PALEONTOLOGICAL ASSESSMENT FOR THE 10426 LOCUST AVENUE PROJECT

PROJ-2022-00124
BLOOMINGTON,
SAN BERNARDINO COUNTY, CALIFORNIA

APNs 0252-151-04, -05, -52 and -64

Prepared for:

Lilburn Corporation
1905 Business Center Drive
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Submitted to:

County of San Bernardino
385 North Arrowhead Avenue
San Bernardino, California 92415

Prepared by:

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July 28, 2022

Paleontological Database Information

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Report Title:	Paleontological Assessment for the 10426 Locust Avenue Project, PROJ-2022-00124, Bloomington, San Bernardino County, California (APNs 0252-151-04, -05, -52 and -64)
Prepared for:	Lilburn Corporation 1905 Business Center Drive San Bernardino, California 92408
Submitted to:	County of San Bernardino 385 North Arrowhead Avenue San Bernardino, California 92415
Prepared by:	Brian F. Smith and Associates, Inc. 14010 Poway Road, Suite A Poway, California 92064
USGS Quadrangle:	Section 21, Township 1 South, Range 5 West, USGS *Fontana, California* (7.5-minute) quadrangle
Study Area:	2.81 acres
Key Words:	Paleontological assessment; Pleistocene alluvial fan deposits; High sensitivity; Bloomington; San Bernardino County.

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I. INTRODUCTION AND LOCATION

A paleontological resource assessment has been completed for the 10426 Locust Avenue Project located at 10362, 10410, 10374, and 10426 Locust Avenue in the unincorporated Bloomington neighborhood of San Bernardino County, California (Figures 1 and 2). The project consists of four parcels (Assessor's Parcel Numbers 252-151-04, -05, -52, and -64) totaling 2.81 acres. On the U.S. Geological Survey 7.5-minute, 1:24,000-scale *Fontana, California* topographic quadrangle map, the project is located in Section 21, Township 1 South, Range 5 West, of the San Bernardino Baseline and Meridian (Figure 2). The project parcels have been graded flat and are partially developed. The proposed project includes the construction of a 56,070-square-foot warehouse.

As the Lead Agency, the County of San Bernardino 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. A paleontological field survey was not conducted since the project is currently graded flat and partly developed.

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.

