

Appendix G

Paleo Assessment

December 2, 2022

Tom Wood
Cruzan
9171 Wilshire Boulevard, Suite 500
Beverly Hills, California 90210
Transmitted via email to tom@cruzan.co

RE: Paleontological Resource Assessment for the 1300 Lawrence Drive Industrial Building Report, City of Thousand Oaks, Ventura County, California

Dear Mr. Wood,

At the request of Cruzan, PaleoWest, LLC (PaleoWest) conducted a paleontological resource assessment for the 1300 Lawrence Drive Industrial Building Project (Project), in the city of Thousand Oaks, Ventura County, California. The goal of the assessment was to identify the geologic units that may be impacted by Project development, determine the paleontological sensitivity of geologic unit(s) within the Project area, assess potential for impacts from development of the Project to paleontological resources under the California Environmental Quality Act (CEQA) guidelines, and recommend mitigation measures to avoid or mitigate impacts to scientifically significant paleontological resources, as necessary. This paleontological resource assessment included a review of existing geologic maps and primary literature regarding fossiliferous geologic units within the proposed Project vicinity and region. This technical memorandum, which was written in accordance with the guidelines set forth by the Society of Vertebrate Paleontology (SVP) (2010), has been prepared to support environmental review under CEQA. It is the understanding of PaleoWest that the City of Thousand Oaks (City) will be the lead agency.

PROJECT LOCATION AND DESCRIPTION

The Project area is at 1300 Lawrence Drive in the city of Thousand Oaks (Figures 1 and 2). The approximately 6.64-acre Project area covers three Assessor's Parcel Numbers (APNs): 667-0-172-015, 667-0-172-025, and 667-0-172-035). The property is currently an underutilized parking lot at the southern corner of Lawrence Drive and Corporate Center Drive.

Cruzan proposes to demolish the existing parking lot and construct a 120,384 square foot (ft²) building, containing 112,384 ft² of warehouse space and 8000 ft² office space. The total lot size is 289,046 ft², 40 percent of which will be covered by the proposed building. The landscape area is planned to cover 36,816 ft², or 12 percent of the lot. A total of 191 parking stalls and 10 bike racks are proposed for construction around the building. The Project area is in an M-1 Industrial Park zoning area, which are established to provide areas for the development of planned manufacturing, technology, and life science uses.

