

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.

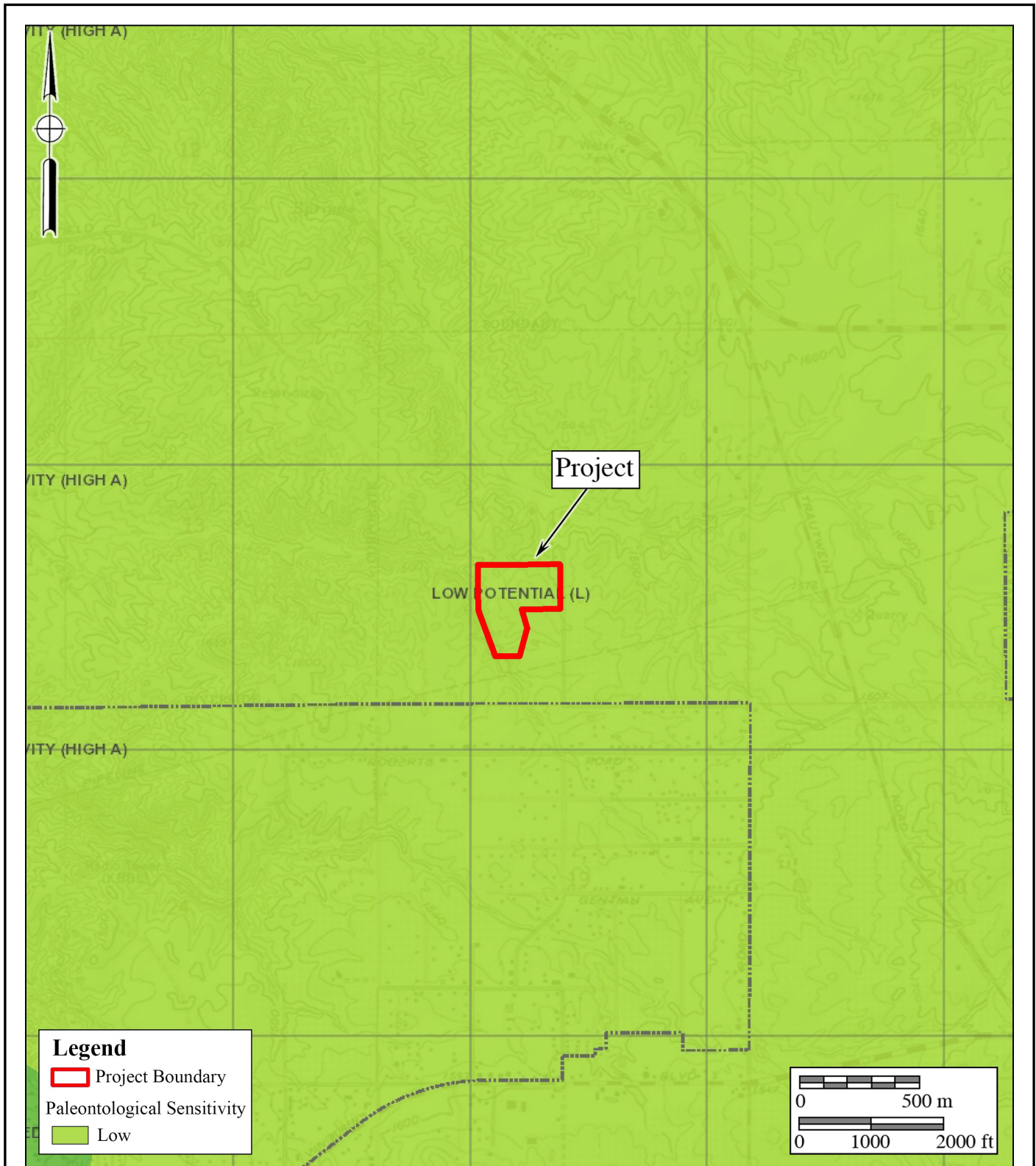


Figure 4
Paleontological Sensitivity Map
 The Dauchy Avenue Project
 After Riverside County Land Information System



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

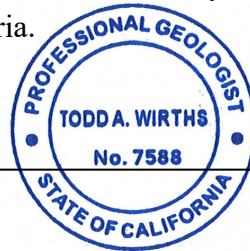
Following a literature search, records check and a field survey, areas may be determined by a qualified vertebrate paleontologist as having low potential for containing significant paleontological resources subject to adverse impacts. (County of Riverside 2020)

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

Date

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

VIII. REFERENCES

City of Riverside. 2007. Environmental Mitigation Monitoring and Reporting Program for the City of Riverside 2025 General Plan, Zoning Code Revision, Subdivision Code Revision, Noise Code Amendment, Citywide Design and Sign Guidelines, and Magnolia Avenue Specific Plan. Chapter 5, General Plan 2025 PEIR - Volume 1. Electronic document, https://riversideca.gov/cedd/sites/riversideca.gov.chedd/files/pdf/planning/general-plan/vol1/Chapter_5_MMRP.pdf, accessed November 25, 2020.

City of Riverside. 2012. Historic Preservation Element. General Plan 2025. Electronic document, https://riversideca.gov/cedd/sites/riversideca.gov.chedd/files/pdf/planning/general-plan/16_Historic_Preservation_Element.pdf, accessed November 25, 2020.

County of Riverside. 2008. County of Riverside general plan, Chapter 5: Multipurpose Open Space Element. Electronic document, https://planning.rctlma.org/Portals/14/genplan/general_plan_2008/general_plan/Chapter_5_Multipurpose_Open_Space_Element_2008.pdf, accessed November 25, 2020.

County of Riverside. 2020. Map My County. Electronic document, https://gis.countyofriverside.us/Html5Viewer/?viewer=MMC_Public, accessed November 25, 2020.

Morton, D.M. and Cox, B. 2001. Geologic Map of the Riverside East 7.5' Quadrangle, Riverside County, California: U.S. Geological Survey Open-File Report 01-452.

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

Brian F. Smith and Associates, Inc.

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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.