior to alteration or destruction[1]. Multiple portions of the city have large, developed areas that are 50 years old or older. These areas are where buildings, structures, or objects that meet the minimum normal age for eligibility for listing in the NRHP or CRHR are most closely clustered. Cogstone recommends that the city prioritize these areas for large-scale historic surveys to evaluate these buildings, structures and objects and to identify those that meet the eligibility requirements for listing in the NRHP or CRHR. Parcel level evaluations of intact buildings, structures or objects that are 45 years or older by a qualified architectural historian are recommended whether as part of a large-scale survey or on a case by case basis.

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.

[1] Evaluation of resources that are 45 years old or older accounts for the time lag between recordation and the usual minimum age for eligibility for listing in the NRHP or CRHR.

INTRODUCTION

PURPOSE OF STUDY

This study was conducted to determine the potential impacts to cultural and paleontological resources during the Lomita General Plan Update Project (Project) in the City of Lomita (city), Los Angeles County, California (Figure 1). The city is the lead agency for the Project under the California Environmental Quality Act (CEQA).

PROJECT DESCRIPTION

The Lomita General Plan Update includes a comprehensive set of goals, policies, and actions (implementation measures), organized into elements, as well as a revised land use map. The goals and policies provide guidance to the city on how to direct change, manage growth, and manage resources over the 20-year life of the General Plan. In order to ensure that the goals and policies in the General Plan are effectively implemented, a series of actions, or implementation measures have been developed, and are presented in each element alongside the goals and policies they implement.

- A goal is a description of the general desired result that the city seeks to create through the implementation of the General Plan.
- A policy is a specific statement that guides decision-making as the city works to achieve its goals. Once adopted, policies represent statements of city regulations. The General Plan's policies set out the standards that will be used by city staff, the Planning Commission, and the City Council in their review of land development projects, resource protection activities, infrastructure improvements, and other city actions. Policies are on-going and require no specific action on behalf of the city.
- An action is an implementation measure, procedure, technique, or specific program to be undertaken by the city to help achieve a specified goal or implement an adopted policy. The city must take additional steps to implement each action in the General Plan. An action is something that can and will be completed.

Additional elements that relate to the physical development of the city will also be addressed in the General Plan Update. The degree of specificity and level of detail of the discussion of each General Plan element need only reflect local conditions and circumstances. The Lomita General Plan Update will include all of the State-mandated elements, and will address one optional topic: Economic Development (Table 1). The Project also includes updates to the city's Zoning Ordinance and Zoning Map to provide consistency with the General Plan Update and to implement the city's previously adopted 2021-2029 Housing Element.

Table 1. Existing and Proposed General Plan Elements

Existing General Plan Elements	General Plan Update Elements
Land Use	Land Use
Circulation	Circulation
Housing	Housing
Resource Management	Resource Management
Safety	Safety
Noise	Noise
Economic Development	Economic Development
Implementation	Implementation
	Environmental Justice[2]

PRJOECT LOCATION

The City of Lomita is located in the South Bay area of Los Angeles County, approximately 16 miles southwest of downtown Los Angeles. The city is approximately 1,228 acres (1.92 square miles) and is bounded by the City of Torrance to the north and west, the City of Los Angeles (Harbor City neighborhood) to the east, the City of Rolling Hills Estates on the southwest, and the City of Rancho Palos Verdes on the southeast. Regional access to the city is provided by Interstate 110 via Pacific Coast Highway, which provides access to Lomita and the greater Los Angeles region (Figures 2 and 3).

The Project is located in Township 4, Range 14 West, Sections 25-27 and 34-36, and in Township 5 South, Range 14 West, Sections 1-3 on the United States Geological Services Torrance 7.5-minute topographic quadrangle map. Cadastral information for the city is summarized in the table below.

[2] Environmental Justice will be incorporated into other elements of the General Plan and will not be a stand-alone element.

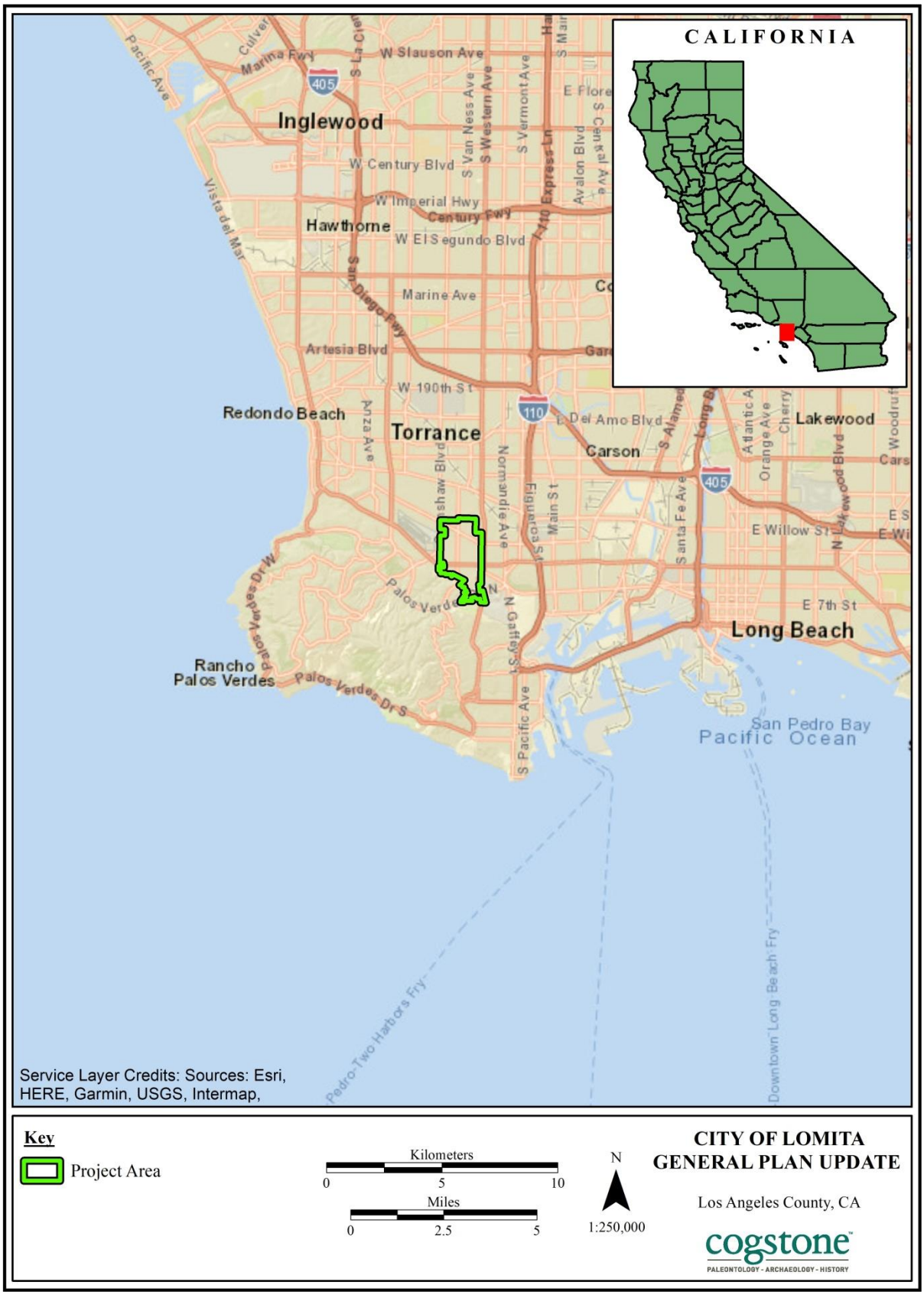


Figure 1. Project vicinity map

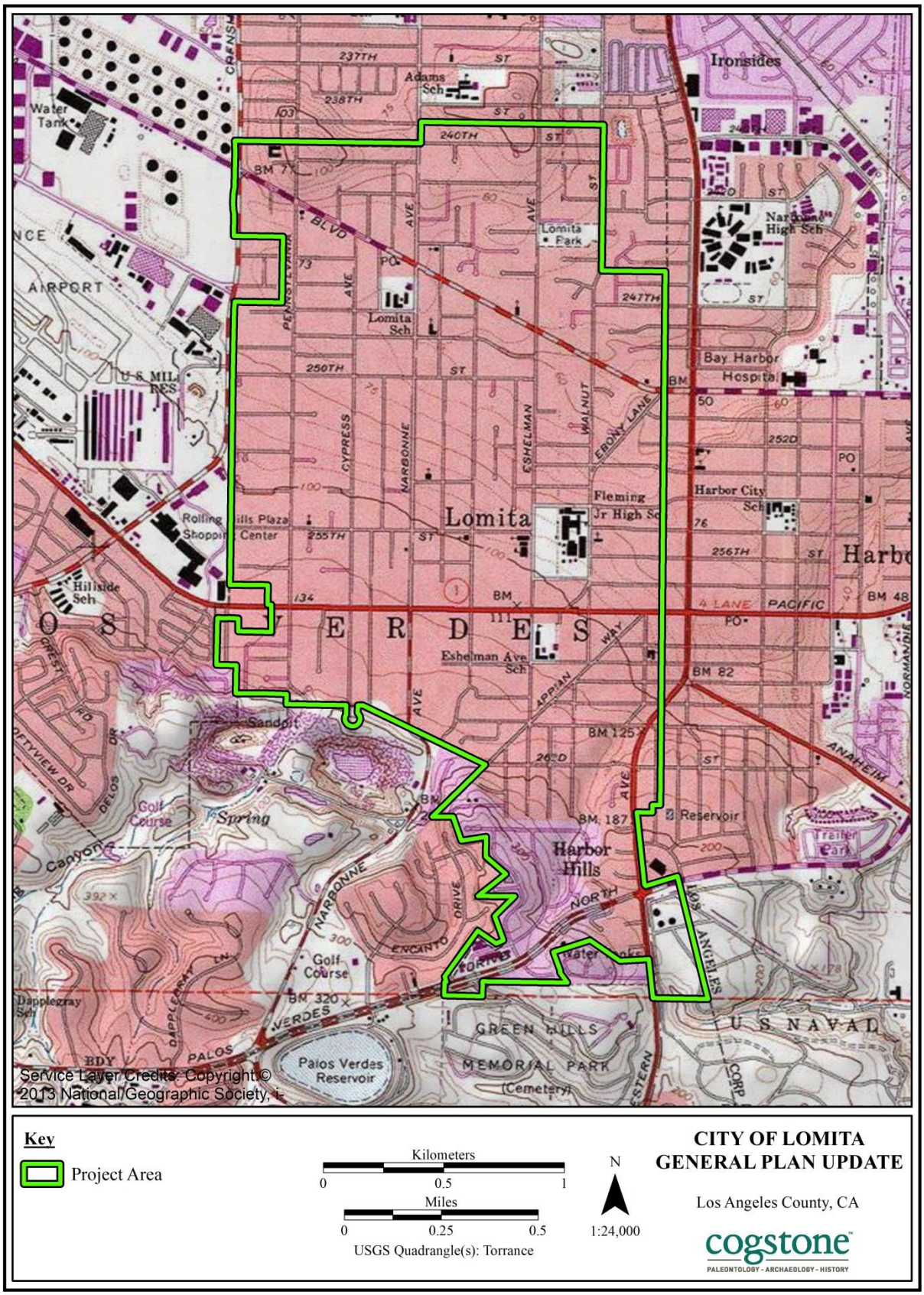


Figure 2. Project location map

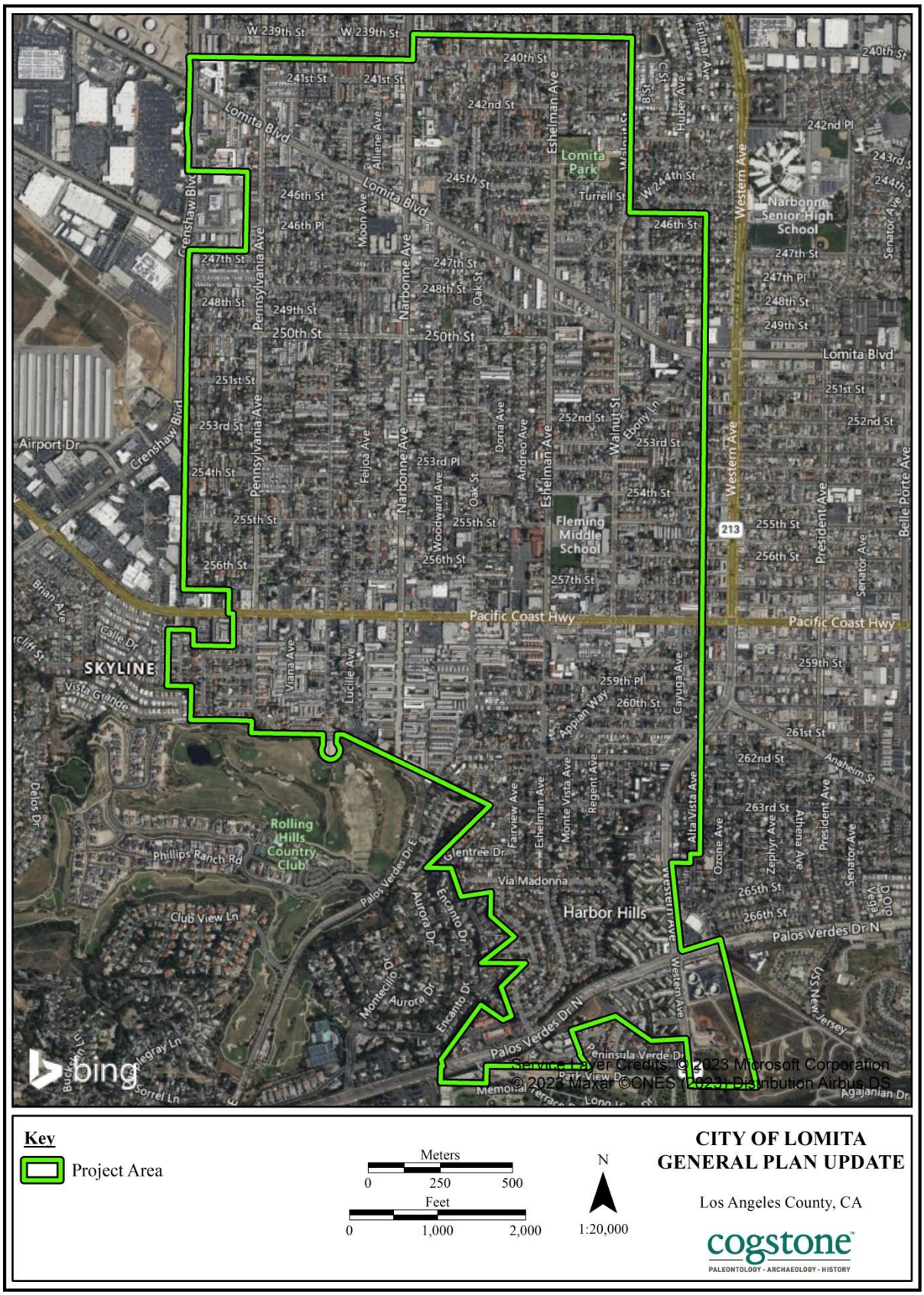


Figure 3. Project aerial map

PROJECT PERSONNEL

Cogstone Resource Management (Cogstone) conducted the cultural and paleontological resources study. Resumes of key personnel are provided in Appendix A.

- John Gust, RPA, served as the Task Manager and the Principal Investigator for Archaeology, and co-authored this report. Dr. Gust has a Ph.D in Anthropology from the University of California (UC), Riverside and more than 11 years of experience in archaeology.
- Eric Scott served as the Principal Investigator for Paleontology and co-authored this report. Mr. Scott has an M.A. in Anthropology, with an emphasis in biological paleoanthropology, from UCLA, and more than 39 years of experience in California paleontology.
- Sandy Duarte co-authored this report. Mrs. Duarte holds a B.A. in Anthropology from UC Santa Barbara, and has more than 20 years of experience in California archaeology.
- Kelly Vreeland and assisted with the geological and paleontological portions of this report. Ms. Vreeland has an M.S. and B.S. in Geology, with an emphasis in paleontology, from California State University (CSU) Fullerton, as well as more than 12 years of experience in California paleontology and geology.
- Shannon Lopez served as architectural historian and drafted sections of this report. Ms. Lopez has an M.A. in History from CSU Fullerton, and has over five years of experience in history and architectural history.
- Logan Freeberg conducted the archaeological and paleontological record searches and prepared the maps for the report. Mr. Freeberg has a certificate in Geographic Information Systems (GIS) from CSU Fullerton and a B.A. in Anthropology from UC Santa Barbara and has more than 20 years of experience in southern California archaeology.
- Debbie Webster provided technical editing. Ms. Webster has more than 23 years of experience in technical writing.
- Molly Valasik provided overall QA/QC for the Project. Ms. Valasik has an M.A. in Anthropology from Kent State University in Ohio and 15 years of experience in southern California archaeology.

REGULATORY ENVIRONMENT

STATE LAWS AND REGULATIONS

CALIFORNIA ENVIRONMENTAL QUALITY ACT

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.

TRIBAL CULTURAL RESOURCES

As of 2015, CEQA 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, § 21084.2). In order to be considered a "tribal cultural resource," a resource must be 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 area of a proposed project. 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. Public Resources Code §20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources.

PUBLIC RESOURCES CODE

Section 5097.5: 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 (lands under state, county, city, district or public authority jurisdiction, or the jurisdiction of a public corporation), 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.

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

The California Register of Historical Resources (CRHR) 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 No. 770 and above. 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 resources 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 historical 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.

NATIVE AMERICAN HUMAN REMAINS

Sites that may contain human remains important to Native Americans must be identified and treated in a sensitive manner, consistent with state law (i.e., Health and Safety Code §7050.5 and Public Resources Code §5097.98), as reviewed below:

In the event that human remains are encountered during project development and in accordance with the 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.

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 LOMITA

The following regulations are excerpted from the 1998 *City of Lomita General Plan, Section 2. Land Use Element and Section 5. Resource Management Element*.

SECTION 2. LAND USE ELEMENT

Land Use Policy 18

The city will identify and promote conservation of Lomita's natural and cultural resources.

SECTION 5. RESOURCE MANAGEMENT ELEMENT

Resource Management Programs

Cultural Resource Management

This regulation requires that, should archaeological or paleontological resources be uncovered during excavation and grading activities, all work would cease until appropriate salvage measurements are established. Appendix K of the CEQA Guidelines shall be followed for excavation monitoring and salvage work that may be necessary. The Conservation Element

indicates those areas with a “high potential for cultural sensitivity. Notification that resources have been encountered (notification may come from field monitors, construction crews, etc.). Salvage will be undertaken pursuant to Appendix K requirements outlines in CEQA.

Cultural Awareness

The city shall continue to implement programs for increasing cultural awareness in the community. The city will cooperate with local organizations (such as the local historical society. Chamber of Commerce, etc.) and individuals to acquire resource materials concerning the local history and culture. These materials may include books, photographs, artifacts, furniture, etc. which may be displayed in the City Hall Lobby. The city will continue to support cultural resources conservation and preservation effort in Lomita.

Historic Building Code

The city will investigate the feasibility of adopting alternate building code standards for historic structures, as authorized by the State Historical Building Code. The initial step will require city staff to amend the development code to include provisions for the maintenance, rehabilitation, and preservation of historic structures. Potential candidates include the old Lomita Theatre, Lomita Lumber and the Famart Blacksmith Bam. Other historic resources described in Section 5.4 [of the plan] should be considered.

BACKGROUND

The geological, paleontological, and environmental sections below provide information on the environmental factors that affect archaeological and paleontological resources, while the prehistoric and historical settings provide information on the history of land use in the general Project region.

GEOLOGICAL SETTING

The Project lies within the Los Angeles Basin, a sedimentary basin which includes the coastal plains of Los Angeles and Orange counties and out to Catalina Island, California. This region is bounded by the Santa Ana Mountains to the east, the Santa Monica Mountains to the north, and the San Joaquin Hills to the south. The marine Los Angeles Basin began to develop in the early Miocene, about 23 million years ago. Through time the basin transitioned to terrestrial deposition by the middle Pleistocene, about 1 million years ago.

The area is part of the coastal section of the northernmost Peninsular Range Geomorphic Province and is characterized by elongated northwest-trending mountain ridges separated by sediment-floored valleys. Subparallel 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 city is mapped as middle Miocene to Pliocene Malaga Mudstone member of the Monterey Formation, the early Pleistocene San Pedro Formation, middle to late Pleistocene old eolian deposits and undivided old alluvium, and late Pleistocene to Holocene young alluvial fan deposits (Saucedo et al. 2016; Table 2; Figure 4).

Table 2. Geology of the city

Rock Unit Name	Paleoenvironment	Epoch	Epoch Age Range
young alluvial fan deposits, unit 2 (Qyf2)	alluvial fan	late Pleistocene to Holocene	<126 ka
young alluvial fan deposits, unit 1 (Qyf1)	alluvial fan		
old alluvium, undivided (Qoa)	flood plain deposits	middle to late Pleistocene	~774 ka - ~11.7 ka
old eolian deposits (Qoe)	wind-blown deposits		
San Pedro Formation, undivided (Qsp)	shallow marine	early Pleistocene	2.58 million years (Ma)
Monterey Formation, Malaga Mudstone (Tmm)	deep marine	middle Miocene to Pliocene	13.82 – 2.58 Ma

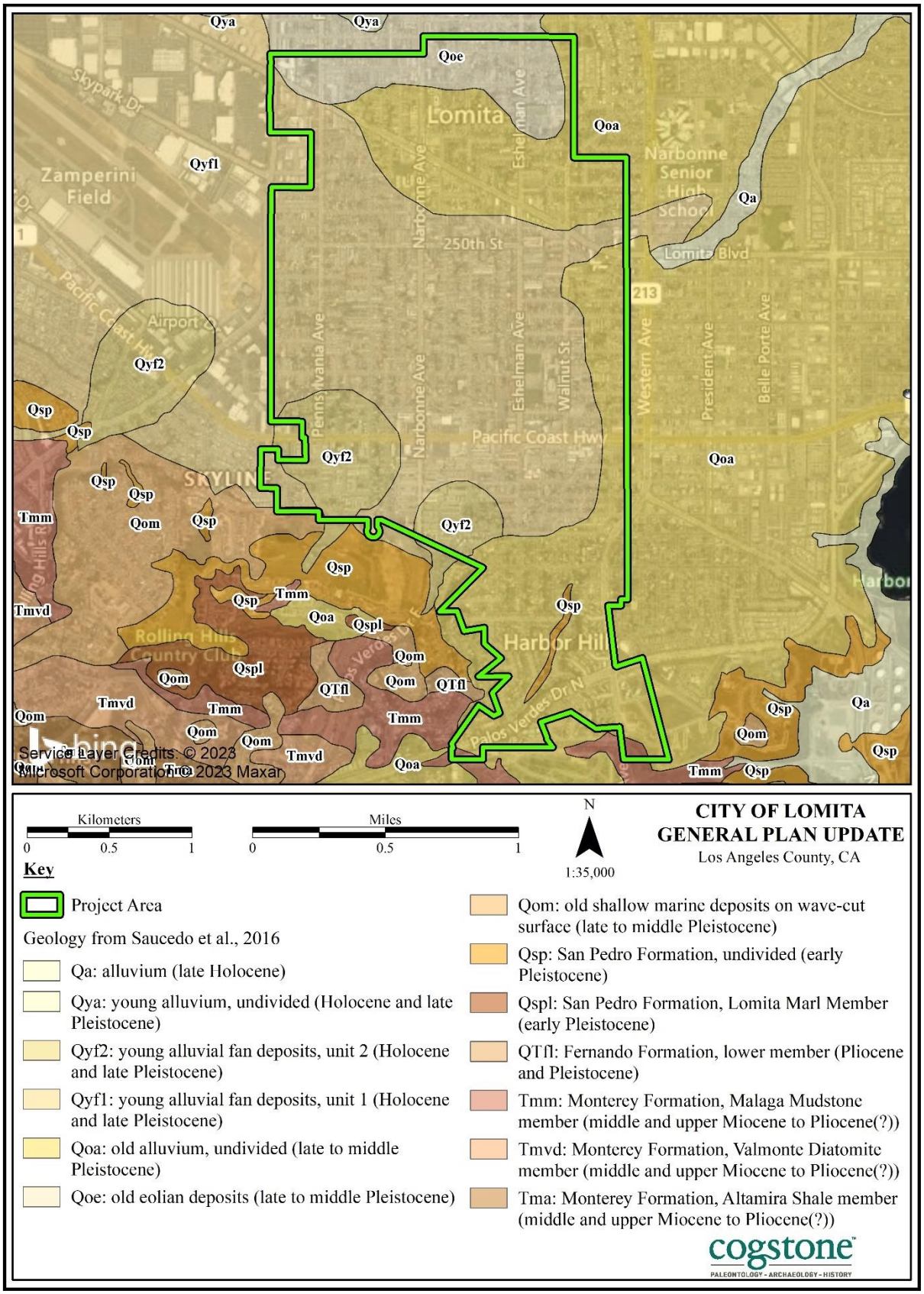


Figure 4. Project geology map

Young alluvial fan deposits, units 1 and 2
Young alluvial fan deposits are laid down along the outer slopes of regional valleys from local mountains via the mouths of canyons, mainly from flooding streams and debris flows. These deposits consist of poorly sorted and poorly consolidated cobble, gravel, sand, and clay (Saucedo et al. 2016).