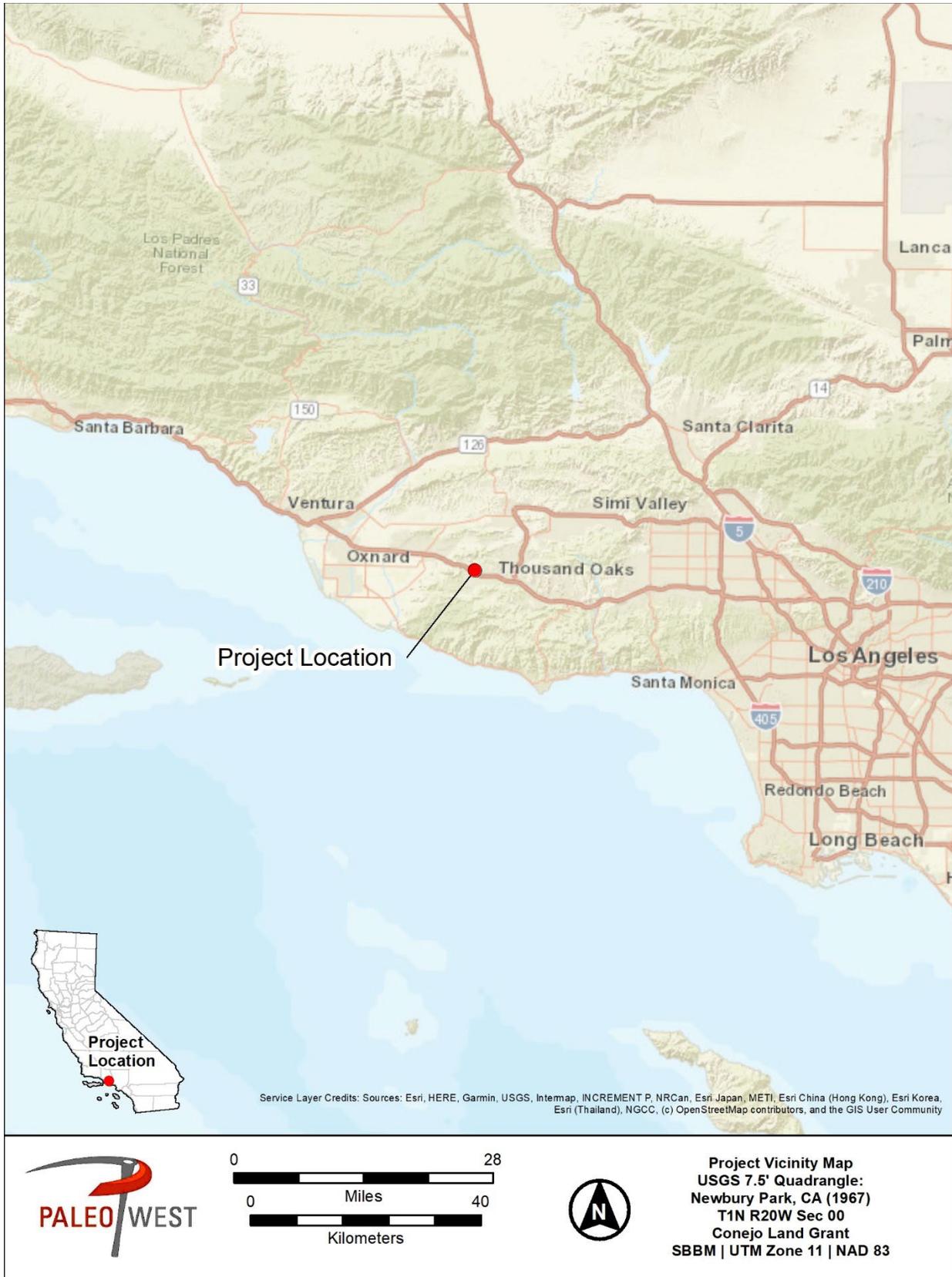


Figure 1. Project vicinity map.

