

APPENDIX D

ARCHAEOLOGY AND PALEONTOLOGY SURVEY LETTERS

This page intentionally left blank

MEMORANDUM

DATE: October 13, 2017

To: Nicole Dubois, LSA

FROM: Kerrie Collison, RPA, LSA

SUBJECT: Results of the Cultural Resources Assessment of the 1.71-acre Monrovia TownePlace Suites Project, Monrovia, Los Angeles County, California (LSA Project No. THA1601)

This memorandum presents the results of the cultural resources assessment conducted by LSA for the Monrovia TownePlace Suites Project (Project) at the intersection of Huntington Drive and Myrtle Avenue in Monrovia, Los Angeles County, California. The assessment includes a records search, a field survey, and this memorandum. LSA understands that the City of Monrovia has conducted Native American consultation pursuant to Assembly Bill 52 and Senate Bill 18.

PROJECT LOCATION AND DESCRIPTION

The Project site is at the southwest corner of the intersection of Huntington Drive and Myrtle Avenue (Figure 1, Attachment B). It is depicted on the United States Geological Survey (USGS) *Mount Wilson, California* 7.5-minute topographic map in unsectioned lands of the Santa Anita Land Grant (USGS 1988; all references provided in Attachment A).

The proposed Project involves the development of a five-story, 65-foot [ft] high, 109-room TownePlace Suites Hotel by Marriott and an on-site parking lot that would serve guests, visitors, and employees at the TownePlace Suites Hotel. A small area for trash collection and two dedications for public streets are also proposed.

METHODS

Records Search

On August 29, 2017, a records search was conducted at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System (CHRIS) at California State University, Fullerton. The records search (Attachment C) included a review of all recorded historic and prehistoric archaeological sites within a 0.25-mile (mi) radius of the Project area, as well as a review of known cultural resource survey and excavation reports. In addition, the following inventories were examined: the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), California Historical Landmarks, California Points of Historical Interest, and the California Historic Resources Inventory (HRI).

Additional Research

Historical aerial photographs available online and information provided in a Phase I Environmental Site Assessment (ESA) were examined to obtain additional information about the history of the

Project area (Nationwide Environmental Title Research [NETR]; SALEM 2016). LSA reviewed the Geotechnical Engineering Report for the Project area, which provides additional information about on-site soil conditions (SALEM 2016a:6).

Field Survey

The purposes of a field survey are (1) to relocate any known cultural resources, if present, and to determine their current status and update documentation; and (2) to identify any unrecorded cultural resources visible on the surface of the Project site. In this way, impacts to known cultural resources may be mitigated prior to the beginning of ground-disturbing activities. On September 7, 2017, LSA Archaeologist Kerrie Collison conducted a pedestrian survey of the entire Project area by walking parallel transects spaced by 5 meters (m). Ms. Collison, who is cross-trained to identify paleontological as well as archaeological resources, completed the survey for both disciplines at the same time. The purpose of the paleontological survey was to confirm the findings of the geologic and paleontological research.

RESULTS

Records Search

The records search identified three studies that were conducted within 0.25 mi of the Project area, none of which included any part of the Project area (Table A). The studies within 0.25 mi of the Project area were identified as one cultural resources due diligence study, one cultural resources assessment, and one Historic Property Survey Report.

Table A: Results of Records Search – Studies¹

Previous Studies within 0.25 Mile of the Project Area	
Report Number ²	Type of Study
LA-08136	Cultural resources due diligence study
LA-10496	Cultural resources assessment
LA-10526	Historic Property Survey Report

¹ Records Search Results (August 2017, Attachment C).

² LA is the code for Los Angeles County used by the South Central Coastal Information Center and denotes that a study occurred there.

Previous cultural resource work within 0.25 mi of the Project area has resulted in the recording of four cultural resources, all of which are historic buildings (Table B). No previously recorded cultural resources are located in the Project area.

Table B: Results of Records Search – Resources¹

Resources within 0.25 Mile of the Project Area	
Site Number	Site Type
P-19-187710	Historic building
P-19-187711	Historic building
P-19-187712	Historic building
P-19-192435	Historic building

¹ Records Search Results (August 2017, Attachment C).

The HRI does not identify any properties in the Project area. However, the HRI does indicate that five listed properties are within 0.25 mi of the Project area. Of the five listed properties within 0.25 mi of the Project area, four are listed with a 6Y status and one is listed with a 6U status. A 6Y status means the property has been determined ineligible for the National Register by consensus through the Section 106 process and has not been evaluated for the California Register or the Local Listing. A 6U status means the property has been determined ineligible for the National Register pursuant to the Section 106 process, but that determination has not been reviewed by the State Historic Preservation Officer (SHPO).

The records search also provided three historic maps: the 1900 *Pasadena, California* 15-minute topographic quadrangle map (USGS 1900), and the 1894 and 1904 *Pomona, California* 15-minute topographic quadrangle maps (USGS 1894 and USGS 1904). An examination of the historic maps shows that development in the Project area and within 0.25 mi of the Project area occurred as early as 1894 (USGS 1894).

In summary, the records search indicates that no portions of the Project area have been previously surveyed for cultural resources, and no previously recorded cultural resources are in the Project area.

