

IV. Environmental Impact Analysis

E. Geology and Soils (Paleontological Resources)

1. Introduction

This section of the Draft EIR provides an analysis of the Project's potential impacts to paleontological resources. The Project's potential impacts related to the remaining geology and soils issues identified in Appendix G of the CEQA Guidelines (e.g., faulting, seismicity, landslides, soil erosion, etc.) are evaluated in the Initial Study included as Appendix A of this Draft EIR and were found to be less than significant. Accordingly, this section provides an overview of the findings in the Initial Study with regard to all geology and soils impacts but focuses primarily on paleontology based on database research and a paleontological records search conducted for the Project by the Natural History Museum of Los Angeles County (Natural History Museum), included in Appendix F of this Draft EIR.

2. Environmental Setting

a. Regulatory Framework

There are several plans, regulations, and programs that include policies, requirements, and guidelines regarding paleontological resources at the federal, state, regional, and local levels. As described below, these plans, guidelines, and laws include the following:

- Society for Vertebrate Paleontology Standard Guidelines
- California Penal Code Section 622.5
- California Public Resources Code (PRC) Section 5097.5
- General Plan Conservation Element

(1) Federal

(a) Society for Vertebrate Paleontology Standard Guidelines

The Society for Vertebrate Paleontology (SVP) has established standard guidelines¹ that outline professional protocols and practices for conducting paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. The Paleontological Resources Preservation Act (PRPA) of 2009 calls for uniform policies and standards that apply to fossils on all federal public lands. All federal land management agencies are required to develop regulations that satisfy the stipulations of the PRPA. As defined by the SVP, significant nonrenewable paleontological resources are:

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Fossils and fossiliferous deposits here are restricted to vertebrate fossils and their taphonomic and associated environmental indicators. This definition excludes invertebrate or paleobotanical fossils except when present within a given vertebrate assemblage. Certain invertebrate and plant fossils may be defined as significant by a project paleontologist, local paleontologist, specialists, or special interest groups, or by lead agencies or local governments.

As defined by the SVP,³ significant fossiliferous deposits are:

¹ Society of Vertebrate Paleontology, *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*, 2010, http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx, accessed January 11, 2022.

² Society of Vertebrate Paleontology, "Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines," *Society of Vertebrate Paleontology News Bulletin* 163:22-27, 1995.

³ Society of Vertebrate Paleontology, "Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines."

A rock unit or formation which contains significant nonrenewable paleontologic resources, here defined as comprising one or more identifiable vertebrate fossils, large or small, and any associated invertebrate and plant fossils, traces, and other data that provide taphonomic, taxonomic, phylogenetic, ecologic, and stratigraphic information (ichnites and trace fossils generated by vertebrate animals, e.g., trackways, or nests and middens which provide datable material and climatic information). Paleontologic resources are considered to be older than recorded history and/or older than 5,000 years BP [before present].

Based on the significance definitions of the SVP,⁴ all identifiable vertebrate fossils are considered to have significant scientific value. This position is adhered to because vertebrate fossils are relatively uncommon, and only rarely will a fossil locality yield a statistically significant number of specimens of the same genus. Therefore, every vertebrate fossil found has the potential to provide significant new information on the taxon it represents, its paleoenvironment, and/or its distribution. Furthermore, all geologic units in which vertebrate fossils have previously been found are considered to have high sensitivity. Identifiable plant and invertebrate fossils are considered significant if found in association with vertebrate fossils or if defined as significant by project paleontologists, specialists, or local government agencies.

(2) State

(a) California Penal Code Section 622.5

California Penal Code Section 622.5 provides the following: “Every person, not the owner thereof, who willfully injures, disfigures, defaces, or destroys any object or thing of archeological or historical interest or value, whether situated on private lands or within any public park or place, is guilty of a misdemeanor.”