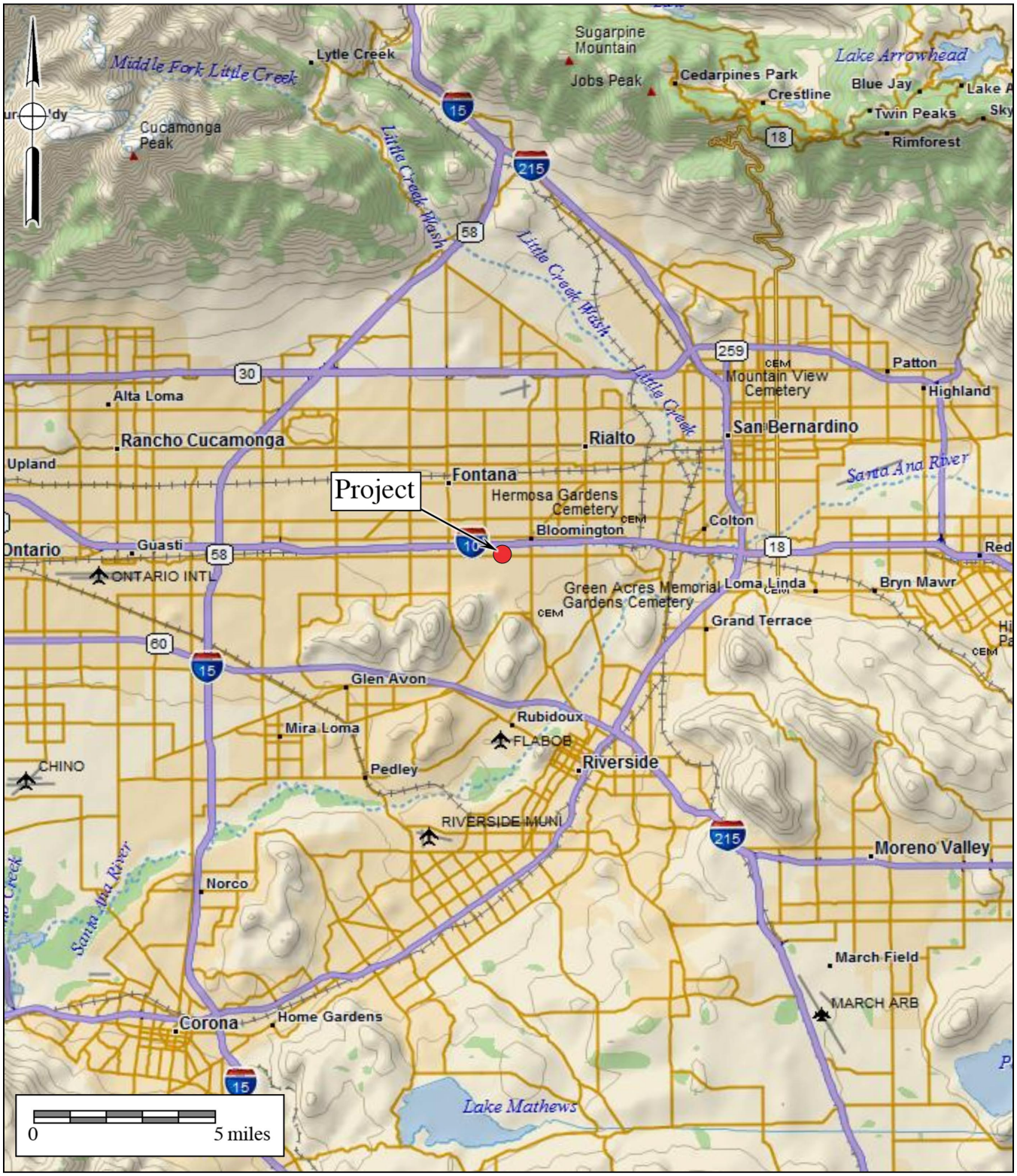

Figure 1

General Location Map

The 10426 Locust Avenue Project

DeLorme (1:250,000)

