PALEONTOLOGICAL ASSESSMENT FOR THE DAUCHY AVENUE PROJECT

CITY OF RIVERSIDE
RIVERSIDE COUNTY, CALIFORNIA

Planning Case P20-0398
APNs 276-040-011 and -012 and 276-050-029

Prepared on Behalf of:

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Prepared for:

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December 1, 2020

Paleontological Database Information

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Report Title:	Paleontological Assessment for the Dauchy Avenue Project, City of Riverside, Riverside County, California (Planning Case P20-0398; APNs 276-040-011 and -012 and 276-050-029)
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Prepared for:	City of Riverside Planning Division Community Development Department 3900 Main Street Riverside, California 92522
Prepared by:	Brian F. Smith and Associates, Inc. 14010 Poway Road, Suite A Poway, California 92064
USGS Quadrangle:	*Riverside East, California* (7.5 minute)
Study Area:	24.43 acres
Key Words*:*	Paleontological assessment; tonalite; Low sensitivity; city of Riverside; Riverside County; no paleontological monitoring.

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I. INTRODUCTION AND LOCATION

A paleontological resource assessment has been completed for the Dauchy Avenue Project (Assessor's Parcel Numbers [APNs] 276-040-011 and -012 and 276-050-029), which is located in the Woodcrest neighborhood of the city of Riverside in Riverside County, California (Figures 1 and 2). The project is bounded by Ferrari Drive to the north, Dauchy Avenue to the east, and a seasonal drainage on the west. On the U.S. Geological Survey, 7.5-minute, 1:24,000-scale *Riverside East, California* topographic quadrangle map, the project is located in the northeast corner of Section 18, Township 3 South, Range 4 West, San Bernardino Base and Meridian (see Figure 2). The 24.43-acre project proposes grading of the project for a residential development with associated landscaping and infrastructure.

II. REGULATORY SETTING

The California Environmental Quality Act (CEQA), which is patterned after the National Environmental Policy Act, is the overriding environmental document that sets the requirement for protecting California's cultural and paleontological resources. The document does not establish specific rules that must be followed but 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 the Implementation of CEQA, 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. In the Environmental Checklist, 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 V, Part c). California Public Resources Code Section 5097.5 states:

> a) 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, 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. Violation of this section is a misdemeanor.

