

PALEONTOLOGICAL ASSESSMENT FOR THE 4665 LAMPSON AVENUE PROJECT

CITY OF LOS ALAMITOS,
ORANGE COUNTY, CALIFORNIA

APN 130-012-35

Prepared for:

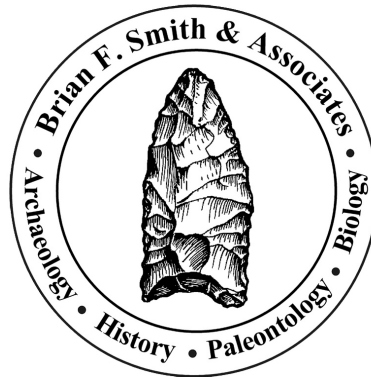
T&B Planning, Inc.
3200 El Camino Real, Suite 100
Irvine, California 92602

Submitted to:

City of Los Alamitos
3191 Katella Avenue
Los Alamitos, California 90720

Prepared by:

Brian F. Smith and Associates, Inc.
14010 Poway Road, Suite A
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September 21, 2022

Paleontological Database Information

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Report Date: September 21, 2022

Report Title: Paleontological Assessment for the 4665 Lampson Avenue
Project, City of Los Alamitos, Orange County, California

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USGS Quadrangle: USGS *Los Alamitos, California* (7.5-minute), Section 32,
Township 4 South, Range 11 West

Assessor's Parcel Number: 130-012-35

Study Area: 12.37 acres

Key Words: Paleontological assessment; Pleistocene alluvial fan deposits;
City of Los Alamitos.

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I. INTRODUCTION AND LOCATION

This paleontological resource assessment has been completed for the Paleontological Assessment for the 4665 Lampson Avenue Project, located along the north side of Lampson Avenue west of the Bolsa Chica drainage channel, in the city of Los Alamitos in Orange County, California (Figures 1 and 2). The project is located just south of the Los Alamitos Joint Forces Training Base, and consists of one 12.37-acre parcel (Assessor’s Parcel Number [APN] 130-012-35). On the U.S. Geological Survey 7.5-minute, 1:24,000-scale *Los Alamitos, California* topographic quadrangle map, the project is situated within Section 32, Township 4 South, Range 11 West, of the San Bernardino Baseline and Meridian (see Figure 2). Currently, the property is occupied by an 88,000-square-foot commercial building that is proposed for demolition for the construction of a residential development and related improvements.

As the lead agency, the City of Los Alamitos has required the preparation of a paleontological assessment to evaluate the project’s potential to yield paleontological resources. The paleontological assessment of the project included a review of paleontological literature and fossil locality records for a previous project in the area; a review of the underlying geology; and recommendations to mitigate impacts to potential paleontological resources.

II. REGULATORY SETTING

The California Environmental Quality Act (CEQA), which is patterned after the National Environmental Policy Act, is the overriding environmental regulation that sets the requirement for protecting California’s paleontological resources. CEQA mandates that governing permitting agencies (lead agencies) set their own guidelines for the protection of nonrenewable paleontological resources under their jurisdiction.

State of California

Under “Guidelines for Implementation of the California Environmental Quality Act,” as amended in December 2018 (California Code of Regulations [CCR] Title 14, Division 6, Chapter 3, Sections 15000 et seq.), procedures define the types of activities, persons, and public agencies required to comply with CEQA. Section 15063 of the CCR provides a process by which a lead agency may review a project’s potential impact to the environment, whether the impacts are significant, and provide recommendations, if necessary.

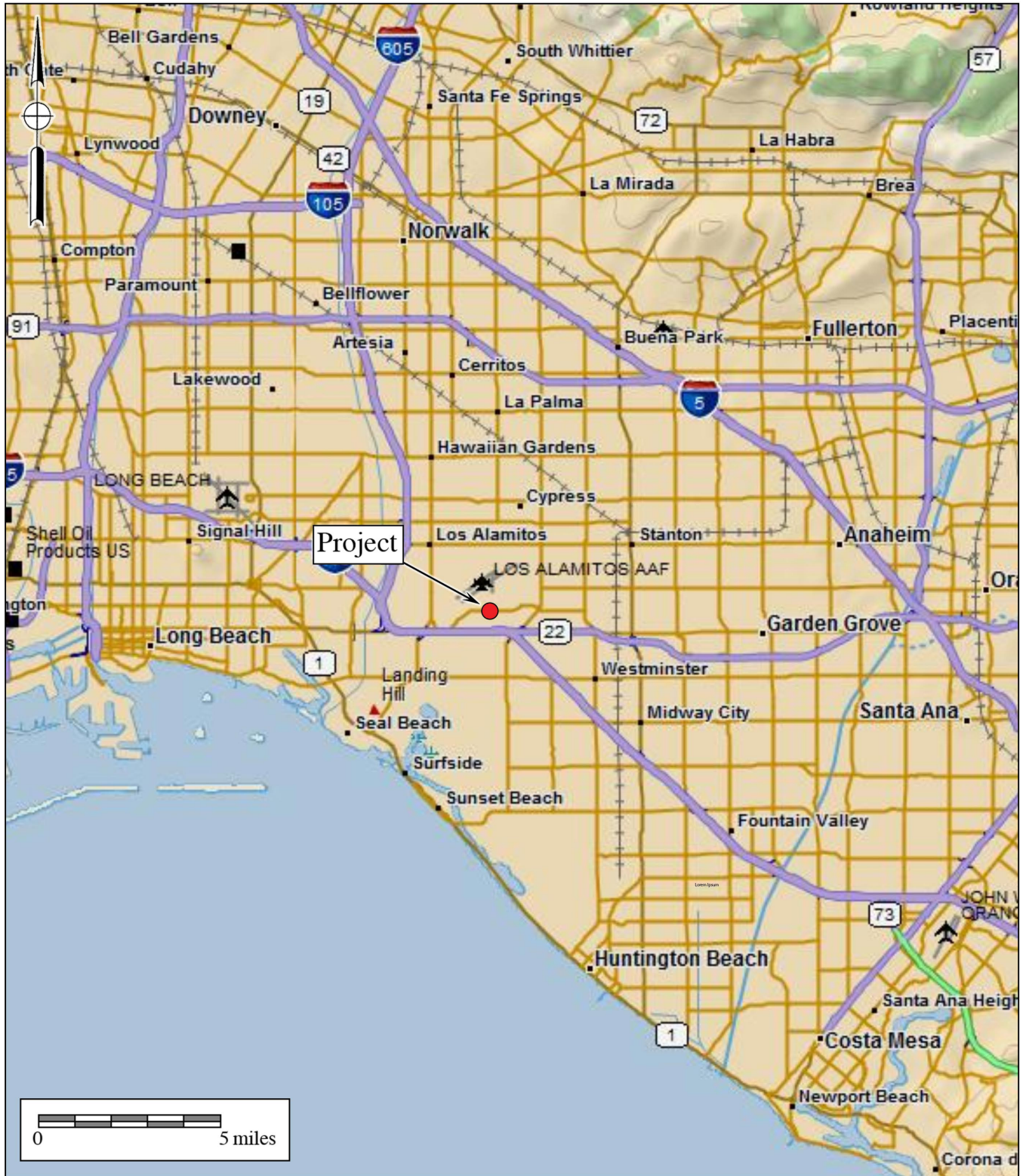


Figure 1
General Location Map
 The 4665 Lampson Avenue Project
 DeLorme (1:250,000)