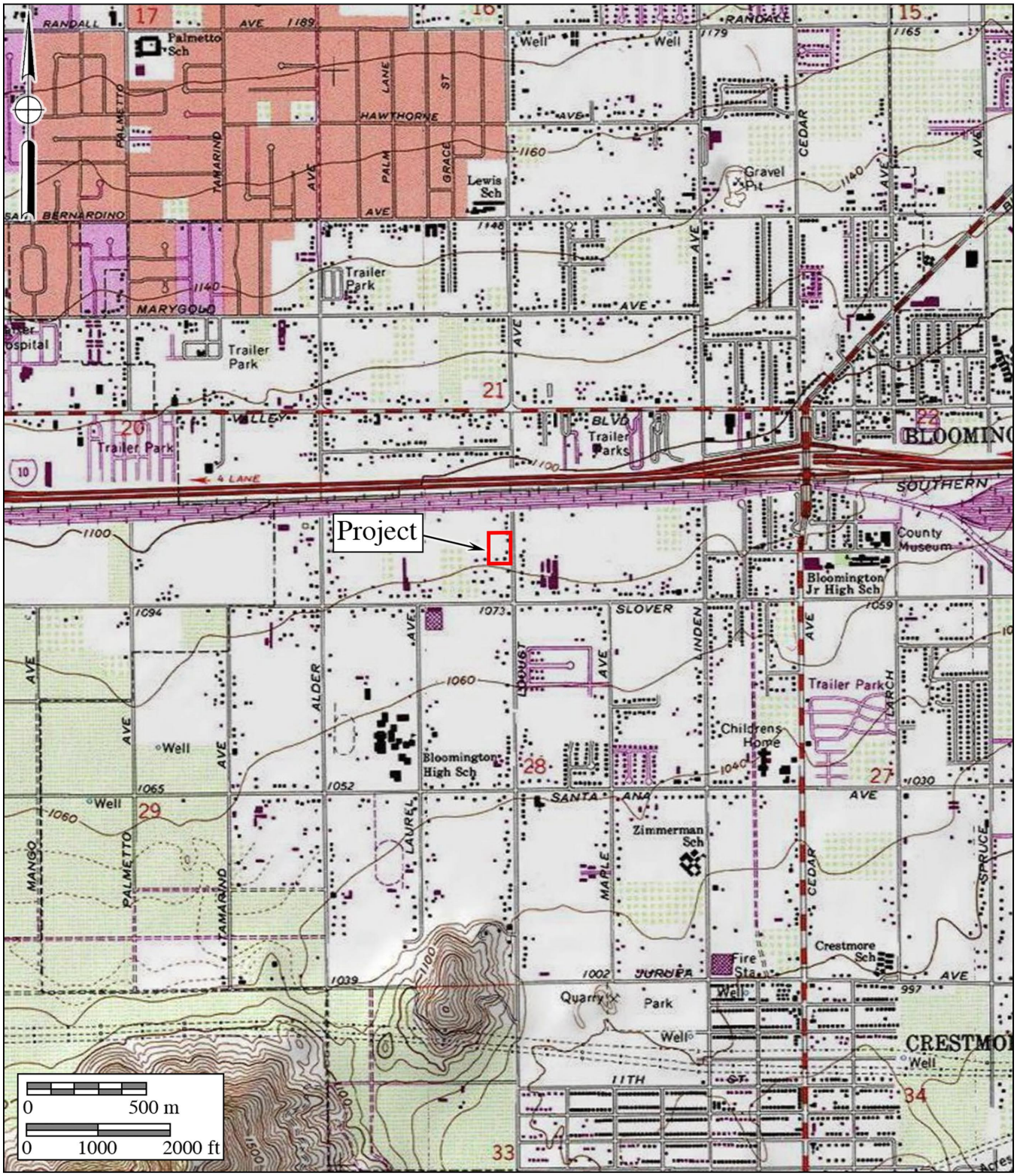

Figure 2

Project Location Map

The 10426 Locust Avenue Project

USGS *Fontana* Quadrangle (7.5-minute 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.

County of San Bernardino

The County of San Bernardino 2007 Development Code has developed criteria for applying guidelines to preserve and protect nonrenewable paleontological resources (County of San Bernardino 2018). In Chapter 82.20, "Paleontologic Resources (PR) Overlay," of the Development Code, Purpose, Location Requirements, Development Standards, and Paleontologist Qualifications are described in Sections 82.20.010 through 82.20.040, respectively (County of San Bernardino 2018).

III. GEOLOGY

The project is located near the western margin and distal southern end of the broad Lytle Creek alluvial fan that emanates from the San Gabriel Mountains approximately nine to 10 miles to the north as a result of uplift and dissection of the eastern San Gabriel Mountains. The main source of these sediments is from the Lytle Creek drainage, near where the northwest-southeast-trending San Andreas fault zone cuts across and separates the San Gabriel and San Bernardino mountain ranges (Morton and Miller 2006). Geomorphically, the project occupies the Fontana Plain (Dutcher and Garrett 1963), and is relatively flat-lying, with a gentle slope to the south (see Figures 2 and 3). Geologically, the project property is mapped as young alluvial fan deposits of Lytle Creek (large area colored yellow and labeled "Qyfl" on Figure 3; after Morton 2003) that are Holocene and late Pleistocene in age, a period of time spanning up to approximately 120,000 years ago (Cohen and Gibbard 2011). Morton (2003) describes these deposits as unconsolidated, cobbly and bouldery alluvium composing the Lytle Creek alluvial fan. Dutcher and Garrett (1963)

indicate that the young alluvial fan deposits may exceed one hundred feet thick in some areas of the Fontana-San Bernardino-Redlands region but show that these deposits are approximately 15 feet thick (Pl. 7, cross-section G-G') for a broad area in the Fontana Plain about one to two miles northeast of the project.

The young alluvial fan deposits are underlain by late to middle Pleistocene-aged old alluvial fan deposits (Morton 2003; Dutcher and Garrett 1963), deposited roughly between 11,700 to 780,000 years ago (Cohen and Gibbard 2011). Outcrops of these older deposits are shown on Figure 3 as brown areas labeled "Qof_2" flanking the northern slopes of the Jurupa Mountains, and are described as unconsolidated but indurated, cobbly and bouldery alluvium of the Lytle Creek fan (Morton 2003). The proximity of old alluvial fan outcrops to the young alluvial deposits mapped at the surface of the project supports Dutcher and Garrett's (1963) assessment, and general geologic structural relationships as well, that the young surficial alluvial deposits are relatively thin in this area of the project.