(b) California PRC Section 5097.5

California PRC Section 5097.5 provides protection for paleontological resources on public lands, where Section 5097.5(a) states, in part, that:

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, rock art, or any other

⁴ Society of Vertebrate Paleontology, “Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines.”

archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

(3) Local

(a) City of Los Angeles General Plan Conservation Element

The City's General Plan Conservation Element recognizes paleontological resources in Section 3: "Archeological and Paleontological" and identifies site protection as important, stating, "Pursuant to CEQA, if a land development project is within a potentially significant paleontological area, the developer is required to contact a bona fide paleontologist to arrange for assessment of the potential impact and mitigation of potential disruption of or damage to the site. Section 3 of the Conservation Element, adopted in September 2001, includes policies for the protection of paleontological resources. As stated therein, it is the City's objective that paleontological resources be protected for historical, cultural research, and/or educational purposes. Section 3 sets as a policy to continue the identification and protection of significant paleontological sites and/or resources known to exist or that are identified during "land development, demolition, or property modification activities."

b. Existing Conditions

Based on a paleontological records search conducted by the Natural History Museum of Los Angeles County (Natural History Museum) in May 2020, included in Appendix F of this Draft EIR, no vertebrate fossil localities have been previously recorded within the Project site. However, there are localities that have been recorded nearby from the same sedimentary deposits that occur at depths within the Project site, as described further below.

Paleontological resources are the fossilized remains of organisms that have lived in a region in the geologic past and whose remains are found in the accompanying geologic strata. This type of fossil record represents the primary source of information on ancient life forms since the majority of species that have existed on earth from this era are extinct. The Project site is located within an urbanized area of the City of Los Angeles and has been subject to grading and development in the past. Thus, surficial paleontological resources that may have existed at one time have likely been previously disturbed. As discussed in the paleontological records search, surface deposits in the vicinity of the Project site consist of younger Quaternary Alluvium, derived predominately as fluvial deposits from Ballona Creek that currently flows north of the Project site. As provided by the Natural History Museum, the uppermost layers of these deposits typically do not contain significant fossil vertebrate remains; however, at relatively shallow depth, the

underlying older Quaternary sediments in the vicinity of the Project site may well contain vertebrate fossils. As provided in the Geotechnical Investigation prepared for the Project and included in Appendix A of this Draft EIR, materials underlying the Project site consist of fill 12.5 feet below the existing site grade followed by native upper soils consisting of stratified younger alluvial soil layers and older alluvium, which was generally encountered below a depth of 55 to 57.5 feet below the existing site grade.⁵

As provided by the Natural History Museum, vertebrate fossil localities were recorded in the vicinity of the Project site. Specifically, LACM 7879 was recorded approximately three miles northwest of the Project site near the intersection of Rose Avenue and Penmar Avenue, and LACM 5462 was recorded approximately four miles north-northwest of the Project site just south of Olympic Boulevard along Michigan Avenue east of Cloverfield Boulevard. LACM 7879 produced a fossil specimen of horse (*Equus*) and ground sloth (*Paramylodon*), at greater than eleven feet in depth, and LACM 5462 produced a fossil specimen of extinct lion (*Felis atrox*), at a depth of only six feet below grade.

The Project site is currently developed with a one-story, 23,072-square-foot office building and two single-story accessory buildings comprised of 5,044 square feet and 2,144 square feet at 12575 W. Beatrice Street, and a two-story, 87,881-square-foot office building at 12541 W. Beatrice Street, as well as surface parking. The Project site does not contain unique natural geologic features, such as natural hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds, or wetlands.

3. Project Impacts

a. Thresholds of Significance

In accordance with the State CEQA Guidelines Appendix G, the Project would have a significant impact related to geology and soils if it would:

Threshold (a): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial***

⁵ Geotechnologies, Inc., *Geotechnical Engineering Investigation, March 19, 2018 (revised March 19, 2020)*.

evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.

ii. Strong seismic ground shaking

iii. Seismic-related ground failure, including liquefaction

iv. Landslides

Threshold (b): Result in substantial soil erosion or the loss of topsoil.

Threshold (c): Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Threshold (d): Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

Threshold (e): Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater.

Threshold (f): Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

As previously noted, the Project's potential impacts related to Thresholds (a) through (e) were fully evaluated in the Initial Study included as Appendix A of this Draft EIR and were found to be less than significant without mitigation. Therefore, this section focuses on Threshold (f), which relates to paleontological resources.

For this analysis, the Appendix G Threshold listed above for paleontological resources is relied upon. The analysis utilizes factors and considerations identified in the City's 2006 L.A. CEQA Thresholds Guide, as appropriate, to assist in answering the Appendix G Threshold question.

The L.A. CEQA Thresholds Guide identifies the following factors to evaluate paleontological resources:

- Whether, or the degree to which, the project might result in the permanent loss of, or loss of access to, a paleontological resource; and
- Whether the paleontological resource is of regional or statewide significance.

b. Methodology

To address potential impacts to paleontological resources, a formal records search was conducted by the Natural History Museum to assess the paleontological sensitivity of the Project site and vicinity. In addition, an evaluation of existing conditions and previous disturbances within the Project site, the geology of the Project site, and the anticipated depths of grading were considered to determine the potential for uncovering paleontological resources.

c. Project Design Features

No specific project design features are proposed with regard to paleontological resources.

d. Analysis of Project Impacts

Threshold (a): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.***

As evaluated in the Initial Study for the Project, which is included as Appendix A of this Draft EIR, and summarized in Section VI, Other CEQA Considerations, of this Draft EIR, based on a review of regulatory maps prepared by the California Department of Conservation and the City of Los Angeles General Plan Safety Element, the Project site is not located within an Alquist-Priolo Special Studies Zone or Fault Rupture Study Area. In addition, according to the Geotechnical Engineering Investigation, based on research of available literature as well as results of site reconnaissance, no known active faults or potentially active faults with the potential for surface rupture underlie the Project site. Therefore, as concluded in the Initial Study, the Project would not directly or indirectly cause potential substantial adverse effects related to rupture of a known earthquake fault. Impacts would be less than significant, and no mitigation measures are required.

Threshold (a): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- ii. Strong seismic ground shaking***

As evaluated in the Initial Study for the Project, which is included as Appendix A of this Draft EIR, and summarized in Section VI, Other CEQA Considerations, of this Draft EIR, while no active faults are known to pass directly beneath the Project site, the Project site is located in proximity to several significant faults capable of producing strong earthquakes. Specifically, the closest known active fault strand to the Project site is the Newport-Inglewood Fault located approximately 3.1 miles from the Project site. However, state and local code requirements ensure that buildings are designed and constructed in a manner that, although the buildings may sustain damage during a major earthquake, would reduce the substantial risk that buildings would collapse. Accordingly, the design and construction of the Project would comply with all applicable existing regulatory requirements, the applicable provisions of the Los Angeles Building Code relating to seismic safety, and the application of accepted and proven construction engineering practices. Therefore, the Project would not directly or indirectly cause potential substantial adverse effects related to strong seismic ground shaking. Impacts related to strong seismic ground shaking would be less than significant, and no mitigation measures are required.

Threshold (a): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

iii. Seismic-related ground failure, including liquefaction

As evaluated in the Initial Study for the Project, which is included as Appendix A of this Draft EIR, and summarized in Section VI, Other CEQA Considerations, of this Draft EIR, as concluded in the Geotechnical Engineering Investigation, the likelihood that surface effects of liquefaction would occur on the Project site would be considered very low to non-existent. Accordingly, the Geotechnical Engineering Investigation determined that should liquefaction occur within the potentially liquefiable zones on the Project site, there would be a negligible effect on the proposed structures. Nonetheless, Project design and construction would comply with all applicable requirements of the LADBS for a site located within a potentially liquefiable area as well as site-specific design recommendations set forth in the Geotechnical Engineering Investigation. Thus, the Project would not directly or indirectly cause potential substantial adverse effects related to liquefaction. Impacts associated with liquefaction would be less than significant, and no mitigation measures are required.

With regard to lateral spreading, as concluded in the Geotechnical Engineering Investigation, the potential for lateral spreading as a result of liquefaction is considered remote on the Project site. Nonetheless, Project design and construction would comply with all applicable requirements of the LADBS for a site located within a potentially liquefiable area as well as site-specific design recommendations set forth in the Geotechnical Engineering Investigation. Therefore, with adherence to existing regulations

and site-specific design recommendations, impacts related to liquefaction would be less than significant, and no mitigation measures are required.

Threshold (a): Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

iv. Landslides

As evaluated in the Initial Study for the Project, which is included as Appendix A of this Draft EIR, and summarized in Section VI, Other CEQA Considerations, of this Draft EIR, the Project site and surrounding area are fully developed and characterized by flat topography. According to the California Department of Conservation's Seismic Hazard Zones Map for the Venice Quadrangle, the Project site is not located within an earthquake-induced landslide area. Furthermore, the Los Angeles General Plan Safety Element does not map the Project site in a landslide area. According to the Geotechnical Engineering Investigation, the probability of seismically-induced landslides occurring on the Project site is considered to be low due to the general lack of elevation difference in slope geometry across or adjacent to the Project site. Development of the Project also would not include altering the existing topography of the Project site such that new steep slopes would be introduced. As such, no impact would occur, and no mitigation measures are required.

Threshold (b): Result in substantial soil erosion or the loss of topsoil.

As evaluated in the Initial Study for the Project, which is included as Appendix A of this Draft EIR, and summarized in Section VI, Other CEQA Considerations, of this Draft EIR, the Project site is currently fully developed with buildings and surface parking areas. As such, there are no extensive open spaces with exposed topsoil. In addition, on-site grading and site preparation would comply with all applicable provisions of Chapter IX, Article 1 of the LAMC, which addresses grading, excavation, and fills. Regarding soil erosion during Project operations, the potential is negligible since the Project site would mostly remain fully developed, except for some landscaping located throughout the Project site. However, the landscaping would include trees to prevent soil erosion. The Project would also be required to comply with the City's Low Impact Development (LID) ordinance and implement standard erosion controls to limit stormwater runoff, which can contribute to erosion. Therefore, with compliance with applicable regulatory requirements, impacts related to substantial soil erosion or the loss of topsoil would be less than significant, and no mitigation measures are required.

Threshold (c): Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

As evaluated in the Initial Study for the Project, which is included as Appendix A of this Draft EIR, and summarized in Section VI, Other CEQA Considerations, of this Draft EIR, the Project site is not located near slopes or geologic features that would result in on- or off-site landsliding; the likelihood that surface effects of liquefaction would occur on the Project site would be considered very low to non-existent and would not potentially result in lateral spreading; no large-scale extraction of groundwater, gas, oil or geothermal energy is occurring or planned at the Project site or in the general vicinity of the Project site which could result in ground subsidence; and, due to the type and density of the soils underlying the Project site, the Project site soils would not be considered collapsible soils. Therefore, the Project would not be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project. Impacts would be less than significant, and no mitigation measures are required.

Threshold (d): Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

As evaluated in the Initial Study for the Project, which is included as Appendix A of this Draft EIR, and summarized in Section VI, Other CEQA Considerations, of this Draft EIR, as provided in the Geotechnical Engineering Investigation, the on-site geologic materials are in the low to high expansion range. Specifically, the Expansion Index was found to be between 35 and 95. The Expansion Index is an indicator of the soil's swelling potential and ranges from very low (expansion index of 0 to 20), low (expansion index of 21 to 50), medium (expansion index of 51 to 90), high (expansion index of 91 to 130), and very high (expansion index of 130 or greater). Project design and construction would comply with all applicable requirements of the LADBS for a site with underlying expansive soils as well as site-specific design recommendations set forth in the Geotechnical Engineering Investigation, including structural slabs deriving support from the pile foundation system and waterproofing interior building floor slabs designed to withstand hydrostatic uplift pressure. Therefore, with adherence to existing regulations and site-specific design recommendations provided in the Geotechnical Engineering Investigation, the proposed structure is feasible from a geotechnical engineering standpoint. Impacts related to expansive soils would be less than significant, and no mitigation measures are required.

Threshold (e): Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater.