Additional Research

According to historic aerial photographs available online, buildings have been in the eastern portion of the Project area since prior to 1952.¹ The online aerial photographs show that, between 1994 and 2002, the building that is currently home to a Taco Bell was constructed on the western portion of the Project area. Sometime between 2005 and 2009, the buildings in the eastern portion of the Project area were torn down and that portion of the Project area became a vacant lot. The eastern portion of the Project area has remained vacant since that time.

Review of the Phase I ESA for the Project area provides additional information about the Project area's historic land use. Initial preparation of the ESA included review of additional photographs dating to 1928 and 1938, both of which show development in the Project area – likely a gasoline service station and a residential building (SALEM 2016b:9).

Review of the Geotechnical Engineering Report for the Project area indicated that, in general, the soils within the depth of exploration consist of up to 7 ft of Artificial Fill (SALEM 2016a:6). Artificial Fill consists of sediments that have been removed from one location and transported to another location by human activity rather than by natural means. The transportation distance can vary from a few feet to many miles, and composition depends on the source and purpose. While Artificial Fill may contain artifacts, these artifacts have been removed from their original location and are thus out of stratigraphic context. Therefore, they are not considered important archaeologically, and as such, Artificial Fill has no archaeological sensitivity.

¹ NETR. Historic Aerials. 1952 to 2012. Website: <https://historicaerials.com> (accessed September 2017).

Field Survey

On September 7, 2017, Ms. Collison conducted a pedestrian survey of the entire Project area by walking parallel transects spaced by 5 m. Other than the non-historic (less than 50 years old) Taco Bell building, no cultural (or paleontological) resources were identified in the Project area during the survey. The majority of the Project area is a vacant lot, the southern portion of which appears to be used as overflow parking for residents of nearby buildings and/or businesses. Ground visibility during the survey was nearly 100 percent, with some pea gravel and wood chips present. Where the ground was not covered, the soil was a medium or dark brown, probably as a result of decomposing woodchips. Scattered modern trash (e.g., plastic beverage bottles and glass bottle fragments) was noted throughout the Project area. Temporary power poles and a trash bin are also in the Project area. The terrain of the vacant lot is mostly flat with a downslope near the southern boundary.

SUMMARY AND RECOMMENDATIONS

Prior to the current study, no cultural resources work had been conducted in the Project area. Other than the non-historic Taco Bell building, no cultural (or paleontological) resources were observed in the Project area during the field survey. Artificial Fill is present on the surface of the Project area to an approximate depth of 7 ft below ground surface (bgs). Due to historic development in the Project area occurring as early as 1894 (USGS 1894), there is potential for subsurface archaeological deposits below the Artificial Fill in the Young Alluvial Fan Deposits to a depth of approximately 10 ft. Therefore, LSA recommends that an archaeological monitor be on site during ground-disturbing activities (Mitigation Measure CUL-1) to monitor for buried prehistoric or historic material when excavation occurs in previously undisturbed native soil (i.e., in Young Alluvial Fan Deposits) from a depth of approximately 7 ft bgs to a depth of 10 ft bgs. (Please refer to the paleontological assessment report for paleontological monitoring recommendations.) Monitoring would not be necessary when excavation occurs in Artificial Fill. Additionally, LSA recommends compliance with State Health and Safety Code (HSC) Section 7050.5 in the unlikely event that human remains are encountered on the Project site during ground-disturbing activities (Mitigation Measure CUL-2). Compliance with recommendations outlined in Mitigation Measures CUL-1 and CUL-2 would reduce potential impacts to cultural resources to a less than significant level.

CUL-1 **Archaeological Monitors.** Prior to the issuance of the first preliminary or precise grading permit, the Applicant shall submit proof that a qualified archaeologist has been retained to provide professional archaeological monitoring services for any construction activities that may disturb native soils (i.e., Young Alluvial Fan Deposits) from approximately 7 feet (ft) below ground surface (bgs) to a depth of 10 ft bgs. The monitor shall be present at the pre-grading conference to explain the cultural monitoring requirements associated with the proposed Project. If any significant historical resources or archaeological resources are encountered during monitoring, work shall stop within the immediate vicinity of the resource, with the precise area to be determined by the monitor, until such time as the resource can be evaluated by an archaeologist and any other appropriate individuals. Project personnel shall not collect or move any archaeological materials and associated materials. To the extent feasible, Project activities shall avoid these resources. Where avoidance is not feasible, the archaeological resources shall be evaluated for their eligibility for listing in the California Register of Historical Resources. If the resources are not

eligible, avoidance is not necessary. If the resources are eligible, adverse effects on the resources must be avoided, or such effects must be mitigated. Mitigation can include, but is not necessarily limited to: excavation of the deposit in accordance with a data recovery plan, per California Code of Regulations (CCR) Title 4(3) Section 5126.4(b)(3)(C) and standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; production of a report detailing the methods, findings, and significance of the archaeological site and associated materials; curation of archaeological materials at an appropriate facility for future research and/or display; an interpretive display of recovered archaeological materials at a local school, museum, or library; and public lectures at local schools and/or historical societies on the findings and significance of the site and recovered archaeological materials.