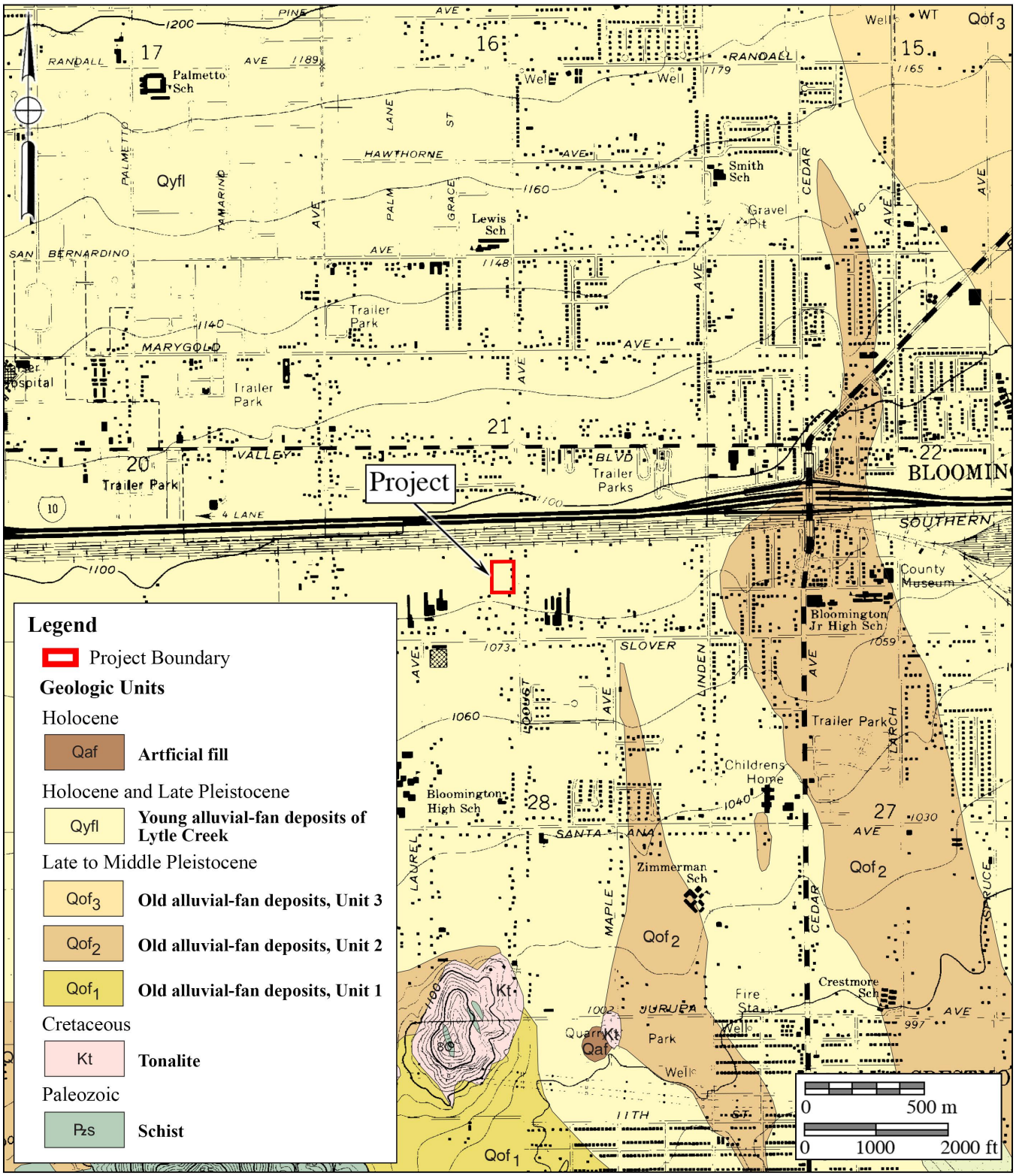

Figure 3

Geologic Map

The 10426 Locust Avenue Project

Geology after Morton (2003)

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, county, and local guidelines (Section II of this report).