As evaluated in the Initial Study for the Project, which is included as Appendix A of this Draft EIR, and summarized in Section VI, Other CEQA Considerations, of this Draft EIR, the Project site is located within a community served by existing wastewater infrastructure. As such, the Project would not require the use of septic tanks or alternative

wastewater disposal systems. Therefore, the Project would have no impact related to the ability of soils to support septic tanks or alternative wastewater disposal systems, and no mitigation measures are required.

Threshold (f): Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

(1) Impact Analysis

(a) Paleontological Resources

As discussed in Section II, Project Description, of this Draft EIR, the Project would include excavations to a maximum depth of 22 feet below ground surface. Thus, the possibility exists that paleontological artifacts that were not discovered during prior construction and other human activity on the Project site may be encountered during Project excavation activities. **As such, impacts with regard to paleontological resources could be potentially significant.**

(b) Unique Geologic Features

There are no unique geologic features on the Project site. The Project site has been previously disturbed/developed and does not contain unique geologic features (e.g., geologic rock formations, bluffs, rock outcropping, etc.). In addition, the properties surrounding the Project site are fully developed with urban uses. As a result, there are no unique geologic features that the Project could impact. **Therefore, the Project would not directly or indirectly destroy a unique geologic feature, and impacts to unique geologic features would be less than significant.**

(2) Mitigation Measures

The following mitigation measure is provided to reduce potential impacts to paleontological resources:

Mitigation Measure GEO-MM-1: A qualified paleontologist shall be retained by the Applicant to perform periodic inspections of excavation and grading activities at the Project Site. The frequency of inspections shall be based on consultation with the paleontologist and shall depend on the rate of excavation and grading activities and the materials being excavated. If paleontological materials are encountered, the paleontologist shall temporarily divert or redirect grading and excavation activities in the area of the exposed material to facilitate evaluation and, if necessary, salvage. The paleontologist shall then assess the discovered material(s) and prepare a survey, study or report evaluating the impact. The Applicant shall then comply with the

recommendations of the evaluating paleontologist, and a copy of the paleontological survey report shall be submitted to the Los Angeles County Natural History Museum and the Department of City Planning. Ground-disturbing activities may resume once the paleontologist's recommendations have been implemented to the satisfaction of the paleontologist.

(3) Level of Significance After Mitigation

With the implementation of Mitigation Measure GEO-MM-1, Project-level impacts to paleontological resources would be reduced to a less-than-significant level.

e. Cumulative Impacts

(1) Impact Analysis

Impacts to paleontological resources and unique geologic features are generally site-specific since the potential for discovery of such resources relate to the particular underlying conditions of a specific site. Also, the Project site vicinity is highly urbanized and has been substantially disturbed and developed over time. In addition, while the paleontological records search indicates that a vertebrate fossil (LACM 7879) was recorded northwest of the Project site near the intersection of Rose Avenue and Penmar Avenue and in other locations in the general vicinity, and while this suggests that other future development in the vicinity of the Project site could impact paleontological resources, the Project would not contribute to such impacts. This is because the Project would not include excavation/grading activities on adjacent properties (e.g., no combined impacts would occur) and would not result in significant Project-level impacts to paleontological resources with implementation of Mitigation Measure GEO-1. Furthermore, as part of the environmental review processes for the related projects, record searches with the Natural History Museum and/or other site-specific technical analyses would be conducted that would identify the potential for discovery of paleontological resources. If there would be a potential for the discovery of paleontological resources within a related project site, that related project would be subject to the City's standard condition of approval for the inadvertent discovery of paleontological resources or site-specific mitigation measures that would be established to address the potential for uncovering of paleontological resources at that specific related project site. Similarly, mitigation measures would be identified to address any potential impacts to unique geologic features. **Therefore, the Project would not contribute considerably to cumulative impacts to paleontological resources or unique geologic features, and cumulative impacts to paleontological resources and unique geologic features would be less than significant.**

(2) Mitigation Measures

Cumulative impacts to paleontological resources and unique geologic features would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts to paleontological resources and unique geologic features were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.