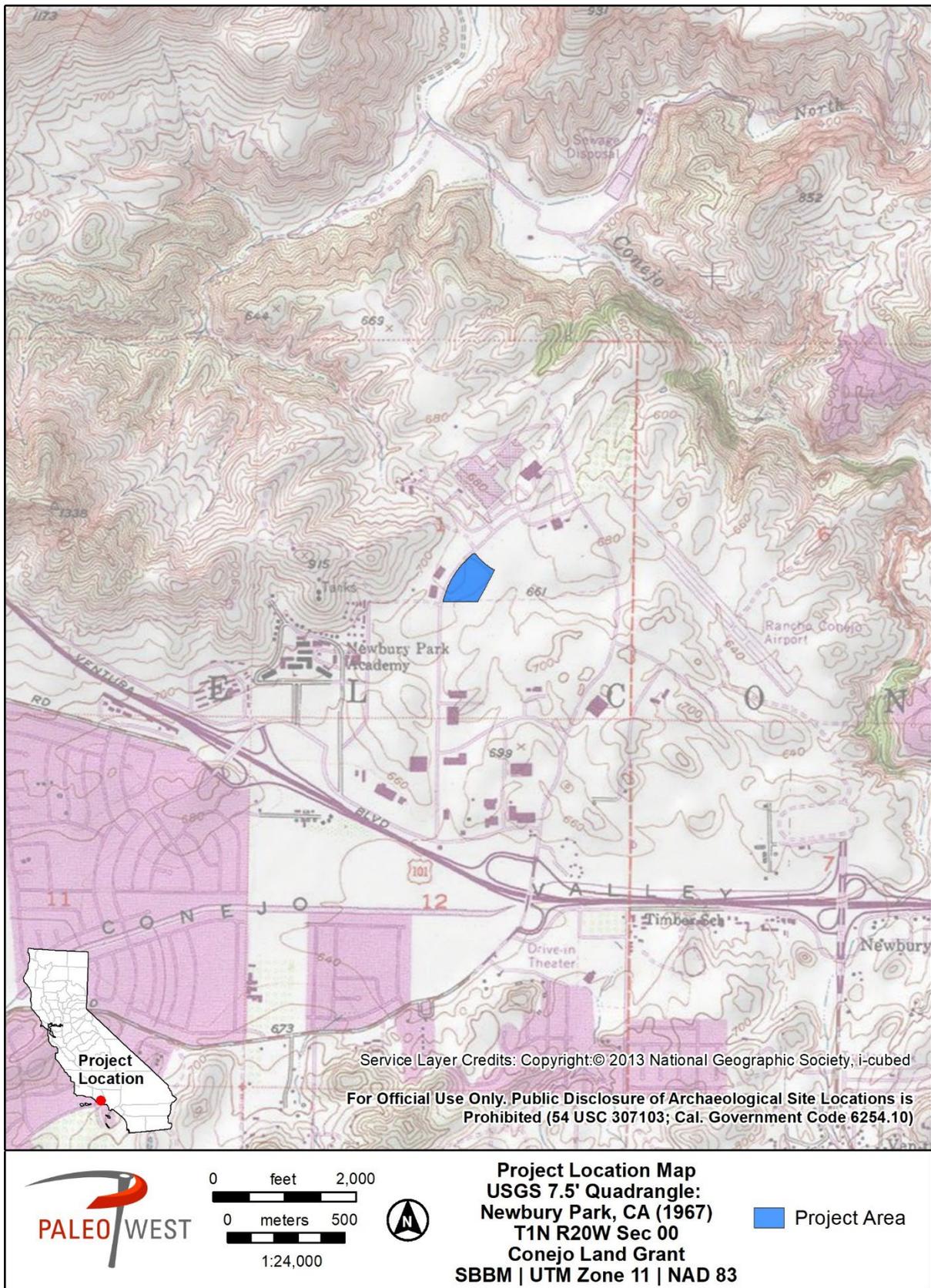


Figure 2. Project location map.

REGULATORY CONTEXT

Paleontological resources (i.e., fossils) are considered nonrenewable scientific resources because once destroyed, they cannot be replaced. As such, paleontological resources are afforded protection under various federal, state, and local laws and regulations. Laws pertinent to this Project are discussed below.

STATE LAWS AND REGULATIONS

California Environmental Quality Act

CEQA requires that public agencies and private interests identify the potential environmental consequences of their projects on any object or site of significance to the scientific annals of California (Division I, California Public Resources Code [PRC] Section 5020.1 [j]). Appendix G in Section 15023 provides an Environmental Checklist of questions (Section 15023, Appendix G, Section XIV, Part A) that includes the following: “Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?”

CEQA does not define “a unique paleontological resource or site.” However, the SVP has provided guidance specifically designed to support state and Federal environmental review. The SVP broadly defines significant paleontological resources as follows (SVP, 2010:11):

“Fossils and fossiliferous deposits 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 considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).”

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 significant.

California Public Resources Code

Section 5097.5 of the Public Resources Code (PRC) 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. As used in this PRC 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."

Consequently, public agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others.

LOCAL

The City of Thousand Oaks General Plan (City of Thousand Oaks, 2013), Chapter 6, establishes that multiple sedimentological deposits in the City contain paleontological resources, including Pleistocene deposits. Chapter 8, Section N, of the General Plan states the following policies:

- **CO-37:** Management of paleontological resources such as significant fossil beds, or fossils of regional significance shall emphasize resource protection and conservation unless excavation and salvage is deemed appropriate by scientific authorities.
- **CO-38:** Decisions pertaining to the disposition of paleontological resources shall be made in concert with recognized public agencies, groups or individuals having jurisdiction, expertise or interest in these matters, including but not limited to the Stagecoach Inn Museum, local natural history museums, colleges and universities.

