

December 23, 2021

Thai-Chau Le, Environmental Project Manager

CITY OF SAN JOSE

DEPARTMENT OF PLANNING, BUILDING, AND CODE ENFORCEMENT

PLANNING DIVISION

200 E. Santa Clara Street

Tower, 3rd Floor

San Jose, CA 95113

RE: PALEONTOLOGICAL RESOURCES IDENTIFICATION MEMO FOR THE CHICK-FIL-A SILVER CREEK AND CAPITOL PROJECT, CITY OF SAN JOSE DEPARTMENT OF PLANNING, BUILDING, AND CODE ENFORCEMENT, SANTA CLARA COUNTY, CALIFORNIA

Dear Ms. Le:

In support of the proposed Chick-fil-A Silver Creek and Capitol Project (project), Michael Baker International staff conducted background research of online and published databases and completed a web-based paleontological record search through the University of California Museum of Paleontology (UCMP) at Berkeley. These efforts identified the paleontological sensitivity of the proposed project area and determined whether the project could result in adverse impacts to paleontological resources in accordance with the California Environmental Quality Act (CEQA). Methods, results, and recommendations are summarized below; figures are provided in **Attachment 1**.

PROJECT DESCRIPTION AND LOCATION

The project proposes demolition of the existing commercial building at 3095 Silver Creek Road and construction of a new Chick-fil-A restaurant building and surface parking. The Chick-fil-A restaurant would be a 3,565-square-foot, one-story building with drive-through service, a small outdoor dining space, and an exterior trash enclosure. The existing 631-space surface parking lot would be reconstructed into a 596-space surface parking lot with 28 spaces serving the Chick-fil-A restaurant. The remaining 568 spaces would serve the Target retail building to the southwest.

The total maximum depth of ground disturbance is estimated to be approximately 8 feet to remove existing utilities. No grading or cutting is anticipated for the project. Ground disturbance is anticipated to include demolition, clearing, paving, and construction. No geotechnical report was available for review for this paleontological assessment.

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The project is mapped within San Jose East, USGS 7.5-minute topographic quadrangle map (Township 7 South, Range 1 East, unsanctioned of Mount Diablo range) (**Attachment 1**: Figures 1-3). The project site is at 3095 Silver Creek Road in San Jose, Santa Clara County, California.

GEOLOGIC SETTING

California is divided into 11 geomorphic provinces, each defined by unique geologic and geomorphic characteristics. The project is at the center of the Coast Ranges geomorphic province, with the northern and southern ranges separated by a depression containing the San Francisco Bay some 12 miles to the north of the project area. Northwest-trending mountain ranges and valleys subparallel to the San Andreas Fault distinguish the province. The Coast Ranges province crosses several counties, bound by the Pacific Ocean to the west and the Great Central Valley geomorphic province to the east. The northern Coast Ranges are of the Franciscan Complex with a primarily irregular, knobby, landslides topography. Valleys and strike-ridges categorize the east border in Upper Mesozoic strata (CGS 2002; Norris and Webb 1976).

The geology of the San Jose area was mapped by Thomas Rodgers (1966a) at a scale of 1:250,000 and by Dibblee and Minch (2005) at a scale of 1:24,000. Locally, the project area is west of the Diablo Mountain Range, south of the Calaveras Reservoir, and by the Silver Creek Faultline. Geologic units underlying the project area are mapped as Quaternary alluvium (Qal), consisting of stream alluvial deposits and tideland deposits dating to the Pleistocene epoch (2.5 million years ago to 11,700 years ago). However, stratigraphic studies show that the Quaternary alluvium overlies much older sedimentary deposits in this area, including the late Miocene Briones formation (23 million years ago to 2.6 million years ago), among other named and unnamed formations. Nearby are exposures of the Franciscan Formation spanning the Jurassic and Cretaceous periods (200 million years ago to 60 million years ago) (Dibblee and Minch 2005; Rodgers 1966a, 1966b).

The project area is located within the Central California Foothills and Coastal Mountains region. This region is composed of flood basins, plains, swales, and drainages within an area extending through the central California coastal valleys, the small valleys of the Coast Range, as well as the San Joaquin and Sacramento Valleys. Soil mapping in the project area indicates a high degree of surficial soil disturbance as it has been mapped 90% Urban land from the Clear Lake complex with 0%-2% slope. The Clear Lake series consists of very deep, poorly drained dark gray and grayish brown-colored clay with negligible to high runoff and slow permeability that formed in fine-textured alluvium derived from igneous, metamorphic, and sedimentary rocks (NRCS 2021).

The project is within the Bay Terraces/Lower Santa Clara Valley ecoregion. Ecoregions denote general similarity in ecosystems and environmental resources. The ecoregion is heavily urbanized with dense development around San Francisco Bay. Historically, typical vegetation included coast live oak, California oat grasses, and needlegrass grasslands; however, the current land use is now entirely urban and residential. It is typified by a dry subhumid climate of relatively hot dry summers and cool, moist winters with a mean annual precipitation of 10 to 35 inches. The soil temperature regimes are mostly thermic, with some isomesic, and soil moisture regimes that are xeric with some acqic (NRCS 2021; Griffith et al. 2016).

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PALEONTOLOGICAL RECORDS SEARCH

Michael Baker International staff requested a fossil locality records search through the UCMP in Berkeley on September 17, 2021. However, no response has been received due to possible staff shortages or closures at the UCMP. Michael Baker International conducted investigations within a 4-mile radius of the project through the UCMP's web-based countywide fossil locality search (UCMP 2021) and the Paleobiology Database (PBDB 2021). The records search was limited to data available online. The search showed no previously identified fossil localities within the project site itself. Four localities were identified within the 4-mile radius through the PBDB database; results are shown in the following table.

Collection #	Location	Formation	Intervals
91539	North of Goodyear St (approx. 3.7 miles NW of the project site)	Briones, marine environment (brown broken face silty clay loam)	Barstovian Land Mammal
185363	Silver Creek Valley (approx. 1 mile SE of project site)	Unknown formation, marine environment (dark gray broken face clay)	Tithonian (late Jurassic)
185364	Shallow Ridge (approx. 1.2 miles SE of the project site)	Unknown formation, marine environment (very dark gray broken face clay)	Tithonian (late Jurassic)
185365	Yerba Buena Creek (approx. 1 mile SE of project site)	Unknown formation, marine environment (dark brown Altamont clay)	Tithonian (late Jurassic)

Source: PBDB 2021

The sensitivity of the Pleistocene-age alluvium formations, such as those in the project area, is typically moderate in intact geologic contexts. The depth of the Pleistocene-age alluvium is unknown, but it is likely underlain by the highly sensitive Briones and unnamed Jurassic-age formation, both of which contain known fossil localities. The Franciscan Formation, which is mapped nearby, is typically sparse in its fossil assemblage. However, significant fossils have been recovered from this formation, including *Ichthyosaurus californicus*, *Ichthyosaurus franciscanus*, and *Plesiosaurus hesternus* (Hilton 2003:272-273).

SUMMARY OF FINDINGS AND RECOMMENDATIONS

The PBDB fossil locality searches did not identify any paleontological resources within the project site. Three paleontological localities were discovered within a general 1-mile radius and one paleontological locality was identified within a 4-mile radius. The project area is moderately sensitive for paleontological resources. The sensitivity of the Pleistocene-age alluvium formations, such as those in the project area, is typically moderate in intact geologic contexts. In addition,

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under the Pleistocene-age alluvium, the project area likely is underlain with highly sensitive, Jurassic-age clay deposits known to have produced fossil localities within close proximity to the project area.

Despite the sensitivity of any intact geological deposits within the project area, due to the shallow depth and nature of ground-disturbing activities, the project has low potential to disturb paleontological resources. Shallow excavation activities are unlikely to extend into intact strata. However, if ground-disturbing activities occur within previously undisturbed geologic contexts, which have the potential to contain significant paleontological resources, full-time paleontological monitoring is recommended during ground disturbance.

The following mitigation measures (MM) are recommended to be implemented such that in the event of any discovery of unknown paleontological resources during earthwork, impacts would be **less than significant**.

MM PALEO-1: In the event that any paleontological resources are encountered at the project site during construction or the course of any ground disturbance activities, all such activities shall halt immediately, at which time the applicant shall notify the City and consult with a qualified paleontologist to assess the significance of the find. The assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined to be unnecessary or infeasible by the City. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted.

PREPARER QUALIFICATIONS

AISHA FIKE, SENIOR ARCHITECTURAL HISTORIAN

Ms. Fike is a senior architectural historian and cultural resources specialist with 12 years of experience in cultural resource management. She is skilled in conducting historic research and completing field inventories and site assessments. Ms. Fike has completed numerous documentations in support of a range of projects requiring compliance with CEQA and various local agency regulations. As the lead architectural historian on multiple California-based development, redevelopment, and transportation projects, Ms. Fike has acquired expertise in assessing both direct and indirect impacts to historic resources and in preparing Historic Resource Inventory and Evaluation Reports, California Department of Parks and Recreation 523 forms, cultural resources sections of environmental documents, finding of effects documents, and Secretary of the Interior Standards analyses. Ms. Fike served on the board of the Northern California Chapter of the Documentation and Conservation of buildings, sites, and neighborhoods of the modern movement (Docomomo/Noca). She meets the Secretary of the Interior's Professional Qualifications Standards for history and architectural history.

