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Project No: 19-08558

Kathy Hoffer
Development Director
HILLWOOD Enterprises, L.P.
2855 Michelle Drive, Suite 180
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Via email: Kathy.Hoffer@hillwood.com

Subject: Paleontological Resource Assessment for the Moreno Valley Trade Center Project, City of Moreno Valley, Riverside County, California

Dear Ms. Hoffer,

Rincon Consultants, Inc. (Rincon) conducted a paleontological resource assessment for the proposed Moreno Valley Trade Center Project (project), an industrial development located in the city of Moreno Valley, Riverside County, California. This study was prepared under contract to HILLWOOD Enterprises, L.P. (HILLWOOD) for use by the City of Moreno Valley (City) in support of the draft Environmental Impact Report (EIR) being prepared pursuant to the California Environmental Quality Act (CEQA). The goals of this assessment are to identify the geologic units that may be impacted by development of the project, determine the paleontological sensitivity of geologic units underlying the project site, assess the potential for impacts to paleontological resources from development of the project, and recommend mitigation measures to reduce impacts to scientifically significant paleontological resources, pursuant to CEQA.

This paleontological resource assessment consisted of a fossil locality record search at the Natural History Museum of Los Angeles County (NHMLAC) and Western Science Center (WSC), a review of existing geologic maps, and a review of primary literature regarding fossiliferous geologic units within the project site and vicinity. Following the literature review and records search, this report assessed the paleontological sensitivity of the geologic units underlying the project site, determined the potential for impacts to significant paleontological resources, and proposed mitigation measures to reduce impacts to less than significant.

Project Location and Description

The project site encompasses 80 acres of land (Assessor's Parcel Numbers 488-340-002 though -012) within the eastern portion of the city of Moreno Valley, Riverside County, California (Figure 1). The property is bounded to the north by Eucalyptus Avenue, the west by Quincy Avenue (the Quincy Channel), the south by Encilia Avenue, and the east by Redlands Boulevard. More specifically, it is in Township 3 south, Range 3 west, Section 2 of the United States Geological Survey Sunnymead, CA 7.5-minute topographic quadrangle (Figure 2). It is in a semi-rural setting consisting of a mixture of agricultural, commercial, and residential development.

The project involves the construction of a 1,332,380 square foot (s.f.) logistics building. As currently designed, the building would contain 20,000 s.f. of office space with 1,312,380 s.f. of warehouse space. The building is planned to be 51 feet in height. A total of 637 stalls for auto parking would be provided with trailing parking consisting of 278 stalls.

Grading and construction plans are not currently available. Given the total footprint of the logistics buildings, ground-disturbing activities will likely include mass grading and trenching for underground utility tie-in.

Regulatory Setting

Fossils are remains of ancient, commonly extinct organisms, and as such are nonrenewable resources. The fossil record is a document of the evolutionary history of life on earth, and fossils can be used to understand evolutionary pattern and process, rates of evolutionary change, past environmental conditions, and the relationships among modern species (i.e., systematics). The fossil record is a valuable scientific and educational resource, and individual fossils are afforded protection under federal, state, and local environmental laws, where applicable. This study has been completed in accordance with the requirements of CEQA, as well as other state and local regulations applicable to potential paleontological resources in the project site are summarized below.

State Regulations

California Environmental Quality Act

Paleontological resources are protected under CEQA, which states in part a project will "normally" have a significant effect on the environment if it, among other things, will disrupt or adversely affect a paleontological site except as part of a scientific study. Specifically, in Section VII(f) of Appendix G of the State CEQA Guidelines, the Environmental Checklist Form, the question is posed thus: "Will the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature." To determine the uniqueness of a given paleontological resource, it must first be identified or recovered (i.e., salvaged). Therefore, CEQA mandates mitigation of adverse impacts, to the extent practicable, to paleontological resources.

CEQA does not define "a unique paleontological resource or site." However, the Society of Vertebrate Paleontology (SVP) has defined a "significant paleontological resource" in the context of environmental review as follows:

> Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are typically to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years) (SVP 2010).