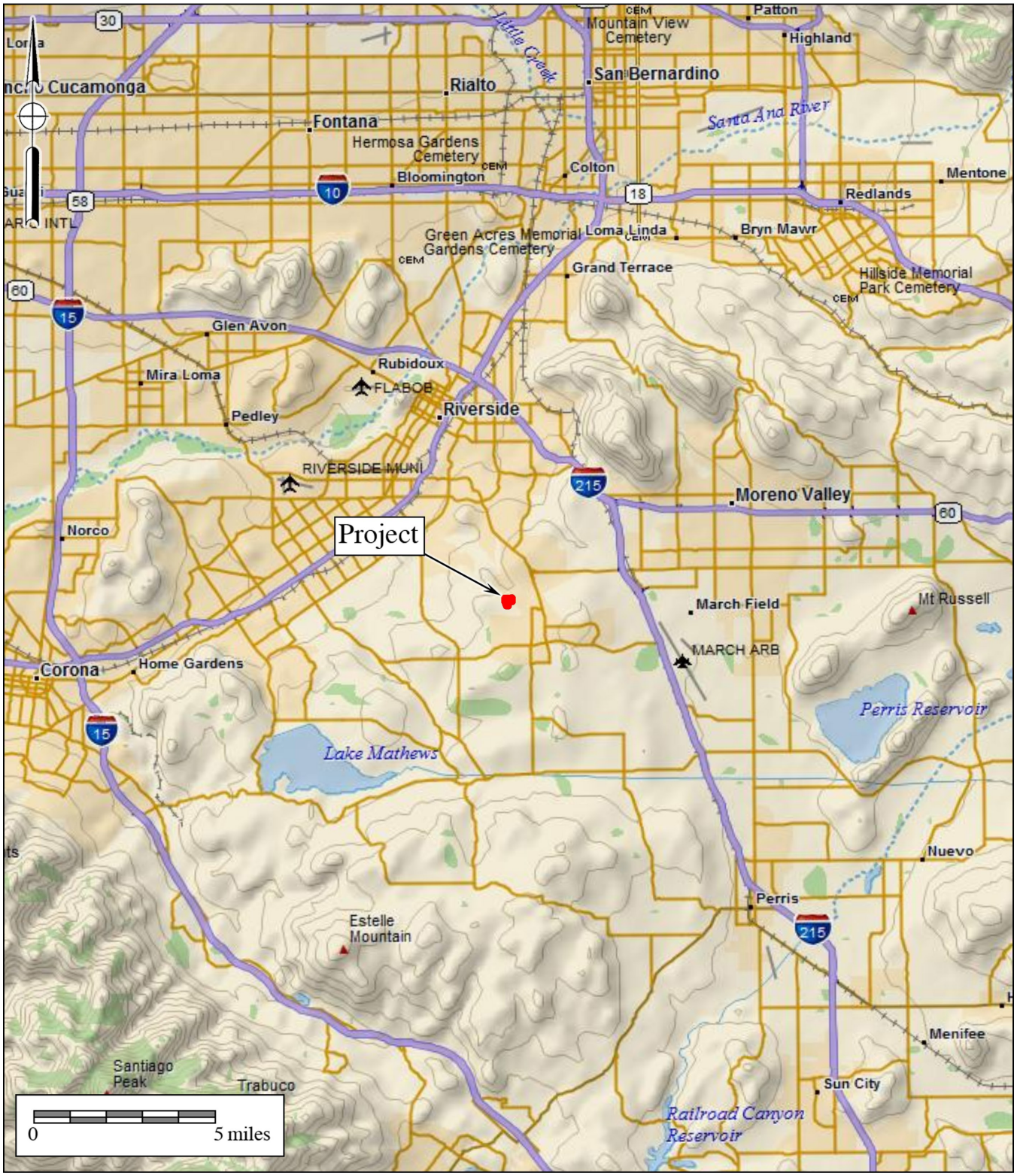


Figure 1

General Location Map

The Dauchy Avenue Project

DeLorme (1:250,000)