CUL-2

Human Remains. In the event that human remains are encountered on the Project site, work within 50 ft of the discovery shall be redirected and the County Coroner notified immediately consistent with the requirements of CCR Section 15064.5(e). State Health and Safety Code (HSC) Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to State Public Resources Code (PRC) Section 5097.98. If the remains are determined to be Native American, the County Coroner would notify the Native American Heritage Commission (NAHC), which would determine and notify a Most Likely Descendent (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The MLD recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials, preservation of Native American human remains and associated items in place, relinquishment of Native American human remains and associated items to the descendants for treatment, or any other culturally appropriate treatment. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City of Monrovia (City) shall consult with the MLD as identified by the NAHC to develop an agreement for treatment and disposition of the remains. Prior to the issuance of grading permits, the City, or its designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State HSC Section 7050.5, and PRC Section 5097.98, as stated above.

Attachments: A: References
B: Figure 1
C: Records Search Results

ATTACHMENT A

REFERENCES

Nationwide Environmental Title Research (NETR). Historic Aerials.

1952 to 2012. Website: <https://historicaerials.com> (accessed September 2017).

SALEM Engineering Group, Inc. (SALEM)

2016a Geotechnical Engineering Investigation: Proposed TownePlace Suites Hotel E. Huntington Drive & S. Myrtle Avenue, Monrovia, California. SALEM Project No. 3-216-0956, September 30, 2016.

2016b Phase I Environmental Site Assessment: Proposed TownePlace Suite Hotel, SWC West Huntington Drive & South Myrtle Avenue, Monrovia, CA 91606. SALEM Project No. 3-46-1112, October 31, 2016.

United States Geological Survey (USGS)

1894 *Pomona, California* 15-minute quadrangle map. United States Geological Survey, Denver, Colorado.

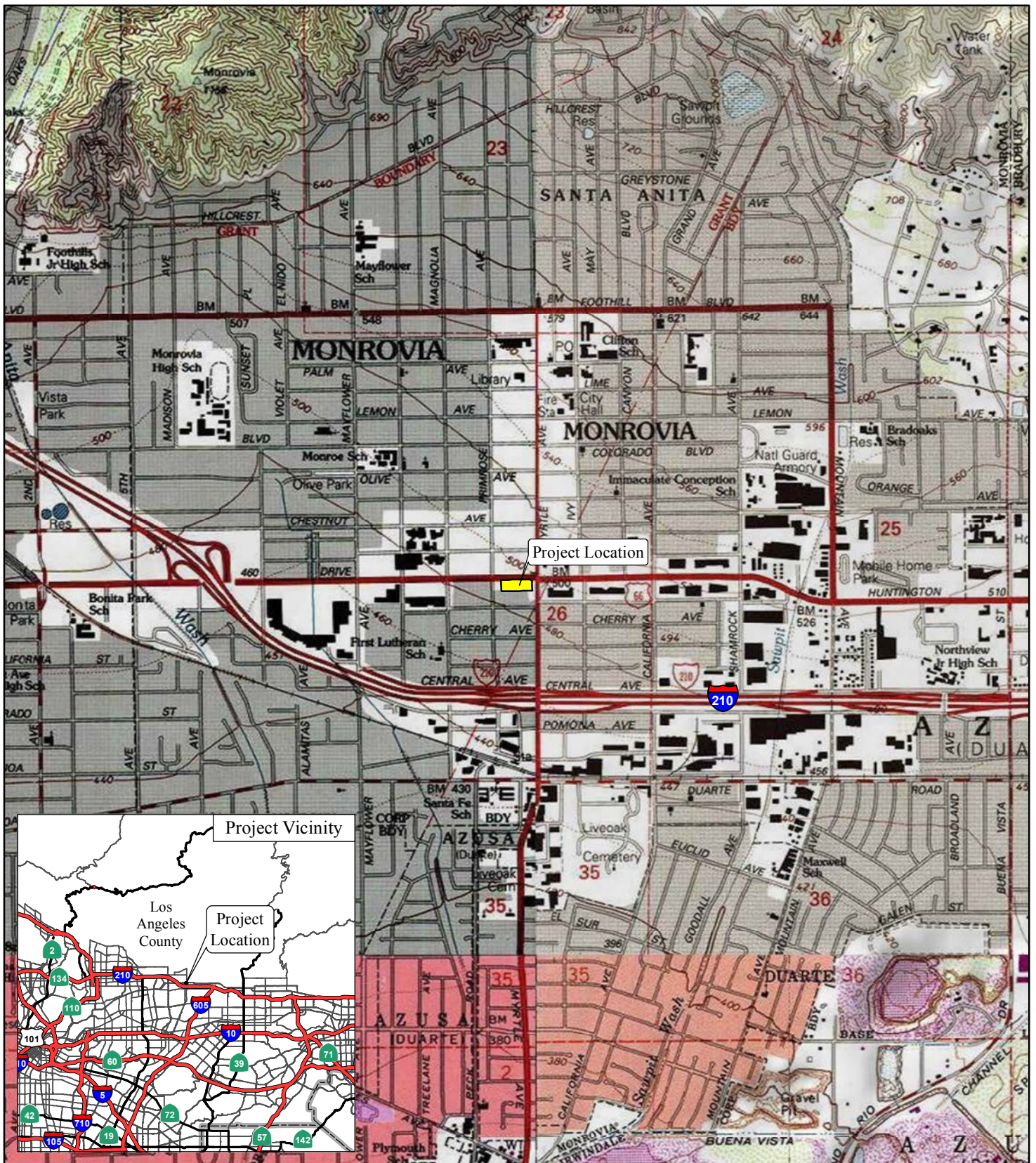
1900 *Pasadena, California* 15-minute quadrangle map. United States Geological Survey, Denver, Colorado.