Old alluvium, undivided
These fluvial deposits consist of layered poorly sorted, moderately well-indurated, moderately dissected, gravels to clays (Saucedo et al. 2016).

Old eolian deposits
The old eolian deposits consist of well-sorted, fine to coarse grain silt and sand. These deposits are dense to very dense and poorly consolidated (Saucedo et al. 2016).

San Pedro Formation, undivided
The marine San Pedro Formation consists of silty sand with thin interbedded lenses of gravel. This formation is fine to coarse grained and poorly consolidated (Saucedo et al. 2016).

Monterey Formation, Malaga Mudstone
The Monterey Formation consists of siliceous and diatomaceous marine mudstone, shale, diatomite, and some chert is primarily white to pale brown and thinly laminated or bedded. The Planning Area contains the Malaga Mudstone member of the Monterey Formation. The Malaga Mudstone is a diatomite and radiolarian mudstone (Saucedo et al. 2016).

PALEONTOLOGICAL SETTING

During the past 100,000 years or so, southern California's climate has shifted from the cooler and damper conditions of the last glacial period to the warmer and dryer conditions of the Holocene interglacial. While continental ice sheets covered the interior of northern North America, southern California was ice free.

Fossils of Monterey cypress (*Hesperocyparis macrocarpa*), Monterey pine (*Pinus radiata*), and Torrey pine (*Pinus* sp. cf. *P. torreyana*) have been found in middle to late Pleistocene deposits in the Wilshire District of Los Angeles (Scott et al. 2014). Fossils of Monterey cypress are also known from middle to late Pleistocene deposits in Costa Mesa, California and the late Pleistocene Rancho La Brea asphalt seeps of the Wilshire District of Los Angeles (Axelrod and Govean 1996; Stock and Harris 1992). Today the most restricted conifers (Monterey cypress and Torrey pine) only inhabit locations on the coasts with cool, moist summers characterized by abundant sea fog. These locations experience a mean summer high temperature of 70ºF - 83ºF (21.1ºC - 28.3ºC). Winters are cool and damp with average precipitation of 10.59" - 32.41" (26.90cm - 82.32cm). Cold water upwellings due to submarine canyons adjacent to the shore near the relict populations create these conditions (Intellicast 2014; the Weather Channel 2014).

ENVIRONMENTAL SETTING

Located in Los Angeles County, the Project is situated approximately 15 miles south-southwest of downtown Los Angeles. The Los Angeles River lays approximately eight miles to the east, Compton Creek is 7 miles east-northeast, and the Pacific Ocean is approximately two miles to the west.

The current Mediterranean-like climate is characterized by warm, dry summers and cool, moist winters, with rainfall predominantly falling between November and May. Mild breezes reach the area from the Pacific Ocean, located west of the Planning Area.

Prior to development, the native vegetation of the Planning Area consisted of California coastal sage scrub. Typical species include California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis* var. *consanguinea*), California buckwheat (*Eriogonum fasciculatum*), lemonade berry (*Rhus integrifolia*), poison oak (*Toxicodendron diversiloba*), purple sage (*Salvia leucophylla*), and black sage (*Salvia mellifera*; Ornduff et al. 2003). Additional common species include brittlebush (*Encelia californica*), chamise (*Adenostoma fasciculatum*), white sage (*Salvia apiana*), Our Lord's candle (*Hesperoyucca whipplei*), and prickly pear cactus (*Opuntia*; Hall 2007).

Large native land mammals of the region included mule deer (*Odocoileus hemionus*), bighorn sheep ([3]‡*Ovis canadensis*), tule elk (‡*Cervus canadensis nannodes*), pronghorn (‡*Antilocapra americana*), bison (‡*Bison bison*), bobcat (‡*Lynx rufus*), mountain lion (‡*Felis concolor*), jaguar (‡*Panthera onca*), coyote (*Canis latrans*), grey wolf (‡*Canis lupus*), black and grizzly bears (‡*Ursus americanus*, ‡*Ursus arctos*). Smaller native fauna included rabbits (‡*Lepus californicus, Sylvilagus audubonii*, ‡*Sylvilagus bachmani*), desert tortoise (‡*Gopherus agassizii*), and numerous other species (California Department of Fish and Game 2020).

Today, after approximately a century of urban and suburban development, the vegetation of the area is instead typified by imported species. Grasses such as slender wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), and giant reed (*Arundo donax*); shrubs and trees including blackwood acacia (*Acacia melanoxylon*), saltcedar (*Tamarix ramosissima*), eucalyptus (*Eucalyptus* spp.), and Brazilian pepper (*Schinus terebinthifolius*) are common (Cal-IPC 2006). In recent history, urban development has driven most animals from the area, although mule deer, bobcat, and coyotes still occur in the surrounding hills.

[3] ‡ - indicates that the species has been extirpated from Southern California.

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 Planning Area 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 3). This pattern is replaced in the Planning Area by the Angeles pattern of the Del Rey Tradition later in time (Sutton 2010).

Table 3. 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 1,000	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 Euro-American material culture (glass beads and metal tools)	Use of domesticated animals, flexed primary inhumations continue, some cremations

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).

In Topanga Phase I other typical characteristics were a few mortars and pestles, abundant core tools (scraper planes, choppers, and hammerstones), relatively few large, leaf-shaped projectile

points, cogged stones, and early discoidals. Secondary inhumation under cairns was the common mortuary practice. In Orange County as many as 600 flexed burials were present at one site and dated 6,435 radiocarbon years before present (Sutton and Gardner 2010:9, 13).

In Topanga Phase II, flexed burials and secondary burial under cairns continued. Adoption of the mortar and pestle is a marker of this phase. Other typical artifacts include manos, metates, scrapers, core tools, discoidals, charmstones, cogged stones and an increase in the number of projectile points. In Orange County stabilization of sea level during this time period resulted in increased use of estuary, near shore, and local terrestrial food sources (Sutton and Gardner 2010:14-16).

In Topanga Phase III, there was continuing abundance of metates, manos, and core tools plus increasing amounts of mortars and pestles. More numerous and varied types of projectile points are observed along with the introduction of stone-line earthen ovens. Cooking features such as these were possibly used to bake yucca or agave. Both flexed and extended burials are known (Sutton and Gardner 2010:17).

The Angeles pattern generally is restricted to the mainland and appears to have been less technologically conservative and more ecologically diverse, with a largely terrestrial focus and greater emphases on hunting and nearshore fishing (Sutton 2010).

The Angeles IV phase is marked by new material items including Cottonwood points for arrows, Olivella cupped beads, Mytilus shell disks, birdstones (zoomorphic effigies with magico-religious properties), and trade items from the Southwest including pottery. It appears that populations increased and that there was a change in the settlement pattern to fewer but larger, permanent villages. Presence and utility of steatite vessels may have impeded the diffusion of pottery into the Los Angeles Basin. The settlement pattern altered to one of fewer and larger permanent villages. Smaller special-purpose sites continued to be used (Sutton 2010).

Angeles V components contain more and larger steatite artifacts, including larger vessels, more elaborate effigies, and comals. Settlement locations shifted from woodland to open grasslands. The exploitation of marine resources seems to have declined and use of small seeds increased. Many Gabrielino inhumations contained grave goods while cremations did not (Sutton 2010).

The Angeles VI phase reflects the ethnographic mainland Gabrielino of the post-contact period (i.e., after A.D. 1542; Sutton 2010). One of the first changes in Gabrielino culture after contact was undoubtedly population loss due to disease, coupled with resulting social and political disruption. Angeles VI material culture is essentially Angeles V augmented by a number of Euro-American tools and materials, including glass beads and metal tools such as knives and needles (used in bead manufacture). The frequency of Euro-American material culture increased

through time until it constituted the vast majority of materials used. Locally produced brownware pottery appears along with metal needle-drilled Olivella disk beads.

The ethnographic mainland Gabrielino subsistence system was based primarily on terrestrial hunting and gathering, although nearshore fish and shellfish played important roles. Sea mammals, especially whales (likely from beached carcasses), were prized. In addition, a number of European plant and animal domesticates were obtained and exploited. Ethnographically, the mainland Gabrielino practiced interment and some cremation.

ETHNOGRAPHY

The Gabrielino 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, 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).

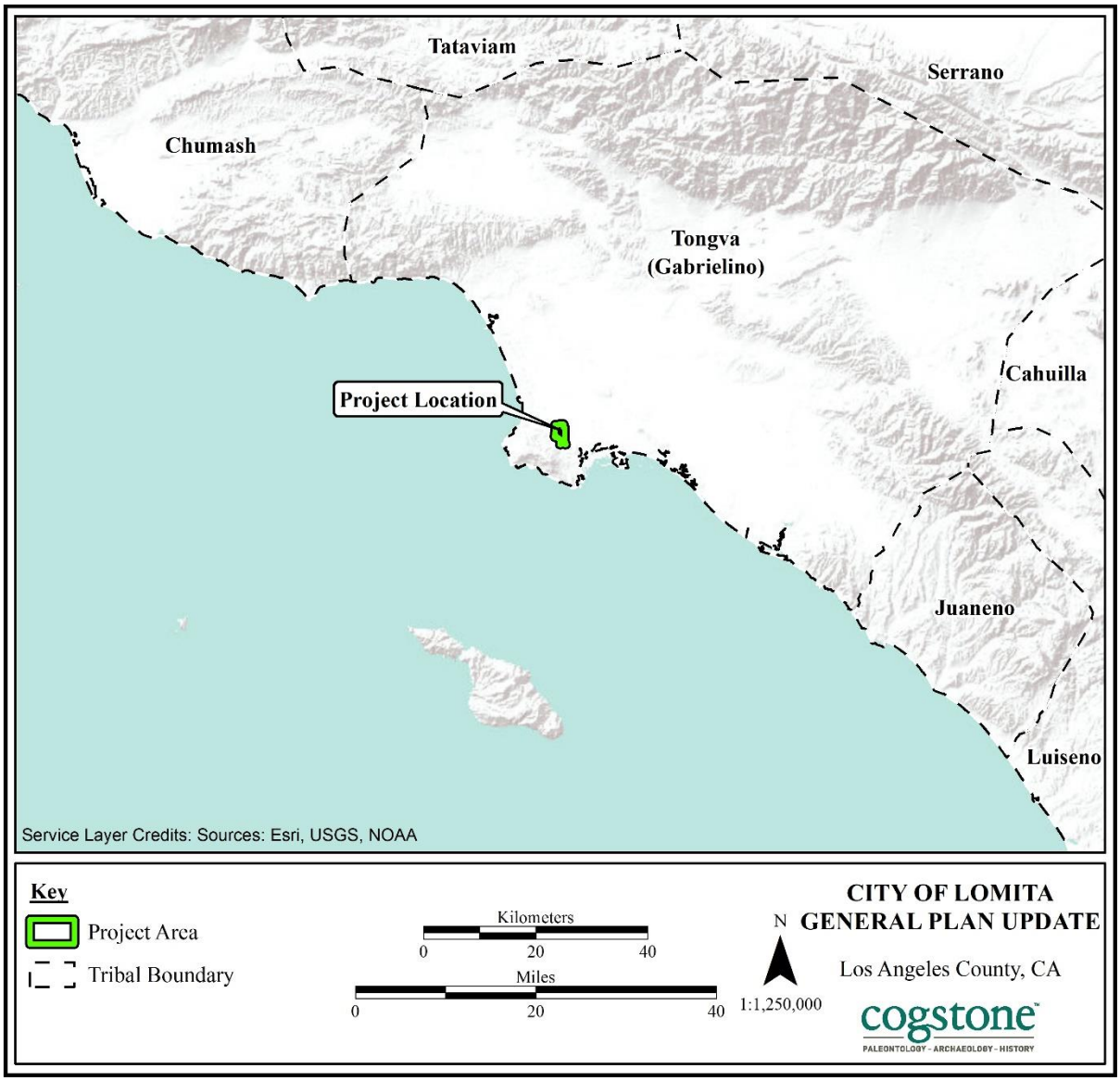


Figure 5. Tribal Boundary Map

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 closest major Tongva village, Swaanga, is located approximately 1.12 miles east of the southeast corner of the city. Smaller villages and seasonal camps may have been present within the city limits.

HISTORIC SETTING

EARLY CALIFORNIA HISTORY

Juan Cabrillo was the first European to sail along the coast of California in 1542 and was followed in 1602 by Sebastian Vizcaino. Between 1769 and 1822 the Spanish had colonized California and established missions, presidios and pueblos (Bean and Rawls 1993).

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). The city is within the former Los Palos Verdes land grant (Figure 6).

Following the signing of the Treaty of Guadalupe Hidalgo on February 2, 1848, which ceased American/Mexican hostilities, the region transitioned to the American Period of California. In 1850, California was granted statehood 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 followed by 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 (Robinson 1948).

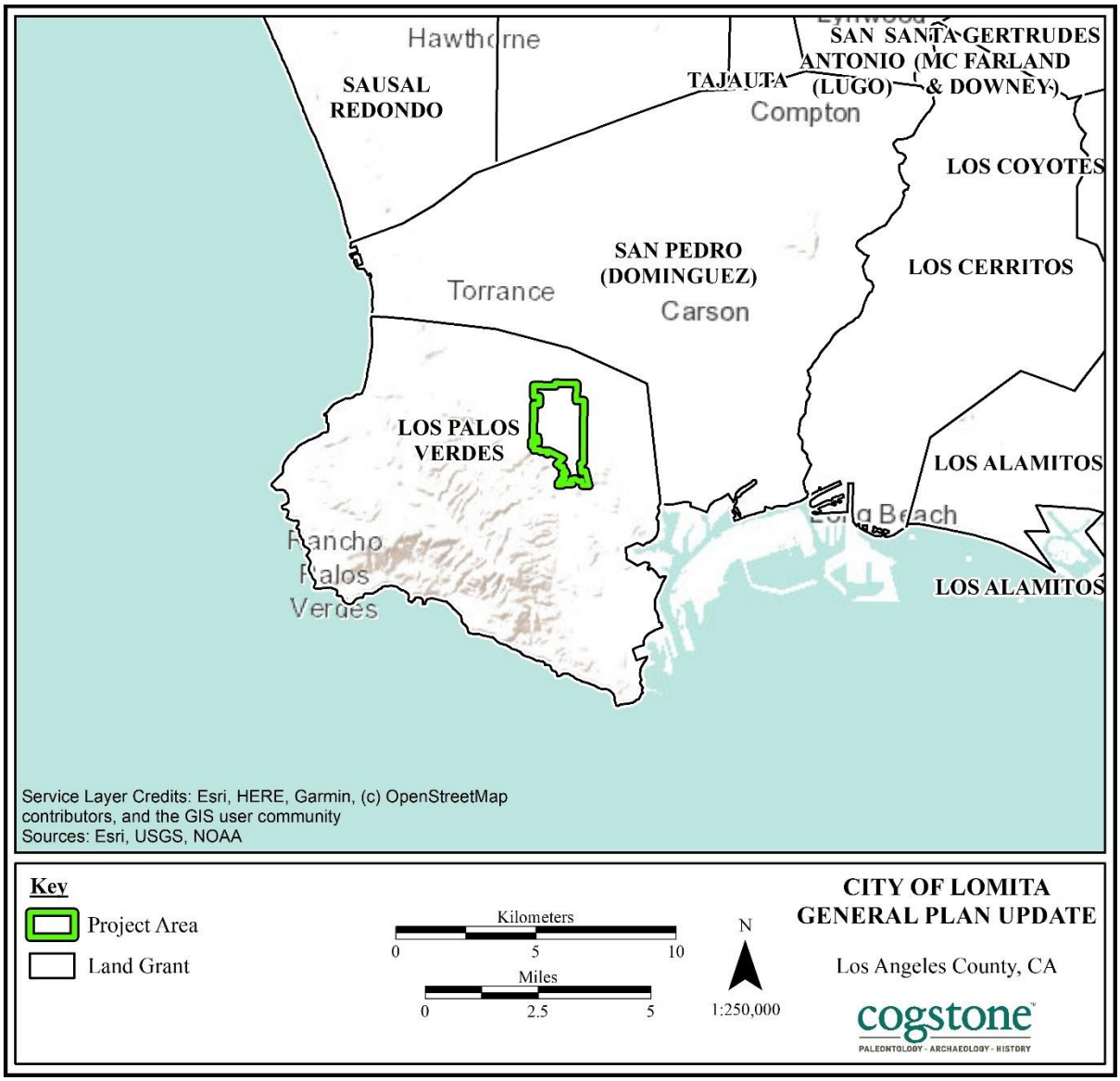


Figure 6. Land grant map

CITY OF LOMITA

The area of what is now the City of Lomita (meaning "little hills") once belonged to the 75,000-acre Rancho San Pedro. The rancho originally consisted of the Palos Verdes and San Pedro area and was granted in 1784 to Juan Jose Dominguez by the Spanish Governor of California as a reward for his military service. In 1841, the land was divided between the Dominguez family and the Sepulveda family after a fierce land dispute. The Palos Verdes portion was taken by the Sepulvedas while the remainder of the rancho stayed with the Dominguez family (Keith n.d.).

In the early 1860s, years of flooding and devastating drought crippled the cattle ranches of Southern California. The resulting debt accrued by ranch owners resulted in the division and sale of the large ranchos into much smaller parcels of land. By 1882, Nathaniel Narbonne (a

sheep farmer and owner of the Ranch Water Company) and his business partner Ben Weston (a farmer) owned the land which would become the City of Lomita.

In 1907, the "Lomita" Subdivision was established by the W.I. Hollingsworth & Co and consisted of seven square miles of residential tracks (Blodgett/Baylosis Associates 1998). At the time Lomita was 15 miles from the post office in nearby Los Angeles. A contemporary newspaper article from 1908 advertised five- and ten-acre tracts for small farms with options for water and water ownership (*Los Angeles Evening Express* 1908). According to a 1909 advertisement by W.I. Hollingsworth & Co., one acre of land could be purchased for $400 or with a $10 down payment and $10 per month (*Los Angeles Evening Express* 1909). By 1910, Lomita consisted of 90 families, two general merchandise stores, a blacksmith, a school house, a church, a town hall, a restaurant, a telephone system, and complete water systems (*The Los Angeles Times* 1910).

In 1923, while drilling for a new water system, oil was discovered. This would change the course of the town of Lomita as 5,000 acres of land would be sold at premium rates and converted into oil fields. While Lomita experienced the oil boom of the 1920s, a profitable agriculture industry took shape in the 1930s. By 1931, Lomita was advertised as the home of the largest celery crop in the world. At the time, 150 acres of celery were farmed by the local Japanese community (*Wilmington Daily Press Journal* 1931). During World War II, Lomita's contributions to the war effort were highlighted by many successful war bond drives, with sales into the hundreds of thousands of dollars (*San Pedro News-Pilot* 1945).

Following the end of the war, the population of Lomita and the surrounding area underwent a significant boom. Throughout the 1950s and 1960s, Lomita battled against neighboring Torrance and its creeping annexation of the original subdivision. In 1964, Lomita filed for incorporation to stop Torrance's encroachment, who just prior to Lomita's incorporation was in the process of initiating a total of 57 uninhabited annexation proceedings (San Diego *News-Pilot* 1964). The City of Lomita was officially incorporated on June 30, 1964.

RECORDS SEARCH

PALEONTOLOGICAL RECORD SEARCH

A paleontological record search of the Project was obtained from the Natural History Museum of Los Angeles County (Bell 2023; Appendix B). Additional records from the University of California Museum of Paleontology database (UCMP 2023), the PaleoBiology Database (PBDB 2023), and print sources were searched for fossil records.

PLEISTOCENE FOSSILS NEAR THE PLANNING AREA

One previously recorded paleontological locality producing vertebrate fossils was noted as potentially occurring within the Project Area. This locality, LACM VP 3249, records specimens from Lomita that do not have point-specific locality data and for which specific Pleistocene formations and depths below surface are unrecorded; however, this locality does clearly demonstrate that Pleistocene fossils have previously been encountered within the Project Area. Locality LACM VP 3249 has yielded remains of extinct taxa including mastodon (*Mammut pacificus*), bison (*Bison* sp.), camel (*Camelops* sp.), llama (*Hemiauchenia* sp., reported as *Tanupolama* sp.), ground sloth (*Megalonyx* sp.), horse (*Equus* sp.), tapir (*Tapirus* sp.), and sea lion (*Eumetopias* sp.), as well as a variety of birds, bony fish, and numerous invertebrates (Table 4).

SAN PEDRO FORMATION FOSSILS NEAR THE PLANNING AREA

No previously recorded paleontological localities from the San Pedro Formation occur within the Project Area. However, two localities (LACM IP 31444 and LACM VP 3268) have produced fossils from the near vicinity (Appendix B), including an indeterminate proboscidean from LACM VP 3268.

MONTEREY FORMATION FOSSILS NEAR THE PLANNING AREA

There are no previously recorded paleontological localities known from the Monterey Formation within the Project Area.