Fossil Locality Search

A prior paleontological collections and locality records search was conducted for a nearby project, the 14801 Slover Avenue Project, by the Division of Geological Sciences at the San Bernardino County Museum (SBCM) in Redlands (Cortez 2021, Appendix B). The 14801 Slover Avenue Project is located approximately 3.5 miles west of the 10426 Locust Avenue Project. The report identified seven localities (SBCM localities [locs.] 5.1.14–5.1.17 and 5.1.19–5.1.21) situated between five and six miles southwest of the 10426 Locust Avenue Project. The bones of large and small Pleistocene-age mammals as well as terrestrial snails and freshwater clams were recovered from these localities, mostly from clayey, silty sands from depths ranging from five to 21 feet below the surface, when recorded. Mammals from these localities include three species of rodent, cottontail rabbit, bison, western camel, horse, Pacific mastodon, and other unidentified large mammal remains. Based on another source, the saber-tooth cat (*Smilodon*) specimen (SBCM loc. 5.1.11) mentioned by Cortez (2021) was reportedly discovered in the Declezville neighborhood, about three miles southwest of the project (Reynolds, *in* Aron et al. 2018).

Cortez (2021) indicates that the young alluvial fan deposits mapped at the surface by Morton (2003) in the area of the project have a low potential to yield significant paleontological resources. Conversely, the underlying late Pleistocene alluvial fan deposits are considered to have a high paleontological sensitivity, based on numerous fossil localities in the region. Fossils include the bones from extinct species such as mammoths, mastodons, giant ground sloths, dire wolves, saber-tooth cats, large and small horses, large and small camels, and bison (Cortez 2021).

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 Inland Empire, such as those that underlie the project ("Qof_2" on Figure 3), 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 (Cortez 2021, attached). These Pleistocene sediments are thus accorded a High paleontological resource sensitivity.

Professional Standards

The Society of Vertebrate Paleontology (SVP 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 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 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, based on the presence of nearby significant fossil localities (SBCM locs. 5.1.11, 5.1.14 - 5.1.17, and 5.1.19 - 5.1.21) and the strong likelihood that the nearby fossil localities originated from the same geologic formation as that which underlies the project at depth, the Pleistocene old alluvial fan deposits can be considered to have a high potential to yield significant paleontological resources.

County Assessment

The County of San Bernardino applies its "Paleontologic Resources (PR) Overlay" guideline to those areas where paleontological resources are known to occur or are likely to be present by using fossil location criteria reported by the SBCM, the University of California Museum of Paleontology (Berkeley), the Los Angeles County Natural History Museum, or other institutions (County of San Bernardino 2018, Section 82.20.020). The reported presence of paleontological resources by the SBCM near the project in a similar geologic setting and in similar

mapped rock units follows the County's definition for mitigation and preservation of nonrenewable paleontological resources (County of San Bernardino 2018, Section 82.20.010). Therefore, the project is subject to remain in compliance within the County's Paleontologic Resources Overlay, Section 82.20.030 (County of San Bernardino 2018). Thus, the following criteria are to be used to evaluate the project's compliance with the intent of the overlay:

a. **Field survey before grading.** In areas of potential but unknown sensitivity, field surveys before grading shall be required to establish the need for paleontologic monitoring.
b. **Monitoring during grading.** A project that requires grading plans and is located in an area of known fossil occurrence within the overlay, or that has been demonstrated to have fossils present in a field survey, shall have all grading monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Paleontologic monitors shall be equipped to salvage fossils as they are unearthed to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring is not necessary if the potentially-fossiliferous units described for the property in question are not present, or if present are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.
c. **Recovered specimens.** Qualified paleontologic personnel shall prepare recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils is essential in order to fully mitigate adverse impacts to the resources.
d. **Identification and curation of specimens.** Qualified paleontologic personnel shall identify and curate specimens into the collections of the Division of Geological Sciences, San Bernardino County Museum, an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA compliance. The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not considered complete until curation into an established museum repository has been fully completed and documented.
e. **Report of findings.** Qualified paleontologic personnel shall prepare a report

of findings with an appended itemized of specimens. A preliminary report shall be submitted and approved before granting of building permits, and a final report shall be submitted and approved before granting of occupancy permits. The report and inventory, when submitted to the appropriate lead agency along with confirmation of the curation of recovered specimens into the collections of the San Bernardino County Museum, will signify completion of the program to mitigate impacts to paleontologic resources.

f. **Mitigation financial limits.** In no event shall the County require the applicant to pay more for mitigation as required by Subsections (b), (c), and (d), above within the site of the project than the following amounts:
   1. One-half of one percent of the projected cost of the project, if the project is a commercial or industrial project;
   2. Three-fourths of one percent of the projected cost of the project for a housing project consisting of one unit; and
   3. If a housing project consists of more than one unit, three-fourths of one percent of the projected cost of the first unit plus the sum of the following:

      A. $200 per unit for any of the next 99 units;
      B. $150 per unit for any of the next 400 units; and
      C. $100 per unit for units in excess of 500.