In addition, Chapter 8, Section N, of the General Plan also establishes the following Implementation Measures:

- In areas considered to have a high likelihood of harboring paleontological resources, the City shall require the preparation of a Paleontological Resource survey as part of the environmental review process for proposed development projects.
- Support the efforts of local citizens, appointed committees or other public agencies and private institutions that are working to conserve and curate paleontological resources. Full public discussion shall be encouraged prior to any action being taken.

PALEONTOLOGICAL RESOURCE POTENTIAL

Absent specific agency guidelines, most professional paleontologists in California adhere to the guidelines set forth by SVP (2010) to determine the course of paleontological mitigation for a given project. These guidelines establish protocols for the assessment of the paleontological resource potential of underlying geologic units and outline measures to mitigate adverse impacts that could result from project development. Using baseline information gathered during a paleontological resource assessment, the paleontological resource potential of the geologic unit(s) (or members thereof) underlying a project area can be assigned to one of four categories defined by SVP (2010). Although these standards were written specifically to protect vertebrate paleontological resources, all fields of paleontology have adopted the following guidelines:

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.

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.

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.

NO POTENTIAL

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

METHODS

To assess whether a particular area has the potential to contain significant fossil resources at the subsurface, it is necessary to review published geologic mapping to determine the geology and stratigraphy of the area. Geologic units are considered "sensitive" for paleontological resources if they are known to contain significant fossils anywhere in their extent. Therefore, a search of pertinent local and regional museum repositories for paleontological localities within and nearby the Project area is necessary to determine whether fossil localities have been previously discovered within a particular rock unit. For this Project, informal records searches were conducted of the online University of California Museum of Paleontology (UCMP) Collections and San Diego Natural History Museum (SDNHM) Collections, the online Paleobiology Database (PBDB) and FAUNMAP, and other published and unpublished geological and paleontological literature of the area.

RESOURCE CONTEXT

GEOLOGIC SETTING

The Project area is in the south-central portion of the Transverse Ranges geomorphic province, a region of northwest-trending mountain ranges and valleys, locally dominated by the Santa Monica Mountains and Simi Hills, roughly parallel to the San Andreas Fault Zone and North American Plate Boundary (Norris and Webb, 1976). Locally, the Project area is in a valley surrounded by the Conejo Volcanics, an igneous rock sequence from the Miocene Epoch (Taliaferro, 1924). The alluvial sediment accumulated in the local valleys is sourced by the igneous deposits from the surrounding Conejo Hills (Yerkes and Campbell, 1995).

SITE SPECIFIC GEOLOGY AND PALEONTOLOGY

According to Campbell et al. (2014), the Project area is entirely underlain by Old alluvium (Qoa) composed of unconsolidated to moderately indurated gravel, sand, and silt deposited on floodplains, alluvial fans, and streambeds in the middle to late Pleistocene Epoch (2.6 million years ago to 11,700 years ago). The site is currently completely developed and paved, and no undisturbed geologic deposits are visible at the ground surface.

Pleistocene deposits in Ventura County have produced remains of ground sloth, bison, mammoth, proboscidean, horse, mastodon, artiodactyl, camel, duck, puffin, waterfowl, and deer mouse (Jefferson, 1991a, 1991b). The Project area is also adjacent to undivided Conejo Volcanics (Tco) in the hills to the west (Campbell et al., 2014), which may underlie the Old alluvium at depth. Unlike most igneous deposits, the Conejo Volcanics have produced paleontological resources, including foraminifera, brachiopods, bivalves, gastropods, barnacles, echinoids, worm tubes, fish scales, and wood (Kellerlynn, 2016).

LITERATURE SEARCH RESULTS

Searches of online databases and other literature produced did not produce fossil localities within three miles of the Project area (Graham and Lundelius 2010; Jefferson 1991, 1991b; Miller 1971; PBDB 2022; SDNHM 2022; UCMP 2022).

FINDINGS

In accordance with the SVP (2010) sensitivity scale, the Old alluvium (Qoa) has high paleontological sensitivity because similar deposits have yielded Pleistocene vertebrate fossils in Ventura County. Due to the presence of Pleistocene deposits (Qoa) on the surface and Miocene volcanic deposits (Tco) potentially at depth, Project-related ground disturbance has the potential to impact paleontological resources throughout the Project area.