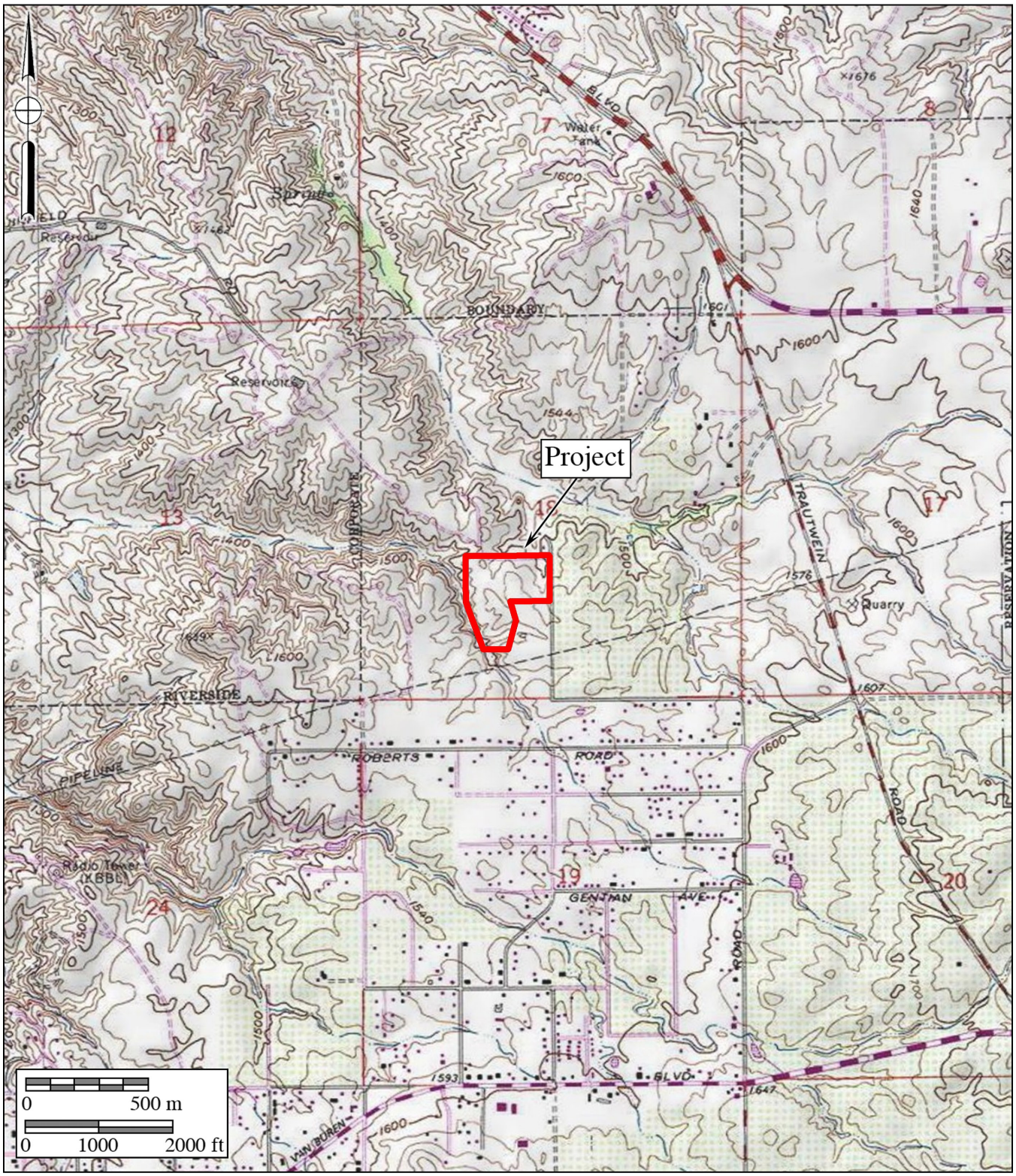


Figure 2

Project Location Map

The Dauchy Avenue Project

USGS *Riverside East* Quadrangle (7.5-minute series)

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.

County of Riverside

An online, interactive, paleontological sensitivity mapping database is maintained by the County of Riverside as a research tool to access the County's assignment of levels of paleontological sensitivity to the various geologic formations within the county (County of Riverside 2020). This is specifically addressed in Section V of this report.

Paleontological resources are addressed under the 2008 Multipurpose Open Space Element of the Riverside County General Plan, Policy OS 19.9, as follows:

> This policy requires that when existing information indicates that a site proposed for development may contain paleontological resources, a paleontologist shall monitor site grading activities, with the authority to halt grading to collect uncovered paleontological resources, curate any resources collected with an appropriate repository, and file a report with the Planning Department documenting any paleontological resources that are found during the course of site grading. (County of Riverside 2008)

The "SABER Policy" (Safeguard Artifacts Being Excavated in Riverside County), enacted in October 2011 by the Riverside County Board of Supervisors, requires that any paleontological resources found or unearthed in the county of Riverside be curated at the Western Science Center on Searl Parkway in the city of Hemet.

City of Riverside

Chapter 5 of the Final Program Environmental Impact Report in the City of Riverside's General Plan provides guidelines and procedures for several environmental Mitigation Monitoring and Reporting Programs (City of Riverside 2007). However, it does not address paleontological resources. Nevertheless, Policy HP-1.3 in the Historic Preservation Element from the General Plan states:

> The City shall protect sites of archaeological and paleontological significance and ensure compliance with all applicable State and federal cultural resources protection and management laws in its planning and project review process. (City of Riverside 2012)

III. GEOLOGY

Geologically, the project is indicated as being underlain by Cretaceous-aged Val Verde tonalite, a plutonic crystalline rock related to granite (pale gray area labeled "Kvt" on Figure 3) (Morton and Cox 2001).

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), for example, when viewed in the context of local extinction of the organism or habitat. Fossils are considered a nonrenewable resource under state, county, and city policies (see Section II of this report). Fossils are not found in plutonic rocks such as those mapped at the project.