Table 4. Pleistocene Fossil localities in the near vicinity of the Planning Area

Common Name	Taxon	Depth below original surface	Formation mapped at surface	Age/ dates	Locality	Location	Reference
bison	†*Bison* sp.	5 feet	older alluvium (Qoa)	late Pleistocene	LACM 1163	Wilmington: west of SR 103, near the Anaheim St or Henry Ford Ave	McLeod 2019
bison	†*Bison* sp.	Unknown	younger alluvial fan (Qyf)	Pleistocene-Holocene	LACM 1165	Carson: Alameda St or Sepulveda Blvd	McLeod 2019
sea lion	*Zalophus* sp.	Less than 48 feet	older marine (Qom)	late Pleistocene	LACM 1144	Long Beach: south of Anaheim St; near the Loma Vista Dr or Crystal Court intersection	McLeod 2019
camel	†Camelidae						
bison	†*Bison* sp.						
Same as LACM 1144	same as LACM 1144	less than 48 feet	older marine (Qom)	Pleistocene	LACM 3550	Long Beach: near 12th St and Pine Ave intersection	McLeod 2019
whale	Cetacea	less than 100 feet	older marine (Qom)	Pleistocene	LACM 6896	Long Beach: near the Magnolia Ave or Ocean Blvd intersection	McLeod 2017a
camel	†Camelidae	24 feet	younger alluvial fan (Qya)	Pleistocene-Holocene	LACM 4129	Carson: Alameda or 223rd Sts	McLeod 2017b
mammoth	†*Mammuthus* sp.	10 feet	older alluvium (Qoa)	Pleistocene	LACM 1919	Dominguez Hills: west of Wilmington Ave., south of 223rd St	McLeod 2017b
mammoth	†*Mammuthus* sp.	Unknown	older marine (Qom)	Pleistocene	LACM 1021	Long Beach: south of I-405; near the Spring St or Cherry Ave intersection	Jefferson 1991, McLeod 2017b
bird	Aves						
mammoth	†*Mammuthus* sp.	Unknown	older marine (Qom)	Pleistocene	LACM 1932	Long Beach: near the Spring St or Cherry Ave intersection	Jefferson 1991, McLeod 2017a
mammoth	†*Mammuthus* sp.	19 feet	older marine (Qom)	Pleistocene	LACM 3660	Lakewood: south of Carson St; along Cover St between Pixie Ave or Paramount Blvd	McLeod 2017a
indeterminate vertebrates	Vertebrata	unknown	older marine (Qom)	Pleistocene	LACM 6802	Lakewood: near Bixby Rd between Atlantic Ave or Orange Ave	McLeod 2017a
Columbian mammoth	†*Mammuthus* sp. Cf. *M. columbi*	unknown	older marine (Qom)	late Pleistocene	LACM 1005	Long Beach: Bixby Park	McLeod 2017a
horse	†*Equus sp.*	Unknown	older alluvium (Qoa)	Pleistocene	UCMP V65109	Long Beach: Signal Hill	UCMP 2023
bony fish	Osteichthyes	unknown	older marine (Qom)	Pleistocene	UCMP A1483	Long Beach: Signal Hill	UCMP 2023
tapir	†*Tapirus* sp.	Unknown	older marine (Qom)	late Pleistocene	LACM 2031	Long Beach: Belmont Pier	Jefferson 1991
bison	†*Bison* sp. Cf. *B. antiquus*						
mammoth	†*Mammuthus* sp.	19 feet	older marine (Qom)	Pleistocene	LACM 3660	Lakewood: south of Carson St; along Cover St between Pixie Ave or Paramount Blvd	McLeod 2017a
mammoth	†*Mammuthus* sp.	Unknown	older alluvium (Qoa)	Pleistocene	LACM 6746	Long Beach: 7th St west of Pacific Coast Highway; Long Beach	McLeod 2019

Common Name	Taxon	Depth below original surface	Formation mapped at surface	Age/ dates	Locality	Location	Reference
mammoth	†*Mammuthus* sp.	8-10 feet	older alluvium (Qoa)	Pleistocene	LACM 1643	Dominguez Hills: near 190th or Annalee Ave.	Jefferson 1991, McLeod 2017a
mammoth	†*Mammuthus* sp.	5 feet	older alluvium (Qoa)	Pleistocene	LACM 3382	Compton: west of the I-710, east of Wilmington Ave., north of Artesia Blvd.	Jefferson 1991, McLeod 2017a
elephant relative	†Proboscidea	30 feet	older alluvium (Qoa)	late Pleistocene	LACM 3319	Long Beach: east of Wilmington Ave north of Artesia Blvd	Jefferson 1991, McLeod 2017a
bison	†*Bison* sp.	Unknown					
mammoth	†*Mammuthus* sp.	15 to 20 feet	older alluvium (Qoa)	late Pleistocene	LACM 1344, 3266, 3365	South Los Angeles: near I-110 and Athens on the Hill	McLeod 2017a
squirrel	Sciuridae						
horse	†*Equus* sp.						
Pronghorn	†*Breameryx* sp.						

CALIFORNIA HISTORIC RESOURCES INFORMATION SYSTEM

Cogstone requested a search of the California Historical Resources Information System (CHRIS) from the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton on June 13, 2023 which included the entire city. Results of the record search indicate that 12 previous studies have been completed within the city (Table 5).

Table 5. Previous studies within the city

Report No. (LA-)	Author(s)	Title	Year
00797	Beroza, Barbara	Cultural Resource Survey and Impact Assessment for Suang-na Village Park	1980
01288	Brock, James P., Mark Roeder, and John Elliot	Cultural and Paleontological Resource Assessment Report for Two Proposed Naval Family Housing Sites for the US Naval Station at Long Beach, California	1983
02559	King, Chester	Native American Placenames in the Santa Monica Mountains: First Draft	1992
03695	Maki, Mary K.	Negative Phase I Archaeological Survey Harbor Hills Housing Project Lomita, Los Angeles County, California	1997
06199	McKenna, Jeanette A.	A Phase I Cultural Resources Investigation, Paleontological Overview, and Architectural Evaluation of the Cypress Street Water Reservoir, Rolling Hills Estates, Los Angeles County, California	2003
08059	McKenna, Jeanette A., and Richard S. Shepard	Results of Phase II Cultural Resources Testing Program at CA-LAN-276, CA-LAN-277, and CA-LAN-3583, Three Prehistoric Sites Identified Within the Chandler Ranch/Rolling Hills Country Club Property in the Rolling Hills Estates and Torrance Areas of Los Angeles County, California	2006
10107	McKenna, Jeanette A.	Results of a Phase I Cultural Resources Investigation, Paleontological Overview, and Architectural Evaluation of the Cypress Street Water Reservoir, Rolling Hills Estates, Los Angeles County, Los Angeles	2004
10108	McKenna, Jeanette A.	Results of a Phase I Cultural Resources Investigation and Paleontological Overview of the Chandler Ranch/Rolling Hills Country Club Residential Development, Rolling Hills Estates, Los Angeles County, California	2006
10333	McKenna, Jeanette A.	A Brief Historic Context Statement Prepared for the General Plan Update: The City of Torrance, Los Angeles County, California	2009
11150	Maxwell, Pamela	West Basin Municipal Water District Harbor/ South Bay Water Recycling Project	2003
11717	Baillie, David	Interior and Exterior Renovation of Building 100, Defense Fuel Supply Point (DFSP), San Pedro, CA	2011
13212	Roland, Jennifer	Phase I Investigation for the Crown Castle LA3373 Lomita Park Antenna Installation Project, Lomita, Los Angeles County, California	2016

Two cultural resources consisting of one prehistoric archaeological site (P-19-000110) and one historic district (P-19-190005), have been recorded within the city (Table 6).

Table 6. Previously recorded cultural resources within the city

Primary No. (P-19-)	Trinomial No. (CA-LAN-)	Resource Type	Resource Description	Year Recorded	NRHP/CRHR Status
000110	000110	Prehistoric Archaeological Site	SCCIC site record provides no site description	1952, 2005	Unevaluated
190005		Historic Built Environment	San Pedro Defense Fuel Support Point (DFSP) Historic District. Administrative buildings, fuel tanks, pipelines, pumping stations, roads, ammunition bunkers, and guard watchtower from World War II period.	1998	NR/CR-Determined Eligible under criteria A/1 and C/3

P-19-000110 (CA-LAN-110)

Site P-19-000110 was originally recorded by H. Eberhart in 1952 as a prehistoric archaeological site (Eberhart 1952). No description of site components was included with the original documentation. When the site was updated by Richard S. Shepard in 2005, the site was not reidentified and no archaeological evidence was observed, however development in the area may have removed the site at the time of construction (Shepard 2005).

P-19-190005 (SAN PEDRO DEFENSE FUEL SUPPORT POINT (DFSP) HISTORIC DISTRICT)

Site P-19-190005 was recorded in 1998 by Robert Whetsell, Milo McLeod, and Karen G. Miller as the San Pedro Defense Fuel Support Point (DFSP) Historic District. The Historic District includes administrative buildings, fuel tanks, pipelines, pumping stations, roads, ammunition bunkers, and a guard watchtower which have remained intact from the World War II period. The district spans 331 acres and sits adjacent to Los Angeles Harbor. The DFSP site was selected as a bulk fuel depot for World War II efforts in the Pacific Theater because of its proximity to one of the major refinery areas in the United States. The DFSP was also strategically located and had easy pipeline access to the ship loading facilities and outer berths of the Los Angeles Harbor. The DFSP was found to exhibit exceptional integrity of setting, materials, workmanship, and design reflecting its historic and current use as a military fuel supply center. Infrastructure associated with administration, security, and fuel storage remains intact, and substantially unchanged since the property's period of significance. The San Pedro DFSP Depot is determined eligible for listing in the NRHP under Criteria A and C and listed in the CRHR (Whetsell et al. 1998).

BUILT ENVIRONMENT RESOURCE DIRECTORY (BERD)

A search of the Built Environment Resource Directory (BERD) identified two additional CRHR listed resources. A full list of the resources located within the city is located in Appendix E.

Eshelman Avenue Elementary School (Property Number 97751)
Location: 25902 Eshelman Avenue
Description: Built in 1923, this historic resource is currently assigned the California Historic Resource Status Code 2S2 (Individual property determined eligible for National Register by consensus through Section 106 process. Listed in the California Register.).

Harbor Hills Housing Project (Property Number 103214)
Located: 26607 Western Avenue
Description. Built in 1940-1941, the Harbor Hills Housing Project is a Mid-Century Modern styled multi-family residence. This facility represents the second public housing project constructed by the Los Angeles County Housing Authority during the Great Depression/pre-war era (SBRA ca. 1996). This historic resource is currently assigned the California Historic Resource Status Code 2S2 (Individual property determined eligible for National Register by consensus through Section 106 process. Listed in the California Register.).

OTHER SOURCES

In addition to the SCCIC records search, a variety of sources were consulted in November 2023 to obtain information regarding the cultural context of the Project vicinity (Table 7). Sources included the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), Built Environment Resource Directory (BERD), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI).

Table 7. Additional Sources Consulted

Source	Results
National Register of Historic Places (NRHP)	Negative
Historic USGS Topographic Maps	According to the 1896 topographic map, there are no residences depicted within the current city boundaries of Lomita. However, several roads are present (*Redondo*, 1:62500, 1896). There is a data gap between 1896 and 1924/1925, when Lomita is depicted with multiple streets organized in a grid pattern with buildings organized along these streets (*Torrance*, 1:24000, 1924; *San Pedro Hills*, 1:24000, 1925). By 1951, Narbonne High School and Orange Street School are visible (*Torrance*, 1:24000, 1951). Lomita school is also present at this time. By 1964, Narbonne High School and Orange Street School have been renamed to Fleming Jr. High School and Eshelman Ave. School (*Torrance*, 1:24000, 1964).

Source	Results
Historic US Department of Agriculture Aerial Photographs	The earliest known aerial photograph of Lomita from 1928 shows substantial development including both built environment and agricultural fields (FrameFinder 1928). Major streets such as Lomita Boulevard and Pacific Coast Highway are visible within the boundary of Lomita. In the 1930s and 1940s, Lomita retains a blend of residential and agricultural development (FrameFinder 1933 and 1941). By 1952, much of the agricultural lots have been developed with residential or commercial buildings (NETROnline 1952). However, some larger concentrations of agricultural lots remain in the northeastern section of Lomita. By 1953, the majority of agricultural fields have been removed and developed (NETROnline 1953). Between 1963 and 1972, the last large open area at the southernmost section of Lomita is developed as a residential area (NETROnline 1963 and 1972).
California Register of Historical Resources (CRHR)	Positive: Eshelman Avenue Elementary School(Property Number 97751); Harbor Hills Housing Project (Property Number 103214), San Pedro Defense Fuel Support Point Historic District (Property Number 133261)
Built Environment Resource Directory (BERD)	Positive; Eshelman Avenue Elementary School (Property Number 97751); Harbor Hills Housing Project (Property Number 103214); San Pedro Defense Fuel Support Point Historic District (Property Number 133261) see Appendix E for complete list.
California Historical Landmarks (CHL)	Negative
California Points of Historical Interest (CPHI)	Negative
Caltrans Historic Bridge Inventory (2016)	Negative
Bureau of Land Management (BLM) General Land Office Records	Positive (Table 8)
Local Registers (Historical Societies/Archives)	Positive; The Lomita Railroad Museum (as identified in the 1998 City of Lomita General Plan)

Table 8. BLM Land Patents

Name(s)	Year	Accession Number	Type	T; R; Section
Jose Loreto Sepulveda	1880	CACAAA 084938	Grant-Spanish/Mexican	T4S; R14W; S25 T4S; R14W; S26 T4S; R14W; S27 T4S; R14W; S34 T4S; R14W; S35 T4S; R14W; S36
USA	1870 1869 1891	CACAAA 000936 01 CACAAA 011840 CACAAA 072788 01	Indemnity List Base-Valid Lien	T4S; R14W; S36

JOSE LORETO SEPULVEDA (1815-1881)

Son of Spanish soldier Jose Dolores Sepulveda, Jose Loreto Sepulveda was born in Los Angeles in 1815. In 1835, Sepulveda married Juana Cedaria Pantoja and together they had 15 children (nine sons and six daughters). In 1846, Jose Sepulveda and his brother Juan Sepulveda were granted ownership of Rancho Palos Verdes by the Mexican governor of California, Pio Pico (*Los Angeles Evening Post-Record* 1909). Following the Annexation of California from Mexico to the United States, the Sepulveda family was required to petition the United States Land Commission to confirm their claim to Rancho Palos Verdes. The family was forced to wait decades before confirmation was officially granted in 1880 (*News-Pilot* 1975). Jose Sepulveda died in 1881 and was buried in Old Calvary Cemetery in Los Angeles.

HISTORICAL SOCIETY CONSULTATION

On July 28, 2023, a request for information was sent to the Lomita Historical Society and the Lomita Railroad Museum via the United States Postal Service. No response has been received.

NATIVE AMERICAN CONSULTATAION

Cogstone archaeologist Logan Freeberg submitted a Sacred Lands File (SLF) search request to the Native American Heritage Commission (NAHC) on June 13, 2023. The NAHC responded on July 18, 2023 and indicated that the search was negative for sacred lands or resources known within the same USGS Quadrangle, Township, Range, and Section as the Planning Area.

Letters requesting consultation were sent to the 11 Native American individuals and organizations identified by the NAHC on City of Lomita letterhead via certified mail on December 18, 2023. Cogstone archaeologist Sandy Duarte followed up via electronic mail on December 22, 2023, and via telephone call on December 27, 2024. Cogstone has received no responses as of March 28, 2024.

PALEONTOLOGICAL SENSITIVITY

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).

PALEONTOLOGICAL SENSITIVITY

Paleontological resources occur in geological units (e.g., formations or members) that can be evaluated with respect to the probability of finding significant fossils. The potential sensitivity of a given geological unit in a Project Area can be broadly predicted from previous records of fossils recovered from that geologic unit in and/or adjacent to the study area. The geological setting and the number of known fossil localities can also help determine the paleontological sensitivity.

A multilevel ranking system has been 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 2016; Appendix G) has a multi-level scale based upon previously-demonstrated yield of fossils. The PFYC system provides additional guidance regarding assessment and management for different fossil yield rankings. 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 five millimeters in diameter or less. Moreover, fossil preservation also greatly increases after natural burial in rivers, lakes, or oceans. Remains left on the ground surface can 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.

Using these criteria, sediments of the Monterey Formation and the San Pedro Formation that are mapped at the surface and present at depth within the boundaries of the Project are assigned moderate paleontological sensitivity (= PFYC 3). These units have previously yielded scientifically important fossils, but such remains are distributed somewhat sporadically and can be widely scattered. Similarly, Quaternary older alluvium, older eolian sediments, and the Pleistocene component of the younger alluvial fan deposits are assigned moderate sensitivity (= PFYC 3). However, in these latter cases, this sensitivity assessment is assigned only to sediments below five feet in depth; middle to late Pleistocene and Holocene sediments above five feet in depth have low paleontological sensitivity (= PFYC 2).

HISTORIC BUILT ENVIRONMENT RESOURCE SENSITIVITY

Relatively few cultural resources have been previously recorded within the Lomita city limits and most of the city was either partially or completely built up ca 50 years ago as shown in a 1968 United States Department of Agriculture aerial photograph. As such, most areas of the city contain buildings, structures, or objects that are more than 45 years old.

CRHR LISTED RESOURCES

A total of three resources are listed in the CRHR. This includes Eshelman Avenue Elementary School (Property Number 97751), Harbor Hills Housing Project (Property Number 103214), and San Pedro DFSP Historic District. Only a small portion of the San Pedro DFSP Historic District is located within the city boundary.

SIGNIFICANT OR POTENTENTIALLY SIGNIFICANT RESOURCES IDENTIFIED IN THE 1998 CITY OF LOMITA GENERAL PLAN

THE LOMITA RAILROAD MUSEUM

The City of Lomita has one confirmed locally significant historic structure. The Lomita Railroad Museum (Blodgett/Baylosis Associates 1998), located at 2135 250th Street at Woodward Avenue, was previously known as the Martin Lewis Railroad Museum. The museum was founded by Mrs. Irene Lewis in dedication to her late husband Martin Lewis and officially opened in 1967. The museum was designed after the Boston & Maine's Greenwood Station in Wakefield Massachusetts (*Daily Breeze* 2015).

POTENTIALLY SIGNIFICANT BUILT ENVIRONMENT RESOURCES

Two specific structures more than 50 years old that may possess historical significance are located within Lomita's downtown area:

- Lomita Elementary School (administration building, located at 2211 247th Street)
- Old Fire House[4]

[4] This resource is referenced on page 5-22 of the Resource Management Element of the 1988 City of Lomita General Plan but no address is included. This may refer to Station 6 located at 25517 Narbonne, or an old bar called The Firehouse located at 24123 Narbonne Avenue. This latter business no longer exists and the building that housed it does not appear to be historic in age.

ARCHAEOLOGICAL SENSITIVITY[5]

Cogstone reviewed the SCCIC record search results, the negative Sacred Lands File results, and historic USGS topographic quadrangle maps to assess the archaeological sensitivity of the city. Due to the presence of only one previously recorded archaeological site within the city, the negative SLF search results, and lack of information gained from review of the USGS maps, this analysis was primarily based on two factors, distance to water courses and whether the sediments in the area were of the requisite age range and have the capability to preserve buried resources. Based on these data, the archaeological sensitivity of the city is estimated to be generally low to moderate with small areas of high sensitivity near the southwest and southeast corners of the city (Appendix F, Figures F-1, F-1a to F-1e).

The minimal contribution of documented cultural resource data unfortunately limits Cogstone's confidence in this analysis.

STUDY FINDINGS AND RECOMMENDATIONS

PALEONTOLOGICAL RESOURCES

The Project is mapped as situated upon surface exposures of the middle Miocene to Pliocene Monterey Formation, the early Pleistocene San Pedro Formation, Quaternary older alluvium and old eolian deposits, and younger alluvial fan deposits. These geological units have moderate paleontological sensitivity (= PFYC 3) – the Monterey Formation and San Pedro Formation throughout their extent, and the Quaternary older alluvium and older eolian sediments, as well as the Pleistocene component of the younger alluvial fan deposits, at or below depth of five feet below the ground surface. The record search revealed multiple fossil localities from within and around the Project Area. Paleontological monitoring of excavation may therefore be required in these formations depending upon lithology and depositional context. Given this, excavation or other surface-disturbing activities will require professional assessment and evaluation in order to determine whether significant paleontological resources occur in the area of a proposed ground-disturbing action and whether the action might affect such resources.

[5] Table 5-6 of the 1998 City of Lomita General Plan Resource Management Element contains a list of archaeological surveys and archaeological sites recorded prior to 1998 for the area surrounding the City of Lomita. As locations for the sites are not included in the table, and these data were not part of the SCCIC record search results, it is impossible to take these sites into account when determining sensitivity.

CULTURAL RESOURCES

Sensitivity for buried archaeological resources varies from low to high within the city. Cogstone recommends that the city require either a site-specific assessment prior to ground disturbance within any area with moderate or high archaeological sensitivity or require full-time cultural resources monitoring during ground-disturbing activities (see Appendix F, Figures F-1, F-1a to F-1e).

There are three resources in the city that are listed in the CRHR—the Eshelman Avenue Elementary School (Property Number 97751), the Harbor Hills Housing Project (Property Number 103214), and the San Pedro DFSP Historic District (P-19-190005). The Lomita Railroad Museum has been designated as significant and both the Lomita Elementary School and Old Fire House are considered potentially significant at the local level.

The possible effects of construction to these resources, resulting from changes to the resource (maintenance, seismic retrofitting, etc.) or due to nearby construction that affect their integrity (vibration, noise, changing viewshed, etc.) should be considered during future planning.

Intact buildings, structures, and objects within the city that are over 45 years old should be evaluated for eligibility for listing in the NRHP and CRHR prior to alteration or destruction[6]. Multiple portions of the city have large, developed areas that are 50 years old or older. These areas are where buildings, structures, or objects that meet the minimum normal age for eligibility for listing in the NRHP or CRHR are most closely clustered (see Appendix I, Figure I-2). Cogstone recommends that the city prioritize these areas for large-scale historic surveys to evaluate these buildings, structures, and objects to identify those that meet the eligibility requirements for listing in the NRHP or CRHR. Parcel level evaluations of intact buildings, structures, or objects that are 45 years or older by a qualified architectural historian are recommended whether as part of a large-scale survey or on a case by case basis.

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

[6] Evaluation of resources that are 45 years old or older accounts for the time lag between recordation and the usual minimum age for eligibility for listing in the NRHP or CRHR.

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.

REQUIREMENTS AND MITIGATION MEASURES

Future proposed projects within the City of Lomita have the potential to impact paleontological and cultural resources. This study assesses the city's sensitivities to these resources at the programmatic level. The following requirements/mitigation measures are recommended to determine resource sensitivity and mitigate negative effects at the project or parcel level:

PALEO-1. City staff shall require applicants for future proposed ground disturbing projects in undisturbed sediments with a PFYC ranking of PFYC 3 or higher to either (1) provide a technical paleontological assessment consisting of a record search, survey, background context and project specific recommendations performed by a qualified paleontologist (with a graduate degree and a specialization in vertebrate paleontology) or (2) agree to retain a qualified paleontologist to develop and implement a Paleontological Resources Impact Mitigation Plan (PRIMP), which should include development of a paleontology Worker Environmental Awareness Program (WEAP) and paleontological monitoring of all excavations in areas or sediments having moderate paleontological sensitivity. If resources are known or reasonably anticipated, the recommendations shall provide a detailed mitigation plan requiring worker awareness training and monitoring during grading and other earthmoving activities in undisturbed sediments. In the event of unanticipated discoveries, all work must be suspended within 50 feet of the find(s) until a qualified paleontologist can evaluate the find(s) and make recommendations. The PRIMP will establish a fossil recovery protocol that includes data to be collected, professional identification, radiocarbon dates and other special studies as appropriate, and curation at local curation facility such as such as the Natural History Museum of Los Angeles County for fossils meeting significance criteria. A comprehensive final mitigation compliance report including a catalog of fossil specimens with museum numbers and an appendix containing a letter from the museum stating that they are in possession of the fossils shall be required.

CUL-1. City staff shall require applicants for future proposed projects with intact extant building(s) more than 45 years old to provide a historic resource technical study evaluating the significance and data potential of the resource. If significance criteria are met, detailed mitigation recommendations are required as part of the technical study. All work shall be performed by a qualified architectural historian meeting Secretary of the Interior Standards.

CUL-2. The effect of any action expected to significantly affect a building, structure, or object found to be eligible for listing at the national (NRHP), state (CRHR), or local level must be mitigated have a less than significant effect, prior to commencement of the alteration. In cases where this is not possible the resource must be recorded to the Historic American Buildings Survey/Historic American Engineering Record (HABS-HAER) standard by a someone who meets the Secretary of the Interior Standards qualifications for architectural history.

CUL-3. City staff shall require applicants for future proposed ground disturbing projects in areas assessed to have moderate or high sensitivity for archaeological resources to either (1) provide a technical cultural resources assessment consisting of a record search, survey, background context and project specific recommendations performed by a qualified archaeologist meeting Secretary of the Interior Standards or (2) agree to full-time monitoring by an archaeologist and a Native American. If resources are known or reasonably anticipated the recommendations shall provide a detailed mitigation plan which shall require monitoring during grading and other earthmoving activities in undisturbed sediments. The plan will provide a treatment plan for potential resources that includes data to be collected, requires professional identification, other special studies as appropriate, and requires curation at a repository for artifacts meeting significance criteria. A comprehensive final mitigation compliance report including a catalog of specimens with museum numbers and an appendix containing a letter from the museum stating that they are in possession of the materials shall be required.

CUL-4. In the event of an unanticipated archaeological discovery, all work must be suspended within 50 feet of the find until a qualified archaeologist evaluates it.

CUL-5. Unanticipated discoveries of human remains shall require immediate cessation of ground disturbance within 50 feet and notification to City staff and the Coroner and shall follow state law as stated in Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98.

REFERENCES CITED

Axelrod, D.I. and F. Govean
1996 An early Pleistocene closed-cone pine forest at Costa Mesa, Southern California. *International Journal of Plant Sciences* 157(3): 323-329.

Bean, W., and J. J. Rawls
1993 *California: An Interpretive History*. 4th Edition. McGraw Hill, New York.