For Official Use Only. Public Disclosure of Archaeological Site Locations is Prohibited (54 USC 307103; Cal. Government Code 6254.10)

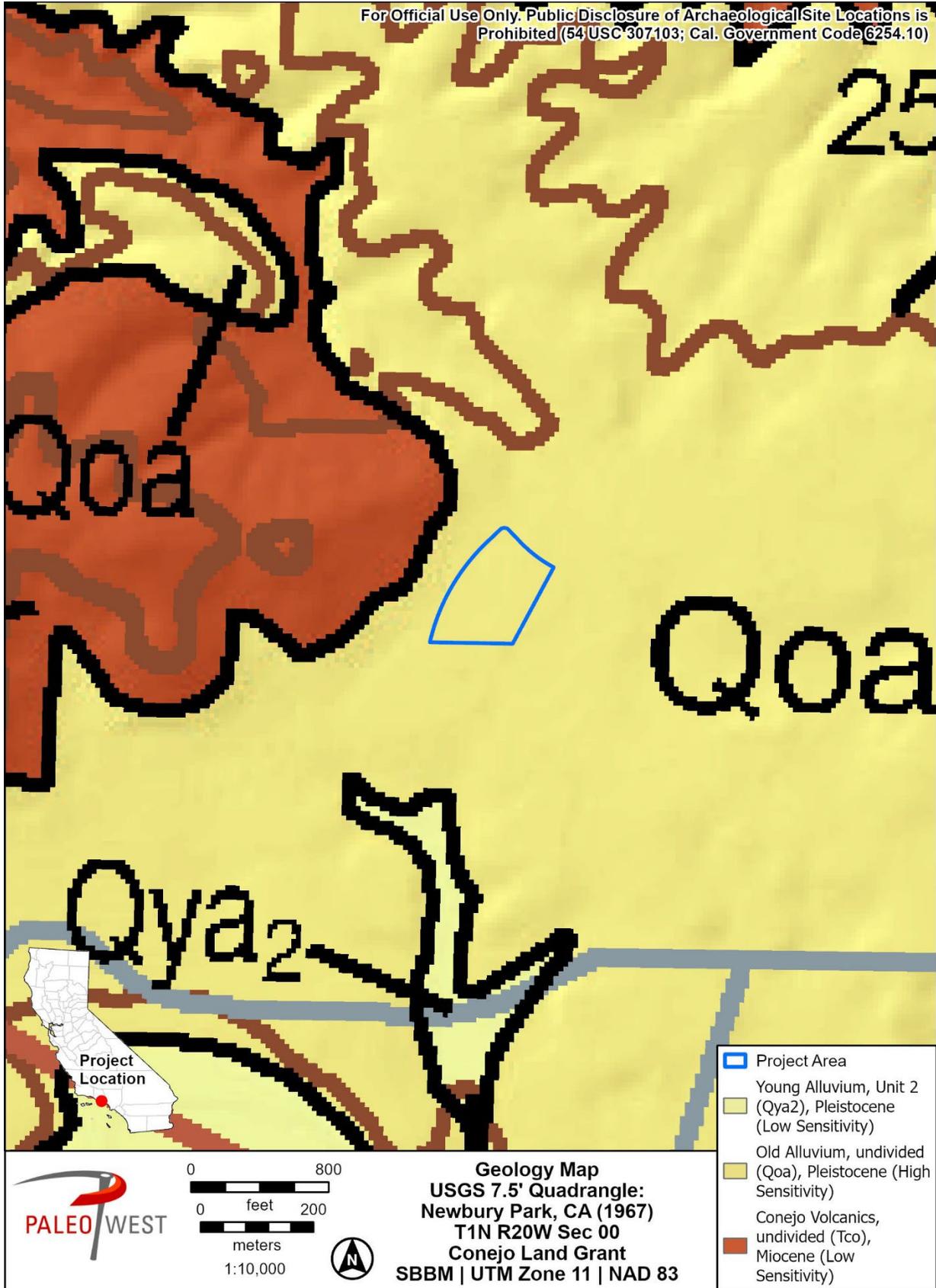


Figure 3. Geologic map of the Project area.