Paleontological Resource Records Search

An in-house paleontological literature review and collections and records search was conducted using sources from the Los Angeles County Natural History Museum the San Bernardino County Museum, the University of California Museum of Paleontology in Berkeley, the Western Science Center in Hemet, and primary literature. The nearest known fossil locality is located approximately nine to 10 miles east of the project in Moreno Valley, consisting of the fossil bones of a horse (*Equus* sp.), a giant ground sloth (*Megalonyx jeffersonii*), and a llama (*Hemiauchenia* sp.), which all became extinct in North America at or soon after the end of the Pleistocene epoch, about 11,700 years ago. These fossils were recovered from late Pleistocene sediments and are presently housed at the Western Science Center.

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.

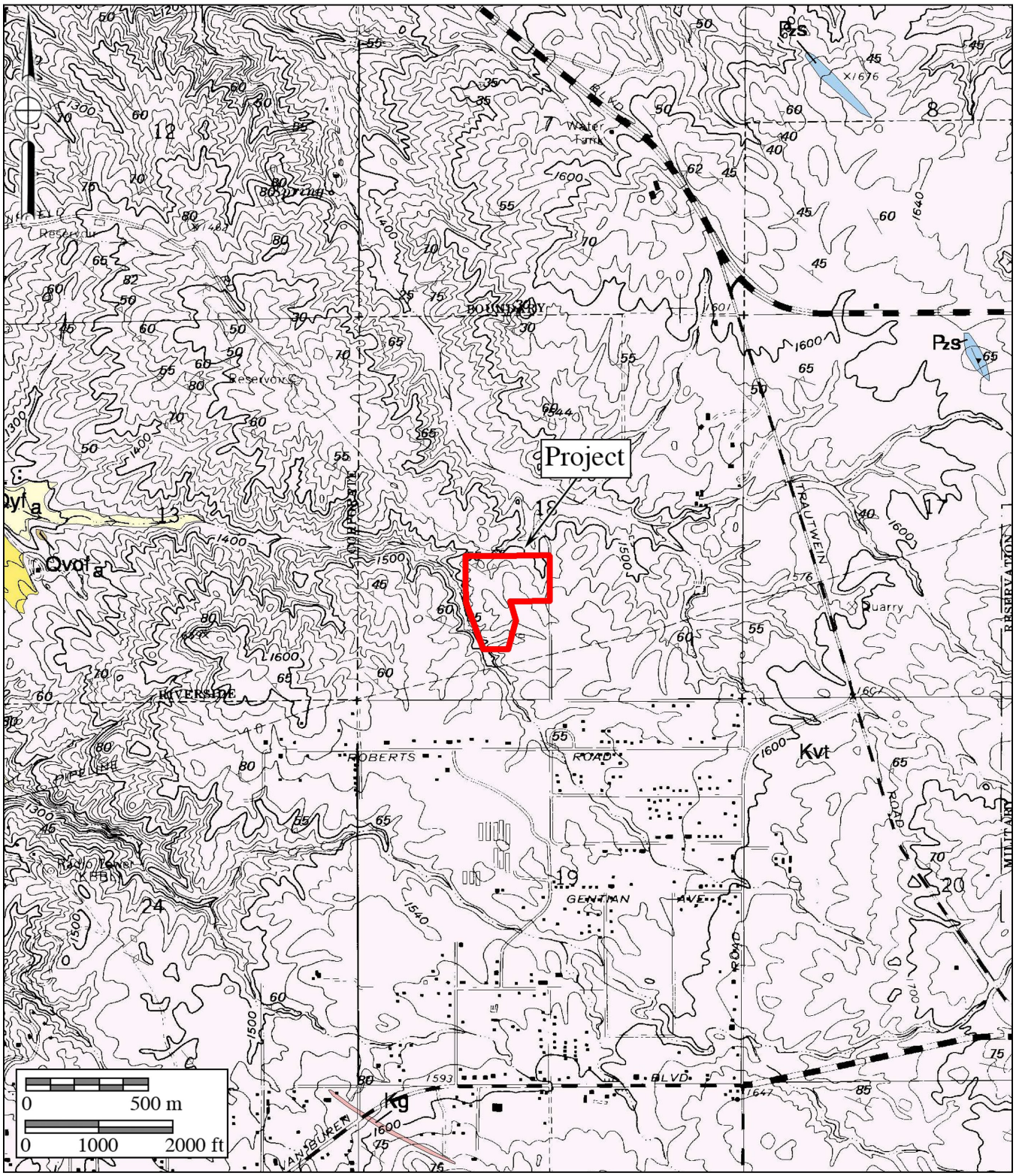


Figure 3

Geologic Map

The Dauchy Avenue Project

Geology after Morton and Cox (2001)