Bean, L.J., and C.R. Smith
1978 Gabrielino. In *California*, edited by Robert F. Heizer, pp. 538-549. Handbook of North American Indians, William C. Sturtevant, general editor, Volume 8. Smithsonian Institution, Washington, D.C.

Bell, A.
2023 Records search, Paleontological resources for the Lomita General Plan Update Project. July 23, 2023. 2 pgs.

Blodgett/Baylosis Associates
1998 *City of Lomita General Plan*. Prepared for City of Lomita. Adopted May 4, 1998. Available at https://lomitacity.com/general-plan/, accessed July 26, 2023.

California Department of Fish and Game
2020 California Listing of Managed Species. https://wildlife.ca.gov/Conservation/Mammals, accessed June 2020.

Cal-IPC
2006 California Invasive Plant Inventory, Cal-IPC Publication 2006-02. Berkeley, CA: The California Invasive Plant Council. https://www.cal-ipc.org/docs/ip/inventory/pdf/Inventory2006.pdf, accessed June 2020.

Daily Breeze
2015 "Irene Lewis makes her dream of a train museum for Lomita a reality (Part 2: Lomita Railroad Museum)". Online article. Posted on March 13, 2015. Author Sam Gnerre. Available at http://blogs.dailybreeze.com/history/2015/03/13/irene-lewis-makes-her-dream-of-a-train-museum-for-lomita-a-reality-part-2-lomita-railroad-museum/, accessed July 31, 2023.

Eberhart, H.
1952 Site record for P-19-000110 (CA-LAN-110) on record at the South Central Coastal Information Center.

FrameFinder
1928 "Flight C_300, Frame M-75". Aerial photographs. Taken January 1, 1928. Available at https://mil.library.ucsb.edu/ap_indexes/FrameFinder/, accessed July 31, 2023.

1933 "Flight C_2668X, Frame D-1". Aerial photographs. Taken July 1, 1933. Available at https://mil.library.ucsb.edu/ap_indexes/FrameFinder/, accessed July 31, 2023.
1941 "Flight C_6972, Frame 61". Aerial photograph. Taken March 6, 1941. Available at https://mil.library.ucsb.edu/ap_indexes/FrameFinder/, accessed July 31, 2023.

Hall, C. A. Jr.
2007 Western Transverse Ranges. In *Introduction to the Geology of Southern California and Its Native Plants* (pp. 233-279). University of California Press, Berkeley.

Intellicast
2014 (accessed) http://www.intellicast.com/

Jefferson, G.T.
1991 A Catalogue of Late Quaternary Vertebrates from California-- Part Two, Mammals: Natural History Museum of Los Angeles County Technical Report No. 7.

Keith, Brian C.
n.d. "Early History of Lomita". *City of Lomita*. Available at https://lomitacity.com/history/, accessed July 28, 2023.

Kroeber, A.L.
1976 *Handbook of the Indians of California*. Dover Publications, Inc., New York. Reprint of 1925 book.

Los Angeles Evening Express
1908 "Lomita". Los Angeles, California. Published Wednesday, January 1, 1908. Available at https://www.newspapers.com/image/607881484, accessed July 28, 2023.
1909 "Los Angeles: Lomita". Los Angeles, California. Published Friday, November 19, 1909. Available at https://www.newspapers.com/image/607897930, accessed July 28, 2023.

Los Angeles Evening Post-Record, The
1909 "Claims San Pedro Belongs to Her". Los Angeles, California. Published Saturday, February 20, 2909. Page 1. Available at https://www.newspapers.com/image/677840959, accessed August 7, 2023.

Los Angeles Times, The
1910 "Lomita". Los Angeles California. Published Sunday, January 16, 1910. Page 111. Available at https://www.newspapers.com/image/380183387, accessed July 28, 2023.

McLeod, S.A. (Natural History Museum Los Angeles County, Department of Vertebrate Paleontology)
2017a Vertebrate Paleontology Records Check for paleontological resources for the proposed MUST Facility Project, Cogstone Project # 3993, in the City of Long Beach, Long Beach, Los Angeles County, California, project area. March 9, 2017, 3 pgs.
2017b Vertebrate Paleontology Records Check for paleontological resources for the proposed 2300 Redondo Ave Project, Cogstone Project # 4139, in the City of Long Beach, Long

Beach, Los Angeles County, California, project area. July 21, 2017, 2 pgs.
2019 Paleontological resources for the proposed Los Cerritos Wetlands Restoration Project, Project # D170537.00, in the Cities of Long Beach and Seal Beach, Los Angeles and Orange Counties, project area. May 28, 2019, 3 pgs.

NETROnline
1952 *Historic Aerials*. Available at https://www.historicaerials.com/viewer, accessed July 31, 2023.
1953 *Historic Aerials*. Available at https://www.historicaerials.com/viewer, accessed July 31, 2023.
1963 *Historic Aerials*. Available at https://www.historicaerials.com/viewer, accessed July 31, 2023.
1972 *Historic Aerials*. Available at https://www.historicaerials.com/viewer, accessed July 31, 2023.

San Diego News-Pilot
1975 "Dominguez, Sepulveda claims filed". San Pedro, California. Published Friday, October 24, 1975. Available at https://www.newspapers.com/image/606659000, accessed August 7, 2023.

Ornduff, R., P. M. Faber, and T. Keeler-Wolf
2003 *Introduction to California Plant Life, Revised Edition.* California Natural History Guides, Volume 69. University of California Press, Berkeley.

Robinson, W. W.
1948 *Land in California: The Story of Mission Lands, Ranchos, Squatters, Mining Claims, Railroad Grants, Land Scrip, Homesteads*. University Press, Berkeley, California.

San Buenaventura Research Associates (SBRA)
Ca. 1996 "Harbor Hills Housing Project". *HABS No. CA-2695*. Copy available at https://tile.loc.gov/storage-services/master/pnp/habshaer/ca/ca2500/ca2548/data/ca2548data.pdf, accessed July 31, 2023.

San Pedro News-Pilot
1945 "Lomita War Bond Sales $164,213". San Pedro, California. Published Friday, January 5, 1945. Page 5. Available at https://www.newspapers.com/image/605109928, accessed July 28, 2023.
1964 "'Torrance Can't Do It'-League". San Pedro, California. Published Friday, January 24, 1964, page 22. Available at https://www.newspapers.com/image/605792111, accessed July 28, 2023.

Saucedo, G.J., H.G. Greene, M.P. Kennedy, and S.P. Bezore
2016 Geologic map of the Long Beach 30' x 60' quadrangle, California: California Geological Survey Regional Geologic Map Series Map No. 5, version 2.0; map scale 1:100,000. ftp://ftp.consrv.ca.gov/pub/dmg/rgmp/Prelim_geo_pdf/Long_Beach_100k_v2.0_Map.pdf

Scott, E., and K. Springer
2003 CEQA and fossil preservation in southern California. The Environmental Monitor Winter: 4-10, 17.

Scott, E., K. Springer, and J.C. Sagebiel
2004 Vertebrate Paleontology in the Mojave Desert: The continuing importance of "Follow-Through" in preserving paleontological resources *in* M. W. Allen and Reed, J. editors The Human Journey and ancient life in California's deserts, proceedings from the 2001 Millennium Conference, 65-70.

Scott, K., C. Richards, S. Gust
2014 Paleontological Monitoring Compliance Report for the Metro Purple Line Extension Exploratory Shaft project, Los Angeles, Los Angeles County, California. November 2014.

Shepard, Richard S.
2005 Site record update for P-19-000110 (CA-LAN-110) on record at the South Central Coastal Information Center.

Stock, C. and J. Harris
1992 Rancho La Brea: a Record of Pleistocene Life in California. *Natural History Museum of Los Angeles County Science Series* 37, 113 pages.

Sutton, M.
2009 People and language, defining the Takic expansion into Southern California. Pacific Coast Archaeological Society Quarterly 41(2 and 3): 31-93.
2010 The Del Rey Tradition and its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly* 44(2):1-54.

Sutton, M., and J. Gardner
2010 Reconceptualizing the Encinitas Tradition of Southern California. *Pacific Coast Archaeological Society Quarterly* 42(4):1-64.

UCMP, University of California Museum of Paleontology
2023 Records search of the University of California, Berkeley paleontology database. Accessed online August 2023.

USGS Historical Topographic Map Explorer
1896 *Redondo*. [map]. U.S. Geological Survey. 1:62500. Topographic Quadrangle Map. Redondo, CA, 1896. Available at https://livingatlas.arcgis.com/topoexplorer/index.html.
1924 *Torrance*. [map]. U.S. Geological Survey. 1:24000. Topographic Quadrangle Map. Torrance, CA, 1924.Available at https://livingatlas.arcgis.com/topoexplorer/index.html.
1925 *San Pedro Hills*. [map]. U.S. Geological Survey. 1:24000. Topographic Quadrangle Map. San Pedro Hills, CA, 1925. Available at https://livingatlas.arcgis.com/topoexplorer/index.html.

1951 *Torrance* [map]. U.S. Geological Survey. 1:24000. Topographic Quadrangle Map. Torrance, CA, 1959. Available at https://livingatlas.arcgis.com/topoexplorer/index.html.
1964 *Torrance*. [map]. U.S. Geological Survey. 1:24000. Topographic Quadrangle Map. Torrance, CA, 1966. Available at https://livingatlas.arcgis.com/topoexplorer/index.html

Wagner, D. L.
2002 California Geomorphic Provinces. *California Geologic Survey Note* 36. Online at https://www.conservation.ca.gov/cgs/Documents/Publications/CGS-Notes/CGS-Note-36.pdf.

Wallace, William J.
1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214-230.

Warren, Claude N.
1968 Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in Western United States*, edited by C. Irwin-Williams. *Eastern New Mexico University Contributions in Anthropology* 1(3):1-14.

Whetsell, Robert, Milo McLeod, and Karen G. Miller
1998 Site record P-19-190005) on record at the South Central Coastal Information Center

Wilmington Daily Press Journal
1931 "Lomita Home of Largest Celery Crop in World". Wilmington, California. Published Tuesday, January 6, 1931. Page 1. Available at https://www.newspapers.com/image/363829223, accessed July 28, 2023.

.

APPENDIX A. QUALIFICATIONS

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

JOHN GUST
Task Manager and Principal Investigator for Archaeology

EDUCATION

2016 Ph.D., Anthropology, University of California, Riverside (UCR)
2011 M.A., Anthropology, UCR
2007 M.A., Applied Geography, University of Colorado, Colorado Springs (UCCS)
2002 B.A., Anthropology, minor in Geography/Environmental Studies, UCCS

SUMMARY OF QUALIFICATIONS

Dr. Gust is a Registered Professional Archaeologist (RPA) with over 11 years of experience in field archaeology. His field expertise includes pedestrian surveys, excavation monitoring, resource recording, and historic artifact analysis. Dr. Gust has extensive experience in California cultural resources, having served as Principal Investigator on projects for Southern California Edison, Pacific Gas and Electric, the City of San Jose, Los Angeles International Airport, and the City of Morro Bay. He has managed a variety of projects at Cogstone in the water, transportation, energy, development, and federal sectors. He has also managed cultural resources monitoring projects for both public and private sector clients. He meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation.* Dr. Gust is a member of the Society for California Archaeology, Society for American Archaeology, and the American Anthropological Association.

SELECTED PROJECTS

San Gabriel River Commuter Bikeway and Big Dalton Wash Commuter Bikeway, City of Baldwin Park, Los Angeles County, CA. Cogstone conducted a cultural and historic built environment resources assessment to determine the potential impacts to cultural and historical resources for the proposed construction of approximately five miles of new bikeway/pedestrian pathway. Services included pedestrian surveys, records searches, a Sacred Lands File search, preparation of California Department of Parks and Recreation 523 (DPR 523) forms, National Register of Historic Places (NRHP) eligibility assessments, and reporting. The project required a Section 408 permit from the United States Army Corps of Engineers due to the proximity of the federally managed San Gabriel River and tributaries. All work was completed in compliance with Section 106 of the National Historic Preservation Act (NHPA). The City of Baldwin Park acted as lead agency under the California Environmental Quality Act (CEQA). Sub to Infrastructure Engineering Corporation. Task Manager and Principal Archaeologist. 2020-2021

Del Amo Circle Apartments Project, City of Torrance, Los Angeles County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources from the construction of a 234,928-square foot, 5-story building with 200 multifamily residential units and on-site facilities, a 169,946-square foot, 6.5-story parking structure with 440 parking spaces, and an amenity deck on the 2.83-acre project site. Maximum depth of ground disturbance was up to eight feet for the apartment building and a minimum of two feet for the parking structure. Cogstone's services included records searches, a Sacred Lands File search, intensive pedestrian cultural and paleontological resources survey, and preparation of a Cultural and Paleontological Assessment Report. The City of Torrance is the lead agency under CEQA. Sub to PlaceWorks. Principal Investigator for Archaeology. 2022

Norwalk Civic Center Specific Plan Project, City of Norwalk, Los Angeles County, CA. Cogstone conducted an assessment to determine the potential impacts to archaeological and paleontological resources from the construction of a mixed-use development with residential, commercial, and open space uses in a 13-acre project area. Cogstone's services included records searches, a Sacred Lands File search, intensive pedestrian survey, and preparation of a Cultural and Paleontological Resources Assessment Report. All work was done in compliance with the mitigation measures for the project. The City of Norwalk was the lead agency under CEQA. Sub to Primestor Development. Principal Investigator for Archaeology. 2022

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

ERIC SCOTT
Principal Paleontologist

EDUCATION

1990 M.A., Anthropology (Biological), University of California, Los Angeles
1985 B.A., Anthropology (Physical), California State University, Northridge

SUMMARY OF QUALIFICATIONS

Mr. Scott is a professional vertebrate paleontologist with over 39 years of experience in paleontological mitigation, fieldwork, curation, and research. He is emeritus paleontology curator at the San Bernardino County Museum, an adjunct instructor at California State University, San Bernardino, and a research associate of the Natural History Museum of Los Angeles County and the La Brea Tar Pits and Museum. Mr. Scott is a 30+ year member of the Society of Vertebrate Paleontology, an international society of professional scientists where he currently serves on the Government Affairs Committee. He also holds membership in the Geological Society of America and other professional societies. He has published over 40 research articles in professional scientific journals.

SELECTED EXPERIENCE

Purple Line Extension (Westside Subway) Sections 1 and 2 Construction Management, Los Angeles County Metropolitan Transportation Authority, Los Angeles, Los Angeles County, CA. The project involves construction of seven stations from the existing Purple Line at Wilshire/Western Avenue along Wilshire Boulevard to the Veterans Administration Hospital in Westwood for 8.6 miles. Cogstone manages all paleontological services for Sections 1 and 2 of the subway project including budgets, Workers Environmental Awareness Program (WEAP) training, monitoring, fossil recovery, fossil preparation, identification, cataloguing curation with the Natural History Museum of Los Angeles County, and reporting. Sub to JV West (Stantec/Jacobs JV; Section 1), AECOM (Section 2). Principal Paleontologist. 2017-*ongoing*

Deep Soil Mixing Pilot Project, Community of Pacific Palisades, Los Angeles County, CA. As part of an on-call contract with the Los Angeles Bureau of Engineering (LABOE), Cogstone provided cultural and paleontological resources monitoring as well as managed Native American monitoring during ground-disturbing activities. The City of Los Angeles was the lead agency under the California Environmental Quality Act (CEQA). Monitoring for the Project was conducted in compliance with the Contingency Plan conditions for the Coastal Development Permit (CDP) from the California Coastal Commission (CCC). No cultural or paleontological resources were identified. No further work was necessary. Sub to ICF. Principal Investigator for Paleontology. 2020

Gates Canyon Stormwater Capture Project, Unincorporated area of Calabasas, Los Angeles County, CA. Cogstone conducted cultural and paleontological resources monitoring for 31 days during proposed improvements to Gates Canyon Park that will allow the capture and storage of stormwater runoff from an adjacent 105-acre residential area. Monitoring complied with program mitigation measures and as defined by the County of Los Angeles, Department of Public Works (LACDPW), Project Management Division II. LACDPW was the project proponent and acted as the lead agency under CEQA. Sub to Aspen Environmental. Task Manager. 2019

SR 14 / Avenue N Operational Interchange Improvements Project, Caltrans District 7, City of Palmdale, Los Angeles County, CA. The purpose of this study was to identify and evaluate paleontological resources during the proposed upgrades and improvements to transportation facilities. Cogstone conducted a ground truthing survey and requested a record search from the Natural History Museum of Los Angeles County. Online records from the University of California Museum of Paleontology database and the Paleobiology Database were searched for fossil records as well as print sources. Ultimately, a combined Paleontological Identification Report and Paleontological Evaluation Report (PIR/PER) was submitted and accepted with minimal comments. Sub to ECORP Consulting. Principal Investigator for Paleontology. 2018

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

SANDY DUARTE
Report Co-Author

EDUCATION

2002 B.A., Cultural Anthropology, University of California, Santa Barbara

SUMMARY QUALIFICATIONS

Ms. Duarte is a skilled archaeologist with over 20 years of experience in monitoring, surveying, and excavation in the state of California. She has experience with Native American consultation in compliance with Section 106 of the National Historic Preservation Act (NHPA), Assembly Bill (AB) 52, and Senate Bill (SB) 18. Beginning in 2006, she worked for the United States Forest Service in the Biology, Timber, and Geology Department as an archaeologist and as a trained wild-land firefighter to preserve archaeological sites in forest fires. In addition she is skilled in paleontological identification, fossil preparation, artifact identification and curation, and has authored cultural resources reports for a variety of federal, state, and local agencies throughout California.

SELECTED EXPERIENCE

University of California Natural Reserve System San Joaquin Marsh Reserve Water Conveyance and Drainage Improvement Project, City of Irvine, Orange County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources for the proposed long-term water management improvements and habitat value of the Marsh Reserve. Services included pedestrian survey, records searches, Sacred Lands File search from the Native American Heritage Commission (NAHC), background research, subsurface testing, and reporting. Due to the proximity of the project to the San Diego Creek, the project required a Clean Water Act Section 404 permit from the United States Army Corps of Engineers (USACE) and Section 106 of the NHPA compliance. The University of California acted as the lead agency under the California Environmental Quality Act (CEQA) and USACE acted as lead agency under the National Environmental Policy Act (NEPA). Sub to Moffat & Nichol. Archaeology Supervisor. 2020

San Gabriel River Commuter Bikeway and Big Dalton Wash Commuter Bikeway, City of Baldwin Park, Los Angeles County, CA. Cogstone conducted a cultural and historic built environment resources assessment to determine the potential impacts to cultural and historical resources for the proposed construction of approximately five miles of new bikeway/pedestrian pathway. Services included pedestrian surveys, records searches, a Sacred Lands File search from the NAHC, preparation of California Department of Parks and Recreation 523 (DPR 523) forms, National Register of Historic Places (NRHP) eligibility assessments, and reporting. The project required a Section 408 permit from the USACE due to the proximity of the federally managed San Gabriel River and tributaries. All work was completed in compliance with Section 106 of the NHPA. The City of Baldwin Park acted as lead agency under the CEQA. Sub to Infrastructure Engineering Corporation. Archaeology Supervisor. 2020-2021

Culver Boulevard Realignment and Stormwater Treatment Project, Culver City, Los Angeles County, CA. Cogstone prepared a Cultural and Paleontological Resources Management Plan in compliance with the mitigation measures in the Final Mitigated Negative Declaration approved by the City. The plan was developed in consultation with the Gabrieleño Band of Mission Indians – Kizh Nation and summarizes the organization and responsibilities of the monitors, the responsibilities of the construction contractor, and the Inadvertent Discovery Plan to be implemented should cultural or paleontological resources be encountered during the project. The City is the project proponent and is the lead agency under CEQA. Cogstone provided cultural and paleontological resources monitoring during ground-disturbing construction activities and then prepared a Cultural and Paleontological Monitoring Compliance Report. Sub to Michael Baker International. Archaeology Supervisor. 2020-2021

Nadeau Multi-Family Residential Project, City of Los Angeles, Los Angeles County, CA. Cogstone is currently conducting cultural and paleontological resources monitoring during the construction of a five-story multi-family residential building over a one-story garage. Cogstone will prepare a Cultural and Paleontological Resources Monitoring Compliance Report upon the completion of ground disturbance for the project. Sub to Nadeau SH, L.P. Archaeology Supervisor. 2022-*ongoing*

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

KELLY VREELAND
Principal Investigator for Paleontology

EDUCATION

2014 M.S., Geology, California State University, Fullerton (CSUF)
2010 B.S., Geology, CSUF

SUMMARY OF QUALIFICATIONS

Ms. Vreeland is a skilled paleontologist with over 12 years of experience in field paleontology. Her field and laboratory experience includes fieldwork and research projects throughout California and Nevada, as well as conducting fieldwork and surficial geologic mapping in Montana. She has expertise in invertebrate paleontology and paleoecology. Ms. Vreeland was a Paleontology Supervisor at Cogstone from 2020 to 2022 and has supervised projects throughout California, including several Caltrans projects, residential development projects, and industrial development projects. She has authored and co-authored numerous paleontological assessments, mitigation plans, and monitoring compliance reports. Ms. Vreeland is a member of the Society of Vertebrate Paleontology, the Geological Society of America, and the Paleontological Society.

SELECTED EXPERIENCE

Del Amo Circle Apartments Project, City of Torrance, Los Angeles County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources during the construction of a 234,928-square foot, 5-story building with 200 multifamily residential units and on-site facilities, a 169,946-square foot, 6.5-story parking structure with 440 parking spaces, and an amenity deck on the 2.83-acre project site. Maximum depth of ground disturbance was up to eight feet for the apartment building and a minimum of two feet for the parking structure. Cogstone's services included records searches, a Sacred Lands File search, intensive pedestrian cultural and paleontological resources survey, and preparation of a Cultural and Paleontological Assessment Report. The City of Torrance was the lead agency under the California Environmental Quality Act (CEQA). Sub to PlaceWorks. Supervisor. 2022

Dominguez Bike Path, City of Carson, Los Angeles County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources during the proposed construction of a 12-foot wide asphalt bike path located on approximately 1.13 linear miles along the northern embankment of the Macco Channel and along the eastern embankment of the Dominguez Channel within the Los Angeles County Flood Control District right-of-way. Cogstone's services included records searches, a Sacred Lands File search, intensive cultural, paleontological, and built environment surveys, and preparation of a Cultural and Paleontological Resources Assessment Report. One historic built-environment resource, a segment of the Dominguez Channel Levee System, was recorded on California Department of Parks and Recreation (DPR 523) forms and evaluated for historic significance. The assessment report complied with the requirements of CEQA with the City of Long Beach acting as the lead agency. Due to the possible impacts on waterways, the United States Army Corps of Engineers (USACE) requires Project proponents to obtain a Clean Water Act (CWA) Section 404 permit. The USACE was the lead agency under the CWA and Section 106 of the National Historic Preservation Act (NHPA). Sub to Geode Environmental. Supervisor. 2022

Norwalk Civic Center Specific Plan Project, City of Norwalk, Los Angeles County, CA. Cogstone conducted an assessment to determine the potential impacts to archaeological and paleontological resources from the construction of a mixed-use development with residential, commercial, and open space uses in a 13-acre project area. Cogstone's services included records searches, a Sacred Lands File search, intensive pedestrian survey, and preparation of a Cultural and Paleontological Resources Assessment Report. All work was done in compliance with the mitigation measures for the project. The City of Norwalk was the lead agency under CEQA. Sub to Primestor Development. Supervisor. 2022

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

SHANNON LOPEZ
Architectural Historian

EDUCATION

2022 Certificate in Historic Preservation, The Boston Architectural College, Boston
2018 M.A., History (with an emphasis in architecture), California State University, Fullerton
2012 B.A., History, Minor in Asian-Pacific Studies, California State University, Dominguez Hills

SUMMARY QUALIFICATIONS

Ms. Lopez is a qualified architectural historian with over five years of experience who meets or exceeds the Secretary of the Interior's *Standards and Guidelines for Architectural History.* Her experience includes architectural history research and surveys with photo documentation and recording of built environment resources for local and federal projects. She has extensive knowledge with Native American consultation, consultation with local and state historical societies, and in the analysis of primary and secondary sources. Ms. Lopez is acknowledged as an approved Architectural Historian by Caltrans. She is accepted as a Principal Investigator for Architectural History and History by the State Historic Preservation Office (SHPO). Additionally, she is an approved Reader at the Huntington Library by the Los Angeles Office of Historic Resources.