1904 *Pomona, California* 15-minute quadrangle map. United States Geological Survey, Denver, Colorado.

1988 *Mount Wilson, California* 7.5-minute quadrangle. Prepared in 1966. Photorevised in 1988. United States Geological Survey, Denver, Colorado.

ATTACHMENT B

FIGURE



LSA

LEGEND

Project Location



0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Mt. Wilson (1988), CA

E:\THA1601\GIS\ProjectLocation_USGS.mxd (9/2/2016)

FIGURE 1

Monrovia Marriott
Project Location

ATTACHMENT C

RECORDS SEARCH RESULTS

South Central Coastal Information Center

California State University, Fullerton
Department of Anthropology MH-426
800 North State College Boulevard
Fullerton, CA 92834-6846
657.278.5395 / FAX 657.278.5542

sccic@fullerton.edu

California Historical Resources Information System
Orange, Los Angeles, and Ventura Counties

8/29/2017

Records Search File No.: 18020.4054

Ivan H. Strudwick
LSA
20 Executive Park, Suite 200
Irvine, CA 92614

Re: Record Search Results for the Monrovia Townplace Suites Project, Monrovia, Los Angeles County, California (LSA Job #: THA1601, Phase 06)

The South Central Coastal Information Center received your records search request for the project area referenced above, located on the Mt. Wilson and Azusa, CA USGS 7.5' quadrangles. The following reflects the results of the records search for the project area and a ¼-mile radius:

As indicated on the data request form, the locations of resources and reports are provided in the following format: custom GIS maps shape files hand-drawn maps

Resources within project area: 0	None
Resources within ¼-mile radius: 4	SEE ATTACHED MAP or LIST
Resources listed in the OHP Historic Properties Directory within project area: 0	None
Resources listed in the OHP Historic Properties Directory within ¼-mile radius: 5	SEE ATTACHED LIST FOR INDIVIDUAL PROPERTY STATUS CODES – resource locations from the OHP HPD may or may not be plotted on the custom GIS map or provided as a shape file
Reports within project area: 0	None
Reports within ¼-mile radius: 3	SEE ATTACHED MAP or LIST

- Resource Database Printout (list):** enclosed not requested nothing listed
- Resource Database Printout (details):** enclosed not requested nothing listed
- Resource Digital Database (spreadsheet):** enclosed not requested nothing listed
- Report Database Printout (list):** enclosed not requested nothing listed
- Report Database Printout (details):** enclosed not requested nothing listed
- Report Digital Database (spreadsheet):** enclosed not requested nothing listed
- Resource Record Copies:** enclosed not requested nothing listed
- Report Copies:** enclosed not requested nothing listed

OHP Historic Properties Directory: enclosed not requested nothing listed
Archaeological Determinations of Eligibility: enclosed not requested nothing listed
Los Angeles Historic-Cultural Monuments enclosed not requested nothing listed
Historical Maps: enclosed not requested nothing listed
Ethnographic Information: not available at SCCIC
Historical Literature: not available at SCCIC
GLO and/or Rancho Plat Maps: not available at SCCIC
Caltrans Bridge Survey: not available at SCCIC; please go to
<http://www.dot.ca.gov/hq/structur/strmaint/historic.htm>
Shipwreck Inventory: not available at SCCIC; please go to
http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks_Database.asp
Soil Survey Maps: (see below) not available at SCCIC; please go to
<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the [California Historical Resources Information System](#),

Isabela Kott
 GIS Technician/Staff Researcher

Enclosures:

- (X) Custom Maps – 1 page
- (X) Resource Database Printout (list) – 1 page
- (X) Report Database Printout (list) – 1 page
- (X) OHP Historic Properties Directory – 2 pages
- (X) National Register Status Codes – 1 page
- (X) Historical Maps – 6 pages
- (X) Invoice #18020.4054

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-08136		2004	McLean, Deborah K.	Results of the Cultural Resources Due Diligence for the Neff Block and the Fascia Block Redevelopment Project in the City of Monrovia, Los Angeles County, California	LSA Associates, Inc.	
LA-10496		2000	Duke, Curt	Cultural Resource Assessment for AT&T Wireless Services Facility Number C887.1, County of Los Angeles, California	LSA Associates, Inc.	
LA-10526		2003	Erickson, Kirsten	Historic Properties Survey Report for Verizon Wireless Telecommunications Tower Site: Primrose, Monrovia, Los Angeles County, California	URS Corporation	19-187710, 19-187711, 19-187712

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-187710		OHP Property Number - 139856; Resource Name - Herco Pipe & Supply Co	Building	Historic	HP06 (1-3 story commercial building)	2003 (K. Erickson, URS Corp)	LA-09424, LA-10526
P-19-187711		OHP Property Number - 139857; Resource Name - Richmond Inc	Building	Historic	HP06 (1-3 story commercial building)	2003 (K. Erickson, URS Corp)	LA-09424, LA-10526
P-19-187712		OHP Property Number - 139858; Resource Name - Gem City Transfer	Building	Historic	HP06 (1-3 story commercial building)	2003 (K. Erickson, URS Corp)	LA-09424, LA-10526
P-19-192435		Resource Name - 1224 S Alta Vista Ave	Building	Historic	HP03 (Multiple family property)	2017 (Jeanette A. McKenna, McKenna et al.)	