The loss of paleontological resources meeting the criteria outlined above (i.e., a significant paleontological resource) would be a significant impact under CEQA, and the CEQA lead agency is responsible for ensuring that impacts to paleontological resources are mitigated, where practicable, in compliance with CEQA and other applicable statutes.

Figure 1 Regional Vicinity

Figure 2 Project Vicinity

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California Public Resources Code

Section 5097.5 of the Public Resources Code states:

> No person shall 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, 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. Violation of this section is a misdemeanor.

Here "public lands" means those owned by, or under the jurisdiction of, the state or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with Public Resources Code Section 5097.5 for their own activities, including construction and maintenance, and for permit actions (e.g., encroachment permits) undertaken by others.

City of Moreno Valley

The City of Moreno Valley General Plan Goals, Objectives, Policies, and Programs Chapter (City of Moreno Valley 2006) contains one policy pertaining to paleontological resources. The policy is as follows:

- Policy 7-6 In areas where archaeological or paleontological resources are known or reasonably expected to exist, based upon the citywide survey conducted by the University of California, Riverside Archaeological Research Unit, incorporate the recommendations and determinations of that report to reduce potential impacts to levels of insignificance.

Methods

Rincon evaluated the paleontological sensitivity of the geologic units which underlie the project site using the results of the paleontological locality search and review of existing information in the scientific literature concerning known fossils in those geologic units. Rincon submitted requests to the NHMLAC and WSC for a list of known fossil localities from the project site and immediate vicinity (i.e., localities recorded on the United States Geological Survey Sunnymead, California 7.5-minute topographic quadrangle), reviewed geologic maps, and reviewed primary literature.

Rincon assigned paleontological sensitivities to the geologic units in 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 SVP (2010) has defined paleontological sensitivity and developed a system for assessing paleontological sensitivity, as discussed below.

Paleontological Sensitivity

Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, diagnostically important, or are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and processes, or which could improve our understanding of paleochronology, paleoecology, paleophylogeography, or depositional histories. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well represented lineages can be equally important for studying evolutionary pattern and process, evolutionary rates, and paleophylogeography. Even unidentifiable material can provide useful data for dating geologic units if radiometric dating is possible. As such, common fossils (especially vertebrates) may be scientifically important, and therefore considered highly significant.

The SVP (2010) describes sedimentary rock units as having high, low, undetermined, or no potential for containing significant nonrenewable paleontological resources. This criterion is based on rock units in which significant fossils have been determined by previous studies to be present or likely to be present. While these standards were written specifically to protect vertebrate paleontological resources, all fields of paleontology have adopted these guidelines, which are given here verbatim:

I. High Potential (Sensitivity). Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered have a high potential for containing significant non-renewable fossiliferous resources. These units include but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas which contain potentially datable organic remains older than Recent, including deposits associated with nests or middens, and areas which may contain new vertebrate deposits, traces, or trackways are also classified as significant.

II. Low Potential (Sensitivity). Sedimentary rock units that are potentially fossiliferous, but have not yielded fossils in the past or contain common and/or widespread invertebrate fossils of well documented and understood taphonomic, phylogenetic species and habitat ecology. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils prior to the start of construction. Generally, these units will be poorly represented by specimens in institutional collections and will not require protection or salvage operations. However, as excavation for construction gets underway it is possible that significant and unanticipated paleontological resources might be encountered and require a change of classification from Low to High Potential and, thus, require monitoring and mitigation if the resources are found to be significant.

III. Undetermined Potential (Sensitivity). Specific areas underlain by sedimentary rock units for which little information is available have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.