SELECTED EXPERIENCE

Dominguez Bike Path, City of Carson, Los Angeles County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts during the proposed construction of a 12-foot wide asphalt bike path located on approximately 1.13 linear miles along the northern embankment of the Macco Channel and along the eastern embankment of the Dominguez Channel within the Los Angeles County Flood Control District right-of-way. Cogstone's services included records searches, a Sacred Lands File search, intensive cultural, paleontological, and built environment surveys, and preparation of a Cultural and Paleontological Resources Assessment Report. One historic built-environment resource, a segment of the Dominguez Channel Levee System, was recorded on California Department of Parks and Recreation (DPR 523) forms and evaluated for historic significance. The assessment report complied with the requirements of the California Environmental Quality Act (CEQA) with the City of Long Beach acting as the lead agency. Due to the possible impacts on waterways, the United States Army Corps of Engineers (USACE) requires Project proponents to obtain a Clean Water Act (CWA) Section 404 permit. The USACE was the lead agency under the CWA and Section 106 of the National Historic Preservation Act (NHPA). Sub to Geode Environmental. Architectural Historian. 2022

San Gabriel River Commuter Bikeway and Big Dalton Wash Commuter Bikeway, City of Baldwin Park, Los Angeles County, CA. Cogstone conducted a cultural and historic built environment resources assessment to determine the potential impacts to cultural and historical resources for the proposed construction of approximately five miles of new bikeway/pedestrian pathway. Services included pedestrian surveys, records searches, a Sacred Lands File search from the NAHC, preparation of DPR 523 forms, National Register of Historic Places (NRHP) eligibility assessments, and reporting. The project required a Section 408 permit from the USACE due to the proximity of the federally managed San Gabriel River and tributaries. All work was completed in compliance with Section 106 of the NHPA. The City of Baldwin Park acted as lead agency under CEQA. Sub to Infrastructure Engineering Corporation. Architectural Historian. 2020-2021

Character Defining Features (CDF) Assessment for Contributing Buildings and Structures at Marine Corps Recruit Depot Parris Island, SC. Cogstone assessed CDFs for contributing resources to the Mainside Historic District and individually eligible historic properties at Marine Corps Recruit Depot Parris Island, South Carolina. The study was conducted to determine which elements of the buildings and structures of the historic district were CDFs for the elements that are eligible for the NRHP. The assessment satisfied Section 110 of the NHPA and will assist the United States Marine Corps with the management of their historic properties. Prime. Architectural Historian. 2017-2020

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

LOGAN FREEBERG
GIS Supervisor

EDUCATION

2018 Geographic Information Systems (GIS) Certificate, California State University, Fullerton
2003 B.A., Anthropology, University of California, Santa Barbara

SUMMARY OF QUALIFICATIONS

Mr. Freeberg has over 20 years of experience in cultural resource management and has extensive experience in field surveying, data recovery, monitoring, and excavation of archaeological and paleontological resources associated with land development projects in the private and public sectors. He has conducted all phases of archaeological work, including fieldwork, laboratory analysis, research, and reporting. Mr. Freeberg also has a strong grounding in conventional field and laboratory methods and is skilled in the use of ArcGIS.

SELECTED EXPERIENCE

San Gabriel River Commuter Bikeway and Big Dalton Wash Commuter Bikeway, City of Baldwin Park, Los Angeles County, CA. Cogstone conducted a cultural and historic built environment resources assessment to determine the potential impacts to cultural and historical resources for the proposed construction of approximately five miles of new bikeway/pedestrian pathway. Services included pedestrian surveys, records searches, a Sacred Lands File search from the NAHC, preparation of DPR 523 forms, NRHP eligibility assessments, and reporting. The project required a Section 408 permit from the USACE due to the proximity of the federally managed San Gabriel River and tributaries. All work performed complied with Section 106 of the NHPA. The City of Baldwin Park acted as lead agency under CEQA. Sub to Infrastructure Engineering Corporation. GIS Supervisor. 2020-2021

Los Angeles World Airports (LAWA) Ongoing Technical Support for Environmental, Mitigation Reporting, and Sustainability Issues Associated with LAWA Construction Projects, LAX, Los Angeles County, CA. Cogstone conducted cultural and paleontological resources monitoring during proposed consolidation and modernization of existing facilities. The project involved redeveloping multiple facilities including hangars and associated structures for Delta Airlines and United Airlines, among others. Upon completion of monitoring, Cogstone prepared Cultural and Paleontological Resources Monitoring Compliance Reports. The City of Los Angeles acted as lead agency under CEQA. Sub to CDM Smith. GIS Supervisor. 2020-2021

141st and Normandie Townhomes Project, City of Gardena, Los Angeles County, CA. Cogstone identified and evaluated the potential impacts to cultural, historic built environment, and paleontological resources for the proposed construction of 50 new, three-story townhomes, which will range in size from 1,252 to 1,689 square feet. Services included pedestrian survey, built environment evaluation, records searches, Sacred Lands File search from the NAHC, background research, and reporting. The City of Gardena acting as lead agency under CEQA. Sub to De Novo Planning. GIS Supervisor. 2020

Prologis Vermont Avenue and Redondo Beach Industrial Project, City of Los Angeles, Los Angeles County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources during proposed construction of an industrial center, 223 automobile parking spaces, 32 bicycle parking spaces, 36 high truck loading positions, and parking stalls for truck trailers. Services included records searches, pedestrian survey, Sacred Lands File search from the NAHC, background research, and reporting. The City of Los Angeles acted as the lead agency under CEQA. Sub to PlaceWorks. GIS Supervisor. 2019-2020

Bell Gardens Water Reservoir Project, City of Bell Gardens, Los Angeles County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources during improvements which included a new two-million-gallon reservoir, booster pump station, well to be drilled, and other components. Services included record searches, Sacred Lands File search from the Native American Heritage Commission, and an intensive-pedestrian survey of the 1.7-acre project area. Sub to Infrastructure Engineers. GIS Supervisor. 2019-2020

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

MOLLY VALASIK
Principal Archaeologist

EDUCATION

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

SUMMARY QUALIFICATIONS

Ms. Valasik serves as Cogstone's CEO and CFO and helps guide the vision and direction of Cogstone. She has been with the company since 2009 and has helped transition Cogstone from sole ownership to multiple owners with an active board of directors. Ms. Valasik is a Registered Professional Archaeologist (RPA) with more than 15 years of experience. She is a skilled professional who is well-versed in the compliance procedures of the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), and Sections 106 and 110 of the National Historic Preservation Act (NHPA) and regularly prepares cultural resources assessment reports for a variety of federal, state, and local agencies throughout California. Ms. Valasik has managed a variety of projects at Cogstone in the water, transportation, energy, development, and federal sectors. She meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*. She is accepted as a Principal Investigator for prehistoric archaeology by the State Historic Preservation Office (SHPO) and is listed as a Principal Investigator on Cogstone's Bureau of Land Management (BLM) Cultural Resource Use Permit (CRUP).

SELECTED PROJECTS

Norwalk Civic Center Specific Plan Project, City of Norwalk, Los Angeles County, CA. Cogstone conducted an assessment to determine the potential impacts to archaeological and paleontological resources from the construction of a mixed-use development with residential, commercial, and open space uses in a 13-acre project area. Cogstone's services included records searches, a Sacred Lands File search, intensive pedestrian survey, and preparation of a Cultural and Paleontological Resources Assessment Report. All work was done in compliance with the mitigation measures for the project. The City of Norwalk was the lead agency under CEQA. Sub to Primestor Development. Project Manager. 2022

San Gabriel River Commuter Bikeway and Big Dalton Wash Commuter Bikeway, City of Baldwin Park, Los Angeles County, CA. Cogstone conducted a cultural and historic built environment resources assessment to determine the potential impacts to cultural and historical resources for the proposed construction of approximately five miles of new bikeway/pedestrian pathway. Services included pedestrian surveys, records searches, a Sacred Lands File search, preparation of California Department of Parks and Recreation 523 (DPR 523) forms, National Register of Historic Places (NRHP) eligibility assessments, and reporting. The project required a Section 408 permit from the United States Army Corps of Engineers due to the proximity of the federally managed San Gabriel River and tributaries. All work was completed in compliance with Section 106 of the NHPA. The City of Baldwin Park acted as lead agency under CEQA. Sub to Infrastructure Engineering Corporation. Project Manager and Principal Archaeologist. 2020-2021

City of Whittier, Whittier Boulevard/Three Intersections Project, City of Whittier, Los Angeles County, CA. The project involved improvements to three intersections (Colima Road, Santa Fe Springs Road, and Painter Avenue) along Whittier Boulevard to reduce delays and improve operations. Cogstone's services included cultural and paleontological resources record searches, a Sacred Lands File search, an intensive pedestrian survey, and the preparation of separate Cultural and Paleontological Resources Assessment Reports. Ultimately, the report was used for CEQA compliance with the City of Whittier acting as the CEQA lead agency. Sub to V&A Consulting, Inc. Principal Investigator for Archaeology. 2016-2018

APPENDIX B. PALEONTOLOGICAL RECORD SEARCH

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

tel 213.763.DINO
www.nhm.org

Research & Collections

e-mail: paleorecords@nhm.org

July 23, 2023

Cogstone

Attn: Logan Freeberg

re: Paleontological resources for the Lomita General Plan Update Project

Dear Logan:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the Lomita General Plan Update project area as outlined on the portion of the Torrance USGS topographic quadrangle map that you sent to me via e-mail on July 20, 2023. We have one fossil locality in the collections of the Natural History Museum of Los Angeles County (NHMLA) that may lie within the proposed project area:

Locality Number	Location	Formation	Taxa	Depth
LACM VP 3249	Lomita, general locality number for specimens without locality data from the area	Unknown formation (Pleistocene)	Mastodon (*Mammut*), Bison (*Bison*), Camel (*Camelops, Tanupolama*), sea lion (*Eumetopias*), ground sloth (*Megalonyx*), horse (*Equus*), tapir (Tapirus); Loon (*Gavia*), grebe (*Achmophorous*), sea duck (*Chendytes*), teleost fish, and other unspecified vertebrates; invertebrate rich sand lenses common	Unknown (many collected from sand pit operations)

VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface

The following table shows the closest additional localities in the collection of the NHMLA to the Project area.

Locality Number	Location	Formation	Taxa	Depth
LACM VP 3200	Long View Dr. in Green Hills Memorial Park	Unknown formation (conglomerate overlying Lomita Marl)	Bison (*Bison*), ground sloth (*Paramylodon*)	250 feet above mean sea level
LACM IP 146;	"Chandler's Lime	Lomita Marl	Invertebrates: Dwarf turbans	Unknown

42754 - 42759	Pit"; Linden Chandler Preserve		(*Homalopoma luridum*), scallop (*Chlamys opuntia*), venus clam (*Saxidomus nuttali, Globivenus fordi*), horse clam (*Tresus nuttali*), carditid (*Glans carpenteri*), bittersweet (*Glycymeris septentrionalis*), turban snail (*Chlorostoma funebrals*), moon snail (Naticidae), cockle (*Nemocardium centifilosum*), lucines (*Epilucina californica*), whelk (*Kelletia kelleti*), murex snail (*Acanthinucella spirata*), and other unsorted specimens	
LACM IP 31443, 23773	Lomita Quarry, Pennsylvania Avenue*	Lomita Marl	Invertebrates (*Mitrella, Turritella, Glans, Epilucina, Cyclocardia*)	Unknown
LACM IP 31444	Sidebothom Sand Pit, Pennsylvania Ave, north of Lomita Quarry	San Pedro Sand	Invertebrates (*Nemocardium, Nutricola, Acila, Epilucina, Caesia, Cryptonatica, Turritella, Turbonilla, Boeotrophon, Mitrella, Cyclocardia*)	Unknown
LACM VP 3268	East side of Gaffey Street at the northern end of the Union Oil refinery	San Pedro Sand	Elephant clade (Proboscidea)	Unknown
LACM VP 4205	West side of Gaffey Street due west of southern most oil sump of Union Refinery	Palos Verdes Sand	Horse (*Equus*)	Unknown
LACM VP 3085	intersection of Lomita Blvd & Main St	Palos Verdes Sand	Fish (Condrichthyes); Rays (Myliobatoidea); Toothed whale (Odontoceti); Inertebrates (Mollusca)	Unrecorded (collected during excavations for sewer outfall)
LACM VP 3823	SE corner of Figueroa St & Sepulveda Blvd	Unidentified (Pleistocene; grey buff arenaceous silt)	Camel family (Camelidae)	12-14 feet bgs

VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface
**Woodring, Bramlette, and Kew.1946.*

This records search covers only the records of the NHMLA. It is not intended as a paleontological assessment of the project area for the purposes of CEQA or NEPA. Potentially fossil-bearing units are present in the project area, either at the surface or in the subsurface. As such, NHMLA recommends that a full paleontological assessment of the project area be conducted by a paleontologist meeting Bureau of Land Management or Society of Vertebrate Paleontology standards.

Sincerely,

Alyssa Bell

Alyssa Bell, Ph.D.

Natural History Museum of Los Angeles County

enclosure: invoice

APPENDIX C. HISTORICAL SOCIETIES CONSULTATION

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

September 7, 2023 (2ad attempt: August 22, 2023)

Lomita Historical Society
Post Office Box 1393
Lomita, CA 90717

RE: Request for information for the Cultural Resources Assessment for the Lomita General Plan Update Project, City of Lomita, Los Angeles County, California

To Whom It May Concern:

As a sub-consultant, Cogstone Resource Management (Cogstone) is conducting a cultural resources assessment for the City of Lomita General Plan Update Project (Project) located in the City of Lomita, Los Angeles County, California.

The Project involves a comprehensive update to the City's existing General Plan with new comprehensive Zoning Code and Zoning Map with illustrated community design standards and guidelines for single-family and multiple-family residential, commercial, and mixed-use developments.

We are contacting you because we would like to invite members of the Lomita Historical Society to provide input regarding this Project. We appreciate any information regarding the history of the City of Lomits and any significant historical resources you are awire of, as well as any comments, issues, and/or concerns relating to the history of the Project area. Please contact me at slopez@cogstone.com or at (714) 974-8300. Thank you for your attention to this matter.

Sincerely,

Shannon Lopez

Shannon Lopez, M.A.
Architectural Historian
(714) 974-8300 x.108
slopez@cogstone.com

1518 West Taft Avenue
Orange, CA 92865
Office (714) 974-8300

Branch Offices
San Diego – Riverside – Morro Bay – Sacramento

cogstone.com
Toll free (888) 333-3212

Federal Certifications EDWOSB, SDB
State Certifications DBE, WBE, UDBE

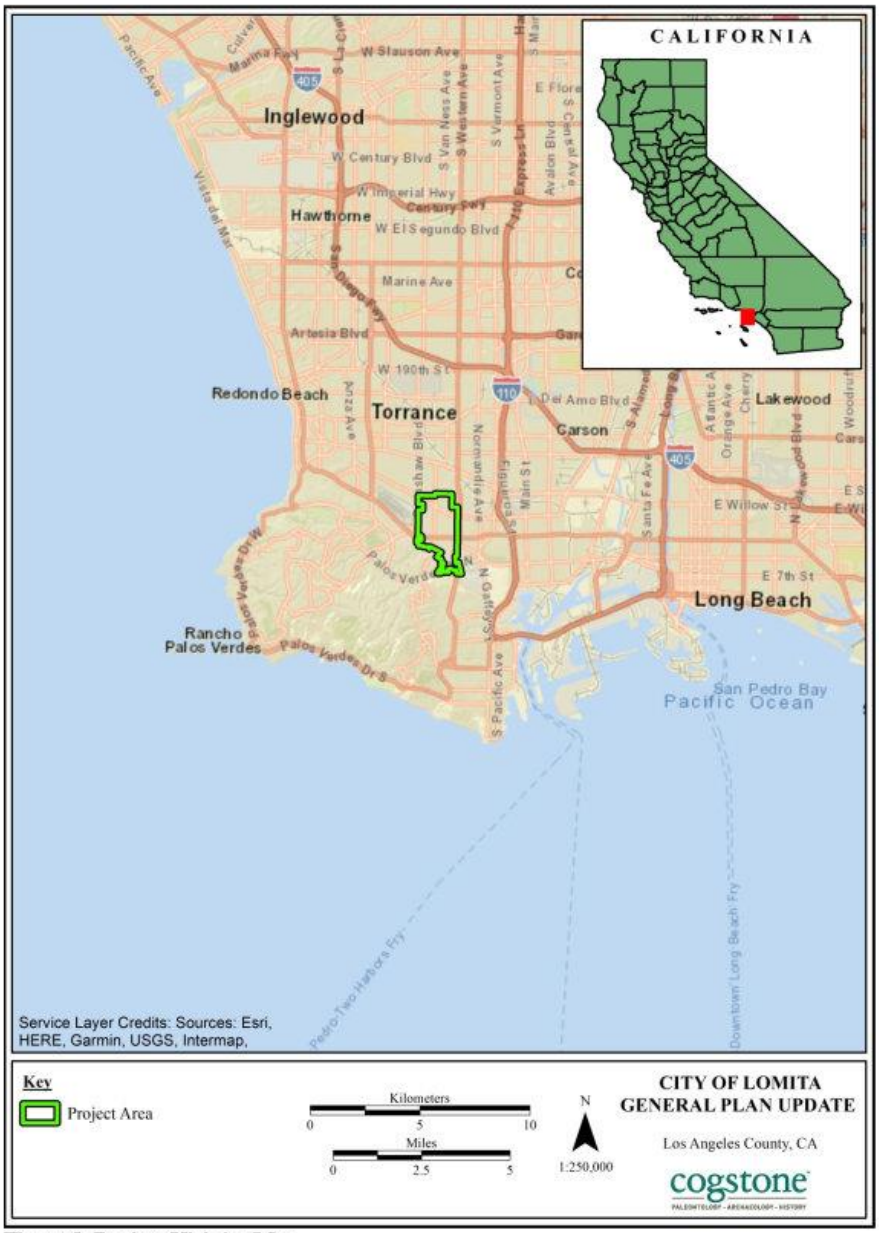


Figure 1. Project Vicinity Map

cogstone.com

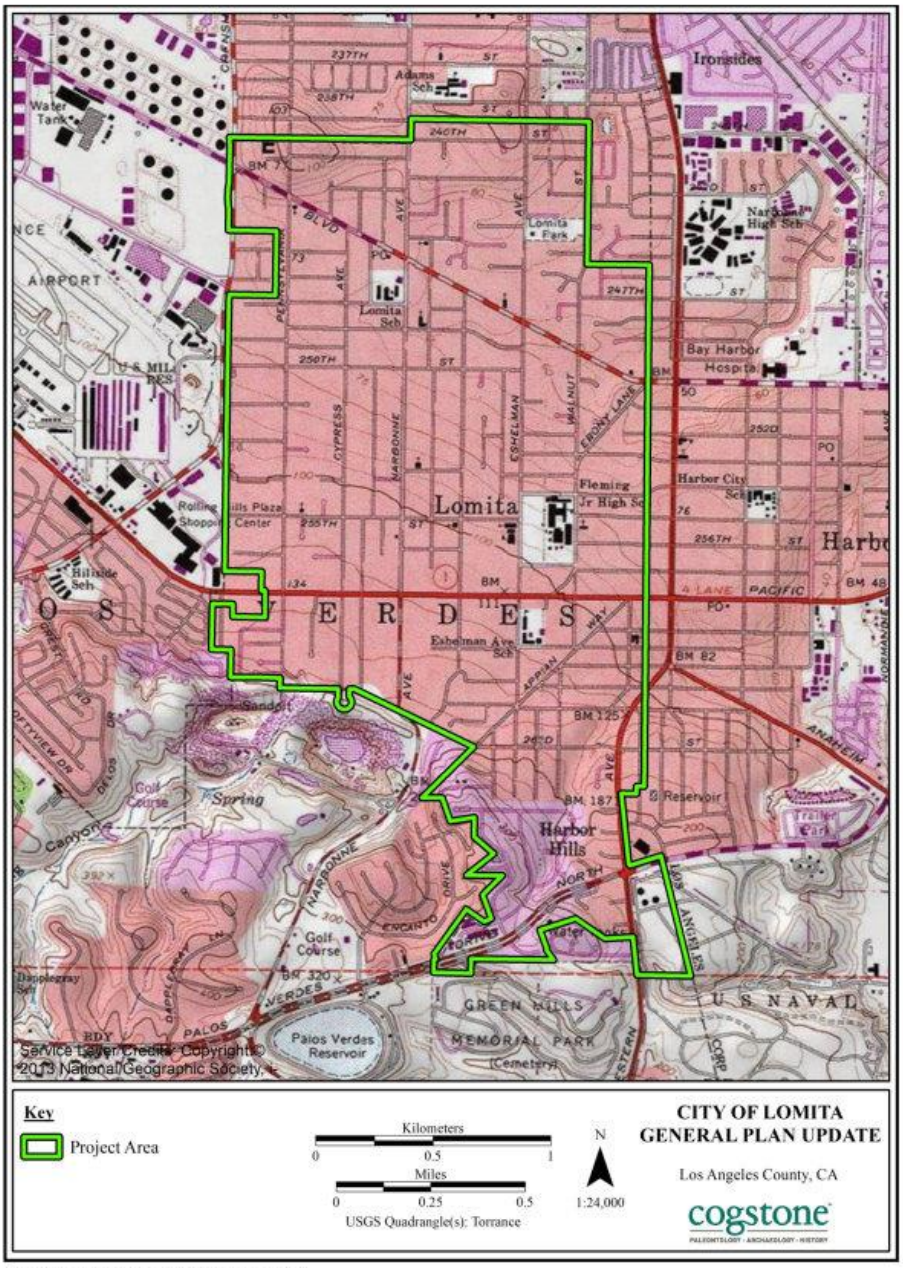


Figure 2. Project Location Map

cogstone.com

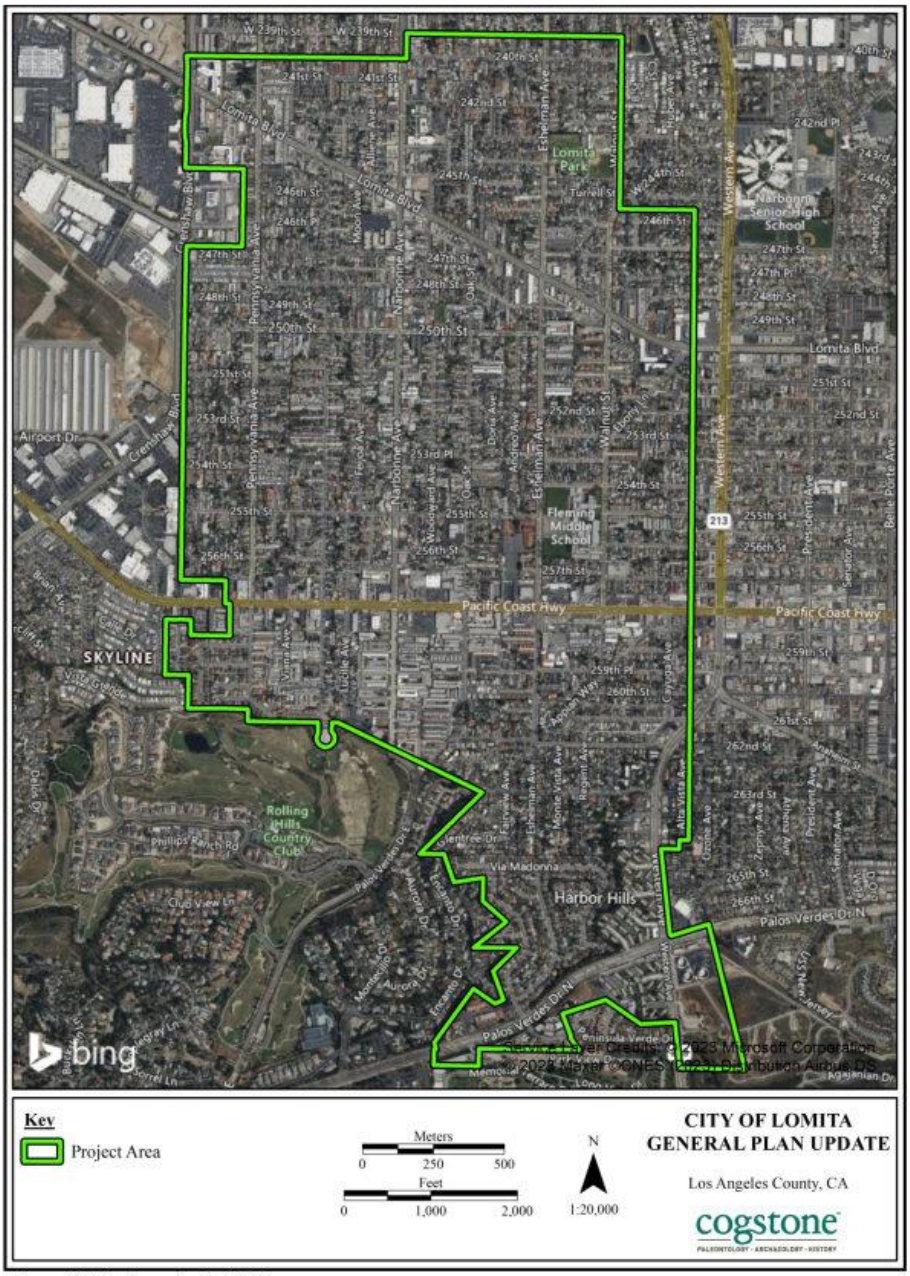


Figure 3. Project Aerial Map

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

September 7, 2023 (2nd attempt: August 22, 2023)

Lomita Railroad Museum
2137 West 250th Street
Lomita, CA 90717

RE: Request for information for the Cultural Resources Assessment for the Lomita General Plan Update Project, City of Lomita, Los Angeles County, California

To Whom It May Concern:

As a sub-consultant, Cogstone Resource Management (Cogstone) is conducting a cultural resources assessment for the City of Lomita General Plan Update Project (Project) located in the City of Lomita, Los Angeles County, California.