BERKELEY
CARLSBAD
FRESNO
IRVINE
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROCKLIN
SAN LUIS OBISPO

MEMORANDUM

Date: December 9, 2016

To: Nicole Dubois, LSA

From: Paul Alms, M.Sc.

Subject: Paleontological Analysis of the Monrovia Marriott Project, City of Monrovia, County of Los Angeles, California

INTRODUCTION

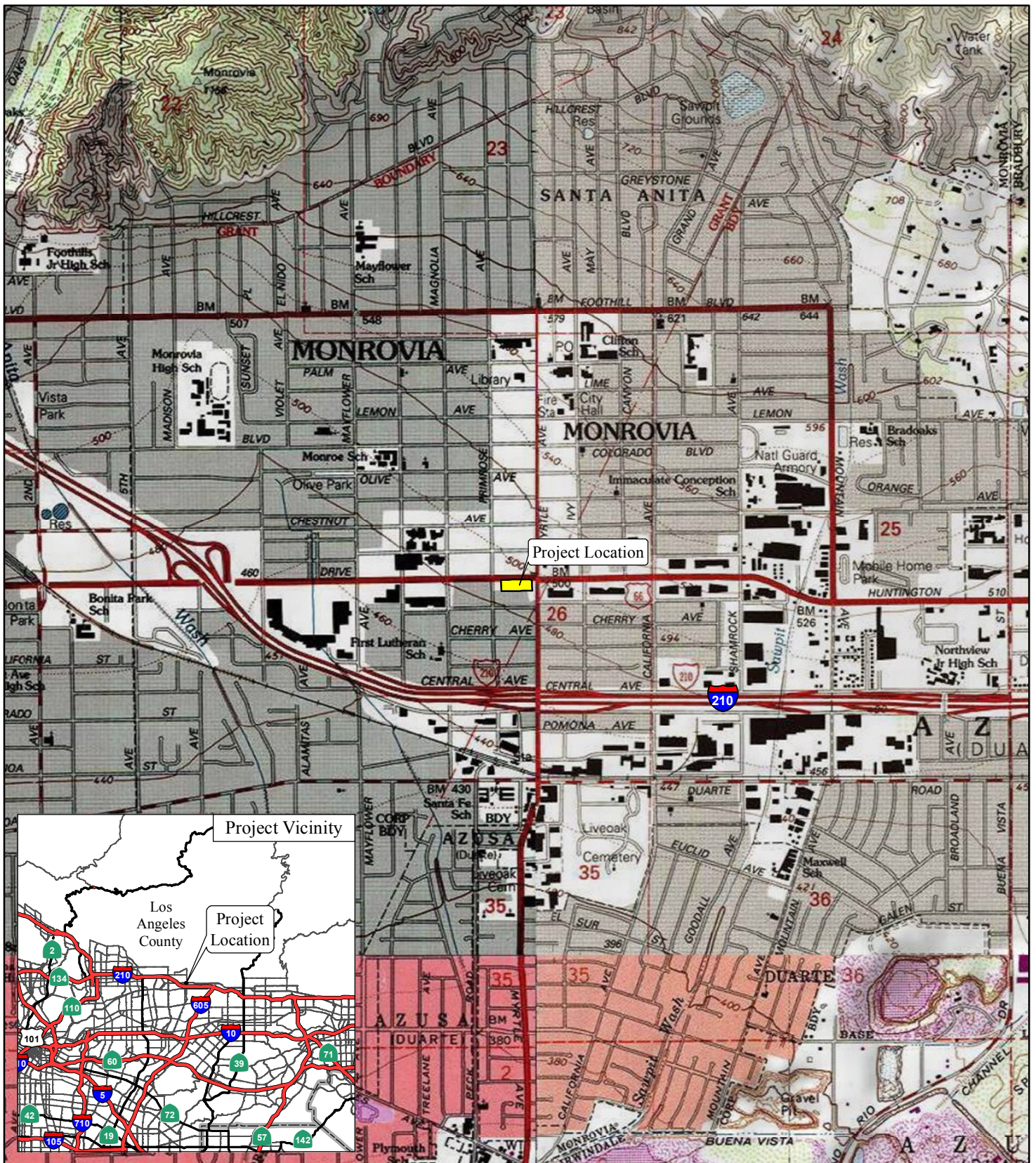
This memorandum was prepared to ensure that the Monrovia Marriott Project (project) in the City of Monrovia, County of Los Angeles (County), California is in compliance with all applicable State regulations and requirements regarding paleontological resources. These regulations and requirements include the California Environmental Quality Act (CEQA): Public Resources Code (PRC) Division 13, Chapter 2.6; the *State CEQA Guidelines*: California Code of Regulations, Title 14, Chapter 3, Appendix G; PRC 5097.5; and the Society of Vertebrate Paleontology (SVP, 2010). This memorandum addresses the potential for the project to impact paleontological resources and, if needed, includes mitigation measures and other recommendations to minimize these impacts. The City of Monrovia is the Lead Agency under CEQA.