VI. CONCLUSIONS AND RECOMMENDATIONS

Research has confirmed the existence of potentially fossiliferous late Pleistocene old alluvial fan deposits ("Qof_2" on Figure 3) that likely underlie the Holocene and late Pleistocene young alluvial fan sediments mapped at the surface ("Qyfl" on Figure 3) of the project. The occurrence of terrestrial vertebrate fossils at shallow depths from Pleistocene alluvial fan sediments across the Inland Empire of western Riverside County is well documented. The "High" paleontological sensitivity rating typically assigned to Pleistocene alluvial fan sediments for yielding paleontological resources supports the recommendation that paleontological monitoring be implemented during mass grading and excavation activities in undisturbed Pleistocene old alluvial fan sediments to mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources. Full-time monitoring of undisturbed alluvial fan deposits at the project is warranted starting at a depth of five feet below the surface.

If a fossil(s) is found at shallower depths, earth disturbance activities should be halted within a radius of 50 feet from the location of the fossil, and a qualified, project-level paleontologist shall be consulted to determine the significance of the fossilized remains. If the fossil is deemed significant by the paleontologist, full-time monitoring should be initiated at the project.

Based on the conclusions and recommendations outlined above, a paleontological resource impact mitigation program (PRIMP) is recommended prior to approval of the grading permit. A suggested PRIMP is outlined below. When implemented with the provisions of CEQA, the County of San Bernardino (2018), and the guidelines of the SVP (2010), this PRIMP would mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources (fossils), if present, to a level below significant.

1. Monitoring of mass grading and excavation activities in areas identified as likely to contain paleontological resources shall be performed by a qualified paleontologist or paleontological monitor. Starting at a depth of five feet, monitoring will be conducted full-time in areas of grading or excavation in undisturbed sediments of alluvial fan deposits.
2. If a fossil(s) is found at a shallower depth, earth disturbance activities should be halted within a radius of 50 feet from the location of the fossil, and a project-level paleontologist shall be consulted to determine the significance of the fossilized remains. If the fossil is deemed significant by the project-level paleontologist, full-time monitoring should be initiated at the project.
3. 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 abundant or large specimens in a timely manner. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or, if present, are determined on 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.
4. Paleontological salvage during trenching and boring activities is typically from the generated spoils and does not delay the trenching or drilling activities. Fossils are collected and placed in cardboard flats or plastic buckets and identified by field number, collector, and date collected. Notes are 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. On mass grading projects, discovered fossil sites are protected by flagging to prevent them from being overrun by earthmovers (scrapers) before salvage begins. Fossils are collected in a similar manner, with notes and photographs being taken before removing the fossils. Precise location of the site is determined with the use of handheld GPS units. 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.

5. Isolated fossils are collected by hand, wrapped in paper, and placed in temporary collecting flats or five-gallon buckets. Notes are 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.
6. Particularly small invertebrate fossils typically represent multiple specimens of a limited number of organisms, and a scientifically suitable sample can be obtained from one to several five-gallon buckets of fossiliferous sediment. If it is possible to dry screen the sediment in the field, a concentrated sample may consist of one or two buckets of material. For vertebrate fossils, the test is usually the observed presence of small pieces of bones within the sediments. If present, multiple five-gallon buckets of sediment can be collected and returned to a separate facility to wet-screen the sediment.
7. In accordance with the "Microfossil Salvage" section of the Society of Vertebrate Paleontology guidelines (2010:7), bulk sampling and screening of fine-grained sedimentary deposits (including carbonate-rich paleosols) must be performed if the deposits are identified to possess indications of producing fossil "microvertebrates" to test the feasibility of the deposit to yield fossil bones and teeth.
8. In the laboratory, individual fossils are cleaned of extraneous matrix, any breaks are repaired, and the specimen, if needed, is stabilized by soaking in an archivally approved acrylic hardener (*e.g.*, a solution of acetone and Paraloid B-72).
9. Recovered specimens are prepared to a point of identification and permanent preservation (not display), including screen-washing sediments to recover small invertebrates and vertebrates. Preparation of individual vertebrate fossils is often more time-consuming than for accumulations of invertebrate fossils.
10. Identification and curation of specimens into a professional, accredited public museum repository with a commitment to archival conservation and permanent retrievable storage (*e.g.*, the San Bernardino County Museum) shall be conducted. The paleontological program should include a written repository agreement prior to the initiation of mitigation activities. Prior to curation, the lead agency (*e.g.*, the County of San Bernardino) will be consulted on the repository/museum to receive the fossil material.
11. 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 mitigate 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.