The Project involves a comprehensive update to the City's existing General Plan with new comprehensive Zoning Code and Zoning Map with illustrated community design standards and guidelines for single-family and multiple-family residential, commercial, and mixed-use developments. To assist in this Project, Cogstone is compiling and reviewing all relevant archival records, historic maps, aerial photographs and other sources to ascertain the status of the City of Lomita's historic resources.

We are contacting you because we would like to invite members of the Lomita Railroad Museum to provide input regarding this Project. We would appreciate any questions, comments, corrections, or recommendations to these lists as we endevore to provide the City with the most up to date information regarding historic resources. Please contact me at slopez@cogstone.com or at (714) 974-8300. Thank you for your attention to this matter.

Sincerely,

Shannon Lopez

Shannon Lopez, M.A.
Architectural Historian
(714) 974-8300 x.108
slopez@cogstone.com

1518 West Taft Avenue
Orange, CA 92865
Office (714) 974-8300

Branch Offices
San Diego - Riverside - Morro Bay - Sacramento

cogstone.com
Toll free (888) 333-3212

Federal Certifications EDWOSB, SDB
State Certifications DBE, WBE, UDBE

BUILT ENVIRONMENT RESOURCE DIRECTORY (BERD)
Eshelman Avenue Elementary School (Property Number: 97751)
Location: 25902 Eshelman Avenue
Description: Built in 1923, this historic resource is currently assigned the California Historic Resource Status Code 2S2 (Individual property determined eligible for National Register by consensus through Section 106 process. Listed in the California Register.).

Harbor Hills Housing Project (Property Number: 103214)
Located: 26607 Western Avenue
Description. Built in 1940-1941, the Harbor Hills Housing Project is a Mid-Century Modern styled multi-family residence. This facility represents the second public housing project constructed by the Los Angeles County Housing Authority during the Great Depression/pre-war era (SBRA ca. 1996). This historic resource is currently assigned the California Historic Resource Status Code 2S2 (Individual property determined eligible for National Register by consensus through Section 106 process. Listed in the California Register.).

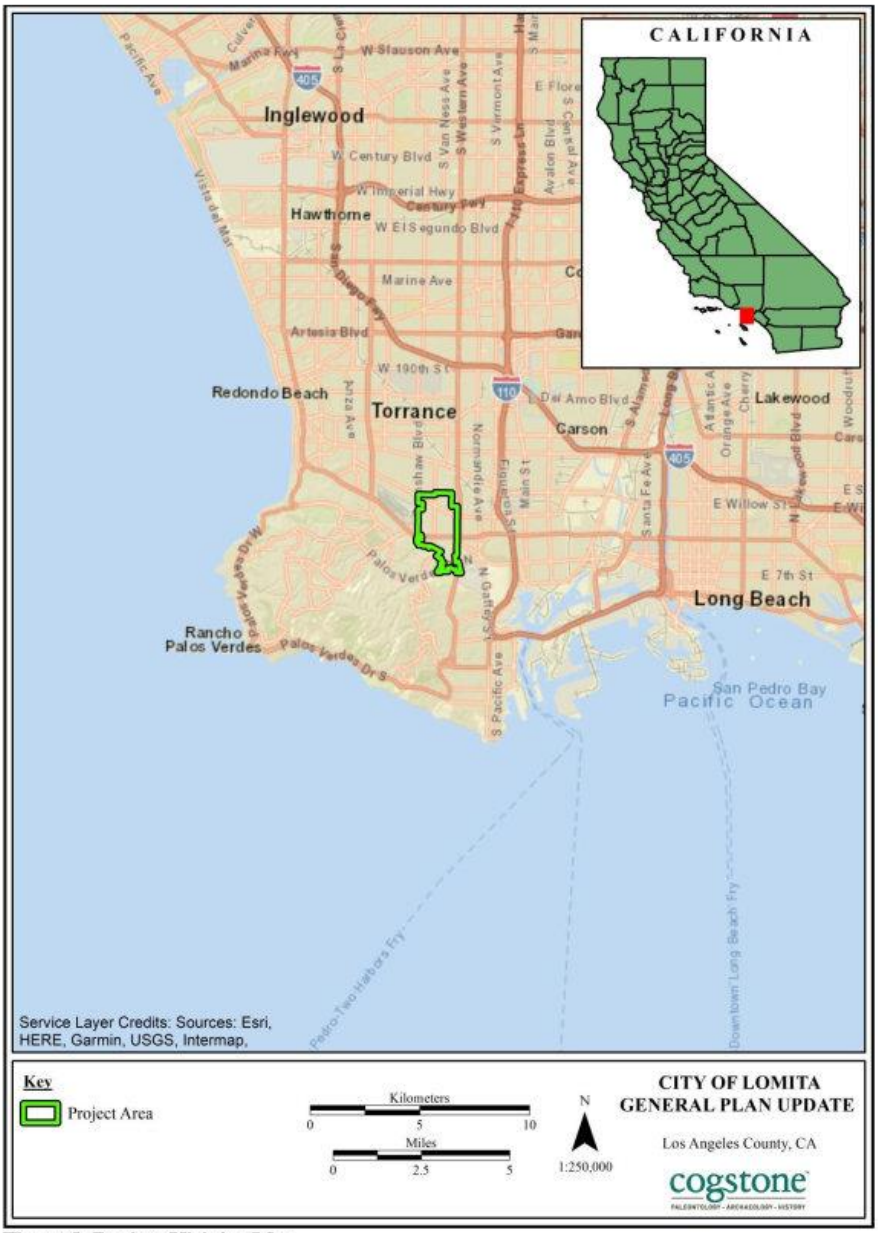


Figure 1. Project Vicinity Map

cogstone.com

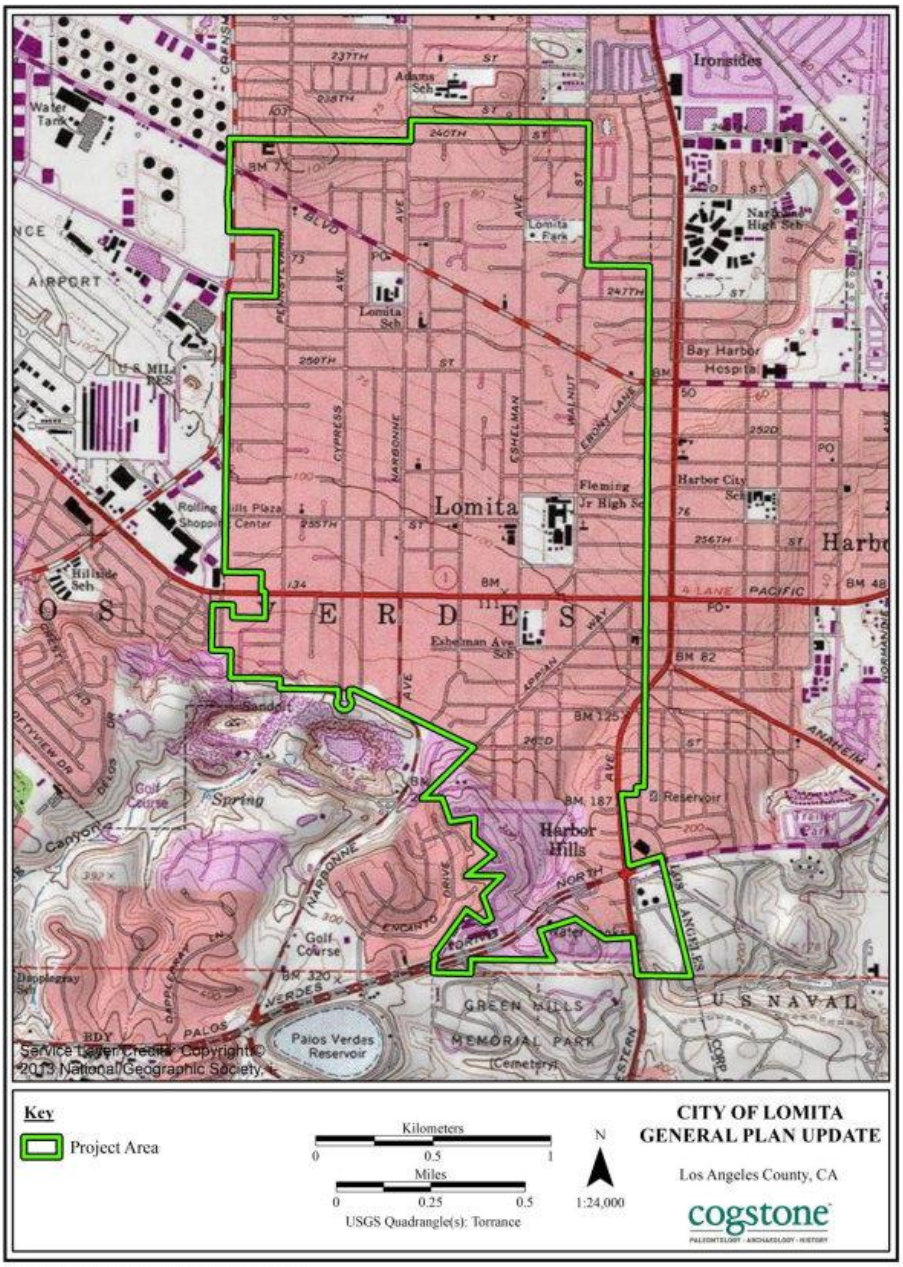


Figure 2. Project Location Map

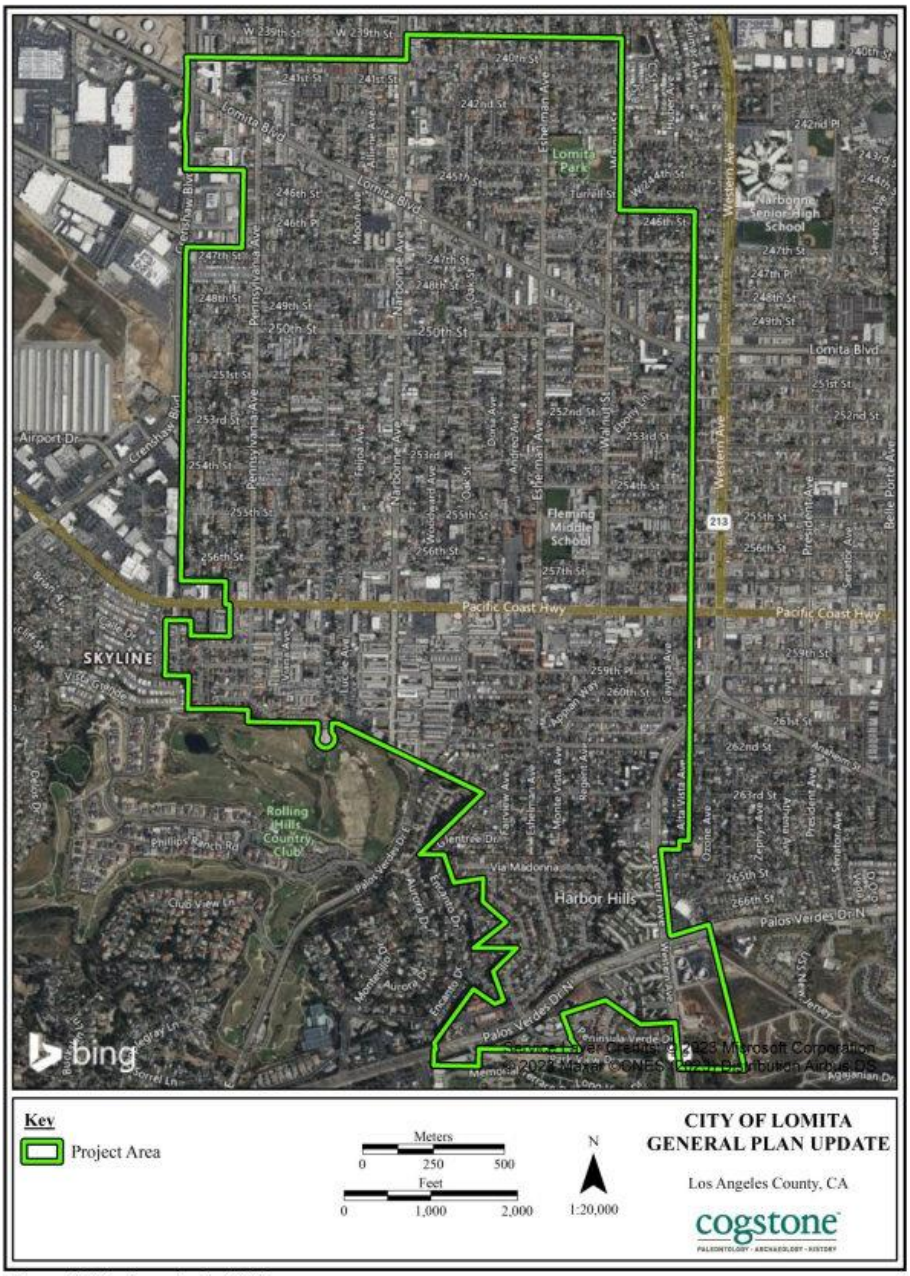


Figure 3. Project Aerial Map

cogstone.com

BUILT ENVIRONMENT RESOURCE DIRECTORY (BERD)
California Historical Resource Status Codes

2S2 Individual property determined eligible for National Register by a consensus through Section 106 process. Listed in the California Register.

6Y Determined ineligible for National register by consensus through Section 106 process- Not evaluated for California or Local Listing.

7R Identified in Reconnaissance Level Survey: Not evaluated.

Primary Number (P-19)	OTIS ID	Property Number	Name	St. Number	St. Name	City	County	Zip	Evaluation Info	Construction Year(s)
	491860	95247		2325	243rd St	Lomita	Los Angeles		6Y, 09/19/1994, HUD940429S	1924
	477280	77443		2324	247th St	Lomita	Los Angeles		6Y, 08/10/1992, HUD920701B | 6Y, 08/31/1993, HUD920422F | 6Y, 08/31/1993, HUD920629T	1923
	483064	84771		2334	247th St	Lomita	Los Angeles	90717	6Y, 01/05/1995, HUD940328AG | 6Y, 11/22/1993, HUD930920d	1940
	490941	94105		2237	248th St	Lomita	Los Angeles	90717	6Y, 03/28/1994, HUD940328AB	1933
178677	431912	29357		1913	253rd St	Lomita	Los Angeles	90717	7R, 0717-0003-0000	1926
	491859	95246		1825	260th St	Lomita	Los Angeles		6Y, 09/19/1994, HUD940429R	1928
	467443	65263	Residence	253	3rd St	Lomita	Los Angeles		6Y, 07/30/1987, HUD870702D	
	480238	81537		25930	Cayuga Ave	Lomita	Los Angeles	90717	6Y, 01/13/1993, HUD871027C	1928
	480352	81651		24817	Cypress St	Lomita	Los Angeles		6Y, 10/30/1989, HUD871027C	1925
	493531	97751	Eshelman Avenue Elementary School	25902	Eshelman Ave	Lomita	Los Angeles		2S2, 04/28/1994, DOE-19-94-0460-C000 | 2S2, 04/28/1994, HRG940202Z	1923

cogstone.com

Primary Number (P-19)	OTIS ID	Property Number	Name	St. Number	St. Name	City	County	Zip	Evaluation Info	Construction Year(s)
	574931	125511		24802	Oak St	Lomita	Los Angeles	90717	6Y, 10/06/1997, DOE-19-97-0230-C000 | 6Y, 10/06/1997, HUD971006G	1920
	467209	65017	Residence	26203	Ocean View Ave	Lomita	Los Angeles		6Y, 12/31/1986, HUD861203D	
178675	431910	29355		26203	Ocean View Ave	Lomita	Los Angeles	90717	7R, , 0717-0001-0000	1922
	539343	158397	Bartlett Motel	2364	Pacific Coast Sr	Lomita	Los Angeles	90717	6Y, 01/18/2006, FCC060106F	1953
	549829	147978			Palos Verdes Dr	Lomita	Los Angeles		6Y, 12/17/2003, DOE-19-03-0448-C000 | 6Y, 12/17/2003, FCC031029D	
	482609	85001		24914	Pennsylvania Ave	Lomita	Los Angeles		6Y, 12/14/1993, HUD931101J	1930
	482259	83879		2017	W 242nd St	Lomita	Los Angeles		6Y, 08/26/1993, HUD911015K	1910
	482206	83803		2033	W 242nd St	Lomita	Los Angeles		6Y, 08/24/1993, HUD910630bb	1925
	480372	81671		2257	W 248th St	Lomita	Los Angeles		6Y, 10/30/1989, HUD871027C	1924
	482134	83725		1844	W 256th St	Lomita	Los Angeles		6Y, 08/18/1993, HUD901231C	1927
	482181	83778		1825	W 260th St	Lomita	Los Angeles		6Y, 08/24/1993, HUD910630Y	1928
	467263	65072	Residence	1823	W 261st St	Lomita	Los Angeles		6Y, 03/13/1987, HUD870313A	
	480241	81540		1931	W 262nd St	Lomita	Los Angeles	90717	6Y, 01/13/1993, HUD871027C	1940
	497492	103214	Harbor Hills Housing Project	26607	Western Ave	Lomita	Los Angeles		2S2, 08/29/1996, HUD960619F	1940-1941
	482343	83964		25408	Woodward Ave	Lomita	Los Angeles		6Y, 08/31/1993, HUD920408F	1915

cogstone.com

Primary Number (P-19)	OTIS ID	Property Number	Name	St. Number	St. Name	City	County	Zip	Evaluation Info	Construction Year(s)
	482169	83763		25921	Hillworth Ave	Lomita	Los Angeles		6Y, 08/20/1993, HUD910331N	1935
	574891	125471		2201	Lomita Blvd	Lomita	Los Angeles	90717	6Y, 02/16/2000, DOE-19-00-0147-C000 | 6Y, C2/16/2000, HUD000216G	1923
	574892	125472		2209	Lomita Blvd	Lomita	Los Angeles	90717	6Y, 02/16/2000, DOE-19-00-0148-C000 | 6Y, C2/16/2000, HUD000216G	1923
	574893	125473		2211	Lomita Blvd	Lomita	Los Angeles	90717	6Y, 02/16/2000, DOE-19-00-0149-C000 | 6Y, C2/16/2000, HUJUD000216G	1936
	574894	125474		2213	Lomita Blvd	Lomita	Los Angeles	90717	6Y, 02/16/2000, DOE-19-00-0150-C000 | 6Y, C2/16/2000, HUD000216G	1936
	479879	81127		24215	Lomita Dr	Lomita	Los Angeles	90717	6Y, 01/13/1993, HUD871027C | 6Y, 08/31/1993, HUD920408G | 6Y, 12/07/1992, HUD921103K	1927
	467529	65352	Residence	25608	Lucille Ave	Lomita	Los Angeles		6Y, 09/14/1987, HUD870817I	
178676	431911	29356		25608	Lucille Ave	Lomita	Los Angeles	90717	7R, 0717-0002-0000	1930
	574852	125318		24509	Narbonne Ave	Lomita	Los Angeles	90717	6Y, 02/16/2000, DOE-19-00-0145-C000 | 6Y, C2/16/2000, HUD000216G	1923
	574853	125319		24519	Narbonne Ave	Lomita	Los Angeles	90717	6Y, 02/16/2000, DOE-19-00-0146-C000 | 6Y, C2/16/2000, HUD000216G	1923

cogstone.com

APPENDIX D. NATIVE AMERICAN CONSULTATION

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Lomita General Plan Update Project

County: Los Angeles

USGS Quadrangle Name: Torrance 7.5'

Township: 4S **Range:** 14W **Section(s):** 25, 26, 27, 34, 35, 36

Township: 5S **Range:** 14W **Section(s):** 1, 2

Company/Firm/Agency: Cogstone Resource Management

Street Address: 1518 W. Taft Ave.

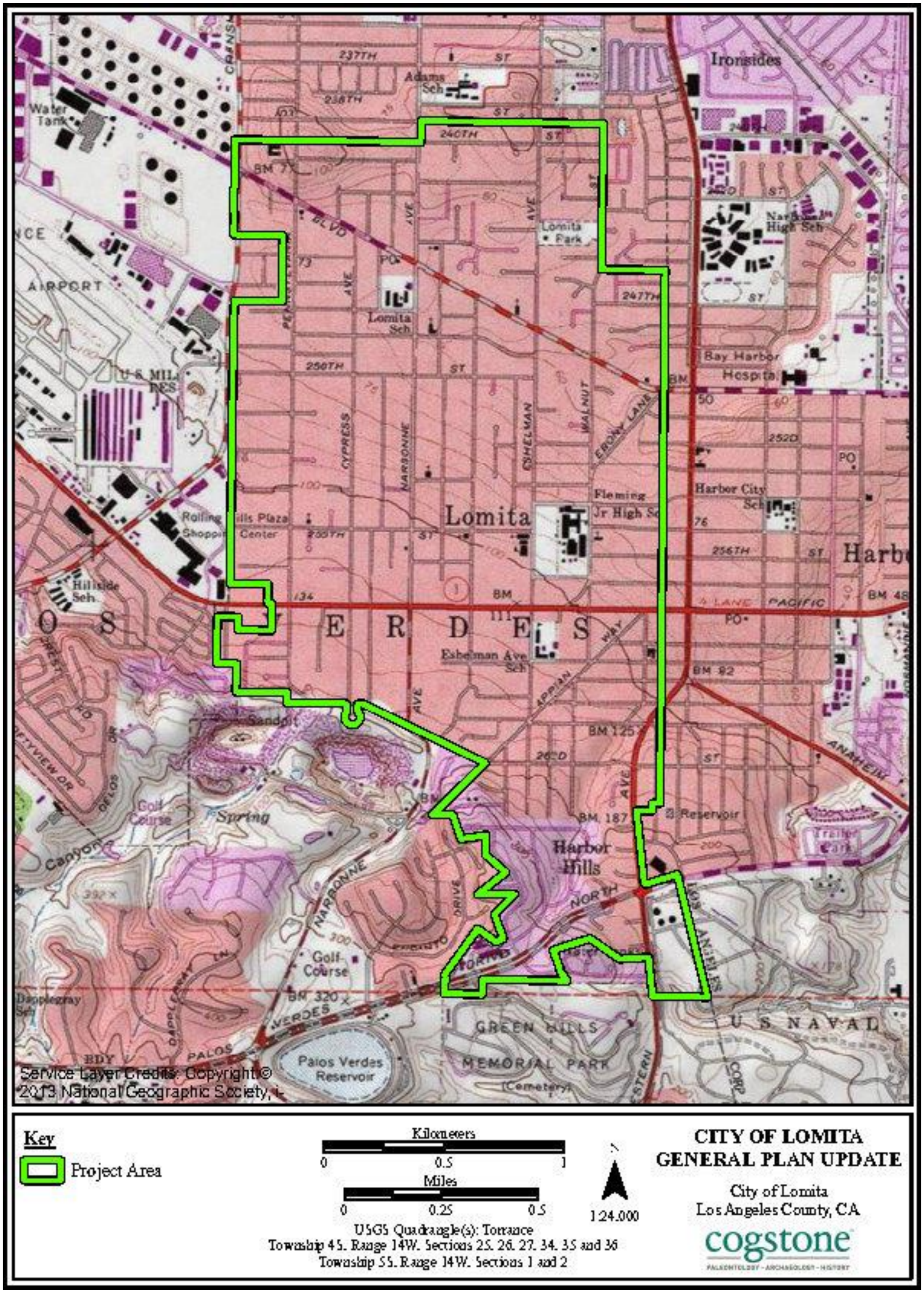
City: Orange **Zip:** 92865

Phone: 714-974-8300

Fax: 714-974-8303

Email: cogstoneconsult@cogstone.com

Project Description:
The Project involves a comprehensive update to the City's existing General Plan with new comprehensive Zoning Code and Zoning Map with illustrated community design standards and guidelines for single-family and multiple-family residential, commercial, and mixed-use developments. Environmental review and clearance in compliance with the California Environmental Quality Act (CEQA) will be required for the Project.