Late Quaternary (Holocene or "modern") alluvium is generally considered to be geologically too young to contain significant, nonrenewable paleontological resources (*i.e.,* fossils) and, therefore, is typically assigned a Low paleontological sensitivity. Old, Pleistocene (more than 11,700 years old), alluvial and alluvial fan deposits in the Inland Empire, however, often yield important Ice Age terrestrial vertebrate fossils, such as extinct mammoths, mastodons, giant ground sloths, extinct species of horse, bison, and camel, saber-toothed cats, and others. Therefore, these Pleistocene sediments are accorded a High paleontological resource sensitivity.

Professional Standards

The Society of Vertebrate Paleontology (2010) drafted guidelines outlining procedures that include:

> [E]valuating the potential for impacts of a proposed action on paleontological resources and for mitigating those impacts. Impact mitigation includes pre-project survey and salvage, monitoring and screen washing during excavation to salvage fossils, conservation and inventory, and final reports and specimen curation. The objective of these procedures is to offer standard methods for assessing potential impacts to fossils and mitigating these impacts.

The guidelines 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 that 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 upon 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.

Riverside County Paleontological Sensitivity Assessment

Since the City of Riverside does not currently provide specific paleontological resource guidelines, a "paleontological sensitivity map and report" generated by the Riverside County Land Information System in November 2020 (Figure 4) is utilized for the project. The County of Riverside ranks the project as having a low potential (green-tinted areas) to yield nonrenewable paleontological resources, and therefore, a Low paleontological sensitivity.

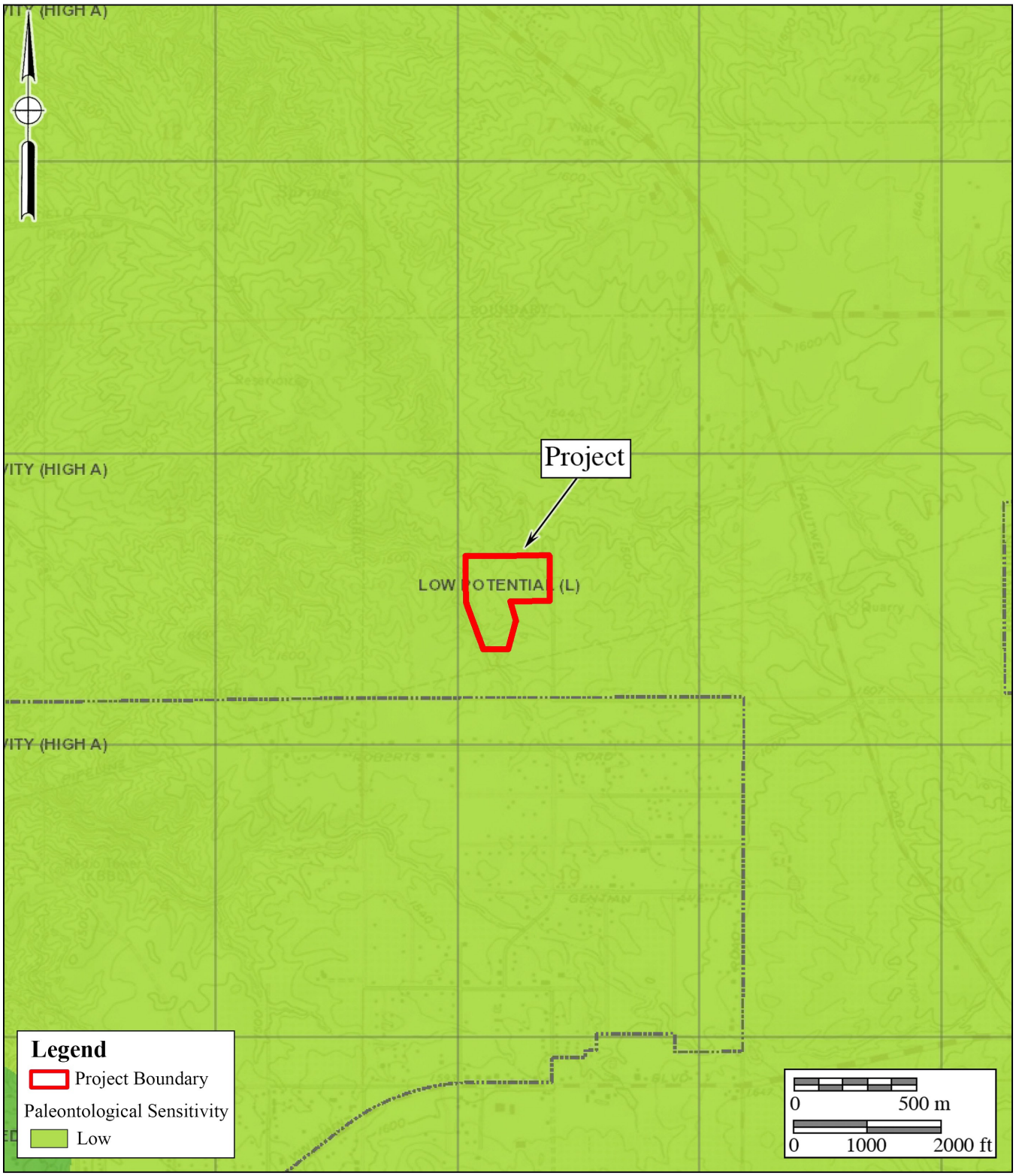


Figure 4

Paleontological Sensitivity Map

The Dauchy Avenue Project

After Riverside County Land Information System

The Cretaceous tonalite underlying the project is regarded as having a paleontological resource potential of low to none. A Low sensitivity is defined as:

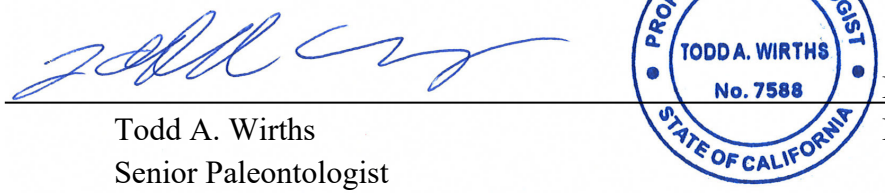
> Following a literature search, records check and a field survey, areas may be determined by a qualified vertebrate paleontologist as having low potential for containing significant paleontological resources subject to adverse impacts. (County of Riverside 2020)

VI. RECOMMENDATIONS

Monitoring for potential paleontological resources (fossils) during earth disturbance activities at the Dauchy Avenue Project is not warranted, since the tonalite underlying the project is not fossiliferous. There is no possibility for fossils to occur in these rocks.

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.



December 1, 2020

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

Date

VIII. REFERENCES

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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, http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx, accessed November 25, 2020.

APPENDIX A

Qualifications of Key Personnel

Todd A. Wirths, MS, PG No. 7588

Senior Paleontologist

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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 Eastvale Self Storage Project, City of Eastvale, Riverside County, California.* Prepared for Gossett Development, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Resource Impact Mitigation Monitoring Program for the IPT Perris DC III Western/Nandina Project, Perris, Riverside County, California.* Prepared for IPT/Black Creek Group. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Assessment for the 10407 Elm Avenue Project, City of Fontana, San Bernardino County, California*. Prepared for Advantage Environmental Consultants, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

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 Resource Impact Mitigation Program (PRIMP) for the Speedway TPM 37676 Project, Temescal Valley, Riverside County, California.* Prepared for Speedway Development. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Assessment for the Natwar Project, Perris, Riverside County, California.* Prepared for Advantage Environmental Consultants, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Resource and Mitigation Monitoring Assessment, Beyond Food Mart, City of Perris, Riverside 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 West Markham Project (TR 33587), City of Perris, Riverside County, California*. Prepared for Markham JP/ARA, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Monitoring and Mitigation Report for the Artesa at Menifee Town Center Project Site, Sherman Road and La Piedra Road, Menifee, Riverside County, California.* Prepared for MBK Real Estate. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Monitoring Report, Diarq Residence, La Jolla, City of San Diego, San Diego County, California.* Prepared for West Way Drive, LLC. 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.