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Subject: Paleontological Resources Evaluation for Lakeview Plaza, City of Lake Elsinore, Riverside County, California

Introduction

A literature review and museum record search were conducted and used to assign a paleontological sensitivity classification to the geologic units within the project site. This information forms the basis for the below evaluation. The results are presented in a California Environmental Quality Act (CEQA) Appendix G format for easy incorporation into a CEQA document.

Impact Analysis

Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The paleontological sensitivity of the geologic units that underlie the project site was evaluated using the results of the paleontological locality search and review of existing information in the scientific literature concerning known fossils within those geologic units. Fossil collections records from the University of California Museum of Paleontology (UCMP) online database were reviewed, which contain known fossil localities in Riverside County.

Following the literature review and museum record search a paleontological sensitivity classification was assigned to the geologic units within the project site. The potential for impacts to significant paleontological resources is based on the potential for ground disturbance to directly impact paleontologically sensitive geologic units. The Society of Vertebrate Paleontology (SVP) has developed a system for assessing paleontological sensitivity and describes sedimentary rock units as having high, low, undetermined, or no potential for containing scientifically significant nonrenewable paleontological resources (SVP 2010). This system is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present.

According to the published geologic mapping by Morton and Weber (2003), the project site is immediately underlain by Mesozoic phyllite (M₂p) and younger Quaternary (Holocene) alluvium (Q_{yv}_a). The Mesozoic phyllite mapped within the eastern project site is considered to have no paleontological resource potential as its formation is not conducive to fossil preservation (SVP 2010). The Holocene alluvium mapped within the project site is derived as fluvial deposits along valley floors and comprised of unconsolidated sand, silt, and clay. Intact Holocene alluvial deposits are too young to preserve



paleontological resources and are determined to have a low paleontological resource potential. However, these younger sediments may grade downward into older deposits of late Pleistocene age that could preserve fossil remains at an unknown but potentially moderate depth (approximately 10 feet).

A search of the paleontological locality records maintained by UCMP's online database resulted in no previously recorded vertebrate fossil localities within the project vicinity.

Project ground disturbance associated with the development of the retail and restaurant complex would be minimal as there are no subterranean components proposed. Given that the fossiliferous deposits may occur at greater depths than anticipated project disturbance, the potential for encountering fossil resources during project-related ground disturbance is low and impacts to paleontological resources are not anticipated.

Further paleontological resources management is not recommended at this time; however, Mitigation Measure PALEO-1 is recommended in the case of unanticipated fossil discoveries during any project ground-disturbing activities within Holocene alluvial deposits. Mitigation Measure PALEO-1 would apply to all phases of project construction and would provide that any unanticipated fossils present on site are preserved and that potential impacts to paleontological resources would be less than significant by arranging for the recovery, identification and curation of previously unrecovered fossils.

Mitigation Measure

PALEO-1 Unanticipated Discovery of Paleontological Resources

In the event an unanticipated fossil discovery is made during the course of project development, then in accordance with SVP (2010) guidelines, it is the responsibility of any worker who observes fossils within the project site to stop work in the immediate vicinity of the find and notify a qualified professional paleontologist who shall be retained to evaluate the discovery, determine its significance and if additional mitigation or treatment is warranted. Work in the area of the discovery will resume once the find is properly documented and authorization is given to resume construction work. Any significant paleontological resources found during construction monitoring will be prepared, identified, analyzed, and permanently curated in an approved regional museum repository.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

References

- California Geological Survey (CGS). 2002. California Geomorphic Provinces, Note 36.
- Morton, D.M., and Miller, F.K. 2006. Geologic map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California. U.S. Geological Survey, Open-File Report OF-2006-1217, scale 1:62,500.
- Morton, D.M., and Weber, F.H., 2003, [Preliminary geologic map of the Elsinore 7.5' quadrangle, Riverside County, California](#): U.S. Geological Survey, Open-File Report OF-2003-281, scale 1:24,000.
- Norris, R.M., and Webb, R.W. 1990. Geology of California. John Wiley & Sons, New York.



Society of Vertebrate Paleontology (SVP). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee.

University of California Museum of Paleontology (UCMP) Online Database. 2019. UCMP specimen search portal, <http://ucmpdb.berkeley.edu/>.

California Geological Survey (CGS). 2002. California Geomorphic Provinces, Note 36.

Preparers

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