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NICHOLAS F. HEARTH, PRINCIPAL INVESTIGATOR/SENIOR ARCHAEOLOGIST

This report was prepared by Michael Baker International Principal Investigator/Senior Archaeologist Nicholas F. Hearth MA, RPA. Mr. Hearth has worked as an archaeologist in cultural resource management since 2002. He meets the Secretary of the Interior's Professional Qualifications Standards for prehistoric archaeology. He received his BA in anthropology in 2003 from the University of Massachusetts, Amherst, and his MA in anthropology in 2006 from the University of California, Riverside. Mr. Hearth has worked in California, New Mexico, and multiple states both in the Midwest and New England. Mr. Hearth is well versed in applying Section 106 of the National Historic Preservation Act, National Environmental Policy Act, and CEQA on a variety of projects across many market sectors. He has completed projects in all phases of archaeology: Phase I pedestrian and shovel test surveys, extended Phase I survey, buried site testing, archaeological sensitivity assessments, Phase II testing and evaluations, Phase III data recovery, and Phase IV monitoring. His project responsibilities include overseeing archaeological, historical, and paleontological studies, directing all phases of archaeological field and laboratory work, and ensuring that the quality of analysis and reporting meets or exceeds appropriate local, state, and federal standards. He also is well versed in the paleontology of California and has authored and coauthored numerous paleontological reports and has conducted paleontological monitoring, recovery, fossil processing, and curation.

Sincerely,



Nicholas F. Hearth, MA, RPA
Principal Investigator/Senior Archaeologist



Aisha Fike, MA
Senior Architectural Historian

Attachments:

Attachment 1 – Figures

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REFERENCES

- CGS (California Geologic Survey). 2002. "California Geomorphic Provinces Note 36." California Department of Conservation.
<https://www.conservation.ca.gov/cgs/Documents/Publications/CGS-Notes/CGS-Note-36.pdf>.
- Dibble, T.W. and Minch J.A. 2005. *Geologic Map of the San Jose East Quadrangle, Santa Clara County, California*, 1:24,000 scale. Dibblee Geological Foundation Map DF-155.
https://ngmdb.usgs.gov/Prodesc/proddesc_71769.htm.
- Griffith, Glenn E., James M. Omernik, David W. Smith, Terry D. Cook, Ed Tallyn, Kendra Moseley, and Colleen B. Johnson. 2016. *Ecoregions of California*. Washington DC: US Geological Open-File Report 2016-1021.
- Hilton, Richard P. 2003. *Dinosaurs and Other Mesozoic Reptiles of California*. Berkeley, University of California Press.
- Norris, Robert M. and Robert W. Webb. 1976. *Geology of California*. Malden, MA: Willey.
- NRCS (Natural Resources Conservation Service). 2021. Web-based soil mapping interface. Accessed October 2021.
<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>.
- PBDB (Paleobiology Database). 2021. Web-based paleontological resource mapping interface. Accessed October 2021. <https://paleobiodb.org/navigator/>.
- Rodgers, Thomas. 1966a. *Geologic Map of California, San Jose Sheet*, 1:250,000 scale. Olaf P. Jenkins Edition, fourth printing, 1981. Sacramento, CA: California Division of Mines and Geology. <http://archives.csuchico.edu/digital/collection/coll19/id/326/>.
- _____. 1966b. *Index to Geologic Map of California, San Jose Sheet*. Olaf P. Jenkins Edition, fourth printing, 1981. Sacramento, CA: California Division of Mines and Geology.
https://www.conservation.ca.gov/cgs/Documents/Publications/Geologic-Atlas-Maps/GAM_017-Explanation-1966.pdf.
- UCMP (University of California Museum of Paleontology). 2021. Web-based paleontological resource mapping interface. Accessed October 2021.
<https://ucmpdb.berkeley.edu/loc.html>.

Attachment 1

Figures

San Jose East Quad



San Jose East Quad





PN: 165544



Project Area

3095 SILVER CREEK ROAD

Michael Baker
INTERNATIONAL



0 50 100 200 Feet

Source: Esri, ArcGIS Online, World Imagery: Santa Clarita, California

Project Area

Figure 3