Ironsides
Adams Sch
Lomita Park
Lomita Sch
Bay Harbor Hospital
Harbor City Sch
Fleming Jr High Sch
Lomita
Eshelman Ave Sch
Rolling Hills Plaza Shopping Center
Hillside Sch
AIRPORT
Harbor Hills
Reservoir
Golf Course
Palos Verdes Reservoir
GREEN HILLS MEMORIAL PARK (Cemetery)
U S NAVAL
Service Layer Credits: Copyright:© 2013 National Geographic Society, i-
Key
Project Area
Kilometers
0 0.5 1
Miles
0 0.25 0.5
1:24,000
USGS Quadrangle(s): Torrance
Township 4S. Range 14W. Sections 25, 26, 27, 34, 35 and 36
Township 5S. Range 14W. Sections 1 and 2
CITY OF LOMITA
GENERAL PLAN UPDATE
City of Lomita
Los Angeles County, CA
cogstone

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

ACTING CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Sara Dutschke
Miwok

COMMISSIONER
Isaac Bojorquez
Chlone-Costanoan

COMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

COMMISSIONER
Wayne Nelson
Luiseño

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Vacant

COMMISSIONER
Vacant

COMMISSIONER
Vacant

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok, Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

July 11, 2023

Cogstone Resource Management

Via Email to: cogstoneconsult@cogstone.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Lomita General Plan Update Project, Los Angeles County

To Whom It May Concern:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, [Pub. Resources Code §21084.3 (a)] ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measures.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

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

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Table D-1. Native American Heritage Commission Contact List[7]

Tribe Name	Contact Person	Cultural Affiliation	Counties	Last Updated
Gabrieleño Band of Mission Indians – Kizh Nation	Christina Swindall Martinez, Secretary	Gabrieleño	Los Angeles, Orange, Riverside, San Bernardino, Santa Barbara, Ventura	6/12/2023
Gabrieleño Band of Mission Indians – Kizh Nation	Andrew Salas, Chairperson	Gabrielino	Los Angeles, Orange, Riverside, San Bernardino, Santa Barbara, Ventura	6/12/2023
Gabrieleño/Tongva San Gabriel Band of Mission Indians	Anthony Morales, Chairperson	Gabrieleño	Los Angeles, Orange, Riverside, San Bernardino, Ventura	
Gabrielino /Tongva Nation	Sandonne Goad, Chairperson	Gabrielino	Los Angeles, Orange, Riverside, San Bernardino, Ventura	3/28/2023
Gabrielino Tongva Indians of California Tribal Council	Robert Dorame, Chairperson	Gabrielino	Los Angeles, Orange, Riverside, San Bernardino, Santa Barbara, Ventura	3/16/2023
Gabrielino Tongva Indians of California Tribal Council	Christina Conley, Cultural Resource Administrator	Gabrielino	Los Angeles, Orange, Riverside, San Bernardino, Santa Barbara, Ventura	3/16/2023
Gabrielino-Tongva Tribe	Sam Dunlap, Cultural Resource Director	Gabrielino	Los Angeles, Orange, Riverside, San Bernardino, Ventura	5/30/2023
Gabrielino-Tongva Tribe	Charles Alvarez, Chairperson	Gabrielino	Los Angeles, Orange, Riverside, San Bernardino, Ventura	5/30/2023
Santa Rosa Band of Cahuilla Indians	Lovina Redner, Tribal Chair	Cahuilla	Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego	
Soboba Band of Luiseno Indians	Joseph Ontiveros, Cultural Resource Department	Cahuilla Luiseno	Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego	
Soboba Band of Luiseno Indians	Isaiah Vivanco, Chairperson	Cahuilla Luiseno	Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego	

[7] 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 Resources Code and section 5097.98 of the Public Resources Code.
This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Lomita General Plan Update Project, Los Angeles County.

Table D-2. Native American consultation log

Tribe Name	Contact Person	Cultural Affiliation	Date(s) and Method of First Contact Attempt	Date(s) and Method of Second Attempt	Date(s) and Method of Third Attempt	Date(s) of Replies Rec'd	Comments
Gabrieleño Band of Mission Indians - Kizh Nation	Christina Swindall Martinez, Secretary	Gabrieleño	USPS certified mail, 12/18/2023	electronic mail, 12/22/2023	telephone call, 12/27/2023		Voice message could not be left
Gabrieleño Band of Mission Indians - Kizh Nation	Andrew Salas, Chairperson	Gabrieleño	USPS certified mail, 12/18/2023	electronic mail, 12/22/2023	telephone call, 12/27/2023		Voice message could not be left
Gabrieleño/Tongva San Gabriel Band of Mission Indians	Anthony Morales, Chairperson	Gabrieleño	USPS certified mail, 12/18/2023	electronic mail, 12/22/2023	telephone call, 12/27/2023		Voice message left
Gabrielino /Tongva Nation	Sandonne Goad, Chairperson	Gabrielino	USPS certified mail, 12/18/2023	electronic mail, 12/22/2023	telephone call, 12/27/2023		Voice message left
Gabrielino Tongva Indians of California Tribal Council	Robert Dorame, Chairperson	Gabrielino	USPS certified mail, 12/18/2023	electronic mail, 12/22/2023	telephone call, 12/27/2023		Voice message could not be left
Gabrielino Tongva Indians of California Tribal Council	Christina Conley, Cultural Resource Administrator	Gabrielino	USPS certified mail, 12/18/2023	electronic mail, 12/22/2023	telephone call, 12/27/2023		Voice message left
Gabrielino-Tongva Tribe	Sam Dunlap, Cultural Resource Director	Gabrielino	USPS certified mail, 12/18/2023	electronic mail, 12/22/2023	telephone call, 12/27/2023		Voice message left
Gabrielino-Tongva Tribe	Charles Alvarez, Chairperson	Gabrielino	USPS certified mail, 12/18/2023	electronic mail, 12/22/2023	telephone call, 12/27/2023		Voice message left
Santa Rosa Band of Cahuilla Indians	Lovina Redner, Tribal Chair	Cahuilla	USPS certified mail, 12/18/2023	electronic mail, 12/22/2023	telephone call, 12/27/2023		Voice message left
Soboba Band of Luiseno Indians	Joseph Ontiveros, Cultural Resource Department	Cahuilla Luiseno	USPS certified mail, 12/18/2023	electronic mail, 12/22/2023	telephone call, 12/27/2023		Voice message left
Soboba Band of Luiseno Indians	Isaiah Vivanco, Chairperson	Cahuilla Luiseno	Certified letter, 12/18/2023	email, 12/22/2023	telephone call, 12/27/2023		Voice message left

CITY COUNCIL

BILL UPHOFF
MARK A. WARONEK
JAMES GAZELEY
CINDY SEGAWA
BARRY WAITE

ADMINISTRATION

CITY MANAGER
RYAN SMOOT

CITY OF LOMITA

[MONTH, DAY, YEAR]

[FIRST LAST]
[TRIBE]
[TITLE/ROLE]
[ADDRESS, STREET]
[CITY, CA, ZIP]

RE: Senate Bill 18 (SB18) and Assembly Bill 52 (AB 52) Consultation Request for the Lomita General Plan Update Project, City of Lomita, Los Angeles County, California

[TITLE & LAST NAME]:

The City of Lomita (City) proposes to prepare a comprehensive update to its existing General Plan along with a Zoning Code Update to implement the General Plan and create consistency between the Land Use Map and the Zoning Code, and to prepare Objective Design Standards (Project). The City is located in the South Bay area in south Los Angeles County (see Figure 1). The City borders Torrance to the north and west, Rolling Hills Estates to the southwest, Rancho Palos Verdes to the southeast, and Los Angeles (Harbor City neighborhood) to the east. Specifically, the City is located on the *Torrance* United States Geological Survey (USGS) 7.5-minute topographic quadrangle map in Sections 25, 26, 27, 34, 35, and 36 of Township 4 South and Range 14 West, and Sections 1 and 2 of Township 5 South and Range 14 West, San Bernardino Baseline and Meridian (see Figure 2). The City of Lomita will conduct an assessment to meet obligations as the lead agency under the California Environmental Quality Act (CEQA).

We are contacting you because the [TRIBE] requested to be notified and provided information, under the provisions of CEQA (Public Resources Code section 21080.3.1 subdivisions (b), (d) and (e)), also known as AB 52, regarding projects within the City of Lomita's jurisdiction and within the traditional territory of the [TRIBE]. Please consider this letter and preliminary Project information as the formal notification of the proposed Project. The City of Lomita requests to consult with the [TRIBE] in order to identify tribal cultural resources that may be impacted by the proposed Project. The point of contact for the City of Lomita is [below/on the next page].

City of Lomita **Point of Contact Information**	
Name/Title:	Brianna Rindge, AICP, Director of Community & Economic Development
Address:	24300 Narbonne Avenue, Lomita, CA 90717
City:	City of Lomita

Tel:	310-325-7110 x122
Fax:	310-325-4024
E-Mail:	b.rindge@lomitacity.com

Additionally, the City requests consultation under Senate Bill 18 (Chapter 905, Statutes of 2004), which requires local governments to consult with tribes prior to making certain planning decisions and requires consultation and notice for a general and specific plan adoption or amendment in order to preserve, or mitigate impacts to, cultural places that may be affected. The City retained Cogstone Resource Management, Inc. (Cogstone) to prepare the cultural resources assessment report.

The City contacted the Native American Heritage Commission (NAHC) on June 13, 2023, to perform a search of the Sacred Lands File. The NAHC responded on July 11, 2023, and reported negative results for Native American sacred sites and/or heritage resources located within the City or the immediate vicinity.

Cogstone requested a record search of the City from the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton, on June 13, 2023. Results of the record search indicate completion of 12 previous studies and recordation of two cultural resources (one prehistoric archaeological site and one historic built environment resource) within the City.

The City of Lomita appreciates any comments, issues, and/or concerns that you may have relating to cultural resources, sacred lands, and tribal cultural resources within the City. All information provided will be kept confidential.

Please respond within 30 days, pursuant to PRC 21080.3.1(d), if you would like to consult on this Project. For consultation under SB 18, **you have 90 days to respond.** If you have any questions or concerns regarding the Project, please do not hesitant to contact Brianna Rindge at the address or number above.

Thank you for your assistance.

Brianna Rindge

Brianna Rindge, AICP
Director of Community & Economic Development
City of Lomita

Attachments: Project vicinity map
Project location map

2

Figure 1. Project vicinity map

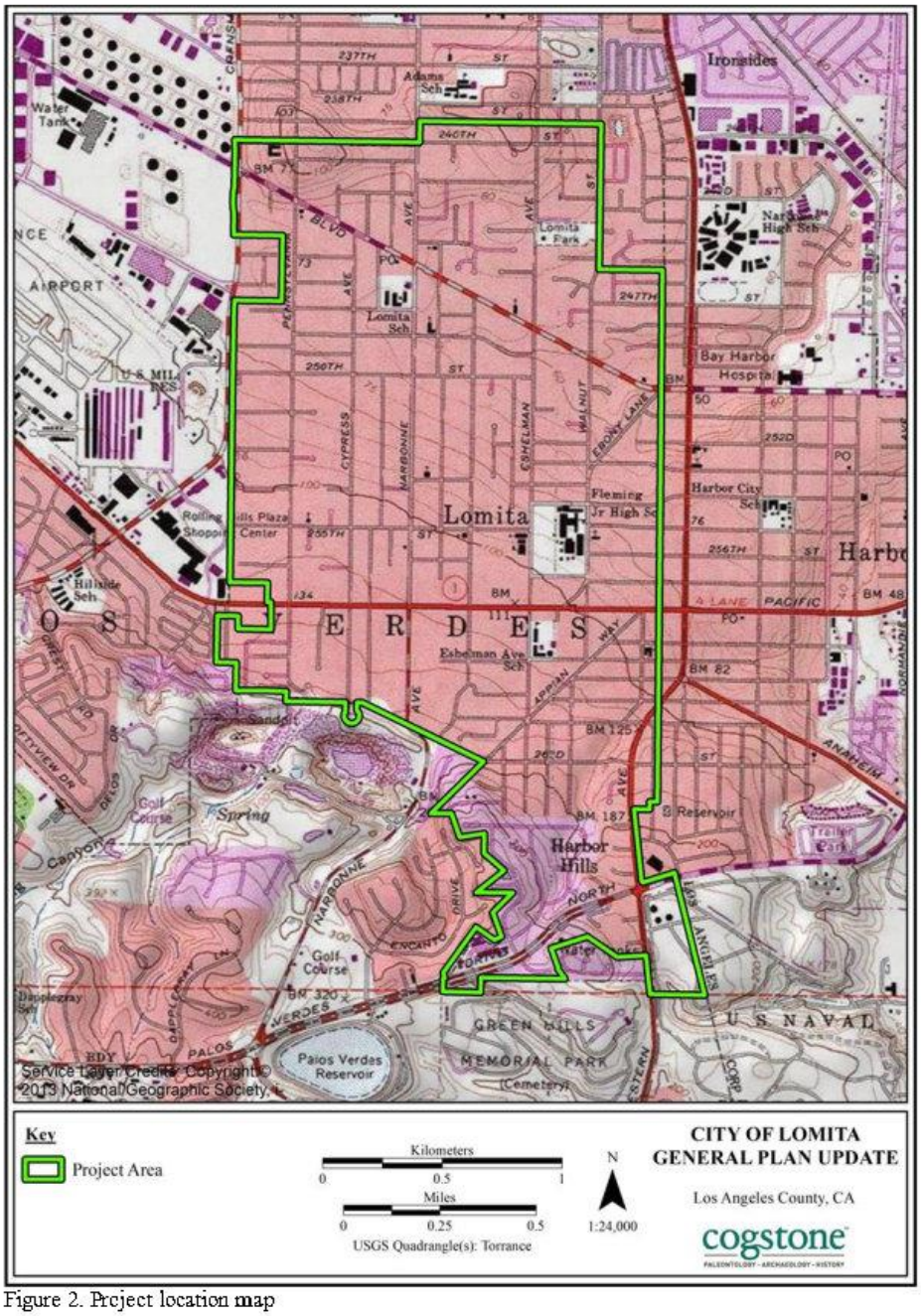


Figure 2. Project location map

APPENDIX E. BUILT ENVIRONMENT RESOURCE DIRECTORY (BERD)

CALIFORNIA HISTORICAL RESOURCE STATUS CODES

2S2 Individual property determined eligible for National Register by a consensus through Section 106 process. Listed in the California Register.

6Y Determined ineligible for National register by consensus through Section 106 process- Not evaluated for California or Local Listing.

7R Identified in Reconnaissance Level Survey: Not evaluated.

Primary Number (P-19)	OTIS ID	Property Number	Name	St. Number	St. Name	City	County	Zip	Evaluation Info	Construction Year(s)
	491860	95247		2325	243rd St	Lomita	Los Angeles		6Y, 09/19/1994, HUD940429S	1924
	477280	77443		2324	247th St	Lomita	Los Angeles		6Y, 08/10/1992, HUD920701B | 6Y, 08/31/1993, HUD920422F | 6Y, 08/31/1993, HUD920629T	1923
	483064	84771		2334	247th St	Lomita	Los Angeles	90717	6Y, 01/05/1995, HUD940328AG | 6Y, 11/22/1993, HUD930920d	1940
	490941	94105		2237	248th St	Lomita	Los Angeles	90717	6Y, 03/28/1994, HUD940328AB	1933
178677	431912	29357		1913	253rd St	Lomita	Los Angeles	90717	7R, 0717-0003-0000	1926
	491859	95246		1825	260th St	Lomita	Los Angeles		6Y, 09/19/1994, HUD940429R	1928
	467443	65263	Residence	253	3rd St	Lomita	Los Angeles		6Y, 07/30/1987, HUD870702D	
	480238	81537		25930	Cayuga Ave	Lomita	Los Angeles	90717	6Y, 01/13/1993, HUD871027C	1928
	480352	81651		24817	Cypress St	Lomita	Los Angeles		6Y, 10/30/1989, HUD871027C	1925
	493531	97751	Eshelman Avenue Elementary School	25902	Eshelman Ave	Lomita	Los Angeles		2S2, 04/28/1994, DOE-19-94-0460-0000 | 2S2, 04/28/1994, HRG940202Z	1923

Primary Number (P-19)	OTIS ID	Property Number	Name	St. Number	St. Name	City	County	Zip	Evaluation Info	Construction Year(s)
	482169	83763		25921	Hillworth Ave	Lomita	Los Angeles		6Y, 08/20/1993, HUD910331N	1935
	574891	125471		2201	Lomita Blvd	Lomita	Los Angeles	90717	6Y, 02/16/2000, DOE-19-00-0147-0000 | 6Y, 02/16/2000, HUD000216G	1923
	574892	125472		2209	Lomita Blvd	Lomita	Los Angeles	90717	6Y, 02/16/2000, DOE-19-00-0148-0000 | 6Y, 02/16/2000, HUD000216G	1923
	574893	125473		2211	Lomita Blvd	Lomita	Los Angeles	90717	6Y, 02/16/2000, DOE-19-00-0149-0000 | 6Y, 02/16/2000, HUJUD000216G	1936
	574894	125474		2213	Lomita Blvd	Lomita	Los Angeles	90717	6Y, 02/16/2000, DOE-19-00-0150-0000 | 6Y, 02/16/2000, HUD000216G	1936
	479879	81127		24215	Lomita Dr	Lomita	Los Angeles	90717	6Y, 01/13/1993, HUD871027C | 6Y, 08/31/1993, HUD920408G | 6Y, 12/07/1992, HUD921103K	1927
	467529	65352	Residence	25608	Lucille Ave	Lomita	Los Angeles		6Y, 09/14/1987, HUD870817I	
178676	431911	29356		25608	Lucille Ave	Lomita	Los Angeles	90717	7R, , 0717-0002-0000	1930
	574852	125318		24509	Narbonne Ave	Lomita	Los Angeles	90717	6Y, 02/16/2000, DOE-19-00-0145-0000 | 6Y, 02/16/2000, HUD000216G	1923
	574853	125319		24519	Narbonne Ave	Lomita	Los Angeles	90717	6Y, 02/16/2000, DOE-19-00-0146-0000 | 6Y, 02/16/2000, HUD000216G	1923

Primary Number (P-19)	OTIS ID	Property Number	Name	St. Number	St. Name	City	County	Zip	Evaluation Info	Construction Year(s)
	574931	125511		24802	Oak St	Lomita	Los Angeles	90717	6Y, 10/06/1997, DOE-19-97-0230-0000 | 6Y, 10/06/1997, HUD971006G	1920
	467209	65017	Residence	26203	Ocean View Ave	Lomita	Los Angeles		6Y, 12/31/1986, HUD861203D	
178675	431910	29355		26203	Ocean View Ave	Lomita	Los Angeles	90717	7R, , 0717-0001-0000	1922
	539343	158397	Bartlett Motel	2364	Pacific Coast Sr	Lomita	Los Angeles	90717	6Y, 01/18/2006, FCC060106F	1953
	549829	147978			Palos Verdes Dr	Lomita	Los Angeles		6Y, 12/17/2003, DOE-19-03-0448-0000 | 6Y, 12/17/2003, FCC031029D	
	482609	85001		24914	Pennsylvania Ave	Lomita	Los Angeles		6Y, 12/14/1993, HUD931101J	1930
	482259	83879		2017	W 242nd St	Lomita	Los Angeles		6Y, 08/26/1993, HUD911015K	1910
	482206	83803		2033	W 242nd St	Lomita	Los Angeles		6Y, 08/24/1993, HUD910630bb	1925
	480372	81671		2257	W 248th St	Lomita	Los Angeles		6Y, 10/30/1989, HUD871027C	1924
	482134	83725		1844	W 256th St	Lomita	Los Angeles		6Y, 08/18/1993, HUD901231C	1927
	482181	83778		1825	W 260th St	Lomita	Los Angeles		6Y, 08/24/1993, HUD910630Y	1928
	467263	65072	Residence	1823	W 261st St	Lomita	Los Angeles		6Y, 03/13/1987, HUD870313A	
	480241	81540		1931	W 262nd St	Lomita	Los Angeles	90717	6Y, 01/13/1993, HUD871027C	1940
	497492	103214	Harbor Hills Housing Project	26607	Western Ave	Lomita	Los Angeles		2S2, 08/29/1996, HUD960619F	1940-1941
	482343	83964		25408	Woodward Ave	Lomita	Los Angeles		6Y, 08/31/1993, HUD920408F	1915

Primary Number (P-19)	OTIS ID	Property Number	Name	St. Number	St. Name	City	County	Zip	Evaluation Info	Construction Year(s)
	565022	133261	San Pedro Defense Fuel Support Point Historic District	3171	3171	San Pedro	Los Angeles	90731	2S2, 12/03/1999, DOD991015A | 2S2, 12/03/1999, DOE-19-99-0407-9999	