IV. No Potential. Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources.

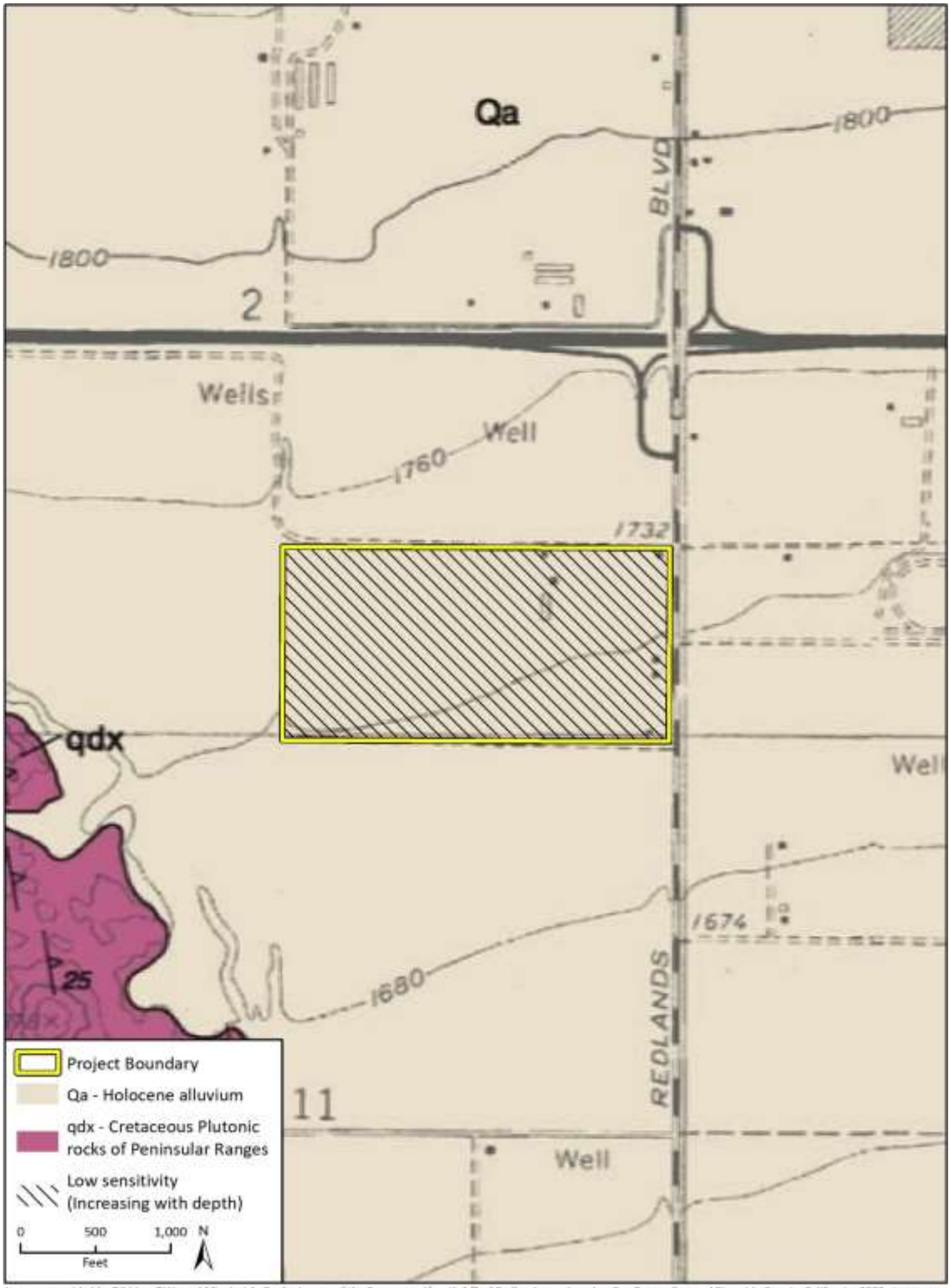
Geologic Setting

The project site is located within the northwestern portion of the Perris Block within the northern portion of the Peninsular Ranges Province, one of eleven major geomorphic provinces in California (California Geological Survey 2002). A geomorphic province is a region of unique topography and geology that is readily distinguished from other regions based on its landforms and diastrophic history (Norris and Webb 1990). The Perris Block is a roughly rectangular area of relatively low relief that has remained relatively stable and undeformed during the Neogene (Norris and Webb 1990; Morton and Miller 2006). It is bound by the Cucamonga Fault Zone to the north, the San Jacinto Mountains to the east, the Elsinore Fault Zone to the southwest, and the Chino Basin to the west. According to Morton and Miller (2006) the Perris Block is underlain by lithologically diverse prebatholithic metasedimentary rocks intruded by Cretaceous plutons of the Peninsular Ranges Batholith, which are subsequently overlain by thin to relatively thick, discontinuous sections of nonmarine Quaternary sediments. Quaternary deposits within the Perris Block consist of Pleistocene and Holocene alluvial fan deposits emanating from the nearby San Gabriel Mountains to the north and fluvial deposits from the Santa Ana River, which bisects the Perris Block and flows southward (Norris and Webb 1990; Morton and Miller 2006).