RECOMMENDATIONS

In general, the potential for a given project to result in negative impacts to paleontological resources is directly proportional to the amount of ground disturbance associated with the project; thus, the higher the number of ground disturbances within geological deposits with a known paleontological sensitivity, the greater the potential for negative impacts to paleontological resources. Since this Project entails excavation and grading for a new building, new ground disturbance is anticipated. The presence of Pleistocene-age sediment at the surface, and potentially fossiliferous Miocene deposits at depth, suggests that ground disturbance may result in significant impacts under CEQA to paleontological resources, such as destruction, damage, or loss of scientifically important paleontological resources. A qualified paleontologist should be retained to develop and implement the measures recommended below. These measures have been developed in accordance with SVP guidelines; if implemented, these measures will satisfy the requirements of CEQA.

WORKER'S ENVIRONMENTAL AWARENESS PROGRAM (WEAP)

Prior to the start of the proposed Project activities, all field personnel will receive a worker's environmental awareness training on paleontological resources. The training will provide a description of the laws and ordinances protecting fossil resources, the types of fossil resources that may be encountered in the Project area, the role of the Paleontological Monitor, outline steps to follow if a fossil discovery is made, and provide contact information for the Project Paleontologist. The training will be developed by the Project Paleontologist and can be delivered concurrently with other training including cultural, biological, safety, et cetera.

PALEONTOLOGICAL MITIGATION MONITORING

Prior to the commencement of ground disturbing activities, a professional paleontologist will be retained to prepare and implement a paleontological mitigation plan for the Project. The plan will describe the monitoring required during ground disturbing activities. Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. If the Project Paleontologist determines full-time monitoring is no longer warranted based on the geologic conditions at depth, they may recommend that monitoring be reduced or cease entirely.

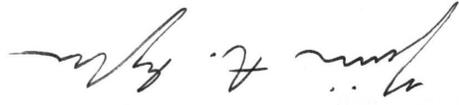
FOSSIL DISCOVERIES

If a paleontological resource is discovered, the monitor will have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project Paleontologist shall complete the following:

1. **Salvage of Fossils.** If fossils are discovered, all work in the immediate vicinity should be halted to allow the Paleontological Monitor, and/or Project Paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the Project Paleontologist (or Paleontological Monitor) should recover them following standard field procedures for collecting paleontological resources as outlined in paleontological mitigation plan for

PALEOWEST

Benjamin Scherzer, M.S. | Senior Paleontologist



Sincerely,

Upon completion of ground disturbing activities (and curation of fossils if necessary), the Project Paleontologist should prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report should include a discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where the fossils were curated. Thank you for contacting PaleoWest for this Project. If you have any questions, please do not hesitate to contact us.

FINAL PALEONTOLOGICAL MITIGATION REPORT

- responsibility of the client.
- completed. The cost of curation will be assessed by the repository and will be the accredited museum or repository no later than 30 days after all laboratory work is to curation at an accredited museum. The fossil specimens must be delivered to the fossils specimens will be identified to the lowest taxonomic level practical prior materials and stabilizing or repairing specimens. During preparation and inventory, for curation. Preparation may include the removal of excess matrix from fossil fossils collected in a properly equipped laboratory to a point ready during Project related excavations. Upon completion of fieldwork, all significant will identify the museum that has agreed to accept fossils that may be discovered
- Fossil Preparation and Curation.** The paleontological mitigation plan for the Project the fossil(s) can be removed in a safe and timely manner. the authority to temporarily direct, divert or halt construction activity to ensure that excavation and longer salvage periods. In this case, the paleontologist should have (such as complete skeletons or large mammal fossils) require more extensive paleontologist and not disrupt construction activity. In some cases, larger fossils the Project. Typically, fossils can be safely salvaged quickly by a single

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