July 28, 2022

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

Date

VIII. REFERENCES

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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 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

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SAN BERNARDINO COUNTY

San Bernardino County Museum

Division of Earth Sciences

29 June, 2021

Brian F. Smith and Associates, Inc.
Attn: Todd Wirths
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Poway CA 92064

PALEONTOLOGY RECORDS REVIEW for proposed 14801 Slover Avenue Project in San Bernardino County, California

Dear Mr. Wirths,

The Division of Earth Sciences of the San Bernardino County Museum (SBCM) has completed a records search for the above-named project in San Bernardino County, California. The proposed Slover Avenue project is located near in the City of Fontana, California as shown on the United States Geological Survey (USGS) 7.5-minute Fontana, California quadrangles.

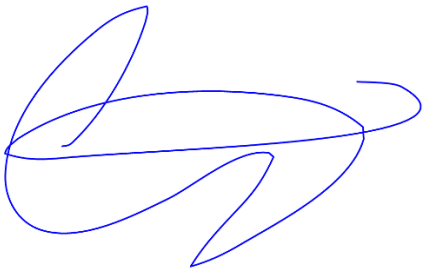
Previous geologic mapping (Morton, 2003) indicates that the study area is located entirely upon alluvial fan deposits of late Holocene age (= Qyf). These recent sediments have low potential to contain significant nonrenewable paleontologic resources. However, these Holocene sediments form a thin veneer overlying subsurface Pleistocene alluvial fan deposits (= Qof3). These older fan sediments have high potential to contain fossil resources. Pleistocene alluvium elsewhere in San Bernardino County and the Inland Empire has been repeatedly demonstrated to have high paleontologic sensitivity (Jefferson, 1991; Reynolds and Reynolds, 1991; Woodburne, 1991; Springer and Scott, 1994; Scott, 1997; Springer and others, 1998, 1999; Anderson and others, 2002). Fossils recovered from these Pleistocene sediments represent extinct taxa including mammoths, mastodons, ground sloths, dire wolves, sabretoothed cats, large and small horses, large and small camels, and bison (Jefferson, 1991; Reynolds and Reynolds, 1991; Woodburne, 1991; Springer and Scott, 1994; Scott, 1997; Springer and others, 1998, 1999).

For this review, I conducted a search of the Regional Paleontological Locality Inventory (RPLI) at the SBCM. The results of this search indicate that no paleontological resources have been discovered within the proposed project site; however, there are several sites within a 2 mile buffer. Located approximately 1.5 miles southwest of the proposed site are eight (8) SBCM localities from Pleistocene aged deposits; SBCM 5.1.11, 5.1.14, 5.1.15, 5.1.16, 5.1.17, 5.1.19, 5.1.20, and 5.1.21. Locality SBCM 5.1.11 uncovered a partial *Smilodon* skull at around a five (5) foot depth as estimated by trenching machine installing a pipeline. At SBCM 5.1.14 remains belonging to *Gyraulus* sp, *Stagnicola* sp, Gastropoda, Bivalvia, *Sylvilagus* sp, *Thomomys* sp, *Neotoma* sp, *Microtus californicus*, *Mammut pacificus* were discovered in very fine silty clayey sand with occasional pebbles. A single *Bison* sp. tooth was recovered from cemented clayey silty moderately sorted sand with small caliche rootlets at SBCM 5.1.15. Clayey silty fine sand with occasional larger subangular grains at locality SBCM 5.1.16 yielded bone fragments of *Camelops hesternus.* In the same type of sediment SBCM 5.1.17 and SBCM 5.1.19 unearthed remains of a large mammal along with fragmentary material of *Mammut pacificus*. SBCM 5.1.20 had a dry light olive gray subangular san that yielded fragments from *Camelops hesternus*, Artiodactyla, and a large mammal. SBCM locality 5.1.21 found fragmentary material from *Equus* sp. at an approximate 21 foot depth.

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

Please do not hesitate to contact us with any further questions that you may have.

Sincerely,



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