APPENDIX F. ARCHAEOLOGICAL RESOURCES SENSITIVITY MAPS

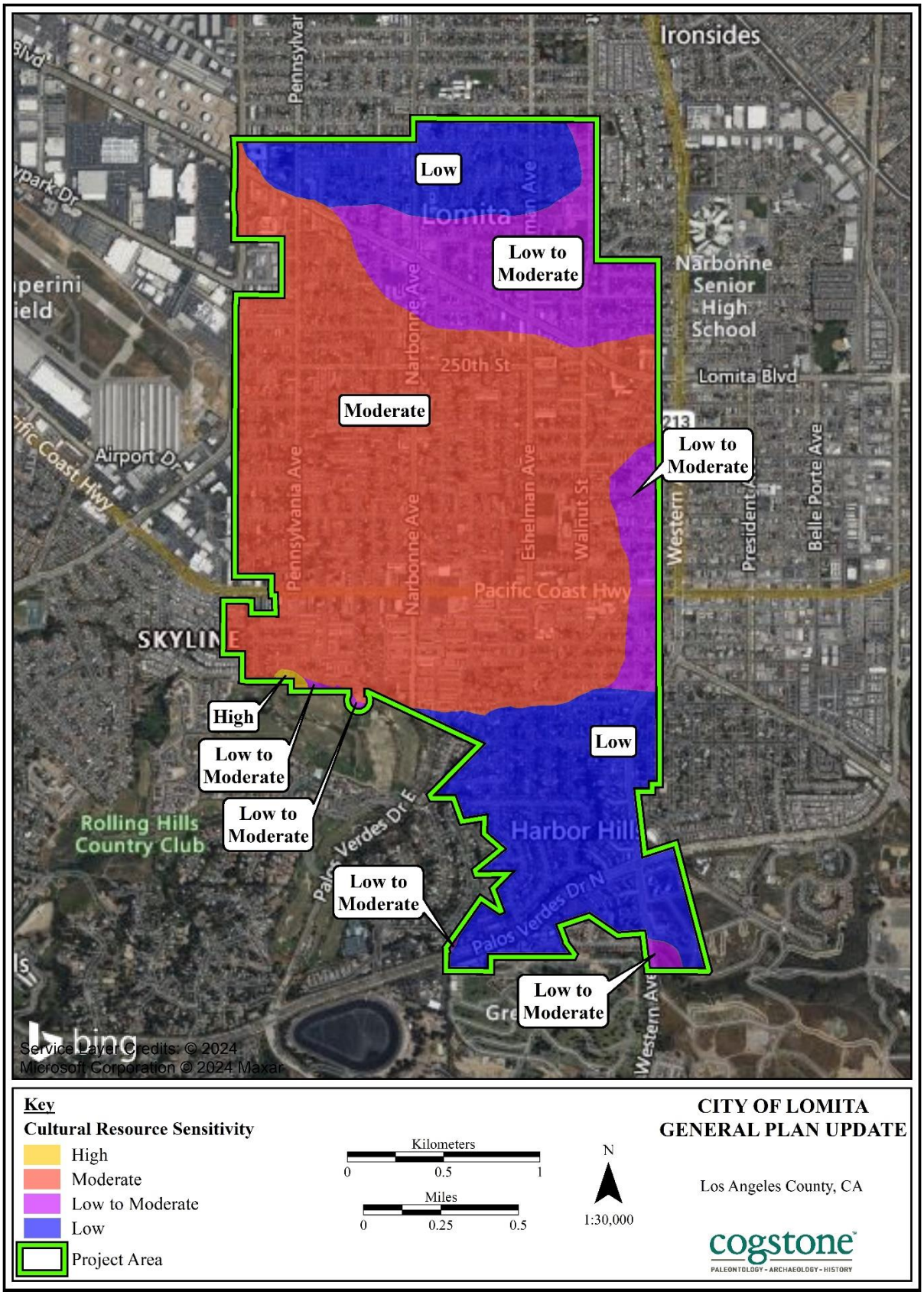


Figure F-1. Archaeological sensitivity overview map

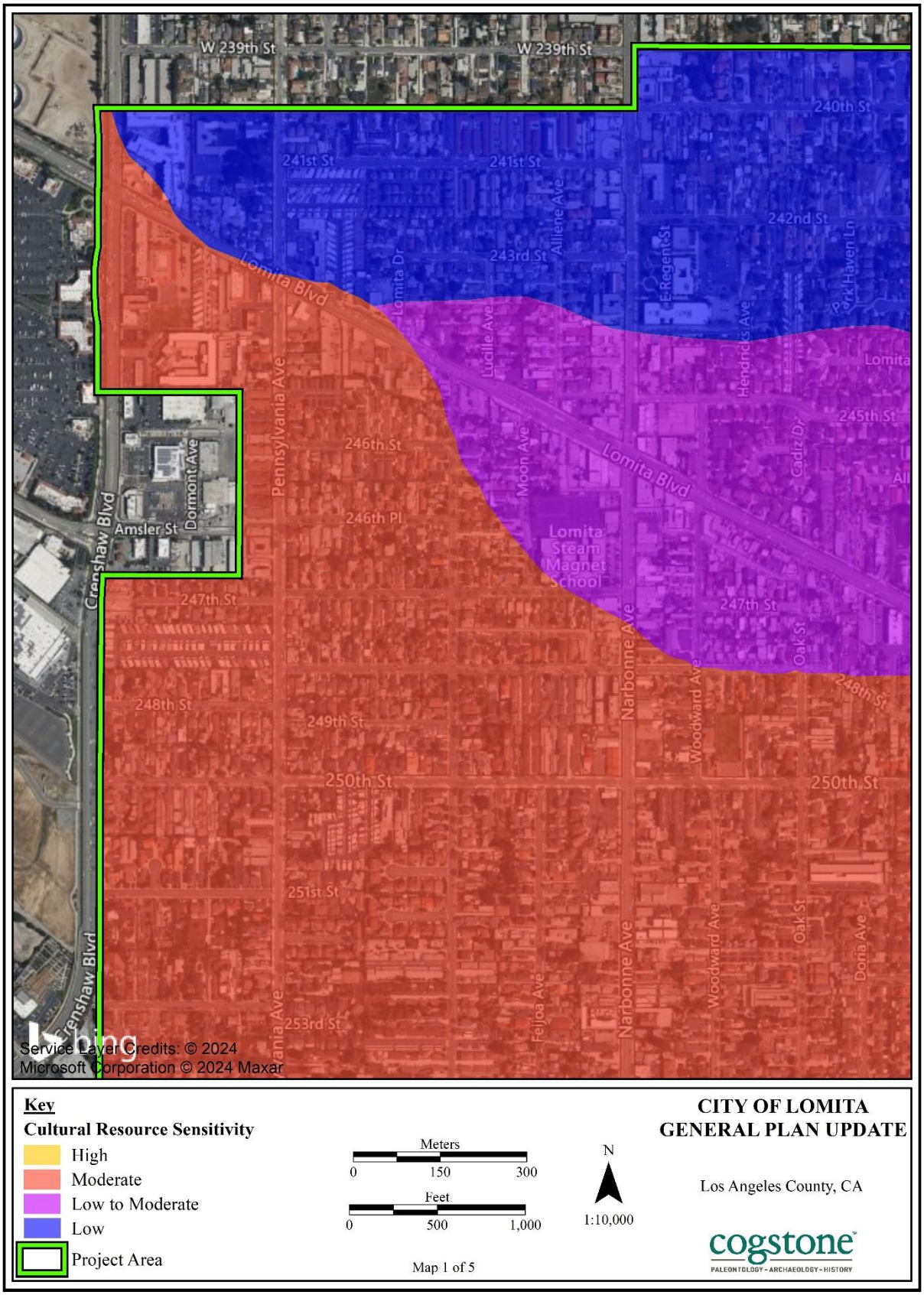


Figure F-1a. Archaeological Sensitivity Detail Map (1 of 5)

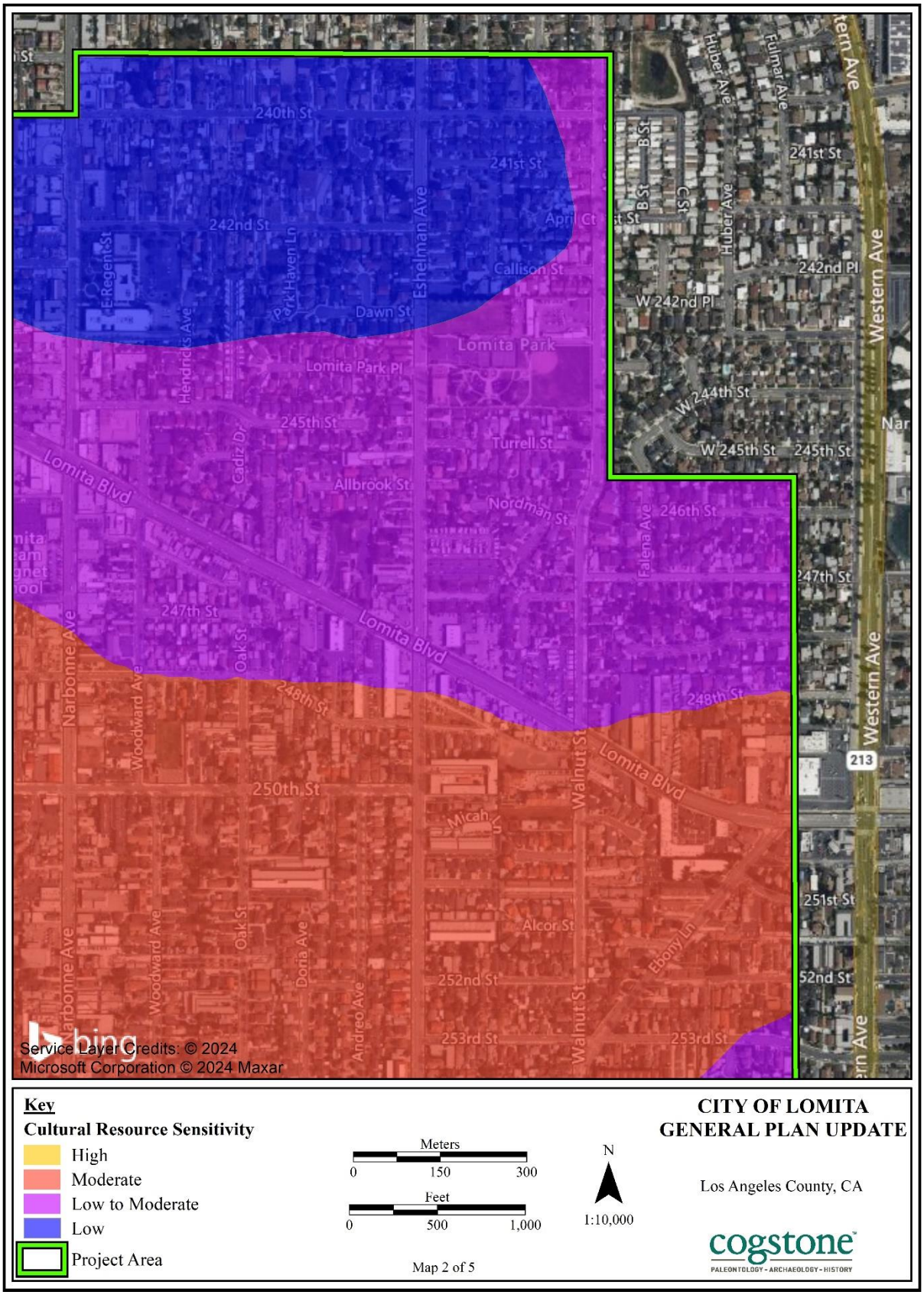


Figure F-1b. Archaeological Sensitivity Detail Map (2 of 5)

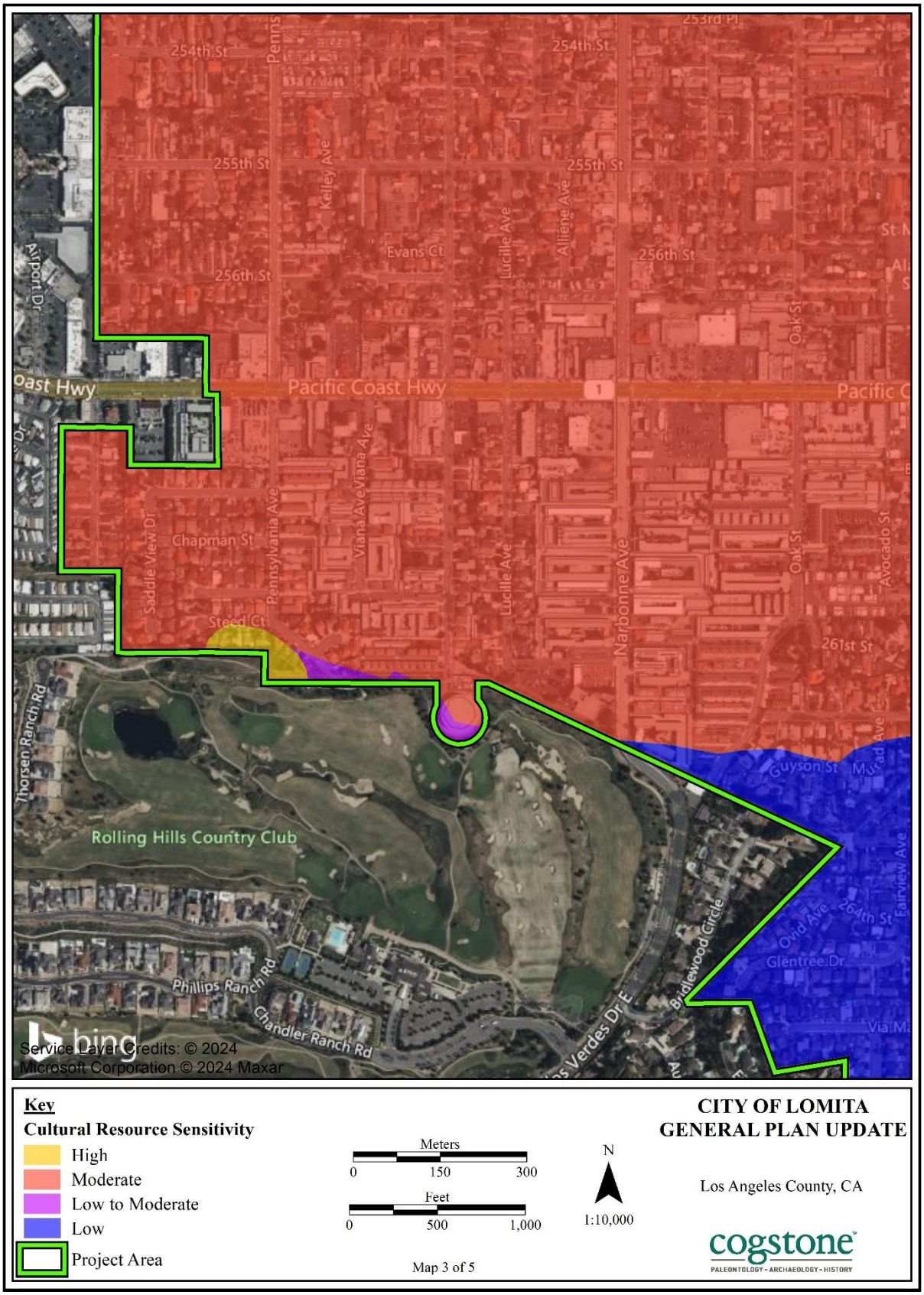


Figure F-1c. Archaeological Sensitivity Detail Map (3 of 5)

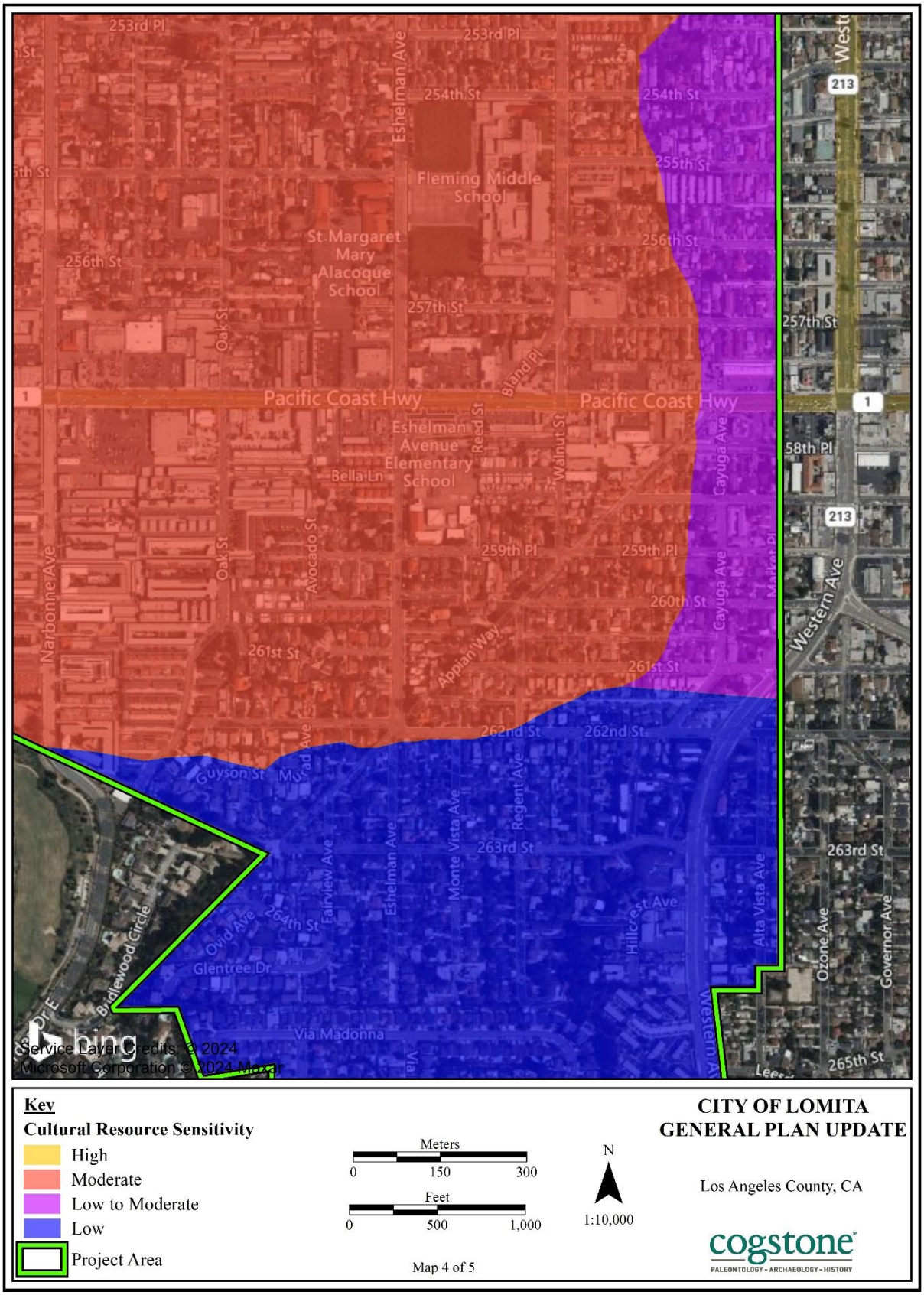


Figure F-1d. Archaeological Sensitivity Detail Map (4 of 5)

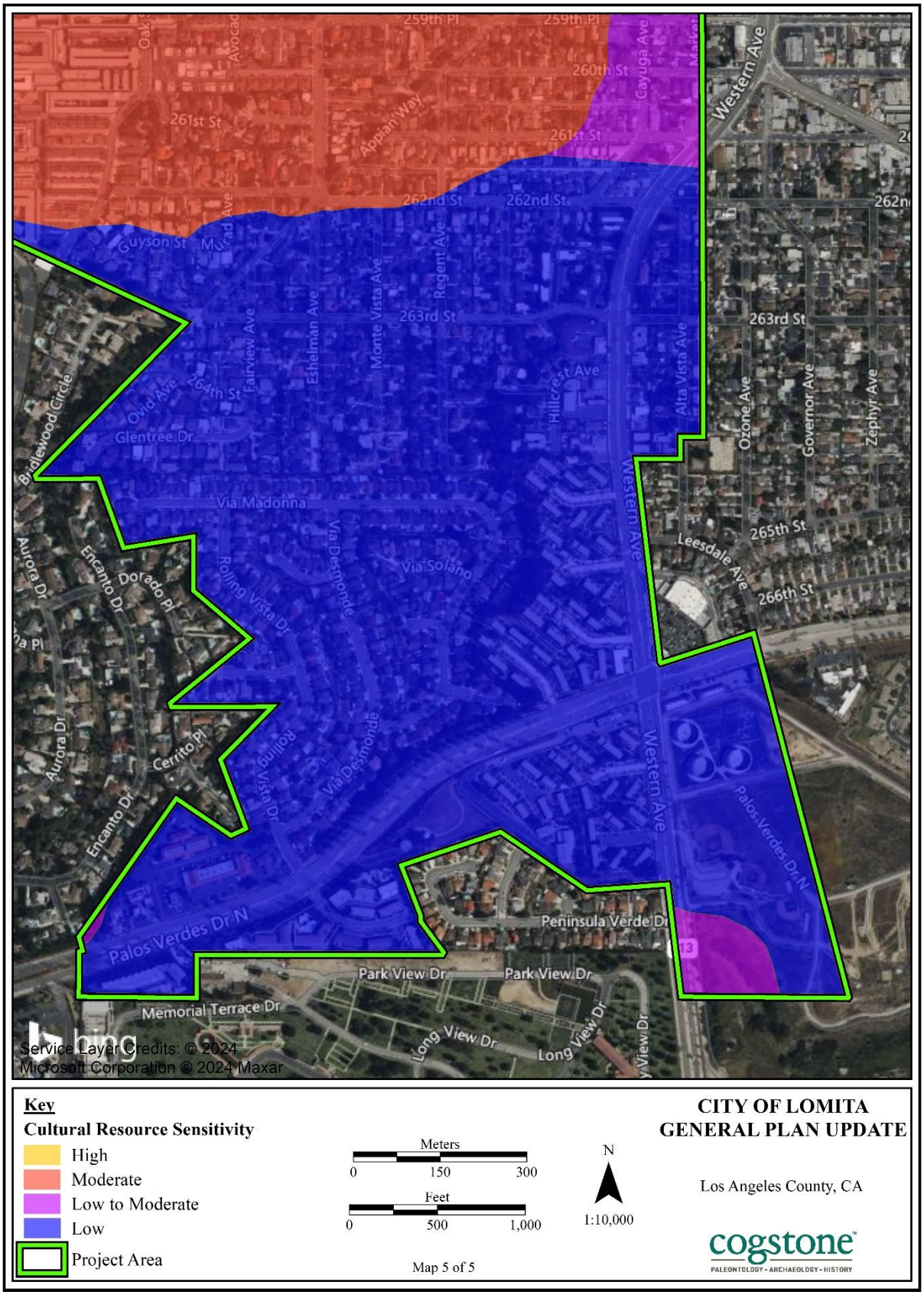


Figure F-1e. Archaeological Sensitivity Detail Map (5 of 5)

APPENDIX G. PALEONTOLOGICAL SENSITIVITY RANKING CRITERIA

PFYC Description Summary (BLM 2016)	PFYC Rank
Very Low. The occurrence of significant fossils is non-existent or extremely rare. Includes igneous (excluding air-fall and reworked volcanic ash units), metamorphic, or Precambrian rocks. Assessment or mitigation of paleontological resources is usually unnecessary except in very rare or isolated circumstances that result in the unanticipated presence of fossils.	1
Low. Sedimentary geologic units that are unlikely to contain vertebrate or scientifically significant nonvertebrate fossils. Includes rock units less than 10,000 years old and sediments with significant physical and chemical changes (e.g., diagenetic alteration) which decrease the potential for fossil preservation. Assessment or mitigation of paleontological resources is not likely to be necessary.	2
Moderate. Units are known to contain vertebrate or scientifically significant nonvertebrate fossils, but these occurrences are widely scattered and/or of low abundance. Common invertebrate or plant fossils may be found and opportunities may exist for casual collecting. Paleontological mitigation strategies will be based on the nature of the proposed activity. Management considerations cover a broad range of options that may include record searches, pre-disturbance surveys, monitoring, mitigation, or avoidance. Surface-disturbing activities may require assessment by a qualified paleontologist to determine whether significant paleontological resources occur in the area of a proposed action, and whether the action could affect the paleontological resources.	3
High. Geologic units containing a high occurrence of significant fossils. Fossils must be abundant per locality. Vertebrates or scientifically significant invertebrate or plant fossils are known to occur and have been documented, but may vary in occurrence and predictability. Mitigation plans must consider the nature of the proposed disturbance, such as removal or penetration of protective surface alluvium or soils, potential for future accelerated erosion, or increased ease of access that could result in looting. Detailed field assessment is normally required and on-site monitoring or spot-checking may be necessary during land disturbing activities. In some cases avoidance of known paleontological resources may be necessary.	4
Very High. Highly fossiliferous geologic units that consistently and predictably produce vertebrate 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. Paleontological resources are highly susceptible to adverse impacts from surface disturbing activities. Paleontological mitigation may be necessary before or during surface disturbing activities. The area should be assessed prior to land tenure adjustments. Pre-work surveys are usually needed and on-site monitoring may be necessary during land use activities. Avoidance or resource preservation through controlled access, designation of areas of avoidance, or special management designations should be considered.	5
Unknown. An assignment of "Unknown" may indicate the unit or area is poorly studied and field studies are needed to verify the presence or absence of paleontological resources. The unit may exhibit features or preservational conditions that suggest significant fossils could be present, but little information about the actual unit or area is known. Literature searches or consultation with professional colleagues may allow an unknown unit to be provisionally assigned to another Class, but the geological unit should be formally assigned to a Class after adequate survey and research is performed to make an informed determination.	U
Water or Ice. Typically used only for areas which have been covered thus preventing an examination of the underlying geology.	W, I