PROJECT DESCRIPTION AND LOCATION

This project proposes to build a five-story TownePlace Suites Hotel by Marriott with up to 109 rooms on 1.71 acres. The project will include an on-site surface parking lot with 109 parking spaces, an on-site pool, and sidewalks along Huntington Drive and South Myrtle Avenue. The project site is bounded by Huntington Drive to the north, South Myrtle Avenue to the east, an alley to the south, and a Taco Bell to the west. The project site is depicted on the United States Geological Survey (USGS) *Mount Wilson, California* 7.5-minute topographic quadrangle map in unsectioned land of the Santa Anita Land Grant (USGS, 1988; Figure 1).

METHODS

LSA examined geologic maps of the project area and reviewed relevant geological and paleontological literature to determine which geologic units are present in the project area and whether fossils have been recovered in the project area or from those or similar geologic units elsewhere in the region. LSA also conducted a search for known fossil localities through the Natural



LSA

LEGEND

Project Location



0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Mt. Wilson (1988), CA

E:\THA1601\GIS\ProjectLocation_USGS.mxd (9/2/2016)

FIGURE 1

Monrovia Marriott
Project Location



History Museum of Los Angeles County (LACM) in order to determine the status and extent of previously recorded paleontological resources within and surrounding the project area.

RESULTS

Literature Review

The project is at the northern end of the Peninsular Ranges Geomorphic Province, a 900-mile (mi) long northwest-southeast-trending structural block that extends from the Transverse Ranges in the north to the tip of Baja California in the south and includes the Los Angeles Basin (California Geological Survey, 2002; Norris and Webb, 1976). This province is characterized by mountains and valleys that trend in a northwest-southeast direction, roughly parallel to the San Andreas Fault. The total width of the province is approximately 225 mi, extending from the Colorado Desert in the east, across the continental shelf, to the southern Channel Islands (i.e., Santa Barbara, San Nicolas, Santa Catalina, and San Clemente) (Sharp, 1976). It contains extensive pre-Cenozoic (more than 66 million years ago [Ma]) igneous and metamorphic rock covered by limited exposures of Cenozoic (less than 66 Ma) sedimentary deposits (Norris and Webb, 1976).

Within this larger region, the project is in the Los Angeles Basin, a broad alluvial lowland bounded to the north and east by the San Gabriel and Santa Ana Mountains, respectively, and by the Pacific Ocean to the southwest (Yerkes et al., 1965). The basin is underlain by a structural depression that has discontinuously accumulated thousands of feet of marine and terrestrial deposits since the Late Cretaceous (approximately 100.5 Ma) (Yerkes et al., 1965). Over millions of years, the basin has experienced episodes of subsidence, deposition, uplift, erosion, and faulting, all of which have resulted in very complex geology (Yerkes et al., 1965). The surface of the basin slopes gently southwestward toward the ocean, interrupted in various places by low hills and traversed by several large rivers (Sharp, 1976; Yerkes et al., 1965), including the Los Angeles River, Rio Hondo, San Gabriel River, and Santa Ana River.

Geologic mapping by Yerkes and Campbell (2005) shows the project site contains Holocene to late Pleistocene in age (less than 126,000 years ago) Young Alluvial Fan Deposits (Figure 2). Artificial Fill may be present at the site due to previous development.

Artificial Fill. Artificial Fill consists of sediments that have been removed from one location and transported to another location by human activity rather than by natural means. The transportation distance can vary from a few feet to many miles, and composition depends on the source and purpose. While Artificial Fill may contain fossils, these fossils have been removed from their original location and are thus out of stratigraphic context. Therefore, they are not considered important for scientific study. As such, Artificial Fill has no paleontological sensitivity.

Young Alluvial Fan Deposits. The Young Alluvial Fan Deposits are Holocene to late Pleistocene in age (less than 126,000 years ago) and consist of unconsolidated silt, sand, and gravel (Yerkes and Campbell, 2005). Cobble- and boulder-size clasts are also present and become more abundant closer to the hills and mountains (Yerkes and Campbell, 2005). These sediments were eroded from higher elevations, carried by flooding streams and debris flows. They show slight to moderate soil development (Yerkes and Campbell, 2005).