According to published geologic mapping by Dibblee and Minch (2003), the project site is entirely underlain by Holocene alluvium (Qa). Holocene alluvium (Qa) consists of unconsolidated and undissected alluvial sand, gravel, and clay of valley areas, which are covered with thick soil (Dibblee and Minch 2003). Intact Holocene alluvial deposits in the project site are too young to preserve paleontological resources; however, at shallow or unknown depth, the Holocene sediments may grade downward into deposits of Pleistocene older alluvium (Qoa) that could preserve fossil remains. Within the vicinity of the project site, Pleistocene older alluvium (Qoa) consists of weakly indurated alluvial fan deposits, composed of tan to light reddish-brown sand and minor gravel derived from local terrains of plutonic rocks, and is dissected by modern stream channels (Dibblee and Minch 2003). Pleistocene older alluvium (Qoa) of Dibblee and Minch (2003) is equivalent to late to middle Pleistocene old alluvial fan deposits, arenaceous gravel (Qofag) and early Pleistocene very old alluvial fan deposits, arenaceous (Qvofa) of Morton and Matti (2001). Additionally, Dibblee and Minch (2003) map Cretaceous plutonic rocks of the Peninsular Ranges (qdx) southwest of the project site, and these plutonic deposits may underlie the Quaternary (i.e., Holocene and Pleistocene) sediments within the project site at shallow or unknown depth. Cretaceous plutonic rocks of the Peninsular Ranges (qdx) consist of medium-grained holocrystalline plutonic rocks, composed mostly of quartz diorite to granodiorite, formed from the cooling of molten rock deep either below the surface under high heat and high pressure or formed from cooling magma injected into older rocks. Cretaceous plutonic rocks of the Peninsular Ranges (qdx) have no paleontological sensitivity since the physical parameters of their formation are not conducive to fossil preservation.

Although Holocene alluvium (Qa) is too young to yield significant fossils and Cretaceous plutonic rocks of the Peninsular Ranges (qdx) form in physical conditions not conducive for fossilization, Pleistocene older alluvium (Qoa) has a well-documented record of abundant and diverse vertebrate fauna recorded throughout California. Vertebrate fossil taxa recorded in Riverside County include horse, tapir, bison, camelid, deer, mastodon, mammoth, ground sloth, canine, rabbit, and rodent, and Pleistocene fossils localities recorded throughout southern California in general yielded fossil whale, sea lion, horse, tapir, ground sloth, bison, peccary, camel, deer, pronghorn, mammoth, short-faced bear, saber-toothed cat, mountain lion, wolf, fox, skunk, rabbit, bat, shrew, mole, pocket gopher, deer mouse, kangaroo rat, pack rat, bird, tortoise, turtle, snake, frog, toad, salamander, bony fish, shark, and ray, as well as invertebrates, such as insect and snail (Agenbroad 2003; Bell et al. 2004; Brattstrom 1961; Jefferson 1985, 1989, 1991; Maguire and Holroyd 2016; Merriam 1911; Paleobiology Database 2019; Reynolds et al. 1991; Savage 1951; Savage et al. 1954; Scott and Cox 2008; Springer et al. 2009; Tomiya et al. 2011; Wilkerson et al. 2011; Winters 1954; University of California Museum of Paleontology 2019). Figure 3, Geologic Units and Paleontological Sensitivity of the Project Site depicts the surficial geologic units in the project site and its immediate vicinity, as well as the paleontological sensitivity within the bounds of the project site.

Figure 3 Geologic Units and Paleontological Sensitivity of the Project Site



Imagery provided by Dibblee, T.W., and Minch, J.A. Geologic map of the Sunnymead/south 1/2 of Redlands quadrangles, San Bernardino and Riverside County, California, 2003.

Results

Locality Search

A search of the paleontological locality records at the NHMLAC resulted in no previously recorded fossil localities in the project site; however, one vertebrate locality, LACM 4540, which yielded a horse (*Equus* sp.) from Quaternary older alluvium, was documented within gravel pits southeast of the proposed project site in the San Jacinto Valley (McLeod 2019).

Rincon also conducted a museum records search at the WSC. According to the museum records search results, the WSC does not contain any records for paleontological resources within the bounds of the project site; however, the collocated WSC localities 192, 193, and 194 have yielded fossil ground sloth (*Megalonyx jeffersonii*), lamine camel (*Hemiauchenia* sp.), and horse (*Equus* sp.), which were recorded during construction of the adjacent Aldi's logistics building located immediately north of and adjacent to the project site (LSA 2014; Radford 2019). Fossils from these localities were recovered from 11 to 13 feet below ground surface in an area mapped as Holocene and late Pleistocene young alluvial fan deposits of Morton and Matti (2001) (LSA 2014; Radford 2019).

Refer to Table 1 for the museum records search results.

Table 1 Museum Records Search Results

Locality No.	Source	Geologic Unit	Age	Taxa
LACM 4540	McLeod 2019	Older alluvium	Quaternary (Holocene and Pleistocene)	Horse (*Equus* sp.)
WSC 192, 193, and 194	LSA 2014; Radford 2019	Young alluvial fan deposits	Holocene and late Pleistocene	Ground sloth (*Megalonyx jeffersonii*), lamine camel (*Hemiauchenia* sp.), and Horse *(Equus* sp.)

Paleontological Sensitivity

In accordance with SVP (2010) guidelines, Rincon determined the paleontological sensitivity of the project site based on a geologic map review, literature review, and museum locality search. Holocene alluvium (Qa) mapped at the surface of the project site has a low paleontological sensitivity because Holocene sedimentary deposits, particularly those younger than 5,000 years old, are generally too young to contain fossilized material. However, the Holocene sediments are underlain by Pleistocene older alluvium (Qoa) at a depth of at least 10 feet below ground surface based on the presence of Pleistocene vertebrate fossils located at depths 11 to 13 feet, as cited in the WSC museum records search (LSA 2014; Radford 2019). Pleistocene older alluvium (Qoa) has a high paleontological sensitivity based on the potential to yield scientifically significant paleontological resources. Figure 3 depicts the paleontological sensitivity as determined by this paleontological assessment.

Findings and Recommendations

Ground-disturbing activities within the upper 10 feet of the project site are unlikely to result in significant impacts to paleontological resources under Appendix G of State CEQA Guidelines. Holocene alluvium (Qa) mapped at the surface extends to 10 feet below ground surface and has a low paleontological sensitivity since it is too young (i.e., less than 5,000 years old) to contain scientifically significant paleontological resources. However, Pleistocene older alluvium (Qoa) underlies Holocene alluvium (Qa) at depths of 10 feet below ground surface and has a high paleontological sensitivity based on the results of the museum records search. Thus, the paleontological sensitivity of the geologic units underlying the project are low increasing to high at depths of 10 feet below ground surface. Impacts would be significant if construction activities result in the destruction, damage, or loss of scientifically important paleontological resources and associated stratigraphic and paleontological data. Ground-disturbing activities associated with the project's construction likely will include mass grading and trenching for utility tie-in, which may negatively impact significant paleontological resources. At the time of this report, grading plans for the project area unavailable.

Paleontological resources mitigation is recommended to reduce impacts to significant paleontological resources to less than significant levels, pursuant to CEQA and local regulations. The following mitigation measures are recommended in the case of unanticipated fossil discoveries. These measures would apply to all phases of project construction and would ensure that any unanticipated fossils present on site are preserved and would ensure that potential impacts to paleontological resources would be less than significant by providing for the recovery, identification, and curation of previously unrecovered fossils.

- **Paleontological Monitoring.** Prior to the commencement of ground disturbing activities under the project, a qualified professional paleontologist shall be retained. The Qualified Paleontologist (Principal Paleontologist) shall have at least a Master's Degree or equivalent work experience in paleontology, shall have knowledge of the local paleontology, and shall be familiar with paleontological procedures and techniques.

  In areas mapped as Holocene alluvium (Qa), previously undisturbed, native sediments 10 feet below the ground surface or deeper determined to be Pleistocene older alluvium (Qoa) should be monitored full-time for paleontological resources by a trained paleontological monitor under the supervision of a Qualified Paleontologist. Monitoring is not recommended during ground-disturbing activities that impact sediments at depths less than 10 feet below ground surface, or in sediments determined to be entirely Holocene in age, regardless of the depth, or in previously disturbed sediments. Additionally, paleontological monitoring is not recommended in Cretaceous plutonic rocks of the Peninsular Ranges (qdx), if encountered either at the surface or at depth. Monitoring shall be supervised by the Qualified Paleontologist and shall be conducted by a qualified paleontological monitor, who is defined as an individual who meets the minimum qualifications per standards set forth by the SVP (2010), which includes a B.S. or B.A. degree in geology or paleontology with one year of monitoring experience and knowledge of collection and salvage of paleontological resources.

  The duration and timing of the monitoring shall be determined by the Qualified Paleontologist. If the Qualified Paleontologist determines that full-time monitoring is no longer warranted, he or she may recommend reducing monitoring to periodic spot-checking or cease entirely. Monitoring would be reinstated if any new ground disturbances are required and reduction or suspension would need to be reconsidered by the Qualified Paleontologist.

- **Fossil Discovery, Preparation, and Curation.** In the event that a paleontological resource is discovered, the monitor shall have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and collected. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammals) require more extensive excavation and longer salvage periods. In this case, the paleontologist should have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.

  Once salvaged, significant fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection (such as the WSC) along with all pertinent field notes, photos, data, and maps. The cost of curation is assessed by the repository and is the responsibility of the project owner.
- **Final Paleontological Mitigation Report.** At the conclusion of laboratory work and museum curation, a final report shall be prepared describing the results of the paleontological mitigation monitoring efforts associated with the project. The report shall include a summary of the field and laboratory methods, an overview of the project geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. If the monitoring efforts produced fossils, then a copy of the report shall also be submitted to the designated museum repository.

If you have any questions regarding this Paleontological Resource Assessment, please contact us.

Sincerely,

Rincon Consultants, Inc.

Mathew Carson, MS
Paleontologist

Jessica DeBusk, BS, MBA
Principal Investigator/Program Manager

References

Agenbroad, L.D. 2003. New localities, chronology, and comparisons for the pygmy mammoth (*Mammuthus exilis*). In J. Reumer (ed.) Advances in Mammoth Research, Proceedings of the 2nd International Mammoth Conference, Rotterdam, the Netherlands. DEINSEA 9, p. 1-16.

Bell, C.J., E.L. Lundelius, Jr., A.D. Barnosky, R.W. Graham, E.H. Lindsay, D.R. Ruez, Jr., H.A. Semken, Jr., S.D. Webb, and R.J. Zakrzewski. 2004. The Blancan, Irvingtonian, and Rancholabrean Mammal Ages. In Woodburne, M.O. (ed.) Late Cretaceous and Cenozoic Mammals of North America: Biostratigraphy and Geochronology. Columbia University Press, New York, p. 232-314.

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

City of Moreno Valley. 2006. City of Moreno Valley General Plan, Chapter 9: Goals, Objectives, Policies, and Programs. Available online: http://www.moreno-valley.ca.us/city_hall/general_plan.shtml

County of Riverside. 2015. County of Riverside, Multipurpose and Open Space Element. Available online: http://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx

Dibblee, T.W., J.A. Minch. 2003. Geologic map of the Sunnymead/south 1/2 of Redlands quadrangles, San Bernardino and Riverside County, California: Dibblee Geological Foundation, Dibblee Foundation Map DF-110, scale 1:24,000.

Jefferson, G.T. 1985. Review of the Late Pleistocene avifauna from Lake Manix, central Mojave Desert, California. Contributions in Science, Natural History Museum of Los Angeles County, 362, p. 1-13.

____. 1989. Late Cenozoic tapirs (Mammalia: Perissodactyla) of western North America. Natural History Museum of Los Angeles County, Contributions in Science 406, p. 1-22.

____. 1991. A catalogue of late Quaternary vertebrates from California. Part two, mammals. Natural History Museum of Los Angeles County Technical Report 7, p. 1-129.

LSA Associates, Inc. (LSA). 2014. Paleontological Mitigation Monitoring Report for the Aldi Distribution Center Project, City of Moreno Valley, Riverside County, California: Prepared for Graycor Construction Company, Inc. and the Western Science Center, 26 p.

Maguire, K.C., and P.A. Holroyd. 2016. Pleistocene vertebrates of Silicon Valley (Santa Clara County, California). PaleoBios v. 33, no. 1, p. 1-14.

McLeod, S. 2019. Collections search of the Natural History Museum of Los Angeles County for the Moreno Valley Logistics Center Project, Moreno Valley, Riverside County, California.

Merriam, J.C. 1911. The Fauna of Rancho La Brea; Part I: Occurrence. Memoirs of the University of California, v. 1, no. 2, p. 197-213.

Morton, D.M., and J.C. Matti. 2001. Geologic map of the Sunnymead 7.5' Quadrangle, California: U.S. Geological Survey, Open-File Report 01-450, scale 1:24,000.

Morton, D.M., and F.K. Miller. 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 1:100,000.

Norris, R.M., and R.W. Webb. 1990. Geology of California. John Wiley and Sons, Inc. New York.

Paleobiology Database. 2019. Online fossil locality database. Available online: https://www.paleobiodb.org/#/

Radford, D. 2019. Collections search of the Western Science Center for the Moreno Valley Logistics Center Project, City of Moreno Valley, Riverside County, California.

Reynolds, R.E., R.L. Reynolds, and A.F. Pajak, III. 1991. Blancan, Irvingtonian, and Rancholabrean(?) land mammal age faunas from western Riverside County, California. In M.O. Woodburne, R.E. Reynolds, and D.P. Whistler (eds.) Inland southern California: the last 70 million years. San Bernardino County Museum Association Quarterly, v. 38, no. 3-4, p. 37-40.

Savage, D.R. 1951. Late Cenozoic vertebrates of the San Francisco Bay region. University of California Publications, Bulletin of the Department of Geological Sciences, v. 28, p. 215-314.

Savage, D.E., T. Downs, and O.J. Poe. 1954. Cenozoic land life of southern California in R.H. Jahns ed., Geology of Southern California. California Division of Mines and Geology, 170, Ch. III, p. 43-58.

Scott, E. and S.M. Cox. 2008. Late Pleistocene distribution of Bison (Mammalia; Artiodactyla) from the Mojave Desert of southern California and Nevada. In X. Wang and L.G. Barnes (eds.) Geology and vertebrate paleontology of western and southern North America: Contributions in Honor of David P. Whistler. Natural History Museum of Los Angeles County, Science Series, v. 41, p. 359-82.

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

Springer, K., E. Scott, J.C. Sagebiel, and L.K. Murray. 2009. The Diamond Valley Lake local fauna: Late Pleistocene vertebrates from inland southern California. In Albright, L.B. III (ed.) Papers on Geology, Vertebrate Paleontology, and Biostratigraphy in Honor of Michael O. Woodburne. Museum of Northern Arizona Bulletin, v. 65, p. 217-36.

Tomiya, S., J.L. McGuire, R.W. Dedon, S.D. Lerner, R. Setsuda, A.N. Lipps, J.F. Bailey, K.R. Hale, A.B. Shabel, and A.D. Barnosky. 2011. A report on late Quaternary vertebrate fossil assemblages from the eastern San Francisco Bay region, California. PaleoBios v. 30, no. 2, p. 50-71.

University of California Museum of Paleontology (UCMP). 2019. UCMP online database specimen search portal, http://ucmpdb.berkeley.edu/.

Wilkerson, G., T. Elam, and R. Turner. 2011. Lake Thompson Pleistocene mammalian fossil assemblage, Rosamond. In Reynolds, R.E. (ed.) The Incredible Shrinking Pliocene. The 2011 Desert Symposium Field Guide and Proceedings, California State University Desert Studies Consortium.

Winters, H.H. 1954. The Pleistocene fauna of the Manix Beds in the Mojave Desert, California. Master's Thesis, California Institute of Technology.