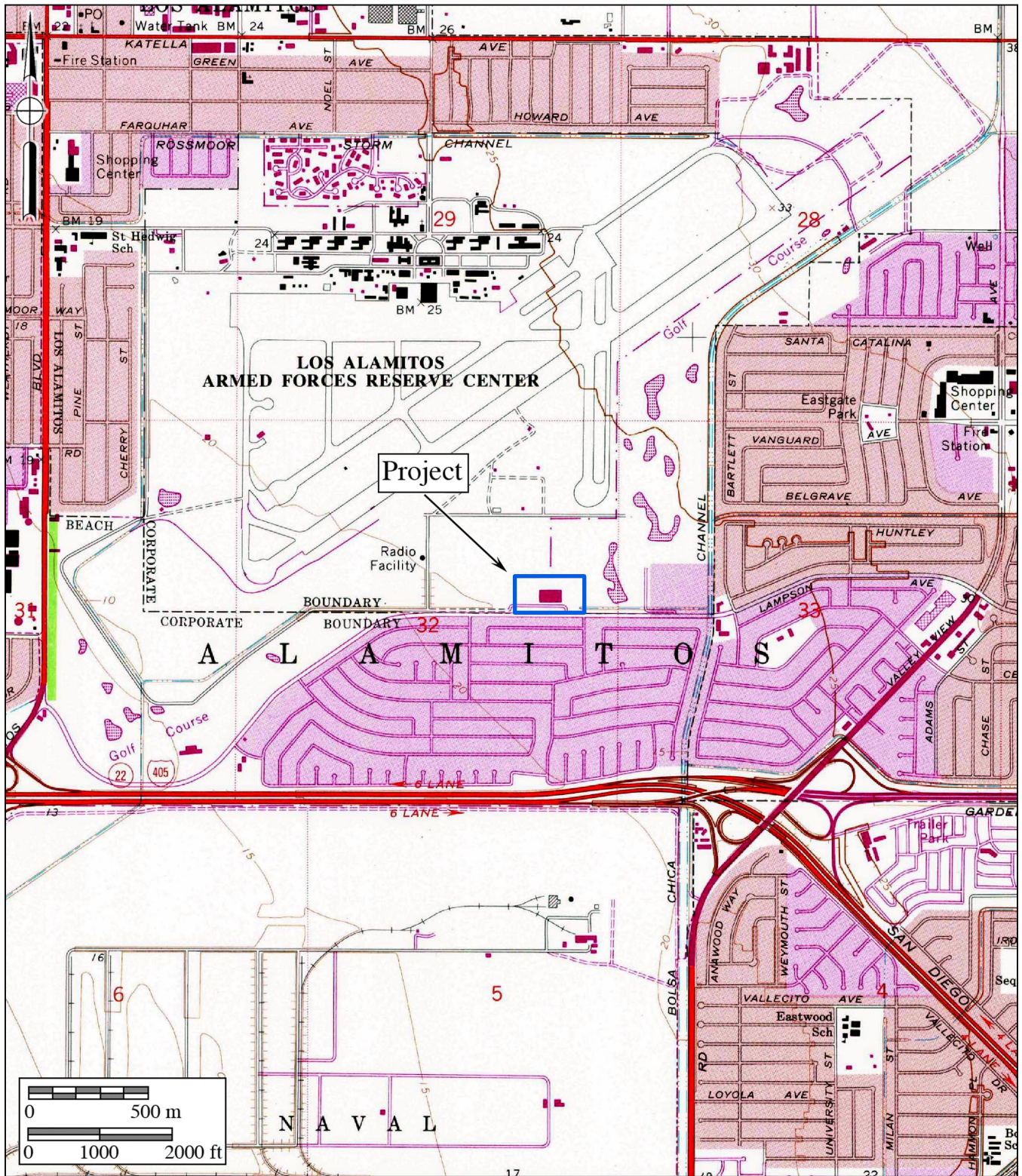


Figure 2

Project Location Map

The 4665 Lampson Avenue Project

USGS Los Alamitos, California Quadrangle (1:24,000 series)



In CEQA’s Environmental Checklist Form, one of the questions to answer is, “Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” (Appendix G, Section VII, Part f). This is to ensure compliance with California Public Resources Code Section 5097.5, the law that protects nonrenewable resources, including fossils, which is paraphrased below:

- a) A person shall not 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, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands.
- b) 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.
- c) A violation of this section is a misdemeanor.

City of Los Alamitos

The General Plan of the City of Los Alamitos does not address paleontological resources, except to state that fossils have not been discovered in the city or in the neighborhood of Rossmoor (PlaceWorks 2015). However, the City’s Draft Environmental Impact Report (DEIR) states that a potential exists for the occurrence of paleontological resources in deeper (older) alluvial deposits, and that older, Pleistocene-aged deposits have yielded a variety of vertebrate fossils in the vicinity of the city and Rossmoor (City of Los Alamitos 2014). In the DEIR, the following mitigation measure is designed to mitigate significant impacts to paleontological resources:

Impact 5.3-3 Applicants for future development projects that require excavation greater than five feet below the current ground surface in undisturbed sediments with a moderate or higher fossil yield potential shall provide a technical paleontological assessment prepared by a qualified paleontologist assessing the sensitivity of sites for buried paleontological resources to the City of Los Alamitos prior to issuance of grading permits. If resources are known or reasonably anticipated, the assessment shall provide a detailed mitigation plan, including a monitoring program and recovery and/or in situ preservation plan, based on the recommendations of a qualified paleontologist. The mitigation plan shall include the following requirements:

- a. A paleontologist shall be retained for the project and shall be on call during grading and other significant ground-disturbing activities.

- b. Should any potentially significant fossil resources be discovered, no further grading shall occur in the area of the discovery until the Community Development Director concurs in writing that adequate provisions are in place to protect these resources.
- c. Unanticipated discoveries shall be evaluated for significance by an Orange County Certified Professional Paleontologist. If significance criteria are met, then the project shall be required to perform data recovery, professional identification, radiocarbon dates as applicable, and other special studies; submit materials to the California State University, Fullerton; and provide a comprehensive final report, including catalog with museum numbers. (City of Los Alamitos 2014)

III. GEOLOGY

The project is located within a broad, flat coastal plain composed of Holocene and late Pleistocene-aged young alluvium at the surface, within the southern part of the Los Angeles Basin (area labeled as “Qya₂” on Figure 3, after Saucedo et al. 2016; Hillhouse 2002). These deposits are described as “poorly consolidated, poorly sorted, permeable flood-plain deposits consisting of soft clay, silt and loose to moderately dense sand and silty sand” (Saucedo et al. 2016). During the Holocene, activity of the Santa Ana River points to widespread sheet flooding and wandering, as indicated by extensive and continuous “younger” sand and silt deposits (Greenwood and Pridmore 1997). The depth of the geologic age transition from Holocene to Pleistocene within the alluvial deposits is not known.

IV. PALEONTOLOGICAL RESOURCES

Definition

Paleontological resources are the remains of prehistoric life that have been preserved in geologic strata. These remains are called fossils and include bones, shells, teeth, and plant remains (including their impressions, casts, and molds) in the sedimentary matrix, as well as trace fossils such as footprints and burrows. Fossils are considered older than 5,000 years of age (Society of Vertebrate Paleontology 2010) but may include younger remains (subfossils) when viewed in the context of local extinction of the organism or habitat, for example. Fossils are considered a nonrenewable resource under state and local guidelines (see Section II of this report).

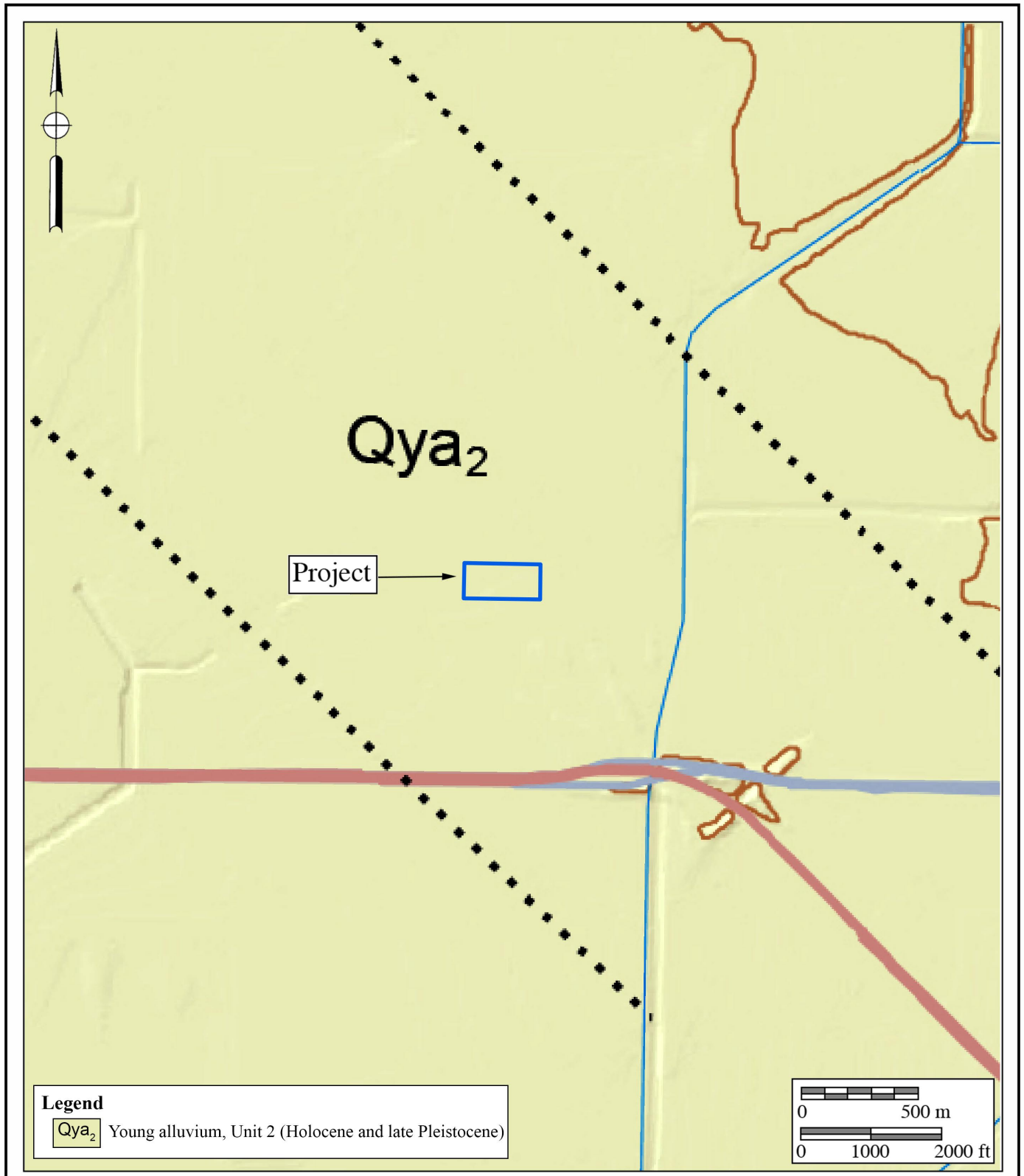


Figure 3
Geologic Map

The 4665 Lampson Avenue Project
 Geology after Saucedo et al. (2016)



Fossil Locality Search

A paleontological collections and locality records search was conducted for the project by the Natural History Museum of Los Angeles County (LACM) (Bell 2022; Appendix B). The report indicated there are no known fossil localities in the vicinity of the project. The nearest known fossil locality reported by Bell (2022) is located approximately 4.3 miles south-southwest of the project at Sunset Beach, where Pleistocene deposits at the surface yielded bone(s) of a camel (*q.v.*, Jefferson 1991). The remaining localities listed by Bell (2022) are over five miles away.

A review of published and unpublished literature was conducted for potential paleontological resources that are known in the vicinity of the project. Data reported in Miller (1971) and Kennedy (1975) indicate there are no known nearby fossil localities. Other than the camel specimen listed above, Jefferson (1991) indicates no other fossil localities are known in the area of the project.

Project Survey

On May 26, 2022, BFSa staff, under the supervision of Principal Investigator Todd A. Wirths, conducted an intuitive review of the property to determine if any paleontological resources were visible. The field methodology employed for the project included walking evenly spaced survey transects set approximately 10 meters apart while visually inspecting the ground surface, when possible. The project parcel was observed as 100 percent developed, consisting of structures, paved surfaces, and landscaping. No bedrock outcrops were exposed that might indicate the presence of fossils. No paleontological resources, or evidence of paleontological resources, were observed during the survey.

V. PALEONTOLOGICAL SENSITIVITY

Overview

The degree of paleontological sensitivity of any particular area is based on a number of factors, including the documented presence of fossiliferous resources on a site or in nearby areas, the presence of documented fossils within a particular geologic formation or lithostratigraphic unit, and whether or not the original depositional environment of the sediments is one that might have been conducive to the accumulation of organic remains that might have become fossilized over time. Holocene alluvium is generally considered to be geologically too young to contain significant nonrenewable paleontological resources (*i.e.*, fossils) and is thus typically assigned a low paleontological sensitivity. Pleistocene (over 11,700 years old) alluvial and alluvial fan deposits in the Los Angeles Basin, such as those that underlie the surficial deposits at the project, however, often yield important terrestrial vertebrate fossils, such as extinct mammoths, mastodons, giant ground sloths, extinct species of horse, bison, camel, saber-toothed cats, and others (Jefferson 1991). These Pleistocene sediments are thus accorded a High paleontological resource sensitivity.

Professional Standards

The Society of Vertebrate Paleontology (2010) has drafted guidelines that include four categories of paleontological sensitivity for geologic units (formations) that might be impacted by a proposed project, as listed below:

- High Potential: Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered.
- Undetermined Potential: Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment, and further study is needed to determine the potential of the rock unit.
- Low Potential: Rock units that are poorly represented by fossil specimens in institutional collections or based on a general scientific consensus that only preserve fossils in rare circumstances.
- No Potential: Rock units that have no potential to contain significant paleontological resources, such as high-grade metamorphic rocks and plutonic igneous rocks.

Using these criteria, the project may be considered to have a low paleontological potential, based on the lack of nearby significant fossil localities and the likelihood that age-appropriate sedimentary deposits that may yield fossils are probably relatively deep. Deeper (older) alluvial deposits may be considered to have an undetermined potential at the project.

VI. CONCLUSIONS AND RECOMMENDATIONS

Research has revealed the presence of “Holocene and late Pleistocene” young alluvial deposits mapped at the 4665 Lampson Avenue Project. Within Orange County, Holocene-aged alluvial sedimentary deposits are usually geologically too young to produce fossils. Paleontological monitoring of these deposits at the project is not recommended during mass grading, trenching, and excavation activities. However, Pleistocene alluvial deposits underlie the Holocene alluvial deposits at the project, and are considered to have a moderate/undetermined paleontological potential.

It is recommended that an Orange County Certified Professional Paleontologist be retained on an on-call basis, in accordance with City of Los Alamitos mitigation measure Impact 5.3-3 (City of Los Alamitos 2014), if grading activities are projected to extend beyond five feet deep into undisturbed alluvial deposits. The depth of the Pleistocene alluvial deposits is not known in the area of the project, but in general, Holocene deposits consist of a relatively thin veneer covering the older deposits. If significant paleontological resources are inadvertently discovered, a “detailed mitigation plan, including a monitoring program and recovery and/or in situ preservation plan” shall implemented for the project, in accordance with City of Los Alamitos mitigation measure Impact 5.3-3 (City of Los Alamitos 2014). A suggested paleontological monitoring and

recovery plan is presented below. By adhering to this monitoring and recovery plan, adverse impacts to paleontological resources will be reduced to a level below significant.

Paleontological Monitoring and Recovery Plan

1. If paleontological resources are discovered during earth disturbance activities, the discovery shall be cordoned off with a 50-foot radius buffer so as to protect the discovery from further potential damage, and an Orange County Certified Professional Paleontologist shall be consulted to assess the discovery.
2. If the discovery is determined to be significant by the paleontologist, a monitoring and recovery plan shall be initiated, which will include notification of appropriate personnel involved and monitoring of earth disturbance activities:
 - a. Monitoring of mass grading and excavation activities shall be performed by a qualified paleontologist or paleontological monitor. Monitoring will be conducted full-time in areas of grading or excavation in undisturbed sediments of alluvial deposits.
 - b. Paleontological monitors will be equipped to salvage fossils as they are unearthed to avoid construction delays. The monitor must be empowered to temporarily halt or divert equipment to allow removal of fossils in a timely manner. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or, if present, are determined upon exposure and examination by qualified paleontological personnel to have low potential to contain fossil resources. The monitor shall notify the project paleontologist, who will then notify the concerned parties of the discovery.
 - c. Paleontological salvage during trenching and boring activities is typically from the generated spoils and does not delay the trenching or drilling activities. Fossils will be collected and placed in cardboard flats or plastic buckets and identified by field number, collector, and date collected. Notes will be taken on the map location and stratigraphy of the site, which is photographed before it is vacated and the fossils are removed to a safe place. If the site involves remains from a large terrestrial vertebrate, such as large bone(s) or a mammoth tusk, that is/are too large to be easily removed by a single monitor, a fossil recovery crew shall excavate around the find, encase the find within a plaster and burlap jacket, and remove it after the plaster is set. For large fossils, use of the contractor's construction equipment may be solicited to help remove the jacket to a safe location.
 - d. Recovered specimens will be prepared to a point of identification and permanent preservation (not display), including screen-washing sediments to recover small invertebrates and vertebrates.
 - e. Recovered specimens shall be identified and curated of specimens into a

professional, accredited public museum repository with a commitment to archival conservation and permanent retrievable storage (e.g., OC Parks). The paleontological program should include a written repository agreement prior to the initiation of monitoring activities. Prior to curation, the lead agency (e.g., the City of Los Alamitos) will be consulted on the repository/museum to receive the fossil material.

- f. A final report of findings and significance will be prepared, including lists of all fossils recovered and necessary maps and graphics to accurately record their original location(s). The report, when submitted to, and accepted by, the appropriate lead agency, will signify satisfactory completion of the project program to reduce impacts to any potential nonrenewable paleontological resources (i.e., fossils) that might have been lost or otherwise adversely affected without such a program in place.

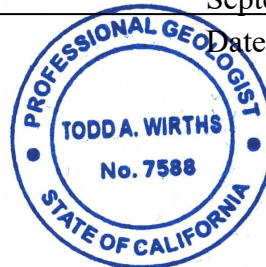
VII. CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this paleontological report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief, and have been compiled in accordance with CEQA criteria.



Todd A. Wirths
Senior Paleontologist
California Professional Geologist No. 7588

September 21, 2022



VIII. REFERENCES

Bell, A. 2022. Letter, Paleontological resources for the 4665 Lampson Avenue Project. For Brian F. Smith and Associates, Inc., Poway, California, by the Natural History Museum of Los Angeles County, Los Angeles, California. (attached)

City of Los Alamitos. 2014. City of Los Alamitos General Plan Update: Draft Environmental Impact Report Volume I: Draft EIR. <https://cityoflosalamitos.org/DocumentCenter/View/437/Environmental-Impact-Report-Draft---Volume-1-PDF>.

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- Society of Vertebrate Paleontology. 2010. Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources; by the SVP Impact Mitigation Guidelines Revision Committee. Electronic document, https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines-1.pdf.

APPENDIX A

Qualifications of Key Personnel

Todd A. Wirths, MS, PG No. 7588

Senior Paleontologist

Brian F. Smith and Associates, Inc.

14010 Poway Road • Suite A •

Phone: (858) 679-8218 • Fax: (858) 679-9896 • E-Mail: twirths@bfsa-ca.com



Education

Master of Science, Geological Sciences, San Diego State University, California 1995

Bachelor of Arts, Earth Sciences, University of California, Santa Cruz 1992

Professional Certifications

California Professional Geologist #7588, 2003

Riverside County Approved Paleontologist

San Diego County Qualified Paleontologist

Orange County Certified Paleontologist

OSHA HAZWOPER 40-hour trained; current 8-hour annual refresher

Professional Memberships

Board member, San Diego Geological Society

San Diego Association of Geologists; past President (2012) and Vice President (2011)

South Coast Geological Society

Southern California Paleontological Society

Experience

Mr. Wirths has more than a dozen years of professional experience as a senior-level paleontologist throughout southern California. He is also a certified California Professional Geologist. At BFSa, Mr. Wirths conducts on-site paleontological monitoring, trains and supervises junior staff, and performs all research and reporting duties for locations throughout Los Angeles, Ventura, San Bernardino, Riverside, Orange, San Diego, and Imperial Counties. Mr. Wirths was formerly a senior project manager conducting environmental investigations and remediation projects for petroleum hydrocarbon-impacted sites across southern California.

Selected Recent Reports

2019 *Paleontological Assessment for the 10575 Foothill Boulevard Project, City of Rancho Cucamonga, San Bernardino County, California.* Prepared for T&B Planning, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Assessment for the MorningStar Marguerite Project, Mission Viejo, Orange County, California.* Prepared for T&B Planning. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

- 2019 *Paleontological Monitoring Report for the Nimitz Crossing Project, City of San Diego.* Prepared for Voltaire 24, LP. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2019 *Paleontological Resource Impact Mitigation Program (PRIMP) for the Jack Rabbit Trail Logistics Center Project, City of Beaumont, Riverside County, California.* Prepared for JRT BP 1, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Monitoring Report for the Oceanside Beachfront Resort Project, Oceanside, San California.* Prepared for S.D. Malkin Properties. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Resource Impact Mitigation Program for the Nakase Project, Lake Forest, Orange County, San California.* Prepared for Glenn Lukos Associates, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Resource Impact Mitigation Program for the Sunset Crossroads Project, Banning, Riverside County.* Prepared for NP Banning Industrial, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Assessment for the Ortega Plaza Project, Lake Elsinore, Riverside County.* Prepared for Empire Design Group. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Resource Record Search Update for the Green River Ranch III Project, Green River Ranch Specific Plan SP00-001, City of Corona, California.* Prepared for Western Realco. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Assessment for the Cypress/Slover Industrial Center Project, City of Fontana, San Bernardino County, California.* Prepared for T&B Planning, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Monitoring Report for the Imperial Landfill Expansion Project (Phase VI, Segment C-2), Imperial County, California.* Prepared for Republic Services, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2021 *Paleontological Assessment for the Manitou Court Logistics Center Project, City of Jurupa Valley, Riverside County, California.* Prepared for Link Industrial. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2021 *Paleontological Resource Impact Mitigation Program for the Del Oro (Tract 36852) Project, Menifee, Riverside County.* Prepared for D.R. Horton. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2021 *Paleontological Assessment for the Alessandro Corporate Center Project (Planning Case PR-2020-000519), City of Riverside, Riverside County, California.* Prepared for OZI Alessandro, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2021 *Paleontological Monitoring Report for the Boardwalk Project, La Jolla, City of San Diego.* Prepared for Project Management Advisors, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

APPENDIX B

Fossil Locality Search Report

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

June 12, 2022

Brian F. Smith and Associates, Inc.
Attn: Todd Wirths

re: Paleontological resources for the 4665 Lampson Avenue Project (22-189)

Dear Todd:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the 4665 Lampson Avenue Project area as outlined on the portion of the Los Alamitos USGS topographic quadrangle map that you sent to me via e-mail on June 6, 2022. We do not have any fossil localities that lie directly within the proposed project area, but we do have fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The following table shows the closest known localities in the collection of the Natural History Museum of Los Angeles County (NHMLA).

Locality Number	Location	Formation	Taxa	Depth
LACM VP 3291	Sunset Beach at low tide, 50 yards north of Anderson Street & west of Pacific Coast Highway	Unknown Formation (Pleistocene)	Camel (<i>Camelops hesternus</i>)	Surface
LACM VP 7657-7659	Ellis Avenue & Patterson Lane, Huntington Beach	Unknown Formation (Pleistocene; gray siltstone)	School shark (<i>Galeorhinus</i>), eagle ray (<i>Myliobatus</i>), goby (<i>Lepidogobius</i> , <i>Leptocottus</i>), midshipmen (<i>Porichthys</i>), croaker (<i>Seriphus</i>), flatfish (<i>Citharichthys</i>), cusk-eel (<i>Otophidium</i>), skate (<i>Raja</i>), angelshark (<i>Squatina</i>), sculpin (<i>Cottidae</i>)	150 - 350 feet bgs
LACM VP 7366, 7422-7425, 7679...	The Huntington Beach Urban Center Sand Borrow Area, N of Pacific Coast Hwy and W of Huntington Dr	Unknown formation (Pleistocene, sands)	Legless lizard (<i>Anniella</i>), tree frog (<i>Hyla</i>), gopher snake (<i>Pituophis</i>), garter snake (<i>Thamnophis</i>), kingsnake (<i>Lampropeltis</i>), ring-necked snake (<i>Diadophis</i>), garter snake (<i>Thamnophis</i>), long-nosed snake	Unknown

			(<i>Rhinocheilus</i>), coachwhip (<i>Masticophis</i>), salamander (<i>Enatina</i>), slender salamander (<i>Batrachoseps</i>), skinks (<i>Plestiodon</i>), alligator lizard (<i>Gerrhonotus</i>), toad (<i>Bufo</i>), side- blotched lizard (<i>Uta</i>), spiny lizard (<i>Sceloporus</i>), climbing salamander (<i>Aneides</i>), turtle (<i>Clemmys</i>); quail (<i>Callipepla</i>), rail (<i>Rallus</i>); vole (<i>Microtus</i>), pocket gopher (<i>Thomomys</i>), shrew (<i>Sorex</i>), kangaroo rat (<i>Dipodomys</i>), cottontail rabbit (<i>Sylvilagus</i>), mole (<i>Scapanus</i>), harvest mouse (<i>Reithrodontomys</i>), deer mouse (<i>Peromyscus</i>), pack rat (<i>Neotoma</i>), chipmunk (<i>Eutamias</i>), bat (Chiroptera), Mammoth (<i>Mammuthus</i>), horse (<i>Equus</i>), bison (<i>Bison</i>); stickleback (<i>Gasterosteus</i>), houndshark (Triakis); Land snails (Gastropoda)	
LACM VP 7493	30 yards south of Pacific Coast Highway & 10 yards west of Grand Avenue; Long Beach	Lakewood Formation	Camel family (Camelidae)	8.5 feet bgs
LACM VP 3260	Long Beach (more specific locality not available)	Unknown formation (Pleistocene)	Bison (<i>Bison</i>)	Unknown
LACM VP 7739	Bluff Park (on the beach adjacent to the eastern half of the southern edge of the parking lot); Long Beach	Late Pleistocene* coastal deposits (dark gray massive sandy silt)	Invertebrates (snails; clams; tusk shells; barnacles; crabs; sea urchins); requiem shark (<i>Carcharhinus</i>), Spotted cusk eel (<i>Chilara</i>), croakers (<i>Genyonemus</i> , <i>Seriphus</i>), school shark (<i>Galeorhinus</i>), righteye flounder (<i>Glyptocephalus</i>), guitarfish (<i>Rhinobatos</i>), toadfish (<i>Porichthys</i>), perch (<i>Cymatogaster</i> , <i>Damalichthys</i>), bullhead shark (<i>Heterodontus</i>), ray (<i>Dasyatis</i> , <i>Myliobatus</i> , <i>Raja</i>), surfperch (<i>Embiotoca</i> , <i>Hyperprosopon</i> , <i>Micrometrus</i>), flatfish (<i>Citharichthys</i>), leopard shark (<i>Triakis</i>), slender sole (<i>Lyopsetta</i>), dogfish shark (<i>Squalus</i>), skate (<i>Squatina</i>), barracuda (<i>Sphyraena</i>)	56 feet bgs

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

*Locality is 25 feet below carbon-14 accelerator mass spectrometry date of 43180 +/-710 years

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,

A handwritten signature in black ink that reads "Alyssa Bell". The signature is written in a cursive style and is centered within a light gray rectangular box.

Alyssa Bell, Ph.D.
Natural History Museum of Los Angeles County

enclosure: invoice