Although Holocene (less than 11,700 years ago) deposits can contain remains of plants and animals, only those from the middle to early Holocene (4,200 to 11,700 years ago; Walker et al. 2012) are considered scientifically important (SVP 2010). Moreover, scientifically important fossils from middle to early Holocene deposits are not very common. However, the older, Pleistocene deposits that may be reached below a depth of approximately 10 feet (ft) have produced scientifically important fossils elsewhere in the County and the region (Jefferson, 1991a, 1991b; Miller, 1971; Reynolds and Reynolds, 1991; Springer et al., 2009). These older deposits span the end of the Rancholabrean North American Land Mammal Age (NALMA), which was named for the Rancho La Brea fossil site in central Los Angeles and dates from 11,000 to 240,000 years ago (Sanders et al., 2009). The presence of *Bison* defines the beginning of the Rancholabrean NALMA (Bell et al., 2004), but fossils from this time also include other large and small mammals, reptiles, fish, invertebrates, and plants. There is potential to find these types of fossils in the older sediments of this geologic unit, which may be encountered below a depth of approximately 10 ft. Therefore, these deposits are assigned a low paleontological sensitivity above a depth of 10 ft and a high sensitivity below that mark.

Fossil Locality Search

According to the locality search conducted by the LACM, there are no known fossil localities within the boundaries of the project. The LACM reports the project site is underlain by deposits of younger Quaternary alluvium (i.e., Young Alluvial Fan Deposits) with older Quaternary sediments occurring possibly at relatively shallow depths. The closest vertebrate locality in these older Quaternary deposits is LACM (CIT) 342, which is west of the proposed project site in the City of Eagle Rock, east of Eagle Rock Boulevard and just south of York Boulevard. This locality produced specimens of turkey (*Parapavo californicus*) and mammoth (*Mammuthus*) 14 ft below the surface. Both of these specimens have been published in scientific literature, and the mammoth fossil was especially important in that it was a rare, nearly complete skeleton.

The LACM believes shallow excavations in the younger Quaternary alluvial deposits in the project site are unlikely to recover any scientifically important vertebrate fossils. However, deeper excavations into the alluvial deposits in the project site may encounter scientifically significant vertebrate remains and should be monitored to recover those remains. A copy of the letter describing the locality search results from the LACM is provided in Attachment A.

CONCLUSIONS AND RECOMMENDATIONS

Artificial Fill, which has no paleontological sensitivity, may be present at the surface of the project site and overlie the Young Alluvial Fan Deposits that are mapped throughout the project site. The Young Alluvial Fan Deposits have low paleontological sensitivity from the surface to a depth of 10 ft and high paleontological sensitivity below that mark. Therefore, in order to mitigate potential impacts to scientifically significant nonrenewable paleontological resources, as required by CEQA Appendix G, PRC Section 5097.5, LSA recommends the following mitigation measure:

- PALEO-1 If ground-disturbing activities associated with project development are expected to extend deeper than 10 feet (ft) below the current ground surface, prior to commencement of any grading activity on site, a paleontologist shall be retained to develop a Paleontological Resources Impact Mitigation Program (PRIMP) for this



project. The PRIMP shall include the methods that will be used to protect paleontological resources that may exist within the project site, as well as procedures for monitoring, fossil preparation and identification, curation into a repository, and preparation of a report at the conclusion of grading. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology and include, but not be limited to, the following:

- Excavation and grading activities in deposits with high paleontological sensitivity (Young Alluvial Fan Deposits beginning at a depth of 10 ft below the existing ground surface) shall be monitored by a paleontological monitor following a PRIMP.
- No monitoring is required for excavations in deposits with no or low paleontological sensitivity (Artificial Fill and Young Alluvial Fan Deposits from the surface to a depth of 10 ft).
- If paleontological resources are encountered during the course of ground disturbance, the paleontological monitor shall have the authority to temporarily redirect construction away from the area of the find in order to assess its significance.
- Collected resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections of a scientific institution.
- At the conclusion of the monitoring program, a report of findings shall be prepared to document the results of the monitoring program.
- In the event that paleontological resources are encountered when a paleontological monitor is not present, work in the immediate area of the find shall be redirected and a paleontologist should be contacted to assess the find for significance. If determined to be significant, the fossil shall be collected from the field.

Attachment A: Paleontological Locality Search Results from the Natural History Museum of Los Angeles County



REFERENCES

- Bell, Christopher J., Ernest L. Lundelius, Jr., Anthony D. Barnosky, Russell W. Graham, Everett H. Lindsay, Dennis R. Ruez, Jr., Holmes A. Semken, Jr., S. David Webb, and Richard J. Zakrzewski
- 2004 *The Blancan, Irvingtonian, and Rancholabrean Mammal Ages*. Chapter 7 in Michael O. Woodburne, ed., *Late Cretaceous and Cenozoic Mammals of North America*. pp. 232–314.
- California Geological Survey
- 2002 *California Geomorphic Provinces*. California Geologic Survey Note 36. California Department of Conservation.
- Jefferson, George T.
- 1991a *A Catalogue of Late Quaternary Vertebrates from California: Part One: Non-marine Lower Vertebrate and Avian Taxa*. Natural History Museum of Los Angeles County Technical Reports No. 5, Los Angeles.
- 1991b *A Catalogue of Late Quaternary Vertebrates from California: Part Two: Mammals*. Natural History Museum of Los Angeles County Technical Reports No. 7, Los Angeles.
- Miller, W.E.
- 1971 *Pleistocene Vertebrates of the Los Angeles Basin and Vicinity (Exclusive of Rancho La Brea)*. Los Angeles County Museum of Natural History Bulletin, Science: No. 10.
- Norris, R.M., and R.W. Webb
- 1976 *Geology of California*. New York: John Wiley and Sons, Inc. 379 pp.
- Reynolds, R.E., and R.L. Reynolds
- 1991 *The Pleistocene Beneath our Feet: Near-surface Pleistocene Fossils in Inland Southern California Basins*. In M.O. Woodburne, R.E. Reynolds, and D.P. Whistler, eds., *Inland Southern California: The Last 70 Million Years, Redlands, San Bernardino County Museum Special Publication 38(3 and 4): 41–43*.
- Sanders, A.E., R.E. Weems, and L.B. Albright
- 2009 *Formalization of the Middle Pleistocene "Ten Mile Beds" in South Carolina with Evidence for Placement of the Irvingtonian-Rancholabrean Boundary*. *Museum of Northern Arizona Bulletin* 64:369–375.



Sharp, R.P.

- 1976 *Geology: Field Guide to Southern California*. Kendall/Hunt Publishing Company, Second Edition: 181.

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. 11 pp.

Springer, Kathleen, Eric Scott, J. Christopher Sagebiel, and Lyndon K. Murray

- 2009 *The Diamond Valley Lake Local Fauna: Late Pleistocene Vertebrates from Inland Southern California*. In L.B. Albright, III, ed. *Papers in Geology, Vertebrate Paleontology, and Biostratigraphy in Honor of Michael O. Woodburne*, Museum of Northern Arizona Bulletin 65, pp. 217–236.

United States Geological Survey (USGS)

- 1988 *Mount Wilson, California 7.5-minute topographic quadrangle*. Published 1966, photorevised 1988. United States Geological Survey, Denver, Colorado.

Walker, M.J.C., M. Berkelhammer, S. Bjorck, L.C. Cwynar, D.A. Fisher, A.J. Long, J.J. Lowe, R. Newnham, S.O. Rasmussen, and H. Weiss

- 2012 *Formal Subdivision of the Holocene Series/Epoch: A Discussion Paper by a Working Group of INTIMATE (Integration of Ice-Core, Marine and Terrestrial Records) and the Subcommission on Quaternary Stratigraphy (International Commission on Stratigraphy)*. *Journal of Quaternary Science* 27:649–659.

Yerkes, R.F., and R.H. Campbell

- 2005 *Preliminary Geologic Map of the Los Angeles 30' x 60' Quadrangle, Southern California*. United States Geological Survey Open File Report 2005-1019. Map Scale 1:100,000.

Yerkes R.F., T.H. McCulloh, J.E. Schoellhamer, and J.G. Vedder

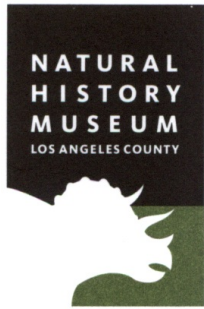
- 1965 *Geology of the Los Angeles Basin, California—An Introduction*. United States Geological Survey Professional Paper 420-A. 57 pp.

ATTACHMENT A

PALEONTOLOGICAL LOCALITY SEARCH RESULTS FROM THE NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org



Vertebrate Paleontology Section
Telephone: (213) 763-3325
Fax: (213) 746-7431
e-mail: smcleod@nhm.org

7 October 2016

LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614

Attn: Sarah Rieboldt, Ph.D., Paleontologist

re: Paleontological Resources Records Check for the proposed Monrovia Marriott Project, LSA Project # THA1601, in the City of Monrovia, Los Angeles County, project area

Dear Sarah:

I have thoroughly searched our paleontology collection records for the locality and specimen data for the proposed Monrovia Marriott Project, LSA Project # THA1601, in the City of Monrovia, Los Angeles County, project area as outlined on the portion of the Mount Wilson USGS topographic quadrangle map that you sent to me via e-mail on 2 September 2016. We do not have any vertebrate fossil localities that lie directly within the proposed project boundaries, but we do have localities nearby from the same sedimentary units that occur subsurface in the proposed project area.

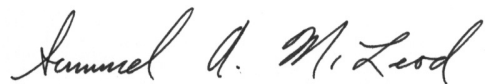
The entire proposed project area has surface deposits composed of younger Quaternary Alluvium, derived as alluvial fan deposits from the San Gabriel Mountains to the north. These younger Quaternary Alluvium deposits typically do not contain significant vertebrate fossils, at least in the uppermost layers, but they are likely underlain, possibly at relatively shallow depths, by deposits of older Quaternary Alluvium. Our closest vertebrate fossil locality in these older Quaternary deposits is LACM (CIT) 342, in Eagle Rock west of the proposed project area east of the Pasadena Freeway (I-110) and Eagle Rock Boulevard just south of York Boulevard, that 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).

Surface grading or very shallow excavations in the younger Quaternary Alluvium exposed in the proposed project area probably will not encounter significant vertebrate fossil remains. Deeper excavations that extend down into older 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. Sediment samples should also be collected from the older deposits in the proposed project area and processed to determine their small fossil potential. 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,

A handwritten signature in cursive script that reads "Samuel A. McLeod".

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice