

Appendix E-2

Vertebrate Paleontology Records Check, prepared by the
Natural History Museum of Los Angeles County,
October 2020

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1 October 2019

Dudek
605 Third Street
Encinitas, CA 92024

Attn: Michael J. Williams, Ph.D., Senior Paleontologist

re: Vertebrate Paleontology Records Check for paleontological resources for the proposed Arroyo Seco Project, Dudek Project # 11884, in the City of Pasadena, Los Angeles County, project area

Dear Michael:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed Arroyo Seco Project, Dudek Project # 11884, in the City of Pasadena, Los Angeles County, project area as outlined on the portion of the Pasadena USGS topographic quadrangle map that you sent to me via e-mail on 17 September 2019. We do not have any vertebrate fossil localities that lie directly within the proposed project area boundaries, but we do have localities nearby from the sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

In the elevated terrain of the San Gabriel Mountains around the northern parcel of the proposed project area the bedrock is composed of plutonic igneous rocks that will not contain recognizable fossils. Most of the proposed project area, though, has surficial deposits that consist predominantly of younger Quaternary gravels in the Arroyo Seco Canyon drainage, but with older Quaternary Alluvium, derived as alluvial fan deposits from the San Gabriel Mountains to the northeast, on the northeastern side of the southern parcel of the proposed project area. These sedimentary deposits typically do not contain significant vertebrate fossils, at least in the uppermost layers, but underlying older and perhaps finer-grained Quaternary deposits may well contain significant vertebrate fossils.

Our closest vertebrate fossil locality in older Quaternary deposits is LACM 2027, southeast of the proposed project area, south of Washington Boulevard and west of Allen Avenue near the western end of Brigden Road, that produced a fossil specimen of mastodon, *Mammut*, at unstated depth. Further to the southwest of the proposed project area, in Eagle Rock east of the Pasadena Freeway (I-110) and Eagle Rock Boulevard just south of York Boulevard, our older Quaternary locality LACM (CIT) 342 produced fossil specimens of turkey, *Parapavo californicus*, and mammoth, *Mammuthus*, at a depth of 14 feet below the surface. The fossil turkey specimen from locality LACM (CIT) 342 was published in the scientific literature by L.H. Miller in 1942 (A New Fossil Bird Locality. *Condor*, 44(6):283-284) and the mammoth specimen was a rare, nearly complete skeleton and was published in the scientific literature by V.L. Roth in 1984 (How Elephants Grow: Heterochrony and the Calibration of Developmental Stages in Some Living and Fossil Species. *Journal of Vertebrate Paleontology*, 4(1):126-145).

Excavations in the igneous bedrock exposed in the elevated terrain in the northern part of the proposed project area will not encounter recognizable fossils. Shallow excavations in the younger Quaternary gravels exposed in the Arroyo Seco drainage, as well as the older Quaternary Alluvium on the eastern portion of the southern parcel of the proposed project area, are unlikely to uncover significant vertebrate fossils. Deeper excavations that extend down into older and perhaps finer-grained Quaternary deposits, however, may well uncover significant fossil vertebrate specimens. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. 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.

Sincerely,



Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice