LA BREA TAR PITS MASTER PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT

SCH NO. 2022020344

SEPTEMBER 2023

LEAD AGENCY: COUNTY OF LOS ANGELES

PREPARED BY: SWCA ENVIRONMENTAL CONSULTANTS
320 NORTH HALSTEAD STREET, SUITE 120, PASADENA, CA 91107

LA BREA TAR PITS & MUSEUM

LA BREA TAR PITS MASTER PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT

SCH NO. 2022020344

SEPTEMBER 2023

LEAD AGENCY: County of Los Angeles

PROJECT PROPONENT: Los Angeles County Museum of Natural History Foundation on behalf of the County of Los Angeles Museum of Natural History
900 Exposition Boulevard, Los Angeles, CA 90007
Contact: Leslie Negritto, Chief Operating Officer

PREPARED BY: SWCA Environmental Consultants
320 North Halstead Street, Suite 120, Pasadena, CA 91107
(626) 240-0587 | www.swca.com
Contact: Bobbette Biddulph, SWCA Project No. 63953

CONTENTS

Appendices

Figures

Tables

ACRONYMS AND ABBREVIATIONS

µg/g	microgram(s) per gram
µg/m³	microgram(s) per cubic meter
µPa	micropascal(s)
2035 General Plan	County of Los Angeles 2035 General Plan
AAM	annual arithmetic mean
AB	Assembly Bill
ADA	Americans with Disabilities Act
AHERA	Asbestos Hazard Emergency Response Act
Air Basin	South Coast Air Basin
APE	area of potential effects
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
AR	Assessment Report
ARG	Architectural Resources Group
AR-TCR	Archaeological Resource-Tribal Cultural Resource
ASCE	American Society of Civil Engineers
Azusa Land Reclamation	Azusa Land Reclamation Company Landfill
B.P.	years before present
Basin Plan	*Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*
bgs	below ground surface
BMP	best management practice
Building and Safety	County of Los Angeles Department of Public Works Building and Safety
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
cal	calibrated
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health Administration
CalEEMod	California Emission Estimator Model
CalEPA	California Environmental Protection Agency
CalGEM	State of California Department of Conservation, Geologic Energy Management Division
CALGreen	California Green Building Standards Code

CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAT	California Action Team
CBC	California Building Code
CCAA	California Clean Air Act
CCI	Code Consultants, Inc.
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERS	California Environmental Reporting System
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	methane
CHL	California Historical Landmark
CHR	California Historical Resource
CHRIS	California Historical Resources Information System
City	City of Los Angeles
City of L.A. Thresholds Guide	*L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles*
City RAP	City of Los Angeles Department of Recreation and Parks
CIWMP	Countywide Integrated Waste Management Plan
CLABC	County of Los Angeles Building Code
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent

County	County of Los Angeles
County Code	Los Angeles County Code
County Public Works	Los Angeles County Department of Public Works
CPHI	California Point of Historical Interest
CPS-SLIC	Cleanup Program Site – Spills, Leaks, Investigations and Cleanups
CRHR	California Register of Historical Resources
CTMP	construction traffic management plan
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWC	California Water Code
dB	decibel(s)
dBA	A-weighted decibel(s)
dbh	diameter at breast height
DDT	dichlorodiphenyltrichloroethane
DPM	diesel particulate matter
DSOD	Division of Safety of Dams
DTSC	California Department of Toxic Substance Control
DWR	California Department of Water Resources
EDR	Environmental Data Resources, Inc.
EIR	environmental impact report
Emergency Response Plan	Los Angeles County Operational Area Emergency Response Plan
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
EWMP	Enhanced Watershed Management Program
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
Foundation	Los Angeles County Museum of Natural History Foundation
FTA	Federal Transit Administration
General Plan	*Los Angeles County General Plan 2035*
GHG	greenhouse gas

gpd	gallons per day
gsf	gross square feet
GWh	gigawatt-hours
GWP	global warming potential
H_2S	hydrogen sulfide
HABS	Historic American Buildings Survey
HASP	Health and Safety Plan
HCM	Historic-Cultural Monument
HFC	hydrofluorocarbon
HPO	Historic Preservation Ordinance
HPOZ	Historic Preservation Overlay Zone
HQTA	high-quality transit area
HRA	health risk assessment
HSC	California Health and Safety Code
HVAC	heating, ventilation, and air conditioning
Hydrology Manual	County of Los Angeles Department of Public Works Hydrology Manual
I-10	Interstate 10
IBC	International Building Code
in/sec	inch(es) per second
IPCC	Intergovernmental Panel on Climate Change
IRWMP	Integrated Regional Water Management Plan
KHSRA	Kenneth Hahn State Recreation Area
KPFF	KPFF Consulting Engineers
kWh	kilowatt-hours
L_0	highest ambient noise level that occurred at the site
$L_{1.7}$	ambient noise level exceeded for 1.7% of the time of the measurement duration
L_{25}	ambient noise level exceeded for 25% of the time of the measurement duration
L_{50}	ambient noise level exceeded for 50% of the time of the measurement duration
$L_{8.3}$	ambient noise level exceeded for 8.3% of the time of the measurement duration
LA County Parks	Los Angeles County Department of Parks and Recreation
LACFCD	Los Angeles County Flood Control District

LACMA	Los Angeles County Museum of Art
LADOT	Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAMC	City of Los Angeles Municipal Code
LAPD	Los Angeles Police Department
LARWQCB	Los Angeles Regional Water Quality Control Board
LASAN	Los Angeles Sanitation and Environment
LCFS	Low Carbon Fuel Standard
L_{dn}	Day-Night Sound Level
LEL	Lower Explosive Limit
L_{eq}	Equivalent noise level
LID	Low Impact Development
L_{max}	root-mean-squared maximum noise level
LOS	Level of Service
LST	localized significance threshold
LUST	leaking underground storage tank
LV	Vibration Velocity Level
L_{xx}	percentile-exceeded sound level
m	meter(s)
MATES V	Multiple Air Toxics Exposure Study V
MBTA	Migratory Bird Treaty Act
Metro	Los Angeles County Metropolitan Transportation Authority
mg/cm^2	milligram(s) per square centimeter
MLD	most likely descendent
MMT CO_2e	million metric tons carbon dioxide equivalent
mph	miles per hour
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
$MTCO_2e$	metric tons CO_2e
Museum of Natural History	County of Los Angeles Museum of Natural History
Mw	Moment Magnitude Scale
MWD	Metropolitan Water District of Southern California

N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHMLAC	Natural History Museums of Los Angeles County
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OEM	Los Angeles County Office of Emergency Management
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
Page Museum	George C. Page Museum
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyls
PCE	perchloroethylene
PCE	perchloroethylene
PF	Public Facilities
PFC	perfluorocarbons
PM	particulate matter
PM_{10}	particulate matter 10 microns or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
ppb	parts per billion
PPE	personal protective equipment
ppm	parts per million
ppmv	parts per million volume
PPV	peak particle velocity

PRC	Public Resources Code
PRMP	Paleontological Resources Management Plan
project	La Brea Tar Pits Master Plan
PROW	Public Right-of-Way
PVS	peak vector sum
RCRA	Resource Conservation and Recovery Act
RMS	Root Mean Square
ROC	reactive organic gases
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel-Efficient
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCOTUS	Supreme Court of the United States
SCS	Sustainable Community Strategy
SEA	Significant Ecological Area
sf	square feet or square foot
SF_6	sulfur hexafluoride
SFHA	Special Flood Hazard Area
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SMP	Soil Management Plan
SNAP	Supplemental Nutrition Assistance Program
SO_2	sulfur dioxide
SoCalGas	Southern California Gas Company
SOx	sulfur oxides
SQMP	stormwater quality management program
SRA	source receptor area
SVP	Society of Vertebrate Paleontology

SWCA	SWCA Environmental Consultants
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
Tanner Air Toxics Act	Toxic Air Contaminant Identification and Control Act of 1983 (Assembly Bill 1807)
Tar Pits	La Brea Tar Pits
TCE	trichloroethylene
TDM	Transportation Demand Management
TMDL	Total Maximum Daily Loads
Transportation Assessment	*La Brea Tar Pits Master Plan Final Transportation Assessment*
TSCA	Toxic Substances Control Act
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USPS	U.S. Postal Service
UST	underground storage tank
UWMP	urban water management plan
VC	vinyl chloride
VdB	vibration velocity decibels
VMT	vehicle miles traveled
VOC	volatile organic compound
WDR	Waste Discharge Requirement
WEAP	Worker Environmental Awareness Program
WMA	Watershed Management Area
WMC	Watershed Management Committee
ZEV	zero-emission vehicle

CHAPTER 1. INTRODUCTION

This chapter provides an overview of the purpose and intended uses of this environmental impact report (EIR) for the La Brea Tar Pits Master Plan (project). It explains the organization of the EIR and includes a description of the environmental and public review process for the project.

La Brea Tar Pits, the George C. Page Museum (Page Museum), and associated facilities, are owned by the County of Los Angeles (County) but are managed by the non-profit Los Angeles County Museum of Natural History Foundation (Foundation). The Foundation's role is to carry out all County services including public access and programming, administration, and operation for the County of Los Angeles Museum of Natural History (Museum of Natural History), including La Brea Tar Pits and the Page Museum under the oversight of the County.

The County, as Lead Agency, acting through the Foundation proposes a redevelopment, or "reimagining," of the 13-acre La Brea Tar Pits site. The proposed project is referred to as the La Brea Tar Pits Master Plan. The project includes a reimagined site design, expansion, and upgrades for the Tar Pits complex, including renovations to the Page Museum, and development of a new museum building. The project site is located at 5801 Wilshire Boulevard in Los Angeles. The project site is within Hancock Park and is adjacent to the Los Angeles County Museum of Art (LACMA).

1.1 PURPOSE OF THE EIR AND THE ENVIRONMENTAL REVIEW PROCESS

The County has prepared this EIR to assess the environmental impacts of the project. The California Environmental Quality Act (CEQA) Guidelines identify the Lead Agency as the public agency with the principal responsibility for carrying out or approving a project (State CEQA Guidelines Section 15367). The County is the CEQA Lead Agency for the project because the project is on County-owned land; the Museum of Natural History is a County departmental unit.[1] Thus, the County is responsible for the coordination and direct oversight of the environmental review process.

This EIR has been prepared in compliance with CEQA, codified as California Public Resources Code (PRC) Section 21000 et seq., and the State CEQA Guidelines in the California Code of Regulations, Title 14, Division 6, Chapter 3. The basic purposes of CEQA are to: 1) inform decision makers and the public about the potential significant environmental effects of proposed activities, 2) identify the ways that environmental effects can be avoided or significantly reduced, 3) prevent significant, avoidable environmental effects by requiring changes in projects through the use of alternatives or mitigation measures when feasible, and 4) disclose to the public the reasons an implementing agency may approve a project even if significant unavoidable environmental effects are involved.

[1] In accordance with Chapter 2.94 of the Los Angeles County Code and various other operating agreements, the County Museum of Natural History is a department of the County and has administrative charge and control over all County matters relating to history and science, and shall also include the administration of Hancock Park (except that area of said park devoted to the Los Angeles County Museum of Art [LACMA]), and the care, safeguarding, and maintenance of all exhibits, equipment, and structural improvements directly relating to exhibits, the administration and maintenance of LACMA, and other property hereafter acquired for or devoted to history and science.

An EIR uses a multidisciplinary approach, applying social and natural sciences to make a qualitative and quantitative analysis of all the foreseeable environmental impacts that a project would exert on the project's surrounding area and environs. As stated in State CEQA Guidelines Section 15151:

> *An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible.*

As described in Section 15121(a) of the State CEQA Guidelines, this EIR is intended to serve as an informational document for public agency decision makers and the public. In accordance with State CEQA Guidelines Section 15126, this EIR describes the project and the existing environmental and regulatory setting, identifies environmental impacts associated with project implementation, identifies mitigation measures for potentially significant impacts, and provides an analysis of alternatives. Thresholds of significance for each environmental resource analyzed in this EIR are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. The thresholds of significance are defined within each impact analysis section. The environmental impact analyses in this EIR are based on a variety of sources, including agency consultation, technical studies, and field surveys. The County would consider the information presented in this EIR, public comments received on the Draft EIR, and other factors, prior to approving the project. The Final EIR would be submitted for consideration and certification to the Los Angeles County Board of Supervisors (Board) prior to the Board's consideration of the project for approval.

1.2 SCOPING AND NOTICE OF PREPARATION PROCESS

Pursuant to Section 15082 of the State CEQA Guidelines, the Lead Agency is required to send a Notice of Preparation (NOP) stating that an EIR would be prepared to the State Office of Planning and Research, responsible and trustee agencies, and federal agencies involved in funding or approving the project. The NOP must provide sufficient information for responsible agencies to make a meaningful response. At a minimum, the NOP must include a description of the proposed project, location of the proposed project, and probable environmental effects of the proposed project (State CEQA Guidelines Section 15082(a)(1)). Within 30 days after receiving the NOP, responsible and trustee agencies and the State Office of Planning and Research shall provide the Lead Agency with specific detail about the scope and content of the environmental information related to that agency's area of statutory responsibility that must be included in the EIR (State CEQA Guidelines Section 15082(b)).

On February 14, 2022, in accordance with Sections 15063 and 15082 of the State CEQA Guidelines, the County published an NOP for the EIR and circulated it to governmental agencies, organizations, and persons who may be interested in the proposed project, including nearby landowners, homeowners, and tenants. The NOP requested comments on the scope of the EIR and asked interested parties for their suggestions regarding ways the project could be revised to reduce or avoid any significant environmental impacts. The NOP provided a general description of the proposed project, a description of the project site, and a preliminary list of potential environmental effects.

The 30-day NOP comment period extended through March 16, 2022. Copies of the NOP were made available for public review on the project's website, available at https://tarpits.org/reimagine. In addition, the NOP was also distributed via the following methods: direct mailings to residents in the 90036 zip code; two rounds of email blasts sent to residents in the 90036 and 90048 zip codes; and a full-page advertisement placed in the *Beverly Press/Park La Brea News* on February 17 and February 24, 2022.

Two public scoping meetings were held virtually via Zoom on March 2, 2022, at 2:30 p.m. and 5:30 p.m. to provide a description of the project and solicit input from any interested parties on the scope and content of the EIR in conformance with PRC Section 21083.9. Live language interpretation of the presentation and scoping meeting input was provided in Spanish and Korean during both scoping meetings.

A summary matrix of written comments received during the NOP comment period as well as verbal comments recorded at the two public scoping meetings is provided as an appendix to this EIR (Appendix A).

1.3 EIR CONTENTS

This EIR is organized into the following chapters, sections, and appendices:

1. **Introduction.** The introduction includes the purpose of an EIR and procedural information.
2. **Summary.** The summary provides a synopsis of the proposed project's potential impacts. It identifies, in an overview fashion, the project under consideration and its objectives; presents a summary of areas of controversy and issues to be resolved; and summarizes the proposed project's impacts and mitigation measures. This chapter also contains a summary analysis of the alternatives to the project, as well as a summary of environmental impacts in table format.
3. **Project Description.** This chapter includes information about the project location, the existing setting, the project site history, project objectives, project characteristics, and project construction.
4. **Environmental Setting.** This chapter describes the project's environmental setting, including existing physical characteristics of the project site. This chapter also provides a discussion of the cumulative context considered for the project, including growth projections and a list of past, present, and reasonably foreseeable future projects in the vicinity of the project.
5. **Environmental Impact Analysis.** This chapter discusses the environmental setting as it relates to the various issue areas, regulatory settings, thresholds of significance, impact assessment methodology, project-specific impacts and mitigation measures, and cumulative impacts. The EIR analyzes the potentially significant impacts to the following resource areas, as identified during the preparation of the NOP:

    - Aesthetics
    - Air Quality
    - Biological Resources
    - Cultural Resources – Archaeological Resources
    - Cultural Resources – Historic Resources
    - Geology and Soils
    - Greenhouse Gas Emissions
    - Mandatory Findings of Significance
    - Hazards and Hazardous Materials
    - Hydrology and Water Quality
    - Land Use and Planning
    - Noise
    - Recreation
    - Transportation
    - Tribal Cultural Resources
    - Utilities and Service Systems

    Environmental issue areas not identified in the list above are discussed in Chapter 7, Other CEQA Considerations, Section 7.4 Environmental Effects Found Not to be Significant. These include agricultural and forestry resources, energy, mineral resources, population and housing, public services, and wildfire.

6. **Alternatives Analysis.** The analysis summarizes the environmental advantages and disadvantages associated with the project and alternatives. As required, the "No Project Alternative" is included among the alternatives considered. An "Environmentally Superior Alternative" is identified.
7. **Other CEQA Considerations.** Identifies other potential environmental effects for which CEQA requires analysis, including the potential for the project to result in growth-inducing impacts, significant irreversible environmental changes, unavoidable significant environmental impacts, and effects found not to be significant and not discussed in detail in the EIR.
8. **References and Report Preparation.** This chapter provides a list of the references cited in the EIR. This chapter also provides a list of individuals who contributed to the preparation of the EIR.
9. **Appendices.** The appendices contain important information used to support the analyses and conclusions made in the EIR. Among the appendices that are included are technical reports addressing air quality and greenhouse gas emissions, biological resources, archaeological and tribal resources, historic resources, geology and soils, noise and vibration, and traffic and transportation.

1.4 AGENCY USE OF THE DOCUMENT

Lead Agency reviewers and decision makers (i.e., the County Board of Supervisors) will use the EIR as an informational document to assist in the decision-making process, ultimately resulting in approval, denial, or conditions of approval for the project. The following jurisdictions may also use this EIR in reviewing and issuing their respective authorizations (if applicable) and/or making recommendations during the project review process:

- Los Angeles Department of Water and Power
- Los Angeles Sanitation and Environment
- City of Los Angeles Department of Transportation
- California Department of Fish and Wildlife
- South Coast Air Quality Management District
- Los Angeles Regional Water Quality Control Board
- California Department of Fish and Wildlife (CDFW)
- U.S. Army Corps of Engineers (USACE)

The CDFW is a potential responsible agency and trustee agency, as defined by Sections 15381 and 15386, respectively, of the State CEQA Guidelines. While CDFW does not have regulatory authority over approval of the broader La Brea Tar Pits Master Plan, CDFW could have regulatory authority over project activities within the riparian habitat and/or aquatic resources in and along Oil Creek and at the Lake Pit. Similarly, USACE could also have discretionary authority over activities in these features. These considerations are further discussed under thresholds b and c in Section 5.3.5 of this EIR.

Lead Agency: County of Los Angeles
Natural History Museums of Los Angeles County
Leslie Negritto, Chief Operating Officer
Phone: (213) 763-3303
Email: lnegritto@nhm.org

Environmental Consultant: SWCA Environmental Consultants
Bobbette Biddulph, Senior Project Manager
320 North Halstead Street, Suite 120
Pasadena, California 91107

1.5 REVIEW OF THE DRAFT EIR

The Notice of Availability of this Draft EIR was distributed to responsible and trustee agencies, other affected agencies, interested parties, and all parties requesting a copy of the Draft EIR in accordance with PRC Section 21092(b)(3). The Notice of Completion and Notice of Availability of the Draft EIR are distributed and posted as required by CEQA. The public review period is 45 days. During this 45-day period, the EIR and its appendices will be available for review on the Natural History Museum's website: https://tarpits.org/reimagine.

Printed copies of the documents with attached electronic appendices are also available for review during the 45-day public review period at the following locations and hours, as listed in Table 1-1.

Table 1-1. Document Review Locations

Location	Address	Hours of Operation	Online Access (URL), if available
George C. Page Museum (Front Desk)	5801 Wilshire Boulevard Los Angeles, CA 90036	Open daily 9:30 am to 5 pm, except the first Tuesday of the month	https://tarpits.org/reimagine
Julian Dixon Library	4975 Overland Avenue Culver City, CA 90230	Tuesday and Wednesday: 12 pm to 8 pm Thursday through Saturday: 10 am to 6 pm Sunday: Closed	n/a
View Park Bebe Moore Campbell Library	3854 West 54th Street View Park-Windsor Hills, CA 90043	Monday through Thursday: 10 am to 8 pm Friday and Saturday: 10 am to 6 pm Sunday: Closed	n/a
West Hollywood Library	625 North San Vicente Boulevard West Hollywood, CA 90069	Monday through Friday: 12 pm to 6 pm Saturday and Sunday: Closed	n/a
Chief Executive Office at the Hall of Administration	500 West Temple Street, Room 754 Los Angeles, California 90012	Appointment must be made for review. Appointments are available Monday through Friday, 8 am to 3 pm. Contact Alisa Chepeian, (213) 974-4266, achepeian@ceo.lacounty.gov	n/a

On behalf of the County of Los Angeles as the Lead Agency, comments on the Draft EIR should be addressed to:

Leslie Negritto, Chief Operating Officer
Natural History Museums of Los Angeles County
900 Exposition Boulevard
Los Angeles, California 90007
Email: lnegritto@nhm.org

Written responses to all significant environmental issues raised will be prepared and included as part of the Final EIR and the administrative record for consideration by decision makers for the project. The County may approve the project if the EIR has been certified per State CEQA Guidelines 15090.

CHAPTER 2. SUMMARY

The Los Angeles County Museum of Natural History Foundation (Foundation) proposes a redevelopment, or "reimagining," of the 13-acre La Brea Tar Pits project site. The proposed project is the *La Brea Tar Pits Loops and Lenses, Master Plan and Concept Design*, prepared for the Foundation and the County and referred to as the La Brea Tar Pits Master Plan (Master Plan, Weiss/Manfredi 2023). The Master Plan is included in Appendix B.

The project site is located at 5801 Wilshire Boulevard in Los Angeles and is on property owned by the County of Los Angeles (County). La Brea Tar Pits, the George C. Page Museum (Page Museum), and associated facilities, are owned by the County but are managed by the Foundation. The Foundation's role is to carry out all County services including public access and programming, administration, and operation for the County of Los Angeles Museum of Natural History (Museum of Natural History),[1] including La Brea Tar Pits and the Page Museum. The County is the Lead Agency under CEQA for this EIR; the Museum of Natural History is a County departmental unit.

The County has prepared this EIR to assess the environmental impacts of the project. The State CEQA Guidelines identify the Lead Agency as the public agency with the principal responsibility for conducting or approving a project (State CEQA Guidelines Section 15367). The County is the CEQA Lead Agency for the project because the project is on County-owned land. The County is responsible for the coordination and direct oversight of the environmental review process and the Board, as governing body of the County, will exercise independent judgment and analysis should it certify the EIR.

This EIR has been prepared in compliance with CEQA (as amended), codified as California Public Resources Code Section 21000 et seq. and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. The basic purposes of CEQA are to: 1) inform decision-makers and the public about the potential, significant environmental effects of proposed activities, 2) identify the ways that environmental effects can be avoided or significantly reduced, 3) prevent significant, avoidable environmental effects by requiring changes in projects through the use of alternatives or mitigation measures when feasible, and 4) disclose to the public the reasons an implementing agency may approve a project even if significant unavoidable environmental effects are involved.

This chapter includes the following information:

- The purpose of the EIR
- A brief description of the project location
- A summary of the project background and the objectives of the project that were established by the Foundation and the Museum of Natural History
- A summary of impacts and mitigation measures associated with the project
- A summary of the known areas of controversy
- A summary of issues to be resolved
- A summary of project alternatives

[1] In accordance with Chapter 2.94 of the Los Angeles County Code and various other operating agreements, the County Museum of Natural History is a department of the County and has administrative charge and control over all County matters relating to history and science, and shall also include the administration of Hancock Park (except that area of said park devoted to the Los Angeles County Museum of Art [LACMA]), and the care, safeguarding, and maintenance of all exhibits, equipment, and structural improvements directly relating to exhibits, the administration and maintenance of LACMA, and other property hereafter acquired for or devoted to history and science.

2.1 PURPOSE OF THE EIR

The County, as the Lead Agency under CEQA, has prepared this EIR to assess the environmental impacts that would result from the approval of the proposed project. This EIR will serve as a public information document to be used by the general public, responsible and trustee agencies, and decision-making bodies to review and evaluate the environmental effects associated with the project, potential mitigation measures recommended to address or minimize those effects, and reasonable alternatives to the project. The review process provides both agencies and individuals an opportunity to share their expertise, discuss agency analyses, check for accuracy, detect omissions, discover public concerns, and solicit mitigation measures and alternatives capable of avoiding or reducing the significant effects of the project while still attaining most of the basic objectives of the project.

2.2 PROJECT LOCATION

The 13-acre La Brea Tar Pits site is located within the eastern and northwestern portions of the 23-acre Hancock Park (Assessor's Parcel Number [APN] 5508-016-902) at 5801 Wilshire Boulevard. The project site includes 13 acres of the eastern and northwestern portions of Hancock Park and is directly adjacent to the Los Angeles County Museum of Art (LACMA). Both LACMA and the Natural History Museum are responsible for managing separate and distinct portions of the 23 acres in Hancock Park, with the Natural History Museum responsible for the 13-acre project site and LACMA responsible for the remainder of Hancock Park to the south and west of the project boundaries. LACMA's facilities are not included in the project.

The project site is located approximately 5.5 miles west of downtown Los Angeles and approximately 8.6 miles east of the Pacific Ocean. It is bounded by West 6th Street to the north (an approximately 1,200-foot-long frontage), South Curson Avenue to the east (an approximately 830-foot-long frontage), Wilshire Boulevard to the south (an approximately 500-foot-long frontage), and LACMA to the west (an approximately 250-foot-long frontage). The area is known as the Miracle Mile neighborhood of the city of Los Angeles.

Primary regional access to the project site is provided by Interstate 10, which runs east-west less than 2 miles south of the project site. The major arterials providing regional and subregional access to the project site vicinity include Wilshire Boulevard, La Brea Avenue, and Fairfax Avenue.

2.3 PROJECT OVERVIEW

The project would result in a reimagined site design, expansion, and upgrades for the Tar Pits complex, including renovations to the Page Museum and development of a new museum building. Table 2-1 provides a summary of the project components; some additional detail on the project components is provided following the table. See Chapter 3, Project Description, for a detailed description of the proposed project.

Table 2-1. Project Components Summary

Project Component	Description
Page Museum Renovations	Renovate existing building within the same footprint (approximately 63,200 square feet).
New Museum Building	Construct a new two-story, 40,000-gross-square-foot (gsf) museum building northwest of the Page Museum, including two new theaters. The construction of the new museum building would require the removal of vegetation in the footprint of the new building.
Wilshire Gateway	Renovate the existing entrance to La Brea Tar Pits at Wilshire Boulevard and South Curson Avenue with shaded canopy and new welcome pavilion.
6th Street Gateway	Renovate the existing entrance at the northwest corner of West 6th Street and the entrance to the LACMA service drive with shaded canopy and new welcome pavilion.
Tar Pits (Pits 3, 4, 9, 13, 61, 67, and 91; Project 23)	Renovate the existing facilities at all the tar pits in the northwestern portion of the project site. These renovations would require the removal and replacement of some vegetation, although the exact amount and nature of the vegetation removal and enhancements have not been determined at the time of this report.
Pedestrian Path and Recreation Areas	Reconfigure the existing pedestrian pathways on-site into a continuous paved path linking existing features on the project site. Provide improvements to the Central Green. Establish a children's play area, picnic areas, and a possible future small dog park.
Circulation and Parking	Relocate the parking lot approximately 50 to 70 feet to the north. The size of the parking lot (63,000 square feet) and the number of parking spaces would not change. The shifting of the parking lot on the northern side of the project site may require removal or relocation of the trees between the existing parking lot and West 6th Street. If these trees need to be removed or relocated, they would be either moved to another location within the 13-acre project site or replaced elsewhere within the project site. Add new landscaping and vehicle access lanes to the parking lot. Establish a new school drop-off/loading area approximately 215 to 230 feet long on South Curson Avenue adjacent to the Wilshire Gateway picnic area.
Landscaping Concept Plan	Establish three distinct landscaping zones encircled by a looping pedestrian path. More than 330 trees are currently on the project site. The project would require removal and replacement and/or relocation of between 150 and 200 trees. The planting strategy includes the introduction or relocation of a similar number of trees as would be removed. It is preliminarily estimated that 10 percent of the 150 to 200 trees to be removed would be relocated rather than replaced. Create three biofiltration areas for stormwater management.

2.3.1 Page Museum Renovations

The project would renovate the existing Page Museum within the same footprint as the existing building (currently approximately 63,200 square feet) to allow for an enlarged exhibition space, additional collections storage, a ground floor café, and retail space. The central atrium would be renovated to provide additional exhibitions, an additional classroom, and visible laboratory space. A sloped green roof would be installed north of the Page Museum and would curve to the west. The project would add several sustainability features to the Page Museum. The features include enhanced daylighting, rainwater collection leading to bioswales, a sloped green roof, and rooftop solar photovoltaic panels.

2.3.2 New Museum Building

A two-story museum building would be constructed northwest of the Page Museum. The building would be approximately 40,000 gross square feet (gsf) and would increase the total museum square footage to

104,000 gsf. The new museum building would include an extended central lobby, exhibit spaces, two theaters, research and collections laboratories, administration spaces, and a loading dock.

The Page Museum and new museum building would be continuously connected on the first floor. The first-floor central lobby would face southwest toward the Central Green and branch off into the Page Museum to the east and the new museum building to the west. The Page Museum and the new museum building would be disconnected on the second floor, which would rise above the earthen berm. The separated facilities would be accessible through sloped outdoor walkways from the Central Green or through the interior in the new museum building. There would be pedestrian entrances leading into the central lobby from the Central Green and parking lot.

2.3.3 Tar Pits

The project would renovate the existing facilities at all the tar pits in the western portion of the project site. The existing fencing around Pit 9, Pit 13, and Pits 3, 4, 61, and 67 would be removed. The project would construct clearly defined viewing areas around each of the tar pits, with improved pit protection zones and fencing, seating, and interpretive signage.

The project would relocate the wooden fossil boxes, research facilities, and ongoing excavation associated with Project 23[2] to space within and adjacent to the new museum building. The temporary storage and research buildings adjacent to Project 23 would be demolished or repurposed within the project site.

Pit 91 would continue to be a key research and interpretation destination in the park. The project includes the demolition of the current viewing station overlooking Pit 91. In addition, a shaded outdoor classroom, a canopy, built-in seating, and a possible support structure would be constructed. While excavation at Pit 91 could be completed in a few years, the site would be maintained and enhanced to support future excavation and educational opportunities. The new support facilities at Pit 91 would continue to support temporary excavation sites at adjacent Pit 10 or other future field sites.

2.3.4 Entrance Renovation and Other Internal Improvements

The project would renovate the existing entrance to La Brea Tar Pits located at Wilshire Boulevard and South Curson Avenue. A large, shaded canopy would stretch down Wilshire Boulevard and curve around to South Curson Avenue to create a new welcome pavilion and shaded entry plaza – the Wilshire Gateway. This gateway would provide orientation, spaces for gathering and queuing, and restrooms. A picnic area would also be located under the shaded canopy.

A pedestrian bridge and walking path would be constructed over the Lake Pit. Directly to the east of the Lake Pit, a new garden bioswale would be installed to manage stormwater and would include vegetation related to the relocated mammoths and mastodon sculptures.

A school drop-off area on South Curson Avenue would lead directly to the educational group and tour entrance, enabling the choreography of student tour check-in processes that are distinct from general museum visitors and other tour groups.

[2] Project 23 is an active fossil recovery site. In 2006, the LACMA began work on a new underground parking garage. During the course of construction, 16 new fossil deposits were discovered, including an almost-complete skeleton of an adult mammoth. Construction was halted, and 23 large wooden boxes were built around each fossil deposit (hence the short-hand descriptor, "Project 23"). These boxes and numerous buckets of fossil material were moved to the Project 23 current location for recovery. Adjacent covered research and storage areas support the ongoing fossil recovery.

The project would renovate the existing entrance at the northwest corner of Hancock Park at West 6th Street and the entrance to the LACMA parking garage. Similar to the Wilshire Gateway, a shaded canopy and welcome pavilion would provide orientation, legibility, and amenities. As a visible point of arrival from the residential communities to the north, this new entry would welcome visitors to a shaded park space where community park and recreational needs are balanced with the research activities. Under the canopy of shade trees, visitors would find diverse destinations, including play areas, picnic areas, seating and interpretation zones at the protected tar seeps, gentle topography and bioswales along Oil Creek, and the revitalized destinations of the Dorothy Brown Amphitheater, Observation Pit, and Pit 91. Along the south edge of the loop path, connections would allow access to other Hancock Park programs and transportation connections.

2.3.5 Landscaping

The planting and landscaping concept for La Brea Tar Pits would be divided into three distinct zones encircled by the looping path system. Each loop of the pedestrian path would have a theme that represents different geologic epochs—Pleistocene in the southeastern loop, Holocene in the northwestern loop, and Anthropocene in the central loop. The Pleistocene Garden, located directly east of the Lake Pit, would be approximately 10,000 to 11,000 square feet in size, and incorporate a biofiltration area to help manage stormwater. It would be planted with herbaceous and woody species and the mammoth and mastodon sculptures currently located in the Lake Pit would be relocated there. The western loop would consist of a Holocene landscape with climate-appropriate native plantings to ease water consumption, ensure appropriate maintenance, and promote sustainable growth. A forested woodland consisting of Torrey pine and coast live oak would be planted with the intention of providing a focal area and shade. The western loop also contains Oil Creek, which would be developed into a biofiltration zone for stormwater management and would be planted with sequoia and Monterey pine trees in wetter pockets.

The woodland forest zone of the western loop would be extended along the park's peripheral edges (northern, southern, eastern, and western) to provide shade to the picnic areas and the parking lot to the north. Tree species are expected to include Torrey pine, coast live oak, western sycamore, and valley oak and would support the development of a unified canopy across the site. A 6,000 to 7,000-square-foot biofiltration area would be located within the center of the vehicular drop-off loop to manage stormwater flows from the parking lot.

2.3.6 Project Construction

Construction of the project would occur when all design and construction plans are completed and approved by the County and other required agencies. Construction activities would include demolition of the existing museum entrances, grading and excavation, and construction of new structures and related infrastructure. All construction activities, including construction staging of equipment, would be situated entirely within the project site. Typical construction equipment would be used during all phases of the project construction and would be stored within the staging area, including excavators, dozers, backhoes, dump trucks, water trucks, sand blasters, rollers, pavers, generators, scrapers, forklifts, delivery trucks, paving equipment, cranes, and air compressors. The grading and construction phase would be the peak period of construction with the highest number of construction vehicles. The grading phase is estimated to result in up to 127 one-way truck trips (e.g., vendor, hauling) and 75 worker vehicle trips per day. The building construction phase is estimated to result in up to 24 one-way truck trips and 200 worker vehicle trips per day.

Any hazardous materials found during construction and renovation would be abated and removed during the construction process in accordance with the applicable hazardous materials standards and requirements. Due to anticipated soil conditions, on-site soils are not expected to be suitable for reuse and

would need to be exported for remediation and disposal. Therefore, it is anticipated that project earthwork activities would include an estimated 53,000 cubic yards of cut/export and potentially 37,000 cubic yards of imported fill. At the time of preparation of this EIR, final engineering, design, and grading plans for the project had not been finalized. Because the project design is at a preliminary stage, the level of detail needed to determine the precise depth of ground disturbance is not known. However, the level of design that has occurred to date allows for a general characterization of the overall ground disturbance and excavation that would be necessary for the project. The project design team worked with the Foundation and the County to characterize a "worst-case" ground-disturbance estimate, which represents the most-impactful scenario in terms of depths and amount of excavation that includes all project elements. While separate estimates for each project element (e.g., the new museum building) are not yet available, the estimate based on the worst-cast scenario provides a reasonable basis on which the potential for environmental impacts can be analyzed.

Under the most-impactful scenario, the project would maximally require excavations from 6 to 10 feet deep. In general, the new museum building would require the most ground disturbance and excavation. While the final elevation of the foundation for the new museum building is not known at this time, it may be below the existing ground surface to provide a smooth connection to the existing Page Museum. While certain project elements are expected to require less excavation than the new museum, this EIR assumes that excavations could occur up to 10 feet deep throughout the 13-acre project site to allow maximum flexibility as the project designs become more refined.

2.4 PROJECT OBJECTIVES

As described in Chapter 3, Project Description, the Los Angeles County Museum of Natural History, as a departmental unit of the County and the Foundation have identified the following objectives for the project:

1. Renovate and expand the existing museum structure to address deferred maintenance of the building envelope and systems, to meet modern seismic, electrical, building code standards, and universal design standards, and to meet sustainability goals consistent with the County's sustainability plan (County of Los Angeles 2019).
2. Provide expanded collections storage facilities that enable access for scientific research, and preserve, protect, and allow future growth of the museum's world-class collections.
3. Provide expanded state-of-the-art laboratory research facilities to accommodate internationally significant and advanced research in paleontology.
4. Provide state-of-the-art exhibition facilities and learning environments within the park and museum to enrich the visitor experience and to support active educational and public programming.
5. Improve access and entry for different visitor types, increase connections between the museum and the park, as well as support increased visitation, special events, and revenue-producing amenities within the park and museum.
6. Expand the museum exhibits, educational classrooms, collection spaces, offices, and laboratory research facilities in one unified, cohesive facility, with the fewest impacts to historical resources possible.
7. Create a central entrance to the museum facilities to enhance the visitor experience of the museum and Hancock Park.

8. Preserve and protect the National Natural Landmark—La Brea Tar Pits—to allow access for future research and excavation, support cultural and educational interpretation, and enable the ongoing natural processes of the asphaltic seeps.
9. Redesign and renovate the Hancock Park community park green space as an expression of the goals of the County of Los Angeles's General Plan Conservation and Natural Resources Element and the City of Los Angeles's Open Space and Conservation Elements of the General Plan, to increase sustainable landscape and site design, to support passive recreational use, to increase the legibility of this important cultural destination, and to enhance connections to the quickly evolving Miracle Mile neighborhood.

2.5 SIGNIFICANT ENVIRONMENTAL IMPACTS IDENTIFIED

Impacts of the proposed project have been classified using the following categories:

- **Less than significant impacts:** Less than significant impacts means the effect does not meet or exceed the applicable significance criteria thresholds for a particular resource. No mitigation measures are required for less than significant impacts.
- **Less than significant impact with mitigation:** An adverse impact that would cause a substantial adverse effect that meets or exceeds the applicable significance criteria thresholds for a particular resource but can be reduced to a less-than-significant impact through successfully implementing identified mitigation measures.
- **Significant and unavoidable impacts:** Significant impacts that cannot be fully and effectively mitigated. No measures could be taken to avoid or reduce these adverse effects to insignificant or negligible levels.

The term "significance" is used throughout the EIR to characterize the magnitude of the projected impact. For this EIR, a significant impact is a substantial or potentially substantial change to resources in the local proposed project site or the area adjacent to the project site. In the discussions of each issue area, thresholds are identified that are used to distinguish between significant impacts and impacts that are less than significant. To the extent feasible, mitigation measures have been identified to reduce project impacts to less than significant. CEQA requires that public agencies should not approve projects as proposed if feasible mitigation measures are available that would substantially lessen the environmental effects of such projects (California Public Resources Code Section 21002).

The impacts and associated mitigation measures identified for the project are shown in Table 2-2. The table includes impacts that are categorized as significant and less than significant, all of which are identified with an impact number (e.g., AQ Impact 1). The impact summary table describes and classifies each impact, lists recommended mitigation when applicable, and states the level of impact remaining after implementation of identified mitigation. A summary of project alternatives, including the environmentally superior alternative, is included in Section 2.8, Project Alternatives.

Table 2-2. Summary of Impacts and Mitigation Measures

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
Aesthetics			
AES Impact 1: The project would not have a substantial effect on a scenic vista either during project construction or operation. Impacts during project construction and operation would be less than significant. (CEQA Checklist Appendix G Threshold I. a)	Less than significant	No mitigation is required.	Not applicable (N/A)
AES Impact 2: The project would not substantially damage scenic resources within a State- or City-designated Scenic Highway during either project construction or operation. Impacts during construction and operation of the project would be less than significant. (CEQA Checklist Appendix G Threshold I. b)	Less than significant	No mitigation is required.	N/A
AES Impact 3: The project would not conflict with applicable zoning and other regulations governing scenic quality during either project construction or operation. Impacts during construction and operation of the project would be less than significant (CEQA Checklist Appendix G Threshold I. c).	Less than significant	No mitigation is required.	N/A
AES Impact 4: The project could create a new source of substantial light or glare during both construction activities and project operation as part of the final building and project design which could adversely affect daytime or nighttime views in the area. Impacts during construction and operation of the project could be significant. (CEQA Checklist Appendix G Threshold I. d)	Significant	**AES/mm-4.1:** During project construction, the following measures shall be required: • The hours of construction activities shall be limited to between 7:00 a.m. and 9:00 p.m. on weekdays and between 8:00 a.m. and 6:00 p.m. on Saturdays and national holidays, with no construction permitted on Sundays. • If construction during evening hours is deemed necessary, construction-related illumination shall be used for safety and security purposes only. Additionally, any construction lighting shall be directed toward the area undergoing work, which requires that construction lighting be shielded and/or aimed so that no direct beam illumination would fall outside of the project site boundary. **AES/mm-4.2:** The project shall implement the following design features: • All facades and/or building surfaces including glass windows shall be constructed using non-reflective materials or be treated with non-reflective coating.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		• All light emanating from new uses shall be either low scaled lighting or shielded to focus lighting and prevent lighting from spilling onto adjacent sensitive uses. • The project shall not include outdoor lighting that causes residential property to be illuminated by more than two footcandles of lighting intensity or receive direct glare from the light source. • All lights used to illuminate parking areas shall be designed, located, and arranged to reflect the light away from any street and any adjacent premises. • Signage with a light intensity of greater than three footcandles above ambient lighting, as measured at the property line of the nearest residentially zoned property, shall be prohibited.	
AES Impact 5 (Cumulative): The project has the potential to contribute considerably to cumulative impacts associated with light and glare during both project construction and operation.	Significant	Implement Mitigation Measures AES/mm-4.1 and AES/mm-4.2.	Less than significant
Air Quality			
AQ Impact 1: The project would not conflict with or obstruct implementation of applicable air quality plans during either construction or operation. Construction and operation impacts would be less than significant. (CEQA Checklist Appendix G Threshold III. a)	Less than significant	No mitigation is required.	N/A
AQ Impact 2: The project would not result in a cumulatively considerable net increase of criteria pollutants that would exceed applicable SCAQMD thresholds during either construction or operation. Construction and operation impacts would be less than significant. (CEQA Checklist Appendix G Threshold III. b)	Less than significant	No mitigation is required.	N/A
AQ Impact 3: The project could expose sensitive residential receptors to substantial pollutant concentrations during construction related to diesel exhaust. Construction impacts could be significant. Operation of the project would not expose sensitive residential receptors to substantial pollutant concentrations. Operation impacts would be less than significant. (CEQA Checklist Appendix G Threshold III. c)	Significant	**AQ/mm-3.1:** To reduce the potential for health risks as a result of construction of the project, the following measures shall be implemented: • Prior to the start of construction activities, it shall be ensured that all 75 horsepower or greater diesel-powered equipment are powered with CARB-certified Tier 4 Interim engines, except where the County establishes that Tier 4 Interim equipment is not available.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		There are several other SCAQMD rules and regulations that serve as mitigation measures for the project construction. These rules are: • SCAQMD Rule 403, which requires projects to incorporate fugitive dust control measures; • SCAQMD Rule 1113, which limits the volatile organic compound content of architectural coating; and • SCAQMD Regulation XIII, New Source Review, which requires new on-site facility nitrogen oxide emissions to be minimized through the use of emission control measures (e.g., use of best available technology control technology for new combustion sources such as boilers and water heaters).	
AQ Impact 4: The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people during either project construction or operation. Construction and operation impacts would be less than significant. (CEQA Checklist Appendix G Threshold III. d**)**	Less than significant	No mitigation is required.	N/A
AQ Impact 5 (Cumulative): The project's air pollutant emissions related to diesel exhaust during construction could result in a cumulative contribution to air pollution in the region. Operation of the project would not result in a significant contribution to air pollution in the region.	Significant	Implement Mitigation Measure AQ/mm-3.1.	Less than significant
Biological Resources			
BIO Impact 1: The project could result in in significant effects during the construction process on one species, the federal candidate monarch butterfly, either directly or through habitat modifications. Impacts during project construction could be significant. During project operation, the project would not result in significant effects, either directly or through habitat modifications, on any identified candidate, sensitive, or special-status species. Impacts during project operation would be less than significant. (CEQA Checklist Appendix G Threshold IV. a)	Significant	**BIO/mm-1.1:** To protect the federal candidate monarch butterfly, which is a candidate species for listing under the federal Endangered Species Act, the following measures (BIO/mm-1.1a or BIO/mm-1.1b) shall be implemented: a. Full avoidance of impacting any milkweed populations on-site with observable monarch eggs and larvae. After obtaining permits and prior to construction, all individual milkweed plants will be surveyed. All individual plants found with eggs or larvae will be flagged for re-survey and avoidance. Individual plants without eggs and larvae will be removed. Flagged plants will be re-surveyed and removed when no eggs or larvae are present. All tropical milkweed will be replaced with native narrowleaf milkweed (*Asclepias fascicularis*) following construction. OR	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		b. If monarch eggs and larvae are not present, any tropical milkweed populations in the project area should be replanted with native narrowleaf milkweed and other nectar-providing plants following construction activities. All tropical milkweed on the property will be assessed for the absence of monarch eggs and larvae and replaced with narrowleaf milkweed after construction.	
BIO Impact 2: The project could directly and indirectly impact the riparian wetland habitat associated with Oil Creek during both construction and operation as a reconnaissance survey suggests there may be approximately 0.3 acre of regulated aquatic resources associated with Oil Creek. Impacts during construction and operation could be significant. (CEQA Checklist Appendix G Threshold IV. b)	Significant	**BIO/mm-2.1:** Impacts to Oil Creek may be avoidable but are subject to final project design. To protect sensitive and regulated aquatic resources associated with Oil Creek, one of the following measures (BIO/mm-2.1a or BIO/mm-2.1b) shall be implemented: a. Full avoidance of Oil Creek, including riparian habitats. To attain full avoidance of Oil Creek, construction and ground disturbance shall not occur within 125 feet of the centerline of Oil Creek. The limits of riparian habitat shall be flagged and construction fencing erected to clearly denote the limits of construction. No overnight staging of equipment or materials shall occur within the protected "no work" zone as delineated by the fencing. Storing, fueling, and equipment maintenance shall not occur in locations where spilled materials could potentially enter Oil Creek and its associated riparian habitat. Spill kits/absorbent clean-up materials shall be available on-site. All equipment and vehicles shall be checked and maintained daily to prevent spills of fuel, oil, and other hazardous materials. A designated staging area shall be established for vehicle/equipment parking and storage of fuel, lubricants, and solvents a minimum of 100 feet outside of the protected zone. All fueling and maintenance activities shall take place in the designated staging area. OR b. If full avoidance of Oil Creek and a designated "no work" buffer is not possible after determination of final design, the following measures shall be required: i. A formal aquatic resources delineation shall be implemented to determine the jurisdictional boundaries of the Oil Creek feature. The delineation shall determine the limits of potentially regulated aquatic resources, the riparian features, and an appropriate buffer for protection (the "protected zone"). The aquatic resources delineation shall identify all appropriate jurisdictional agencies and be used in securing all applicable permits prior to construction and after a	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		project final design has been determined. At the discretion of the regulatory agencies, the requirements of the permits may supplement or exceed the requirements of this measure. If permits are required, all environmental requirements of the regulatory permits shall be implemented, and the executed permits shall be kept on-site. ii. Within the riparian habitat and buffer, vegetation removal shall be kept to the minimum necessary to removed diseased and/or non-native vegetation and to implement the features of the Master Plan. Initial removal of vegetation within the riparian habitat shall be monitored full-time by a qualified biologist, and weekly spot-check monitoring shall continue throughout the construction of the project. Work within riparian habitat shall not be conducted during or immediately after a rain event. iii. A restoration plan, prepared by a qualified restoration ecologist, shall be prepared and implemented. The restoration plan will include detailed success criteria, typically associated with 80% relative cover to pre-project baseline conditions with less than 10% invasive cover, to provide replacement habitat at an equal or better value than the existing Oil Creek riparian corridor, within 5 years of planting. The final plan shall be approved by the County of Los Angeles Museum of Natural History, the County Department of Regional Planning, and the permitting agencies (if any). At a minimum, restoration requirements included in the plan and implemented shall include the following: • Native tree replacement requirements consistent with the requirements of the Plant Pest and Disease Management Plan (BIO/mm-6.2). • A detailed planting scheme identifying the location and sizes of all container stock. • Details on planned irrigation which shall provide for successful plant establishment; survival should occur without supplemental irrigation for at least 2 years.	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		• Annual monitoring, maintenance, and adaptive management measures and annual reporting requirements. iv. The riparian habitat and buffer specified in the aquatic resources delineation shall be flagged and construction fencing erected to clearly denote the limits of the protected zone. No overnight staging of equipment or materials shall occur within the protected zone. Storing, fueling, and equipment maintenance shall not occur in locations where spilled materials could potentially enter Oil Creek and its associated riparian habitat. Spill kits/absorbent clean-up materials shall be available on-site. All equipment and vehicles shall be checked and maintained daily to prevent spills of fuel, oil, and other hazardous materials. A designated staging area shall be established for vehicle/equipment parking and storage of fuel, lubricants, and solvents a minimum of 100 feet outside of the protected zone. All fueling and maintenance activities shall take place in the designated staging area. v. Mitigation requirements and permit conditions shall be conveyed to construction crews prior to construction.	
BIO Impact 3: The project could directly and indirectly impact the Lake Pit lakebed and its associated riparian habitat during both construction and operation as a reconnaissance survey suggests there may be approximately 1.2 acres of regulated aquatic resources associated with the Lake Pit. Impacts during construction and operation could be significant. (CEQA Checklist Appendix G Threshold IV. b)	Significant	**BIO/mm-3.1:** This mitigation measure only applies to project features implemented in and around the Lake Pit, including the pedestrian path and bridge. The following measures shall be implemented prior to the implementation of these features: a. A formal aquatic resources delineation shall be implemented to determine the jurisdictional boundaries of the Lake Pit features. The delineation shall determine the limits of potentially regulated aquatic resources, the riparian features, and an appropriate buffer for protection (the "protected zone"). The aquatic resources delineation shall identify all appropriate jurisdictional agencies and be used in securing all applicable permits prior to construction and after a project final design has been determined. At the discretion of the regulatory agencies, the requirements of the permits may supplement or exceed the requirements of this measure. If permits are required, all environmental requirements of the regulatory permits shall be implemented, and the executed permits shall be kept on-site.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		b. Within the riparian habitat and buffer, vegetation removal shall be kept to the minimum necessary to remove diseased and/or non-native vegetation and to implement the features of the Master Plan. Initial removal of vegetation within the riparian habitat shall be monitored full-time by a qualified biologist, and weekly spot-check monitoring shall continue throughout the construction of the project. Work within riparian habitat shall not be conducted during or immediately after a rain event. c. A restoration plan, prepared by a qualified restoration ecologist, shall be prepared and implemented. The restoration plan will include detailed success criteria, typically associated with 80% relative cover to pre-project baseline conditions with less than 10% invasive cover, to provide replacement habitat at an equal or better value than the existing riparian vegetation within and along the margins of the Lake Pit, within 5 years of planting. The final plan shall be approved by the County of Los Angeles Museum of Natural History, the County Department of Regional Planning, and the permitting agencies (if any). At a minimum, restoration requirements included in the plan and implemented shall include the following: • A detailed planting scheme identifying the location and sizes of all container stock. • Details on planned Irrigation which shall provide for successful plant establishment; survival should occur without supplemental irrigation for at least 2 years. • Five years of annual monitoring, maintenance, and adaptive management measures and annual reporting requirements. d. The riparian habitat and buffer specified in the aquatic resources delineation shall be flagged and construction fencing erected to clearly denote the limits of the protected zone. No overnight staging of equipment or materials shall occur within the protected zone. Storing, fueling, and equipment maintenance shall not occur in locations where spilled materials could potentially enter the Lake Pit and its associated riparian habitat. Spill kits/absorbent clean-up materials shall be available on-site. All equipment and vehicles shall be checked and maintained daily to prevent spills of fuel, oil, and other hazardous materials. A designated staging area shall be established for vehicle/equipment parking and storage of	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		fuel, lubricants, and solvents a minimum of 100 feet outside of the protected zone. All fueling and maintenance activities shall take place in the designated staging area. e. Mitigation requirements and permit conditions shall be conveyed to construction crews prior to construction.	
BIO Impact 4: The project site may contain potential jurisdictional wetland/aquatic resources in and along Oil Creek and the Lake Pit. Project construction and operation may result in impacts to wetland habitat. Impacts during construction and operation of the project could be significant. (CEQA Checklist Appendix G Threshold IV. c)	Significant	Implement Mitigation Measures BIO/mm-2.1 and BIO/mm-3.1.	Less than significant
BIO Impact 5: The project could directly impact nesting birds during project construction and temporally impact nesting bird habitat during project operation. Impacts during construction and operation of the project could be significant. (CEQA Checklist Appendix G Threshold IV. d)	Significant	**BIO/mm-5.1:** To avoid impacts to nesting birds, one of the following measures (BIO/mm-5.1a or BIO/mm-5.1b) shall be implemented: a. If possible, no vegetation trimming, pruning, removal, construction, or grading shall occur during the nesting and breeding season (January 1 through September 15). OR b. If activities associated with vegetation trimming, pruning, removal, construction, or grading are necessary during the bird nesting and breeding season (January 1 through September 15), the following measures shall be implemented: • A qualified biologist shall conduct surveys for active nests weekly, beginning 14 days prior to initiation of any new construction activities, with the last survey conducted no more than 3 days prior to the start of clearance/construction work. If ground-disturbing activities are delayed, additional pre-construction surveys should be conducted so that no more than 3 days have elapsed between the survey and ground-disturbing activities. • Active nests found within 100 feet of the construction zone shall be delineated with highly visible construction fencing or other exclusionary material that would inhibit entry by personnel or equipment into the buffer zone. The size of the buffer zone shall be at the discretion of the qualified biologist and shall be no less than 25 feet. Raptors may require a larger buffer zone, up to 300 feet. Installation of the exclusionary material shall be completed by construction personnel under the supervision of a	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		qualified biologist prior to initiation of construction activities. The buffer zone shall remain intact and maintained while the nest is active (i.e., occupied or being constructed by at least one adult bird) and until young birds have fledged and no continued use of the nest is observed, as determined by a qualified biologist. The barrier shall be removed by construction personnel only at the direction of the biologist. **BIO/mm-5.2:** New and replacement trees shall be 24-inch box specimen trees or larger to reduce temporary impacts to nesting birds.	
BIO Impact 6: Removal, relocation, trimming, or replacement of the 13 protected oak trees on the project site during project construction and operation could potentially conflict with the County of Los Angeles Oak Tree Ordinance. Impacts during construction and operation of the project could be significant. (CEQA Checklist Appendix G Threshold IV. e)	Significant	**BIO/mm-6.1:** For oak trees within the project site that are to be retained in their current location, prior to construction, chain-link fencing shall be installed around the protected zone of the trees (5 feet beyond the dripline, the outermost extent of the tree's branches, or 15 feet from the trunk, whichever is greater). The fencing shall remain in place throughout the entire period of construction. Any excavation or grading allowed within the protected zone shall be limited to hand tools or small hand-powered equipment. In addition, one of the following measures (BIO/mm-6.1a or BIO/mm-6.1b) shall be implemented: a. If possible, removal, relocation, trimming, or replacement of the oak trees at the Tar Pits site shall be avoided. b. If modification (removal, relocation, trimming, or replacement) of protected oaks is required, coordination with the County of Los Angeles Department of Regional Planning shall occur prior to commencement of any work on-site. Any encroachment or removal requests must be reviewed by the County of Los Angeles Department of Regional Planning for consistency with County policies and ordinances relating to oak tree protection prior to commencement of any work on-site. Although an oak tree permit is not required, measures to mitigate for impacts to oak trees shall include the following: • Removed oak trees shall be mitigated by planting coast live oaks at a 2:1 ratio on the project site. Each replacement tree shall be at least a 15-gallon specimen.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		• The replacement oaks shall be monitored for a period of 5 years, with any failures resulting in a new oak being planted and initiation of a new 5-year monitoring period for the replanted tree. **BIO/mm-6.2:** A Plant Pest and Disease Management Plan shall be prepared prior to initiation of landscape planting and developed in consultation with an International Society of Arboriculture Certified Arborist. The Plant Pest and Disease Management Plan shall define methods to ensure new plant materials (container stock) are free of insect pests and diseases prior to delivery to the project site. Implementation of the Plant Pest and Disease Management Plan shall occur through the life of the project; modification and adaptation may occur to ensure applicability and viability of the plan.	
BIO Impact 7: Construction and operation of the project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact would occur. (CEQA Checklist Appendix G Threshold IV. f)	No impact	No mitigation required.	N/A
BIO Impact 8 (Cumulative): During construction and operation, the project has the potential to contribute considerably to cumulative impacts to biological resources.	Significant	The project would be required to implement Mitigation Measures BIO/mm-1.1, BIO/mm-2.1, BIO/mm-3.1, BIO/mm-5.1, BIO/mm-5.2, BIO/mm-6.1, and BIO/mm-6.2.	Less than significant
Cultural Resources – Archaeological Resources			
CR-ARCH Impact 1: During project construction, the project could cause a substantial adverse change in the significance of an unknown archaeological resource pursuant to State CEQA Guidelines Section 15064.5. Construction impacts could be significant. Project operation would not cause a substantial adverse change in the significance of an unknown archaeological resource pursuant to State CEQA Guidelines Section 15064.5. No operational impacts would occur. (CEQA Checklist Appendix G Threshold v. b)	Significant	**CR-ARCH/mm-1.1:** Retain a Qualified Archaeologist. a. Prior to initiating any ground-disturbing activities, a Qualified Archaeologist shall be retained. A Qualified Archaeologist is defined as one who meets the Secretary of the Interior's (SOI) Standards for professional archeology and those defined for a Principal Investigator by the Society for California Archaeology (SCA). The qualifications shall be presented as part of a resume for at least one primary point of contact who will act in capacity as the Qualified Archaeologist but also other key staff who may serve in this role. The resume shall demonstrate their SOI and SCA qualifications and shall be subject to approval by the County. b. Ground-disturbing activities shall include excavating, digging, trenching, plowing, drilling, tunneling, quarrying, grading, leveling, removing peat, clearing, driving posts, augering, backfilling, blasting, stripping topsoil or a similar	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		activity at the project site. The Qualified Archaeologist shall carry out and ensure proper implementation of the mitigation measures and regulatory compliance related to archaeological resources and, where appropriate, tribal cultural resources during the project. The Qualified Archaeologist shall be responsible for establishing a meeting schedule with Page Museum curators and collections managers during implementation of the project to address any outstanding questions or concerns that arise during mitigation efforts to ensure effective communication and coordination. c. No more than 21 days before ground-disturbing activities for the project commence, the Qualified Archaeologist shall submit a letter confirming that they have been retained consistent with the terms of the CR-ARCH/mm-1.1 and attach the professional resumes for all staff who may be acting in the capacity of the Qualified Archaeologist. **CR-ARCH/mm-1.2:** Prepare an Archaeological and Tribal Cultural Resources Management Plan (AR-TCR Management Plan). a. Prior to commencing ground-disturbing activities, an AR-TCR Management Plan shall be prepared by the Qualified Archaeologist and submitted to the Page Museum curators and the NHMLAC Curator of Anthropology, who shall review and approve the AR-TCR Management Plan on behalf of the County. The AR-TCR Management Plan shall be prepared in conformance with Public Resources Code Section 5024.1, Title 14 California Code of Regulations, Section 15064.5 of the CEQA Guidelines, and PRC Sections 21083.2 and 21084.1. b. The AR-TCR Management Plan shall include but not be limited to the following elements: i. Historical context statement, research design, the specific types of archaeological sites likely to be encountered. ii. Construction worker training program (described in CR-ARCH/mm-1.3). iii. Monitoring protocol for ground-disturbing activities that includes a framework for assessing the geoarchaeological setting to determine whether sediments capable of preserving archaeological remains are present in substantial conformance with the Archaeological and Tribal Cultural Resources Assessment and include a protocol for	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		identifying the conditions under which additional or reduced levels of monitoring (e.g., spot-checking) may be appropriate. The duration and timing of the monitoring shall be determined based on the rate of excavation, geoarchaeological assessment, and, if present, the quantity, type, and spatial distribution of archaeological resources identified.	
		iv. Limited program of archaeological presence/absence testing within naturally deposited asphaltic or non-asphaltic alluvial sediments before they are mechanically excavated. In particular, the area of the new museum, promenade, and parking lot expansion shall be further investigated. These investigations shall be conducted via a combination of archaeological units, hand tools, and mechanical trenching. The methods used to conduct the limited archaeological testing shall be coordinated with contractors to ensure that sufficient time is afforded to evaluate the significance any identified resources, and if they are found to be significant, time to develop and implement a treatment plan appropriate to the type of resource. The timing of any such efforts shall be conducted in localized areas so that delays to project earthwork activities are minimized while allowing archaeological materials to be identified in a manner that retains the scientific integrity of the discovery.	
		v. An approach to evaluate newly identified site components, if applicable, as contributors to the significance of LAN-159/H as a “historical resource” pursuant to CEQA Guidelines Section 15064.5(a) or a “unique archaeological resource” pursuant to PRC 21083.2(g). If any archaeological resources are identified and are found not to be significant or do not retain integrity, then they shall be recorded to a level sufficient to document the contents and condition.	
		vi. Potential treatment plans to be implemented in the event a newly discovered archaeological resource is determined by the Qualified Archaeologist to contribute to the significance of the site as a historical resource based on California Register of Historical Resources criteria or a unique archaeological resource in substantial	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		conformance with the Archaeological and Tribal Cultural Resources Assessment. The AR-TCR Management Plan shall require that if the treatment plans outlined therein are found to be infeasible or other alternatives are proposed, the Qualified Archaeologist shall coordinate with the project proponent and the County to amend the AR-TCR Management Plan with a formal treatment plan that would reduce impacts to the resource(s). The treatment plans stated in the AR-TCR Management Plan or prepared after the discovery of a historical resource, shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment and if it is determined avoidance is not feasible, treatment may include but not be limited to any of the following depending on the type of resource and the significance evaluation: • Native American archaeological site components. Data recovery shall be conducted (i.e., excavation, laboratory processing and analysis) to remove the resource(s) and reduce potential impacts to less than significant where significance is determined under CRHR Criterion 4 or as a unique archaeological resources and integrity is retained. Additional treatment measures to mitigate potentially significant impacts to the component as a tribal cultural resource, which is to be carried out in consultation with the Tribal Consultants and after considering the status of the discovery as a tribal cultural resource. • Historical archaeological site components. If a historical archaeological component of the site is present and found to retain integrity, data recovery shall be conducted (i.e., excavation, laboratory processing and analysis) to remove the resource(s) and reduce potential impacts to less than significant.	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		vii. Discovery and processing protocol for inadvertent discoveries of archaeological resources that are encountered when an Archaeological Monitor is not present. viii. A process by which recovered materials will be prepared for curation at the Page Museum or the Natural History Museum at the Los Angeles Exposition Park, as directed by Page Museum curators and collections managers, and in consultation with Tribal Consultants. The curation shall ensure their long-term preservation and allow access to interested scholars and shall be done at the expense of the County and/or the Foundation. If the materials are Native American in origin or any item of cultural patrimony, the manner of their handling and long-term curation may require additional consultation with the appropriate Native American community that shall be determined as part of a tribal consultation process to be conducted by the County who shall be responsible for the disposition of these materials. ix. The AR-TCR Management Plan shall summarize the requirements for tribal coordination during in the event of an inadvertent discovery of Native American archaeological resources, including the applicable regulatory compliance measures or conditions of approval for the inadvertent discovery of archaeological resources to be carried out in concert. **CR-ARCH/mm-1.3:** Conduct an archaeological awareness training. a. The Qualified Archaeologist or a designee working under their direction shall provide training to on-site project personnel who are responsible for overseeing ground-disturbing activities (i.e., a foreman or site supervisor) and machine operators. The initial training shall be conducted prior to the start of ground-disturbing activities in the project site. The training shall brief the crews on the regulatory compliance requirements and applicable mitigation measures that must be adhered to during ground-disturbing activities for the protection of archaeological resources. As an element of the worker training, the Qualified Archaeologist or their designee shall advise the construction crews on proper procedures to follow if an unanticipated archaeological resource is discovered during construction, including the authority of	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		Archaeological Monitor(s) to temporarily halt or redirect work away from such a discovery. Workers shall be shown examples of the types of archaeological resources that would require notification of the archaeologist, if encountered. The workers shall be provided with contact information for the Qualified Archaeologist and their designee(s) as part of a brief handout summarizing the critical components of the training. Once the ground-disturbing activities have commenced, the need for additional or supplemental worker trainings shall be determined by the Qualified Archaeologist based upon consultation with project personnel. b. Within five days of completing each training, a list of those in attendance shall be provided by the Qualified Archaeologist to a point of contact designated by the Museum of Natural History. **CR-ARCH/mm-1.4:** Monitoring for Archaeological Resources. a. At least one Archaeological Monitor working under the direction of the Qualified Archaeologist shall be present during ground-disturbing activities to implement the AR-TCR Management Plan. The Archaeological Monitor shall have the authority to temporarily halt or redirect construction activities when an archaeological resource, suspected resource, or archaeologically sensitive sediments are encountered, as determined by the Qualified Archaeologist in consultation with the Page Museum curators. The presence/absence testing protocol shall be implemented within the asphaltic alluvial sediments that have elevated archaeological sensitivity as stipulated in the AR-TCR Management Plan and conducted in concert with Tribal Monitors and applicable tribal cultural measure measures. The Qualified Archaeologist and Archaeological Monitor shall document the results of the presence/absence testing and allow ground-disturbing activities to proceed in the sediments with archaeological sensitivity once the archaeological and tribal monitors have confirmed the absence of resources. The Archaeological Monitor shall continue to monitor the ground-disturbing activities with the depths assessed by the presence/absence testing. Once the Archaeological Monitor identifies sediments or depths of excavation that are not capable of containing or are unlikely to contain archaeological resources, a corresponding reduction of monitoring coverage would be appropriate, and may be recommended by the Qualified	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		Archaeologist. The Archaeological Monitor shall complete a daily written log documenting construction activities and observations, which shall be included in the final report. The number of Archaeological Monitors shall be determined by the County, based on the scale of ground-disturbing activities and a reasonable degree of effort required to implement the mitigation measures. b. In the event that potentially significant archaeological resources are exposed during construction, work in the immediate vicinity of the find (within 8 meters [25 feet]) shall stop until the Qualified Archaeologist can evaluate the significance of the find, with input from the tribal monitor if the discovery is affiliated with Native Americans and is also being assessed as tribal cultural resources. Construction activities may continue in other areas in coordination with the Qualified Archaeologist and, if applicable, tribal monitors. c. At the conclusion of all ground-disturbing activities the Qualified Archaeologist shall prepare a technical report documenting the methods and results of all work completed under the AR-TCR Management Plan, including, if any, treatment of archaeological materials, results of artifact processing, analysis, and research, and evaluation of the resource(s) for the California Register of Historical Resources. The format and content of the report shall follow the California Office of Historic Preservation's Archaeological Resource Management Reports (ARMR): Recommended Contents and Format. Any archaeological resources identified shall be documented on appropriate California Department of Parks and Recreation 523-Series Forms. The report shall be prepared under the supervision of a Qualified Archaeologist and submitted to curators of the Page Museum for initial review (on behalf of the Museum of Natural History, as the County departmental unit), and final copies shall be submitted to the County. The report shall be completed with 12 months of completion of the monitoring, unless other arrangements are required, as documented in writing and approved by the County, given the nature of the discovery, in which case a revised date can be determined through consultation with the Museum of Natural History. The final draft of the report shall be submitted to the South Central Coastal Information Center and the Tribal Consultants.	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
CR-ARCH Impact 2: Construction of the project could disturb previously unidentified human remains if present within the project site. Construction impacts could be significant. Operation of the project would not disturb any human remains, including those interred outside of formal cemeteries. No operational impacts would occur. (CEQA Checklist Appendix G Threshold v. c)	Significant	Implement Mitigation Measures CR-ARCH/mm-1.1 through CR-ARCH/mm-1.4.	Less than significant
CR-ARCH Impact 3 (Cumulative): Prior to the consideration of proposed mitigation measures, construction of the project could result in significant contributions to cumulative impacts related to the disturbance and destruction of archaeological resources pursuant to State CEQA Guidelines Section 15064.5, and human remains. Cumulative construction impacts could be significant.	Significant	Implement Mitigation Measures CR-ARCH/mm-1.1 through CR-ARCH/mm-1.4. These measures put forward a process that ensures any new archaeological resources or new components of existing historical resources would be identified, inventoried, and evaluated as contributors to the historical significance of the resource, and treated appropriately if found to be a contributing element, which incorporates input from culturally and geographically affiliated California Native American tribes.	Less than significant
Cultural Resources – Historical Resources			
CR-HIST Impact 1: As a result of project construction, the project would cause a substantial adverse change in the significance of a Historical Resource pursuant to Section 15064.5 of the State CEQA Guidelines. Specifically, the project would cause a substantial adverse change in the significance of two identified historical resources: the La Brea Tar Pits Historic District and the George C. Page Museum. This impact would be significant. Project operation would not cause a substantial adverse change in the significance of historic resources pursuant to State CEQA Guidelines Section 15064.5. No operational impacts would occur. (CEQA Checklist Appendix G Threshold V. a)	Significant	**CR-HIST/mm-1.1:** Impacts to the La Brea Tar Pits Historic District and Page Museum resulting from project implementation shall be reduced through the ongoing input to the Design Team from a qualified Historic Architect, as the project design progresses. The Historic Architect shall satisfy the Secretary of the Interior's Professional Qualifications Standards for Historic Architecture as defined by the National Park Service and in accordance with 36 CFR 61 and possess a minimum of ten (10) years of project-level experience in designing, developing, and reviewing architectural plans for conformance with the Secretary's Standards. The Historic Architect shall work with the Design Team to identify options for new construction, upgrades, stabilization, repairs, and rehabilitation activities that will facilitate compliance with the Secretary's Standards. This historic preservation input to the Design Team shall begin in the earliest phases of schematic design phase possible and extend throughout the development of 50% Construction Drawings. For new construction, the Historic Architect shall work with the Design Team to identify options and opportunities for: (1) ensuring compatibility of scale and character for new construction, site and landscape features, and circulation corridors, (2) ensuring that new construction, in materials, finishes, design, scale, and appearance, is compatible but differentiated from historic contributors and character-defining features; and (3) ensuring that new construction	Significant and unavoidable

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		is designed and sited in such a way that it reinforces and strengthens, as much as feasible, character-defining site plan features, landscaping, and circulation corridors. For modernization and upgrade projects, the Historic Architect shall work with the Design Team to identify project options that facilitate compliance with the Secretary's Standards. The Historic Architect shall review proposed materials, finishes, window treatments/configuration, and other details to ensure compliance with the Secretary's Standards. The Historic Architect shall provide specifications for architectural features or materials requiring restoration or removal, maintaining and protecting relevant features in place, or on-site storage. Specifications shall include detailed drawings or instructions where historic features may be impacted. The Historic Architect shall document the input provided to the Design Team in Memoranda for the Record at the Schematic and 50% Construction Documents phases. A Draft Memorandum for the Record shall be provided to interested parties including the Los Angeles Conservancy and the Los Angeles County Historic Preservation Commission for review and comment. The Historic Architect shall participate in pre-construction and construction monitoring activities, as appropriate, to facilitate conformance with the Secretary's Standards and/or lessening of material impairment to historical resources. **CR-HIST/mm-1.2:** An Inventory and Treatment Plan shall be prepared by a qualified historic preservation professional and implemented for the La Brea Tar Pits Historic District. Once complete, the Draft Inventory and Treatment Plan shall be provided to interested parties such as the Los Angeles Conservancy and County of Los Angeles Historic Preservation Commission for review and comment. The Inventory and Treatment Plan shall be finalized prior to the commencement of construction activities. Specific requirements for the Inventory and Treatment Plan are provided below: • A qualified historic preservation professional shall be retained to prepare the Inventory and Treatment Plan. The historic preservation professional shall satisfy the Secretary of the Interior's Professional Qualifications Standards for History and/or Architectural History as defined by the National Park Service and in accordance with 36 CFR 61 and possess a minimum of ten (10) years of project-level experience in CEQA review of historic resources and reviewing architectural plans for conformance with the Secretary's Standards. A landscape	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		architect or landscape specialist with a minimum of five (5) demonstrated years of experience working with historic landscapes shall contribute to preparation of the Inventory and Treatment Plan to identify historic landscaping and trees that fall within the period of significance for the historic district (up to 1977). • The Inventory and Treatment Plan shall adhere to best professional practices promulgated by the National Park Service and State Office of Historic Preservation. • The Inventory and Treatment Plan shall supplement the historic resources survey completed and documented in the Historic Resources Technical Report for the La Brea Tar Pits Master Plan by documenting the character-defining features and existing conditions of those "contributing" (i.e., historically significant) components of the historical resource. The inventory shall include site plan features, commemorative plaques and statues, artwork and sculptures, and other extant contributors to the historic district. • The study shall include recommendations for annual maintenance activities, treatment and repair priorities, and maximum retention of remaining district contributors. All recommendations shall be designed to maximize retention of remaining contributors to the historic district and minimize the loss of character-defining features. The Final Inventory and Treatment Plan shall be used for the ongoing stewardship of the property following construction. **CR-HIST/mm-1.3:** A Historic American Buildings Survey (HABS)-like Documentation Package shall be prepared to document the contributing features of the La Brea Tar Pits Historic District and Page Museum prior to the authorization of demolition or construction activities. The HABS-like Documentation Package shall adhere to best professional practices promulgated by the National Park Service and shall be provided to interested parties such as the Los Angeles Conservancy and County of Los Angeles Historic Preservation Commission for review and comment. Documentation shall be in accordance with the applicable standards described in the Secretary of the Interior's Standards for Architectural and Engineering Documentation. Prior to the commencement of construction activities, a historian or architectural historian who meets the Secretary of the Interior's Professional Qualifications Standards in History and/or Architectural History shall be retained to prepare HABS-like documentation for the La Brea Tar Pits Historic District and Page Museum.	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		Required contents for the HABS-like package include the following: • Photographs: Photographic documentation will focus on the Page Museum and, within the historic district, those contributing elements (built, landscape, hardscape, paleontological, and natural features) slated for demolition, alterations, or adjacent new construction. Photographs shall include detail shots of contributing features and components slated for demolition, with overview and context photographs for the adjacent setting. Photographs shall be taken using a professional-quality single lens reflex (SLR) digital camera with a minimum resolution of 10 megapixels. Digital photographs will be provided in electronic format. • Descriptive and Historic Narrative: The historian or architectural historian will prepare descriptive and historic narrative of the historical resources/features slated for demolition. Physical descriptions will detail each contributing component, with accompanying photographs, and information on how the resource fits within the broader historic district during its period of significance. The historic narrative shall draw upon previously prepared studies, including the Historical Resources Technical Report prepared for the La Brea Tar Pits Master Plan, as well as the La Brea Tar Pits Inventory and Treatment Plan prepared under Mitigation Measure CR-HIST/mm-1.2. The narrative shall also include a methodology section specifying the name of researcher, date of research, and sources/archives visited, as well as a bibliography. Within the written history, statements shall be footnoted as to their sources, where appropriate. Upon finalization of the HABS-like Documentation Package, a hard copy and digital copy shall be prepared and offered to the Natural History Museum Seaver Center for Western History Research, University of Southern California Special Collections, and the Los Angeles Public Library. **CR-HIST/mm-1.4:** A Retrospective Exhibit and Interpretive Program shall be prepared and implemented. The Retrospective Exhibit and Interpretive Project shall be prepared by a qualified historic preservation professional who meets the Secretary of the Interior's Professional Qualifications Standards in History and/or Architectural History. The exhibit materials shall be drawn from previous studies including but not limited to the Inventory and Treatment Plan described in Mitigation Measure CR-HIST/mm-1.2 and the HABS-like documentation package described in Mitigation Measure	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		CR-HIST/mm-1.3, as well as other supplemental research materials as needed. The retrospective exhibit and interpretive program shall focus on the history of the site, the people involved in the early ownership, development, and scientific discoveries and excavations, and the events leading to its donation to the County of Los Angeles, as well as on the site's development through the end of the period of significance for the La Brea Tar Pits Historic District, 1977. The retrospective exhibit and interpretive program may include but not be limited to exhibit materials and interpretive panels, both exterior (e.g., as a series of panels in the park), interior (e.g., as a permanent exhibit in the Page Museum or new museum building), and online (on the museum website). The exhibit and interpretive program shall be designed for maximum public accessibility. The plan for the interpretive and commemorative program shall be detailed in an Interpretive Program Plan Memorandum to be prepared with the guidance of a qualified historic preservation professional. The retrospective exhibit and interpretive program shall be completed within three (3) years of commencement of initial construction activities. The Draft Interpretive Program Plan Memorandum shall be reviewed by interested parties such as the Los Angeles Conservancy and County of Los Angeles Historic Preservation Commission for comment. **CR-HIST/mm-1.5:** A pre-construction protection plan for historical resources shall be prepared prior to any major alteration or construction activities that may potentially damage historic resources or contributing features of the La Brea Tar Pits Historic District or Page Museum. A qualified Historic Architect shall be retained to develop a Preservation Protection Plan that identifies potential risks to historical resources within or adjacent to the immediate project footprint. The Historic Architect shall satisfy the Secretary of the Interior's Professional Qualifications Standards for Historic Architecture as defined by the National Park Service and in accordance with 36 CFR 61 and possess a minimum of ten (10) years of project-level experience in reviewing architectural plans for conformance with the Secretary's Standards. The Preservation Protection Plan may include, but not be limited to, the following components: • Inclusion/mapping of the historical resource/contributing feature on any architectural drawings, site plans, and/or construction documents. • Site walk with Design Team and construction team representative to review staging areas for construction and construction sequence and activities, to identify areas	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		of concern and to provide input for proactive avoidance of unforeseen impacts. • Procedures and timing for the placement and removal of temporary protection features, such as fencing and other barriers, around the historical resource/contributing feature. • Monitoring of the installation and removal of temporary protection features by the Historic Architect, or designee. • Post-construction survey to document the condition of the historic resource after project completion. • Preparation of a technical memorandum documenting the pre-construction and post-construction conditions of the historic resource and compliance with protective measures outlined in the Preservation Protection Plan. The Preservation Protection Plan shall be submitted in draft form to interested parties including the Los Angeles Conservancy and the Los Angeles County Historic Preservation Commission for review and comment.	
CR-HIST Impact 2 (Cumulative): Construction of the project would result in substantial adverse changes to the significance of a Historical Resource pursuant to Section 15064.5 of the State CEQA Guidelines, which would be considerable impacts contributing to cumulative historical resources impacts. Specifically, the project would cause a substantial adverse change in the significance of two identified historical resources: the La Brea Tar Pits Historic District and the George C. Page Museum. These direct construction impacts would also be significant. No operational impacts to historical resources would occur; therefore, contributions to cumulative impact would similarly not occur during the project's operational period.	Significant	Implement Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5.	Significant and unavoidable
Geology and Soils			
GEO Impact 1: The project would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving surface fault rupture, seismic ground shaking, or seismic-related ground failure including liquefaction. Impacts associated with these issues would be less than significant during project construction and operation.	Less than significant	No mitigation is required.	N/A

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
The project would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving landslides during either project construction or operation. No impact would occur during project construction and operation related to landslides. (CEQA Checklist Appendix G Threshold VII. a)			
GEO Impact 2: Through compliance with existing regulations, the project would not result in substantial soil erosion or the loss of topsoil during project construction or operation. Impacts would be less than significant during project construction and operation. (CEQA Checklist Appendix G Threshold VII. b)	Less than significant	No mitigation is required.	N/A
GEO Impact 3: The project could cause geologic instability at the project site related to subsidence as well as compressible and collapsible soils during project construction and operation. Impacts during construction and operation could be significant. (CEQA Checklist Appendix G Threshold VII. c)	Significant	**GEO/mm-3.1:** To prevent subsidence of the ground surface within the project site, temporary dewatering shall be required during construction for excavations which extend below the existing groundwater level (i.e., greater than 10 feet below ground surface), anticipated for deepest excavations associated with the proposed Page Museum one-story addition, as excavations will be required for construction of the proposed mat foundation and associated new utility placement. Dewatering activities shall be conducted as follows: a. Dewatering shall be performed prior to excavation. Temporary dewatering shall be performed during the construction stage, prior to beginning any excavation which will extend beneath the groundwater. The Construction Contractor shall decide the proper timeline which will permit a dry environment for the excavation work and prevent water seepage into the excavation. b. The design of a temporary dewatering system shall be performed by an experienced, qualified dewatering contractor. Prior to proceeding with the actual design of the dewatering system, a test installation shall be constructed to verify the design's effectiveness. c. The dewatering system shall be designed to lower the site groundwater sufficiently to permit a dry environment and to prevent water seepage from the temporary perimeter cut slopes. The design shall balance the soil conditions with well spacing and well depth. Recommendations for well design provided in the project's Geology and Soil	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		Discipline Report shall be incorporated into the final design of the dewatering system, including: • Installation of relatively closely spaced wells around the excavation perimeter, referred to as well points • Wells shall include perforated casing with annular space filled with suitable filter material • Well points shall extend past the depth of proposed excavation • Elements of current dewatering system within the Lake Pit shall be incorporated, including collection piping, sump pumps, a sand-oil separator device, and a micro-filter device. In addition, separator and filter devices shall be considered for temporary dewatering pumps to help maintain the system's efficiency and increase the amount of time prior to the pumps being plugged up with tar. d. Groundwater shall be pumped from the tar sands and is anticipated to contain a relatively high percentage of tar. The tar shall be removed, and the groundwater treated in accordance with all applicable regulatory requirements prior to disposal. **GEO/mm-3.2:** To ensure proper design and stability of structures to be constructed on existing artificial fill or upper alluvial soils, the excavation and replacement of existing compressible materials within the areas of the proposed improvements shall be required. Excavation and replacement shall consist of complete removal of artificial fill and/or compressible surficial alluvial soil beneath the areas of the proposed improvements and replacement with compacted structural fill, with an anticipated artificial fill depth ranging between 1 and 8 feet below ground surface based on review of existing explorations performed within or adjacent to the project site. This value will be confirmed after completion of subsurface explorations during the final geotechnical design to further characterize the subsurface conditions underlying the improvement areas (i.e., compressibility of the soft layers and the depth to firm material). Due to the anticipated soil contamination, on-site soils are not anticipated to be suitable for reuse as fill material and shall be exported for proper remediation and disposal in accordance with all applicable regulatory requirements. The final engineering design of the structures included in the project shall be reviewed and approved by the Los Angeles County Department of Public Works, Building and Safety Division.	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
GEO Impact 4: The project site is located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating a potentially significant risk to life and/or property during project construction and operation. Impacts could be significant. (CEQA Checklist Appendix G Threshold VII. d)	Significant	**GEO/mm-4.1:** To address impacts related to expansive soils within the project site, additional expansion testing shall be required as part of the final geotechnical design for the project. Based on the outcome of the additional expansion testing, one or more of the following options shall be implemented to address expansive soils: a. Over-excavation: Over-excavation and replacement of the expansive material with a soil having low or non-expansive potential, with the upper 2 feet of expansive soil (where encountered at the site) being removed and replaced with non-expansive fill. OR b. Soil Treatment: Chemical treatment, such as lime treatment. This generally involves mixing a certain percentage of the chemical into the subgrade soil, compacting the mixed soil-chemical material, and then allowing the material curing time prior to continuing construction. The percentage of the chemical addition and the associated engineering properties of the improved soil will need to be determined through geotechnical laboratory testing. If chosen, the final geotechnical design shall provide design and construction recommendations related for this option. OR c. Structural Design: The structural design option would involve increasing the bearing pressure on the soil and/or extending the foundation or flatwork depth. However, while increasing the bearing pressure reduces the potential impact from expansive soil, it does increase the potential impact associated with excessive settlement. If this option is elected, settlement evaluation shall be performed as part of the final geotechnical design and based on the proposed loading conditions. Loading conditions shall be limited to a maximum differential of 1 inch over a 20-foot span within the structure. The final design solution will be determined by the project engineer consistent with the above measures. The final engineering design of the structures included in the project shall be reviewed and approved by the Los Angeles County Department of Public Works, Building and Safety Division.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
GEO Impact 5: The project would not include the use of septic tanks or alternative wastewater disposal systems during either project construction or operation. No impact would occur. (CEQA Checklist Appendix G Threshold VII. e)	No impact	No mitigation is required.	N/A
GEO Impact 6: Given the high paleontological sensitivity of the project site, ground-disturbing activities associated with project construction could damage paleontological resources that may be present below the surface. Construction impacts could be significant. Operation of the project would not directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature. No operational impacts would occur. (CEQA Checklist Appendix G Threshold VII. f)	Significant	**GEO/mm-6.1: Retain a Qualified Professional Paleontologist (Project Paleontologist):** Prior to the start of construction and/or ground-disturbing activities, the Los Angeles County Museum of Natural History Foundation, at the direction of the County, shall retain a Qualified Professional Paleontologist (Project Paleontologist) who meets or exceeds the professional standards defined by the SVP (2010), and who has specific experience overseeing mitigation projects in Pleistocene deposits of the Los Angeles Basin. The SVP (2010:10) defines a qualified professional paleontologist as: "a practicing scientist who is recognized in the paleontological community as a professional and can demonstrate familiarity and proficiency with paleontology in a stratigraphic context." The Project Paleontologist shall have a graduate degree in paleontology or geology, and/or a publication record in peer reviewed journals; have demonstrated competence in field techniques, preparation, identification, curation, and reporting; have at least 2 full years of professional experience as assistant to a qualified professional paleontologist with administration and project management experience (supported by a list of projects and referral contacts); have proficiency in recognizing fossils in the field and in determining their significance; have expertise in local geology, stratigraphy, and biostratigraphy; and have experience collecting vertebrate fossils in the field (SVP 2010). The Project Paleontologist and Page Museum curators and collections managers shall meet weekly during scheduled ground-disturbing activities associated with the construction of the project to address any outstanding questions or concerns that arise during mitigation efforts to ensure effective communication and coordination. The Project Paleontologist shall oversee all regulatory compliance measures, shall oversee mitigation protocols related to paleontological resources, and shall be a point of contact for the Page Museum curators and County officials. A professional resume or curriculum vitae of the Project Paleontologist shall be submitted to the County for approval prior to the start of ground-disturbing activities. **GEO/mm-6.2: Prepare a Paleontological Resources Management Plan:** After finalization of the engineering, design, and grading plans for the project and prior to the start of preconstruction ground-disturbing activities, a Paleontological Resources Management Plan (PRMP) shall be prepared by the Project	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		Paleontologist and submitted to the Page Museum curators, who shall review and approve the final PRMP on behalf of the County and Natural History Museum. The PRMP shall define the processes and procedures for paleontological monitoring and fossil excavation based on the nature of ground-disturbing activities required for project. The PRMP shall: a. Incorporate the results of the Paleontological Resources Technical Report (SWCA 2023), the final geotechnical investigation, and the final engineering/grading plans for the project. b. Require all construction personnel to attend a Worker Environmental Awareness Program (WEAP) training to be presented by the Project Paleontologist, or their designee. c. Define the processes and procedures for coordinating and communicating with responsible parties and stakeholders (including but not limited to the contractors, consultants, County officials, and the Page Museum curators and collections managers), when construction activities would be halted due to discovery and subsequent salvage efforts during ground-disturbing activities, and when regularly scheduled meetings between the Project Paleontologist and the Page Museum curators and collections managers would be required. d. Outline a procedure whereby mechanical excavation is conducted to remove any non-fossil-bearing sediments or soils subject to environmental soil remediation, such that adequate time is afforded to identify fossil localities and to conduct scientific salvage operations to a feasible extent (see Millington and Dietler 2023); the timing of scientific fossil salvage operations during initial grading should be given special considerations in the PRMP such that delays to earthwork activities are minimized while allowing paleontological material to be salvaged at an acceptable level that retains the scientific integrity of the discoveries. e. Require full-time paleontological monitoring by qualified paleontological monitors who meet the standards of the SVP (2010) and shall be supervised by the Project Paleontologist; qualified paleontological monitors shall have the authority to temporarily halt construction activities to record and salvage fossil discoveries as they are unearthed to allow for potentially significant fossils to be collected with their scientific integrity intact to the extent feasible and practical.	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		f. Discuss unanticipated fossil discovery and communication protocols if paleontological resources are discovered by non-paleontology staff working on the project in instances where paleontological monitors are documenting or recording paleontological resources discovered elsewhere within the project site. g. Discuss feasible monitoring procedures for each of the different ground-disturbing activities, including but not limited to active observation or inspection of sediments during active ground disturbances, whether they be trenching, grading, excavating, drilling, or some other activity that disturbs sediments; inspection of sediments spoils spiles or cuttings, as well as backfill originating from Hancock Park that may contain asphaltum or fossil material; and/or matrix screening of spoils for small or microfossils as needed. h. Define fossil salvaging procedures, including but not limited to outlining the treebox method for asphaltum bearing large accumulations of fossils, salvaging of isolated fossils, matrix screening in the field for microfossils, and chain-of-custody procedures for transferring the fossil discoveries to the Page Museum curators or collection managers as they are exhumed from the project site. Because of the unique conditions of La Brea Tar Pits and the chemical considerations of working with asphaltum fossil deposits, any paleontological resource discoveries shall remain on-site with the Page Museum. The paleontological monitor shall record pertinent geologic data and collect appropriate sediment samples from any fossil localities. i. Require the Project Paleontologist to prepare a report of the findings of the monitoring efforts within 90 days after construction is completed. **GEO/mm-6.3: Conduct Worker Training:** The Project Paleontologist shall develop and present a WEAP training to educate the construction crew on the legal requirements for preserving fossil resources, as well as the procedures to follow in the event of an unanticipated fossil discovery. This training program shall be given to the crew before ground-disturbing work commences and shall include handouts to be given to new workers as needed. **GEO/mm-6.4: Monitor for Paleontological Resources:** Full-time monitoring shall be required during all ground-disturbing activities (including artificial fill or previously disturbed sediments), regardless	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		of depth. Additionally, special considerations shall be given to the project design elements and geotechnical and soils remediation or hazard reduction recommendations, including but not limited to the paleontological screening of tar sands prior to disposal or treatment. Procedures and protocols for paleontological monitoring and fossil salvage shall be outlined in the PRMP. Monitoring shall: a. Be conducted by a qualified paleontological monitor who meets the standards of the SVP (2010) and shall be supervised by the Project Paleontologist, who shall coordinate with the Page Museum curators and collections managers and County officials. The Project Paleontologist may periodically inspect construction activities to recommend adjusting the level of monitoring in response to subsurface conditions; however, modifications, such as increasing, reducing, or ceasing of paleontological monitoring, or any changes of the implementation of the PRMP, should be approved by Page Museum curators and the Natural History Museum. b. Include inspection of exposed sedimentary units during active excavations, grading, tar sand removal, and any other ground-disturbing activity that has the potential to impact sediments capable of preserving significant fossils. The Page Museum curators (or their representatives) and the paleontological monitor shall have authority to temporarily divert activity away from exposed fossils to evaluate the significance of the find and, shall the fossils be determined significant or likely significant, professionally and efficiently recover the fossil specimens and collect associated data while minimizing delays. Data collection procedures may require the support of construction contractors to carefully and efficiently collect field data and extract the fossils to allow construction to continue. c. Require grading and earthwork contractors to follow the guidance of Page Museum staff or the Project Paleontologist regarding the collection and/or extraction of paleontological resources. The paleontological monitor shall record pertinent geologic data and collect appropriate sediment samples from any fossil localities. Recovered fossils shall be directly retained by the Page Museum for later analysis, laboratory preparation, and eventual curation if deemed significant or important by the Page Museum curators or collection managers.	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		GEO/mm-6.5: Prepare a Paleontological Resources Monitoring Report: Upon conclusion of ground-disturbing activities, the Project Paleontologist overseeing the implementation of the PRMP, including paleontological monitoring and fossil salvaging, shall prepare a final monitoring report that documents the paleontological monitoring efforts for the project and describes any paleontological resources discoveries observed and/or recorded during the life of the project. The final monitoring report and any associated data pertinent to the salvaged fossil specimen(s) shall be submitted to the Natural History Museum of Los Angeles County within 90 days after construction is completed. If the project is developed in phases, the final report is only necessary at the completion of the last phase to be constructed. At the discretion of the County, if there are unanticipated gaps in the phases of construction or other reasons why the County would prefer phased final reports, multiple final reports could be prepared.	
GEO Impact 7 (Cumulative): The project would not result in significant contributions to cumulatively considerable impacts related to geotechnical or soils-related hazards; however, the project could result in significant contributions to cumulatively considerable impacts related to paleontological resources.	Significant	Implement Mitigation Measures GEO/mm-6.1 through GEO/mm-6.5.	Less than significant
Greenhouse Gas Emissions			
GHG Impact 1: During project construction, the project would not generate greenhouse gas emissions, either directly or indirectly, that would result in a significant impact on the environment. Project construction impacts would be less than significant. During project operation, the project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Project operation impacts could be significant. (CEQA Checklist Appendix G Threshold VIII. a)	Significant	**GHG/mm-1.1:** The modifications to the George C. Page Museum and the development of the new museum shall not include the installation of natural gas infrastructure. Future operation of the new facilities shall not use natural gas–fired appliances. In addition, the project shall provide more electric vehicle charging stations than the mandatory requirements in the Los Angeles County Code, Title 31, Green Building Standards, electric vehicle charging space and charging station calculations (Code Section 5.106.5.3.3).	Less than significant
GHG Impact 2: The project could result in a significant impact related to consistency with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases, specifically the potential conflict with the SCAG 2020-2045 RTP/SCS in relation to improving mobility and accessibility, transportation productivity, and encouraging active transportation. Impacts could be significant.	Significant	Implement Mitigation Measures TRA/mm-1.1.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
(CEQA Checklist Appendix G Threshold VIII. b)			
GHG Impact 3 (Cumulative): The project could result in a significant contribution to the cumulative impact of GHG emissions and global climate change.	Significant	Implement Mitigation Measures GHG/mm-1.1 and TRA/mm-1.1.	Less than significant
Hazards and Hazardous Materials			
HAZ Impact 1: During project construction, the project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Construction workers, facility employees, and the public could be exposed to hazardous materials associated with the naturally occurring tar seeps present within the project site through the required removal of contaminated soils to an off-site location. Impacts during project construction could be significant. Project operation would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Operational impacts would be less than significant. (CEQA Checklist Appendix G Threshold IX. a)	Significant	**HAZ/mm-1.1:** Prior to earthwork activities, the project contractor, in coordination with the LAFD and the County, through the Foundation, shall be required to prepare a Soil Management Plan (SMP) for the removal of contaminated soils and their transportation off-site. The SMP shall be prepared in accordance with all relevant and applicable federal, state, and local laws and regulations that pertain to the transportation and disposal of hazardous materials and waste. The SMP shall: • Describe the methodology to identify and manage (reuse or off-site disposal) contaminated soil during soil excavation and/or construction; • Provide protocols for confirmation sampling, segregation and stockpiling, profiling, backfilling, disposal, guidelines for imported soil, and backfill approval from the DTSC Information Advisory on Clean Imported Fill Material; and • In addition, the LAFD may consult with other agencies (e.g., DTSC and the LARWQCB) if the nature of the contamination warrants the involvement of these agencies. **HAZ/mm-1.2:** The following requirements and precautionary actions shall be implemented when disturbing soil at the project site: • No soil disturbance or excavation activities shall occur without a project site-specific Health and Safety Plan (HASP). Any soil that is disturbed, excavated, or trenched due to on-site construction activities shall be handled in accordance with applicable local, state, and federal regulations, as well as sampled and analyzed by a certified laboratory for constituents in accordance with the accepting landfill's requirements (including testing for the presence of hydrocarbons, volatile organic compounds, semi-volatile organic compounds, heavy metals, and pesticides). • The contractor shall prepare a project-specific HASP. It is the responsibility of the contractor to review available information regarding project site conditions, including the SMP, and potential health and safety concerns in the	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		planned area of work. The HASP shall describe the proposed construction activities and hazards associated with each activity. Hazard mitigation shall be presented in the HASP to limit construction-related risks to workers. The HASP shall include emergency contact numbers, maps to the nearest hospital, gas monitoring action levels, gas response actions, allowable worker exposure times, and mandatory personal protective equipment (PPE) requirements. The HASP shall specify Certificate of Competency action levels for construction workers as well as monitoring criteria for increasing the level of PPE. The HASP shall be signed by all workers on-site to demonstrate their understanding of the construction-related risks. • The contractor and each subcontractor shall require their employees who may directly come in contact with Suspect Soil (soil that is stained or odorous) to perform all activities in accordance with the contractor's HASP. If Suspect Soil is encountered, to minimize the exposure of other workers to potential contaminants on the project site, the contractor may erect temporary fencing around excavation areas with appropriate signage as necessary to restrict access and to warn unauthorized on-site personnel not to enter the fenced area. • There shall be no reuse of excavated soil deemed inappropriate for reuse as defined in the project-specific SMP. • The contractor shall conduct, or have its designated subcontractor conduct, visual screening of soil during activities that include soil disturbance. If the contractor or subcontractor(s) encounter any Suspect Soil, the contractor and subcontractor(s) shall immediately stop work and take measures to not further disturb the soils (e.g., cover suspect soil with plastic sheeting) and inform the Foundation and the environmental monitor. The Foundation shall identify the environmental monitor—an experienced professional trained in the practice of the evaluation and screening of soil for potential impact working under the direction of a licensed Geologist or Engineer—prior to the beginning of work.	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		• Prior to excavation activities, the contractor or designated subcontractor shall establish specific areas for stockpiling Suspect Soil, should it be encountered, to control contact by workers and dispersal into the environment, per the provisions provided in the SMP.	
HAZ Impact 2: Construction of the project could result in the release of hazardous materials into the environment related to naturally occurring tar seeps and subsurface methane gas. Impacts during project construction could be significant. During project operation, hazardous vapors from subsurface methane gas could result in the release of hazardous materials into the environment. Impacts during project operation could be significant. (CEQA Checklist Appendix G Threshold IX. b)	Significant	Implement Mitigation Measures HAZ/mm-1.1 and HAZ/mm-1.2. **HAZ/mm-2.1:** During construction activities at the project site, controls shall be in place to address the effects of subsurface gases and impacted soil and groundwater on workers and the public. During construction, the following shall be implemented: • Monitoring devices for methane and benzene shall be present to alert workers of elevated gas concentrations when subsurface soil-disturbing work is being performed. • Any trench or excavation wider than 18 inches and having a depth greater than 2× its narrowest width shall be monitored with a portable combustible gas detector. The portable detector shall have a resolution capable of reporting to 1% LEL (Lower Explosive Limit), or 0.1% by volume in air, or in parts per million (ppm). If concentrations of combustible gases reach or exceed 20% LEL, or 1.0% by volume in air, or 10,000 ppm, the trench or excavation shall be evacuated until such time as the gas concentrations are determined to be steadily below these levels. All welding and electrical equipment shall be removed from the trench/excavation until the area is deemed to be safe. Portable blowers are the most appropriate means of controlling combustible gas concentrations. The blower motors and appurtenant electrical wiring shall not be placed in the trench or excavation. • No welding, cutting, or other hot work shall be performed close to flammable tars which, when subjected to heat, might produce flammable or toxic vapors (per OSHA 1910.252(a)(3)(i)). Smoking should also be avoided when working near tar seeps. • Contingency procedures shall be in place if elevated gas concentrations are detected, such as the mandatory use of PPE, evacuating the area, and/or increasing ventilation within the immediate work area where the elevated concentrations are detected. • Workers shall be trained to identify exposure symptoms and implement alarm response actions.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		• Soil and groundwater exposure during excavations shall be minimized to reduce the surface area which could off-gas. This shall be achieved by staggering exposed excavation areas. • Soil removed as part of construction shall be sampled and tested for off-site disposal in a timely manner. If soil is stockpiled prior to disposal, it shall be managed in accordance with the project's Stormwater Pollution Prevention Plan. • Fencing shall be erected to limit public access and allow for gas dilution. The construction contractor can determine the appropriate type of fencing, as long as public access is restricted such that interaction with hazardous construction conditions does not occur. • All requirements of the project-specific HASP shall be implemented and followed as described in HAZ/mm-1.2. **HAZ/mm-2.2:** As part of the final project design, the project engineer shall develop and implement a methane mitigation system. The mitigation system, which would provide a barrier for hazardous vapors, methane, and tar, consists of a subslab venting system that exhausts to the atmosphere, a subslab impermeable gas/tar barrier membrane system, and a monitoring system consisting of probes above and below the gas barrier membrane. The monitoring program consists of routine (quarterly) monitoring and reporting to the County Public Works, Environmental Programs Division. The Environmental Programs Division shall also review the plans to see if the criteria meet the requirements of Los Angeles County Code 110.4 Methane Gas Hazards. Additionally, tar collection systems underneath the gas mitigation systems need to be evaluated by the engineer and by the county engineer to evaluate the performance of the overall system. A contingency plan should also be prepared to describe how matters shall be handled in the event that high concentrations of methane gas enter a building despite the mitigation measures. The inspection and periodic observations of membrane and vapor control measures shall be performed by the Vapor Barrier Engineer (i.e., the Engineer or his Designee). At a minimum, inspection/observation shall take place during the installation of the vent piping, after backfilling of the vent piping, during the installation of the vapor barrier, after the installation of the vapor barrier (prior to backfilling), during the placement of the protection course, immediately prior to placement of foundation concrete, during and at the completion of the vent riser installation for the vent piping, and at	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		the completion of construction prior to the issuance of the system certification and certification of occupancy.	
HAZ Impact 3: The project could introduce hazardous materials within 0.25 mile of an existing or proposed school during both construction and operation. Impacts during project construction and operation could be significant. (CEQA Checklist Appendix G Threshold IX. c)	Significant	Implement Mitigation Measures HAZ/mm-1.1, HAZ/mm-1.2, HAZ/mm-2.1, and HAZ/mm-2.2.	Less than significant
HAZ Impact 4: The project site is not identified on any of the hazardous materials lists compiled pursuant to Government Code Section 65962.5. Construction and operation of the project would not create a significant hazard to the public or the environment as it relates to hazardous materials sites compiled pursuant to Government Code Section 65962.5. No impact would occur. (CEQA Checklist Appendix G Threshold IX. d)	No impact	No mitigation is required.	N/A
HAZ Impact 5: The project site is not located within 2 miles of a public airport or public use airport. The project would not result in an airport-related safety hazard during either project construction or operation. No impact would occur. (CEQA Checklist Appendix G Threshold IX. e)	No impact	No mitigation is required.	N/A
HAZ Impact 6: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan during either construction or operation. Construction and operational impacts would be less than significant. (CEQA Checklist Appendix G Threshold IX. f)	Less than significant	No mitigation is required.	N/A
HAZ Impact 7 (Cumulative): Prior to the consideration of proposed mitigation measures, construction and operation of the project could result in hazardous materials impacts associated with the naturally occurring tar seeps and methane conditions present at the project site, including accidental spills or releases associated with the disposal, transport, and management of hazardous materials. If unaddressed, potential contributions to cumulative hazardous materials impacts could be significant.	Significant	Implement Mitigation Measures HAZ/mm-1.1, HAZ/mm-1.2, HAZ/mm-2.1, and HAZ/mm-2.2.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
Hydrology and Water Quality			
HYD Impact 1: During project construction, the project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Construction impacts would be less than significant. Implementation of the project would increase impervious surfaces within the project site, and project operation would have the potential to contribute to the degradation of surface or groundwater quality. Operational impacts could be significant. (CEQA Checklist Appendix G Threshold X. a)	Significant	**HYD/mm-1.1:** The Foundation shall implement the following non-structural Best Management Practices (BMPs) for the life of the project: **Open Paved Areas and Biofiltration Planter Areas** • Regular sweeping of all open and planter areas, at a minimum, on a weekly basis in order to prevent dispersal of pollutants that may collect on those surfaces. • Regular pruning of the trees and shrubs in the planter areas to avoid formation of dried leaves and twigs, which are normally blown by the wind during windy days. These dried leaves are likely to clog the surface inlets of the drainage system when rain comes, which would result in flooding of the surrounding area due to reduced flow capacities of the inlets. • Trash and recycling containers shall be used such that, if they are to be located outside or apart from the principal structure, are fully enclosed and watertight in order to prevent contact of stormwater with waste matter, which can be a potential source of bacteria and other pollutants in runoff. These containers shall be emptied and the wastes disposed of properly on a regular basis. **Education and Training** • Annual training of employees on property management and proper methods of handling and disposal of waste shall be provided. Employees should understand the on-site BMPs and their maintenance requirements. **Landscape Management** • Landscaping shall be maintained using minimum or no pesticides. **Litter Control** • An adequate number of trash receptacles shall be provided and inspected regularly. Leaky receptacles shall be prepared or replaced. Receptacles shall be covered. • Prohibit/prevent dumping of liquid or hazardous wastes. Post “no hazardous materials” signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		Housekeeping of Loading Docks • Loaded and unloaded items shall be moved indoors as soon as possible. **Catch Basin Inspection** • Stormwater pollution prevention information shall be provided. Owner shall be made aware that the following is to be followed: "Property owner shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create potential discharge to storm drains." • Catch basins shall be inspected regularly. **Design and Construct Trash and Waste Storage Areas to Reduce Pollutant Introduction** • Trash and waste will be handled and stored for pickup adjacent to the loading dock. This limits the potential introduction of pollutants into the site. Trash and waste pickup will occur regularly. **Use Efficient Irrigation Systems and Landscaping Design** • Landscape shall be generally designed to provide an efficient and continuous irrigation system. • Landscape areas shall be designed to include plants that are friendly to the climate of Los Angeles. **Storm Drain Stencil Signage** • Stencil or label all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language to prevent dumping of improper materials into the urban runoff conveyance system. **HYD/mm-1.2:** The Foundation shall ensure all structural and non-structural Best Management Practices (BMPs) are operated, monitored, and maintained for the life of the project pursuant to the following: • All structural BMPs shall be inspected, cleaned-out, and where necessary, repaired, at the following minimum frequencies: 1) prior to October 15th each year; 2) during each month between October 15th and April 15th of each year and, 3) at least twice during the dry season (between April 16th and October 14th of each year). • Debris and other water pollutants removed from structural BMPs during cleanout shall be contained and disposed of in a proper manner.	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		• The drainage system, the associated structures, and BMPs shall be maintained according to manufacturer's specification to ensure maximum pollutant removal efficiencies.	
HYD Impact 2: The project would not substantially decrease groundwater supplies or interfere with groundwater recharge. Construction and operational impacts would be less than significant. (CEQA Checklist Appendix G Threshold X. b)	Less than significant	No mitigation is required.	N/A
HYD Impact 3: The project would not substantially alter the existing drainage pattern of the site or increase surface water runoff in a manner that would result in substantial erosion or siltation, flooding, or an exceedance of stormwater drainage systems. Construction and operational impacts would be less than significant. (CEQA Checklist Appendix G Threshold X. c)	Less than significant	No mitigation is required.	N/A
HYD Impact 4: The project site is not in a flood hazard zone or tsunami zone and the risk of seiche is low. Therefore, there would be no risk of release of pollutants due to project inundation by these hazards. No construction or operational impacts would occur. (CEQA Checklist Appendix G Threshold X. d)	No impact	No mitigation is required.	N/A
HYD Impact 5: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Construction and operational impacts would be less than significant. (CEQA Checklist Appendix G Threshold X. e)	Less than significant	No mitigation is required.	N/A
HYD Impact 6 (Cumulative): Prior to consideration of the proposed mitigation measures, operation of the project could have the potential to contribute to the degradation of surface or groundwater quality. If unaddressed, potential contributions to cumulative impacts associated with degradation of surface or groundwater quality could be significant.	Significant	Implement Mitigation Measures HYD/mm-1.1 and HYD/mm-1.2.	Less than significant
Land Use and Planning			
LUP Impact 1: The project would not include features that would physically divide an established community during construction and operation. No impact would occur.	No impact	No mitigation is required.	N/A

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
(CEQA Checklist Appendix G Threshold XI. a)			
LUP Impact 2: Implementation of the project would result in the alteration of designated historical resources and would be potentially inconsistent with the objectives, goals, and policies of the County's General Plan Conservation and Natural Resources Element, the City's General Plan Conservation Element, and the Wilshire Community Plan as they pertain to the protection of designated historical resources. Impacts would be significant. (CEQA Checklist Appendix G Threshold XI. b)	Significant	Implement Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5.	Significant and unavoidable
LUP Impact 3 (Cumulative): The project would contribute incrementally toward cumulative effects on historical resources associated with the project and related land use policies protecting these resources (i.e., County of Los Angeles General Plan, the City of Los Angeles General Plan, and the Wilshire Community Plan). The potential inconsistencies are identified in Table 5.10-8. The project would contribute significantly to cumulative impacts to historic resources, which would be considered a significant impact.	Significant	Implement Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5.	Significant and unavoidable
Noise and Vibration			
NOI Impact 1: During project construction, the project could generate a substantial increase (5 dBA Leq) in ambient noise levels in the vicinity of the project, which could affect noise-sensitive land uses. As a result, the project could result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of established standards. Therefore, noise impacts resulting from project construction could be significant. (CEQA Checklist Appendix G Threshold XIII. a)	Significant	**NOI/mm-1.1:** The following measures shall be implemented to reduce construction-related noise impacts: a. Operation of equipment used in construction, alteration, drilling, or demolition work shall be prohibited between the hours of 7:00 p.m. and 7:00 a.m., Monday through Friday; before 8:00 a.m. or after 6:00 p.m. on Saturday; and any time on Sundays or legal holidays. b. A temporary and impermeable 12-foot-high temporary barrier designed to provide a 10 dBA noise reduction, shall be erected along the eastern and northern sides of the project site boundary. This barrier shall be constructed in one of the following ways: • from acoustical blankets hung over or from a supporting frame, or • from commercially available acoustical panels lined with sound-absorbing material, or • from common construction materials such as plywood, provided that the barrier is designed with	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		overlapping material at the seams to ensure that no gaps exist between the panels. c. Noise levels from powered equipment or powered hand tools at a distance of 50 feet from the noise source or within 500 feet of a residential zone will be limited to 75 dBA, such limits shall not apply where compliance is technically infeasible. Technical infeasibility means that the noise limit cannot be achieved despite the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques during operation of the equipment. d. All construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise-suppression devices. e. Pneumatic tools used at the site shall be equipped with an exhaust muffler on the compressed air exhaust to minimize noise levels. f. Stationary noise sources shall be located as far from adjacent sensitive receptors as possible and shall be muffled and enclosed within temporary sheds or insulated barriers when possible. g. Prior to commencement of construction, a designated project contact person will directly notify the management of any surrounding residential properties located within 100 feet of the project site about the construction schedule and activities and provide a contact number to address any noise-related complaints during construction. h. A designated point of contact shall be identified to address noise-related complaints during construction. The noise disturbance coordinator will be responsible for responding to any local complaints about construction noise.	
NOI Impact 2: During project operation, the project would not generate a substantial increase in ambient noise in excess of applicable standards or thresholds; noise impacts during project operation would be less than significant. (CEQA Checklist Appendix G Threshold XIII. a)	Less than significant	No mitigation is required.	N/A
NOI Impact 3: The project would not generate excessive groundborne vibration or groundborne noise levels either during project construction or operation; impacts related to groundborne vibration and noise levels would be less than significant.	Less than significant	No mitigation is required.	N/A

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
(CEQA Checklist Appendix G Threshold XIII. b)			
NOI Impact 4: Because the project is not located in the vicinity of an airstrip or airport, the project would not expose people residing or working in the project site to excessive noise levels related to aircraft during either project construction or operation. No impact would occur. (CEQA Checklist Appendix G Threshold XIII. c)	No impact	No mitigation is required.	N/A
NOI Impact 5 (Cumulative): The project would not contribute considerably to cumulative noise and/or vibration impacts.	Less than significant	No mitigation is required.	N/A
Recreation			
REC Impact 1: The project would not result in substantial physical deterioration of existing parks and recreation facilities during either project construction or operation. Impacts would be less than significant. (CEQA Checklist Appendix G Threshold XVI. a)	Less than significant	No mitigation is required.	N/A
REC Impact 2: Construction of the project would include enhancements and modifications to existing recreational facilities within the 13-acre project site. These activities could have an adverse physical effect on the environment. Construction impacts could be significant. Operation of the project would not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Operational impacts would be less than significant. (CEQA Checklist Appendix G Threshold XVI. b)	Significant	Implement construction-related Mitigation Measures AES/mm-4.1; AQ/mm 3.1; BIO/mm-1.1, BIO/mm-2.1, BIO/mm-3.1, BIO/mm-5.1 and 5.2, BIO/mm-6.1; CR-ARCH/mm-1.1 through 1.4; GEO/mm-3.1 and 3.2, GEO/mm-4.1, GEO/mm-6.1 through 6.5; GHG/mm-1.1; HAZ/mm-1.1 and 1.2, HAZ/mm-2.1 and 2.2; NOI/mm-1.1; TRA/mm-4.1 through 4.3; and TCR/mm-1.1 through 1.4.	Less than significant
REC Impact 3 (Cumulative): Prior to the application of proposed project mitigation measures, the project could contribute to cumulative impacts associated with adverse physical effects on the environment. Cumulative construction impacts could be significant. Operation of the project would not contribute to cumulative impacts.	Significant	Implement construction-related Mitigation Measures AES/mm-4.1; AQ/mm 3.1; BIO/mm-1.1, BIO/mm-2.1, BIO/mm-3.1, BIO/mm-5.1 and 5.2, BIO/mm-6.1; CR-ARCH/mm-1.1 through 1.4; GEO/mm-3.1 and 3.2, GEO/mm-4.1, GEO/mm-6.1 through 6.5; GHG/mm-1.1; HAZ/mm-1.1 through 1.3, HAZ/mm-2.1; NOI/mm-1.1; TRA/mm-4.1 through 4.3; and TCR/mm-1.1 through 1.4.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
Transportation			
TRA Impact 1: The project could result in a significant impact related to consistency with transportation plans, programs, ordinances, or policies. (CEQA Checklist Appendix G Threshold XVII a)	Significant	**TRA/mm-1.1:** In consultation with the LADOT, the Los Angeles County Museum of Natural History Foundation (Foundation) shall prepare and implement a Transportation Demand Management (TDM) Program to reduce museum employee and visitor vehicle trips and increase alternative modes such as walking, bicycling, public transit, and rideshare. The Foundation shall designate an existing member of staff as the on-site TDM Coordinator. This coordinator shall be responsible for monitoring and tracking employee and visitor mode share and annual reporting to LADOT. **Employee Strategies:** Information shall be distributed to employees and displayed on a bulletin board, display case, or kiosk (displaying transportation information) where the greatest number of employees are likely to see it. The following measures may be applied to reduce employee vehicle trips and VMT: • Provide a transportation information bulletin board on-site with public transit information, contact information for rideshare and transit, ridesharing promotional material, bike route and facility information, and listing of on-site services or facilities. • Provide facilities on-site to support bicycling to work, such as secure bike parking, showers, and lockers. • Encourage and support participation in Metro vanpool, including subsidies for participation. • Implement paid parking for employees. • Subsidize transit passes. • Offer flexible work schedules and telecommuting, when feasible. **Visitor Strategies:** Transportation information for visitors shall be displayed on La Brea Tar Pits' website and distributed with physical marketing materials. The following measures may be applied to reduce visitor vehicle trips and VMT: • Advertise and offer discounted museum tickets for visitors who use public transit or a bicycle to visit the project.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation

		• Provide and maintain secure on-site bicycle parking for visitors and monitor usage to determine if additional bicycle racks are needed.
		  ○ Provide wayfinding signage directing bicyclists from the visitor entrances to where on-site bicycle parking is located.
		  ○ Ensure bicycle parking is well lit and monitored by staff.
		• Continue to have paid parking for visitors.
		• Coordinate with Metro to improve transit access and user comfort and encourage visitors to take local bus service or the future Purple Line extension to La Brea Tar Pits, through the following measures:
		  ○ Improve pedestrian wayfinding between the planned Purple Line station, local bus stops, and La Brea Tar Pits.
		  ○ Implement bus stop improvements such as shelters along Wilshire Boulevard bus stops that would be used by La Brea Tar Pits visitors.
		  ○ Coordinate with Metro and the City of Los Angeles to ensure that safe and comfortable pedestrian facilities (such as ADA curb ramps and continental crosswalks) are available between local bus stops and the project entrances, including at the Curson Avenue/ Wilshire Boulevard intersection.
		• Coordinate with the City of Los Angeles to implement planned bikeways in the vicinity of the project site and contribute to the implementation of the bikeways. This includes planned bikeways along Wilshire Boulevard and West 6th Street.	

TRA Impact 2: The project would result in a net increase in VMT and would result in a substantial increase in vehicle miles traveled. Impacts would be considered significant. (CEQA Checklist Appendix G Threshold XVII b)	Significant	Implement Mitigation Measure TRA/mm-1.1.	Significant and unavoidable
TRA Impact 3: Once developed, the project would not substantially increase hazards due to a geometric design feature; impacts would be less than significant. (CEQA Checklist Appendix G Threshold XVII c)	Less than significant	No mitigation is required.	N/A

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
TRA Impact 4: The project could result in inadequate emergency access during construction and operation. Project impacts would be potentially significant. (CEQA Checklist Appendix G Threshold XVII d)	Significant	**TRA/mm-4.1:** A construction traffic management plan (CTMP) shall be developed by the contractor, approved by the County and the City of Los Angeles Department of Transportation (LADOT), and implemented to alleviate construction period impacts. The CTMP will include, but may not be limited to, the following restrictions: • Prohibition of construction worker parking on nearby residential streets. • Prohibition of construction-related vehicles parking or staging on surrounding public streets. • Temporary pedestrian and vehicular traffic controls (i.e., flag persons) during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways. • Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate. • Scheduling of construction-related deliveries, haul trips, etc., shall occur outside the commuter peak hours to the extent feasible. **TRA/mm-4.2:** Consultation shall occur with the City of Los Angeles Fire Department (LAFD) to analyze the project's emergency access design, including a review of the proposed vehicle access points. Construction activities and their impact on emergency access shall also be reviewed to ensure that the final design provides adequate access to the project site and neighboring businesses and residences. **TRA/mm-4.3:** To improve emergency access safety and circulation, coordination shall occur with LADOT to explore the feasibility of implementing one or more of the following improvements: • Signal timing at the built-out intersection of Curson Avenue/Wilshire Boulevard shall be regularly updated to optimize traffic signal timing. In addition, the weekday a.m. and p.m. peak period bus-only lanes on Wilshire Boulevard shall be extended to the weekday midday and weekend midday peak hours to improve bus operations through that intersection. • Signal timing at the Curson Avenue/West 6th Street intersection shall be regularly updated to optimize splits. In addition, improve existing lane striping to extend the northbound left-turn lane at the intersection, and/or add an inbound left-turn lane at the project's Curson Avenue driveway.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		• Incorporate safety features to accommodate passenger pick-up and drop-off along West 6th Street when planned separated bike lanes are implemented. • Monitor driveway operations at Curson Avenue. • The County of Los Angeles does not have the authority to impose these measures because they are within the discretionally authority of the City of Los Angeles. Thus, while they are recommended, the County of Los Angeles is not required to implement them. However, the requirement to coordinate with the City and facilitate possible implementation of the above measures shall be required.	
TRA Impact 5 (Cumulative): The project would result in a significant contribution to cumulative transportation impacts by resulting in a net increase in VMT.	Significant	Implement Mitigation Measure TRA/mm-1.1.	Significant and unavoidable
Tribal Cultural Resources			
TCR Impact 1: During project construction, the project could cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Sections 5020.1(k) and 5024.1. Construction impacts could be significant. Project operation would not cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Sections 5020.1(k) and 5024.1. No operational impacts would occur. (CEQA Checklist Appendix G Threshold XVIII. a, i. and ii)	Significant	**TCR/mm-1.1:** Retain Tribal Consultants. a. Prior to any ground-disturbing activities on the project site associated with the proposed project, the Gabrieleno Band of Mission Indians – Kizh Nation, Gabrieleno/ Tongva San Gabriel Band of Mission Indians, and Gabrielino Tongva Indians of California shall be retained as Tribal Consultants. Each of the Tribal Consultants shall provide the services of a representative, known as a Tribal Monitor. The Tribal Monitor(s) shall be present on-site and carry out actions described in the Archaeological and Tribal Cultural Resources Management Plan (AR-TCR Management Plan) and any actions required to comply with mitigation measures for tribal cultural resources. These actions shall include but not be limited to monitoring ground-disturbing activities. Ground disturbing activities are defined as excavating, digging, trenching, plowing, drilling, tunneling, quarrying, grading, leveling, removing trees, clearing, driving posts or pilings, augering, backfilling, blasting, stripping topsoil or a similar activity at the project site. The frequency of the monitoring services shall be provided on a rotational basis as outlined in TCR/mm-1.3.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		b. At least 21 days before any ground disturbing activities commence, each of the Tribal Consultants shall submit a letter of retention to the Museum of Natural History confirming that the that they have been retained consistent with the terms of the TCR/mm-1.1. **TCR/mm-1.2:** Prior to any ground-disturbing activities on the project site associated with the proposed project, the Tribal Consultants or Tribal Monitors shall provide a worker training to on-site project personnel responsible for supervising ground-disturbing activities (i.e., foreman or supervisor) and machine operators. The initial training shall be conducted prior to the start of ground-disturbing activities in the project site. The worker training shall include but not be limited to any topics related to protocols related to tribal cultural resources, regulatory compliance requirements, monitoring procedures and stop-work restrictions, and any other applicable mitigation measures that must be adhered to during ground-disturbing activities for the protection of tribal cultural resources. As an element of the worker training, the Tribal Consultants or Tribal Monitors shall advise the construction crews on proper procedures to follow if an unanticipated tribal cultural resource is discovered during construction whether a Tribal Monitor is present or not. The Tribal Consultants or Tribal Monitors shall also provide the construction workers with contact information for the Tribal Consultants and Tribal Monitors. Once the ground disturbances have commenced, the need for additional or supplemental worker training shall be determined through consultation with the Tribal Consultants, and project proponent or their designated project supervisor. Within 5 days of completing a worker training, a list of those in attendance shall be provided to the Museum of Natural History by the Tribal Consultants, the Qualified Archaeologist, or a designee of either parties. **TCR/mm-1.3:** Monitoring for Tribal Cultural Resources. a. Prior to any ground-disturbing activities associated with the project, a minimum of one Tribal Monitor shall be present during ground-disturbing activities as stipulated in the AR-TCR Management Plan. The AR-TCR Management Plan shall establish a monitoring schedule in a manner that provides opportunities for each of the three Tribal Consultants to participate in monitoring throughout the project's duration and within specific project phases that involve ground-disturbing activities. The monitoring schedule shall be determined at the sole discretion of the Museum of Natural History. The Museum of Natural History or their designee shall notify each Tribal Consultant in advance of its assigned monitoring period to	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		allow for adequate preparation and planning. The Qualified Archaeologist shall be responsible for coordinating and communicating with the Tribal Consultants to address the need for consistency in reporting of the results during the rotational monitoring process. If one Tribal Monitor is unable to attend on a given day, but another Tribal Monitor is present, ground disturbing work shall commence. The need for additional monitors exceeding the two respective Tribal Monitors shall be assessed if the areas subject to monitoring exceeds what can be reasonably covered. The Tribal Monitors shall work under the direction of their respective Tribal Consultant. The Tribal Monitors shall complete daily monitoring logs that provide descriptions of the relevant ground-disturbing activities (the type of construction activities performed and location of ground-disturbing activities), sediment types, presence or absence of tribal cultural resources or potential tribal cultural resources, and any other facts, conditions, materials, or discoveries of significance to the Tribal Consultants. Monitor logs shall identify and describe any discovered tribal cultural resources or potential tribal cultural resources as defined in Public Resources Code Section 21074(a), which includes but is not limited to Native American artifacts, remains, places of significance, as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs shall be provided to the project lead agency and the Qualified Archaeologist for purposes of summarizing in the monitoring report. b. The Tribal Monitors shall have the authority to temporarily halt or redirect construction activities if a tribal cultural resource or potential tribal cultural resource is exposed during construction. If a tribal cultural resource or potential tribal cultural resource is identified, work in the immediate vicinity (not less than 50 feet) of the find shall stop unless another distance is determined by both the Tribal and Archaeological Monitors, which shall consider the nature of the find and the potential for additional portions of the resource to remain buried in the unexcavated areas of the project site. Construction activities may continue in other areas in coordination with the qualified archaeologist and tribal consultant. c. If a potential component of the existing tribal cultural resource (LAN-159/H) is identified, it shall be assessed by the Tribal Consultants as a tribal cultural resource in terms	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		of its cultural value, based on tribal expertise, and supported by substantial evidence. If the discovery is archaeological in nature, then the assessment shall also incorporate the Qualified Archaeologist's evaluation as a potential contributor to the significance of LAN-159/H based on the California Register of Historical Resources criteria or as a unique archaeological resource, as specific in the AR-TCR Management Plan and in substantial conformance with the Archaeological and Tribal Cultural Resources Assessment. Any identified tribal cultural resources shall be assessed by both Tribal Consultants and the materials shall be cataloged and stored at the Page Museum for the period in which the ground-disturbing activities are occurring. Further analysis and the disposition of any collected materials shall be determined through consultation with the Tribal Consultant, the County, and informed by the evaluation of the materials as elements that contribute to the significance of the archaeological resource. Any consultation required shall occur on an as-needed basis during the ground-disturbing activities and continue after tribal monitoring has concluded as part of the reporting process described in Part F of TCR/mm-1.4 and CR-ARCH/mm-1.4. d. If initial monitoring identifies no further sensitivity (i.e., sediments incapable of containing tribal cultural resources) below a certain depth or within a certain portion of the project site, a corresponding reduction of monitoring coverage would be appropriate. The reasoning for and scale of the recommended reduction shall be assessed by the Tribal Consultant in consultation with the Qualified Archaeologist and communicated to the Museum of Natural History in writing prior to reduction. Monitoring for tribal cultural resources shall be required until there is written confirmation from the County or a supervisor responsible for overseeing the ground-disturbing activities that there shall be no further ground-disturbing activities on the project site or in connection with the project site, either for the duration of the project. e. Within one month of concluding the tribal cultural resources monitoring, the Tribal Consultants shall prepare a memo stating that the monitoring requirements have been fulfilled consistent with the terms of TCR/mm-1.3 and summarize the results of any finds and actions taken by the tribal monitor to implement the final measures related to tribal cultural resources. The memo shall be	

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
		submitted to the Museum of Natural History and the Qualified Archaeologist to be attached to a final archaeological and tribal monitoring report prepared by the Qualified Archaeologist consistent with CR-ARCH/mm-1.4. **TCR/mm-1.4:** If human remains are encountered during construction all ground-disturbing work shall be immediately diverted from the discovery as directed by the Tribal Consultant and Qualified Archaeologist and based on consideration of the possibility that additional or multiple Native American human remains may be located in the project site, and after having considered whether the bones are human or faunal. Upon discovery of human remains, whether the archaeological or tribal monitor is present, the Los Angeles County Coroner's Office shall be notified, as prescribed in PRC Section 5097.98 and Health and Safety Code Section 7050.5. If the Coroner determines that the remains are of Native American origin, the Coroner shall proceed as directed in Section 15064.5(e) of the State CEQA Guidelines, and as specified in the TCRMMP, which require the coroner to notify the NAHC who will appoint a Most Likely Descendent (MLD). Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated accordingly. While the coroner determines whether the remains are Native American and the MLD is designated and notified, the discovery is to remain confidential and secure to prevent any further disturbance.	
TCR Impact 2 (Cumulative): Prior to the consideration of proposed mitigation measures, construction of the project could result in significant contributions to cumulative impacts related to the disturbance and destruction of tribal cultural resources.	Significant	Implement Mitigation Measures TCR/mm-1.1 through TCR/mm-1.4. These measures put forward a process that ensures any new tribal cultural resources or new components of an existing tribal cultural resource will be identified, inventoried, evaluated for significance in terms of its value to a California Native American tribe, and treated appropriately if found to be a contributing element.	Less than significant
Utilities and Service Systems			
UTL Impact 1: During project construction, the project could require the construction of new or expanded sewer lines from the project site to an identified point of connection within existing sewer system facilities. LASAN will not be able to give a definitive confirmation of adequate sewer system capacity for the project without further detailed gauging and evaluation associated with more detailed architectural plans, which would be provided during the project's permitting phase. At this juncture, it is not known if new or upgraded sewer lines would be required and conclusion of this analysis would be speculative. Impacts related to construction of new or expanded utility	Significant	**UTL/mm-1.1:** To confirm the sewer system serving the project site can accommodate the total wastewater flows generated by the project, the Los Angeles County Museum of Natural History Foundation (Foundation) shall coordinate with Los Angeles Sanitation and Environment (LASAN) during project permitting and prior to construction for confirmation of sewer system capacity. LASAN shall make this determination by conducting detailed gauging and further evaluation to identify a specific sewer connection point and/or to determine if upgrading or additional sewer lines are necessary to accommodate the project.	Less than significant

Impacts	Impacts Before Mitigation	Mitigation Measures	Impacts Following Mitigation
infrastructure could be significant. Operational impacts would be less than significant. (CEQA Checklist Appendix G Threshold XIX. a)		Implement Mitigation Measures AES/mm-4.1; AQ/mm-3.1; BIO/mm-1.1, BIO/mm-2.1, BIO/mm-3.1, BIO/mm-5.1 and 5.2, BIO/mm-6.1; CR-ARCH/mm-1.1 through 1.4; GEO/mm-3.1 and 3.2, GEO/mm-4.1, GEO/mm-6.1 through 6.5; GHG/mm-1.1; HAZ/mm-1.1 and 1.2, HAZ/mm-2.1 and 2.2; NOI/mm-1.1; TRA/mm-1.1, TRA/mm-4.1 through 4.3; and TCR/mm-1.1 through 1.4.	
UTL Impact 2: LADWP would have sufficient water supply to serve the water demand generated by the project and the existing service area during normal, single dry year, and multiple dry years conditions during both construction and operation of the project. Impacts related to water supply and demand would be less than significant. (CEQA Checklist Appendix G Threshold XIX. b)	Less than significant	No mitigation is required.	N/A
UTL Impact 3: It has been determined that the wastewater treatment provider serving the project (LASAN) would have adequate capacity to serve the wastewater flows generated by the project. Impacts would be less than significant. (CEQA Checklist Appendix G Threshold XIX. c)	Less than significant	No mitigation is required.	N/A
UTL Impact 4: The project would not generate solid waste in excess of the capacity of local infrastructure or otherwise impair state or local solid waste reduction goals during construction and operation of the project. Impacts would be less than significant. (CEQA Checklist Appendix G Threshold XIX. d)	Less than significant	No mitigation is required.	N/A
UTL Impact 5: The project would comply with federal, state, and local solid waste reduction goals during construction and operation. Impacts would be less than significant. (CEQA Checklist Appendix G Threshold XIX. e)	Less than significant	No mitigation is required.	N/A
UTL Impact 6 (Cumulative): The project could result in contributions to cumulatively considerable impacts related to off-site upgrades to LASAN's sewage collection system. At this juncture, it is not known whether new or upgraded sewer lines would be required and the conclusion of this analysis would be speculative. However, it is reasonable to assume that some potential for environmental impacts would occur with an infrastructure upgrade that may be required to collect sewage from the La Brea Master Plan project in combination with other development projects that are developed within LASAN's service area.	Significant	Implement Mitigation Measures AES/mm-4.1; AQ/mm-3.1; BIO/mm-1.1, BIO/mm-2.1, BIO/mm-3.1, BIO/mm-5.1 and 5.2, BIO/mm-6.1; CR-ARCH/mm-1.1 through 1.4; CR-HIST/mm-1.1 through 1.5; GEO/mm-3.1 and 3.2, GEO/mm-4.1, GEO/mm-6.1 through 6.5; GHG/mm-1.1; HAZ/mm-1.1 through 1.2, HAZ/mm-2.1 and 2.2; NOI/mm-1.1; TRA/mm-1.1, TRA/mm-4.1 through 4.3; TCR/mm-1.1 through 1.4; and UTL/mm-1.1.	Less than significant

2.6 AREAS OF CONTROVERSY

Section 15123(b)(2) of the State CEQA Guidelines requires identifying areas of controversy known to the Lead Agency, including issues raised by agencies and the public. On February 14, 2022, in accordance with Sections 15063 and 15082 of the State CEQA Guidelines, the County published a Notice of Preparation (NOP) for the EIR and circulated it to governmental agencies, organizations, and persons who may be interested in the proposed project, including nearby landowners, homeowners, and tenants. As part of releasing the NOP, the County requested comments on the scope of the EIR and asked interested parties for their suggestions regarding ways the project could be revised to reduce or avoid any significant environmental impacts. The NOP provided a general description of the proposed project, a description of the project site, and a preliminary list of potential environmental effects. The 30-day comment period extended through March 16, 2022.

Two public scoping meetings were held virtually via Zoom on March 2, 2022, at 2:30 p.m. and 5:30 p.m. Pacific Standard Time, to solicit input from any interested parties on the scope and content of the EIR in conformance with Section 21083.9 of the California Public Resources Code. Live language interpretation of the presentation and scoping meeting input was provided in Spanish and Korean during the scoping meetings.

Following the close of the 30-day comment period on the NOP, comment letters were reviewed to identify any key issues that may require additional technical studies or background research. A summary matrix of written comments received during the NOP comment period and the verbal comments recorded at the two public scoping meetings is provided in Appendix A.

Areas of controversy raised by public agencies, public organizations, and individual members of the public primarily included concerns regarding the overall design of the project as it relates to protecting the passive recreational spaces and pedestrian pathways in and around the Lake Pit; the desire for the inclusion of a dog park and children's playground; the potential for project renovations to increase light pollution in the area; changes to landscaping and the potential for tree removal and/or replacement within the project site; and impacts of the project on traffic and circulation in and around the project site. To the extent these issues and concerns are within the scope of CEQA, they are addressed in the evaluation and identification of potential mitigation measures for each environmental issue area included in Chapter 5, Environmental Impact Analysis.

2.7 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the State CEQA Guidelines requires the summary section of an EIR to identify any "issues to be resolved" by the decision-making body, including the choice among alternatives and whether or how to mitigate any significant effects. In consideration of the project, the Foundation, under the direction of the County, will need to weigh transportation issues, modifications to designated historical resources, the replacement or relocation of existing trees, and the potential for additional environmental impacts to occur as described in this EIR. Specifically, determinations will need to be made as to whether the recommended mitigation measures for identified significant impacts should be adopted or modified, and whether the benefits of the project outweigh the environmental impacts that cannot be feasibly avoided or mitigated to less than significant (i.e., the project's significant and unavoidable impacts to historical resources, conflicts with applicable plans and policies to protect historical resources, and increase in vehicle trips within the project area). Additionally, a determination will need to be made as to whether any of the alternatives, instead of the project, should be approved.

2.8 PROJECT ALTERNATIVES

Section 15123(b)(3) of the State CEQA Guidelines requires that an EIR summary identify the choice among project alternatives. Alternatives to the project are discussed in detail in Chapter 6, Alternatives Analysis, of this EIR in accordance with Section 15126.6 of the State CEQA Guidelines. Alternatives required to be considered under CEQA are those that would avoid or substantially lessen one or more of the significant environmental effects identified during evaluation of the proposed project. CEQA Guidelines Section 15126.6(a) states that an EIR shall describe a range of reasonable alternatives. As evaluated throughout Chapter 5 of this EIR, the significant impacts of the project prior to implementation of project mitigation measures would occur in the following environmental issues areas: aesthetics; air quality; biological resources; archaeological resources; historical resources; geology and soils; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality; land use and planning; noise and vibration; recreation; transportation; tribal cultural resources; and utilities and service systems.

Chapter 6 of this EIR identifies, describes, and evaluates the following four alternatives:

- **No Project/No Build Alternative**. Section 15126.6(e) of the State CEQA Guidelines requires analysis of the No Project/No Build Alternative. In the No Project/No Build Alternative, implementation of the project would not occur and the existing project site and its physical conditions would generally remain as they are in their current state. This includes the majority of Hancock Park and the structures within the project boundary, including the Page Museum; therefore, these features would resemble existing conditions. Site elements, including the surface parking lot, maintenance areas, amphitheater, landscaping, and pathways, would all remain. Site access for visitors, loading, maintenance vehicles, and the fire department would remain in its current configuration.
- **Alternative 1: Renovate Page Museum Only**. In Alternative 1, the exterior conditions of the La Brea Tar Pits Historic District and the Page Museum would be retained as-is under existing conditions, while addressing some of the museum's deficiencies by way of an interior renovation only. The renovation work within the Page Museum would upgrade its existing facilities and systems while maintaining its current program, spatial organization, and room sizes. This alternative was considered as the renovation would retain or replace in kind the historic, character-defining features related to the museum's interior such as the central open-air atrium and the fishbowl-like lab space. This alternative would emphasize remedial work on the building structure and existing exhibits and would be performed from the museum interior as much as possible. This alternative scenario would, however, require further study to determine the feasibility of the renovation to also meet modern seismic standards since modifications to the building's exterior would be avoided under this alternative. In those instances, the identified areas would be repaired or replaced in kind and designed to resemble their current physical appearance to avoid impacting the historic, character-defining features of the museum's exterior. The remainder of the project site would also resemble existing conditions, and site access for visitors, loading, maintenance vehicles, and the fire department would remain in the current configuration in this alternative. Other museum-related facilities, as well as associated passive recreational areas and pathways around and within the project site, would remain as-is under current conditions.
- **Alternative 2: Maintain Central Atrium Pleistocene Garden**. Alternative 2 would include renovating the existing Page Museum to maintain the central atrium with the Pleistocene Garden in place while also providing the same expanded museum facilities and programming as proposed by the project. To maintain the central atrium footprint while providing the proposed laboratory, classroom, and multi-purpose educational spaces, Alternative 2 would include expanding the new

museum space to the north and west of the existing Page Museum, increasing the size of the new museum building by approximately 15,000 square feet above what is proposed by the project. In addition, the character of the open-air roof would remain intact. This alternative would slightly reconfigure the surface parking lot, like the project, extending it west of the new museum building footprint. This alternative would adjust the project's triple-loop pedestrian path adjacent to the proposed new museum building to accommodate the larger building footprint. The landscaping improvements and overall landscape design of the project site in Alternative 2 would be similar to the project, except for the reconfigured northern portion of the project site, the reduced open space area, as well as the adjustment to the pedestrian path.

- **Alternative 3: Adjust Footprint to Reduce Contact with Page Museum and Expand Central Green**. Alternative 3would include the renovation of the Page Museum within the existing building footprint, similar to the project, but would incorporate a series of design refinements to reduce impacts on certain primary, character-defining features of the Page Museum, including refining the materiality and size of the expansion atrium pop-up to better compliment the frieze, preserving a larger portion of the existing berm on the west side of the Page Museum, and detailing the second-floor glass enclosure underneath the Page Museum frieze to be as transparent as possible. This alternative would also include constructing a new museum building of approximately 40,000 square feet, similar to the project, but would adjust the building footprint to the north and west of the project's proposed footprint. This adjustment would allow for more separation of the new museum from the existing Page Museum by narrowing the transition area connection between the two buildings. Adjusting the footprint of the new museum to the north would also allow for approximately 4,000 square feet of open space to be added to the Central Green. In this alternative, the on-site surface parking would be reconfigured to complement the adjusted building footprint, extending west of the new museum building as with the project, but this alternative would maintain the number of parking spaces that currently exist on-site and would not add additional parking spaces.

Table 2-3 provides a comparison of impacts among the project alternatives.

Table 2-3. Comparison of Impacts Among Alternatives

Issue Area	No Project/ No Build Alternative	Alternative 1: Renovate Page Museum Only	Alternative 2: Maintain Central Atrium Pleistocene Garden	Alternative 3: Adjust Footprint to Reduce Contact with Page Museum and Expand Central Green
Aesthetics	Decreased	Decreased	Similar	Similar
Air Quality	Decreased	Decreased	Similar	Similar
Biological Resources	Decreased	Decreased	Similar	Similar
Cultural Resources – Archaeological Resources	Decreased	Decreased	Similar	Similar
Cultural Resources – Historical Resources	Decreased; would avoid the project's significant and unavoidable impact	Decreased; would avoid the project's significant and unavoidable impact	Similar; impacts would continue to be significant and unavoidable*	Decreased; impacts would continue to be significant and unavoidable†
Geology and Soils	Decreased	Decreased	Similar	Similar
Greenhouse Gas Emissions	Similar	Similar	Similar	Similar
Hazards and Hazardous Materials	Decreased	Similar	Similar	Similar
Hydrology and Water Quality	Decreased	Similar	Similar	Similar

Issue Area	No Project/ No Build Alternative	Alternative 1: Renovate Page Museum Only	Alternative 2: Maintain Central Atrium Pleistocene Garden	Alternative 3: Adjust Footprint to Reduce Contact with Page Museum and Expand Central Green
Land Use and Planning	Decreased; would avoid the project's significant and unavoidable impact	Decreased; would avoid the project's significant and unavoidable impact	Similar; impacts would continue to be significant and unavoidable	Decreased; impacts would continue to be significant and unavoidable.
Noise and Vibration	Decreased	Decreased	Similar	Similar
Recreation	Similar	Similar	Similar	Similar
Transportation	Decreased; would avoid the project's significant and unavoidable impact	Decreased; would avoid the project's significant and unavoidable impact	Similar; impacts would continue to be significant and unavoidable	Similar; impacts would continue to be significant and unavoidable
Tribal Cultural Resources	Decreased	Decreased	Similar	Similar
Utilities and Service Systems	Decreased	Decreased	Similar	Similar
Meets Project Objectives?	Partially	Partially	Partially	Yes

Notes:

* The benefits of avoiding the impacts to the Page Museum's character-defining features do not outweigh the additional impacts to the character-defining features of the La Brea Tar Pits Historic District and would not avoid the project's significant and unavoidable impacts related to alterations of historical resources.

†Impacts to certain character-defining features are lessened to both the Page Museum and the La Brea Tar Pits Historic District, thereby reducing the overall severity of the impacts to historical resources; however, it would not avoid the project's significant and unavoidable impacts.

As detailed in Chapter 6 and based strictly on an analysis of the relative environmental impacts, Alternative 1, Renovate the Page Museum Only, would be the Environmentally Superior Alternative because it would be the built alternative that minimizes the project's adverse impacts on the environment. The Foundation and the Museum of Natural History, as a departmental unit of the County, will consider the whole of the record when considering the project including, but not limited to, public comment and testimony related to the size and design of the residence. The Foundation and the Museum of Natural History may select the project as proposed, an alternative, or a specified combination of particular elements identified in the alternatives, as the approved project.

Alternative 1 would avoid the project's significant and unavoidable impact to historical resources as it would result in renovations to the interior of the Page Museum only, while retaining the character-defining features of both the Page Museum and the La Brea Tar Pits Historic District that qualify them as historical resources. Because Alternative 1 would avoid impacts to historical resources, it would also avoid the project's inconsistencies with applicable land use plans and policies. In addition, Alternative 1 would also avoid the project's significant and unavoidable impact related to transportation as it would not result in the project's substantial increase in regional vehicle miles traveled (VMT). Alternative 1 would also result in decreased impacts to a majority of the other environmental issues areas listed in Table 2-3 as no grading or other earthwork activities would be necessary, and no other structures would be constructed as a result of this alternative. Further, upon completing this alternative, there would be no changes to the existing land use types or operational characteristics of the project site. Alternative 1 would meet one of the project objectives related to preserving and protecting the National Natural Landmark—La Brea Tar Pits. Alternative 1 would partially meet two other project objectives related to addressing the deferred maintenance and meeting modern building code standards of Page Museum as well as partially meeting the project objective related to providing state-of-the-art exhibition facilities and learning environments within the museum. While it would not meet most of the project objectives, Alternative 1 is the alternative scenario that reduces the most environmental impacts when compared to the project.

For comparison, Alternative 2, Maintain Central Atrium Pleistocene Garden, would preserve most of the character-defining features of the Page Museum, but it would result in the loss of a greater amount of open space in the La Brea Tar Pits Historic District due to the increased footprint of the project. As such, the benefits of avoiding the impacts to the Page Museum's character-defining features do not outweigh the additional impacts to character-defining features to the La Brea Tar Pits Historic District and this alternative would not avoid the project's significant and unavoidable impacts related to alterations of historical resources. Since Alternative 2 would not avoid the project's significant and unavoidable impacts to historical resources, it would also result in the project's inconsistencies with applicable land use plans and policies. In addition, Alternative 2 would not avoid the project's substantial increase in regional VMT and would still result in significant and unavoidable impacts related to this issue. Alternative 2 would also result in similar impacts as the project to the other environmental issues areas listed in Table 2-3 as this alternative would result in similar types of construction activities and operational uses as proposed by the project. Alternative 2 would meet seven project objectives and partially meet the remaining two objectives due to the loss of open space as a result of the expanded museum footprint.

Alternative 3, Adjust Footprint to Reduce Contact with Page Museum and Expand Central Green, would result in similar environmental impacts as the project for each issue area analyzed in this EIR, as shown in Table 2-3, except for historical resources and land use and planning. While Alternative 3 would lessen certain impacts to character-defining features to both the Page Museum and the La Brea Tar Pits Historic District thereby reducing the overall severity of the impacts to historical resources, it would not avoid the project's significant and unavoidable impacts. Similarly, the design refinements in this alternative would help to further support the land uses plans and policies applicable to the project as they relate to the protection and alternation of historical resources, but not in such a way to avoid the project's related significant and unavoidable impacts. This alternative would also result in the project's significant and unavoidable impacts related to increased regional VMT. However, Alternative 3 is the alternative that meets all project objectives by providing an adjusted museum footprint and incorporating a series of design refinements that would support the basic objectives of the project.

CHAPTER 3. PROJECT DESCRIPTION

This chapter provides a description of the proposed La Brea Tar Pits Master Plan (project), including the project location and setting, the project objectives, and a description of project characteristics and design features. This chapter also includes a description of intended uses of this EIR, including required agency actions and coordination requirements.

La Brea Tar Pits is an active paleontological research site located within Hancock Park in the city of Los Angeles (Figure 3-1 and Figure 3-2). La Brea Tar Pits, the George C. Page Museum (Page Museum), and associated facilities, are owned by the County of Los Angeles (County) but are managed by the non-profit Los Angeles County Museum of Natural History Foundation (Foundation). The Foundation's role is to carry out all County services including public access and programming, administration, and operation for the County of Los Angeles Museum of Natural History (Museum of Natural History),[1] including La Brea Tar Pits and the Page Museum. The County is the Lead Agency under CEQA for this EIR; the Museum of Natural History is a County departmental unit.

The Foundation proposes a redevelopment, or "reimagining," of the 13-acre La Brea Tar Pits site, including the Page Museum and portions of the surrounding Hancock Park. The proposed project is the *La Brea Tar Pits Loops and Lenses, Master Plan and Concept Design*, prepared for the Foundation and the County and referred to as the La Brea Tar Pits Master Plan (Master Plan, Weiss/Manfredi 2023). The project includes a reimagined site design, expansion, and upgrades for the Tar Pits complex, including renovations to the Page Museum. The Master Plan is included as Appendix B.

The project site is located at 5801 Wilshire Boulevard in Los Angeles. The project site is adjacent to the Los Angeles County Museum of Art (LACMA).

3.1 PROJECT LOCATION

The 13-acre La Brea Tar Pits site is located within the eastern and northwestern portions of the 23-acre Hancock Park (Assessor's Parcel Number [APN] 5508-016-902) at 5801 Wilshire Boulevard. The project site includes 13 acres of the eastern and northwestern portions of Hancock Park and is directly adjacent to LACMA; both LACMA and the Foundation are responsible for managing separate and distinct portions of the 23-acre Hancock Park, with the Foundation responsible for the 13-acre project site and LACMA responsible for the remainder of the site to the south and west of the project boundaries. LACMA's facilities are not included in the project.

The project site is located approximately 5.5 miles west of downtown Los Angeles and approximately 8.6 miles east of the Pacific Ocean. It is bounded by West 6th Street to the north (an approximately 1,200-foot-long frontage), South Curson Avenue to the east (an approximately 830-foot-long frontage), Wilshire Boulevard to the south (an approximately 500-foot-long frontage), and LACMA to the west (an approximately 250-foot-long frontage). The area surrounding the site is known as the Miracle Mile neighborhood of the city of Los Angeles.

[1] In accordance with Chapter 2.94 of the Los Angeles County Code and various other operating agreements, the County Museum of Natural History is a department of the County and has administrative charge and control over all County matters relating to history and science, and shall also include the administration of Hancock Park (except that area of said park devoted to the Los Angeles County Museum of Art [LACMA]), and the care, safeguarding, and maintenance of all exhibits, equipment, and structural improvements directly relating to exhibits, the administration and maintenance of LACMA, and other property hereafter acquired for or devoted to history and science.

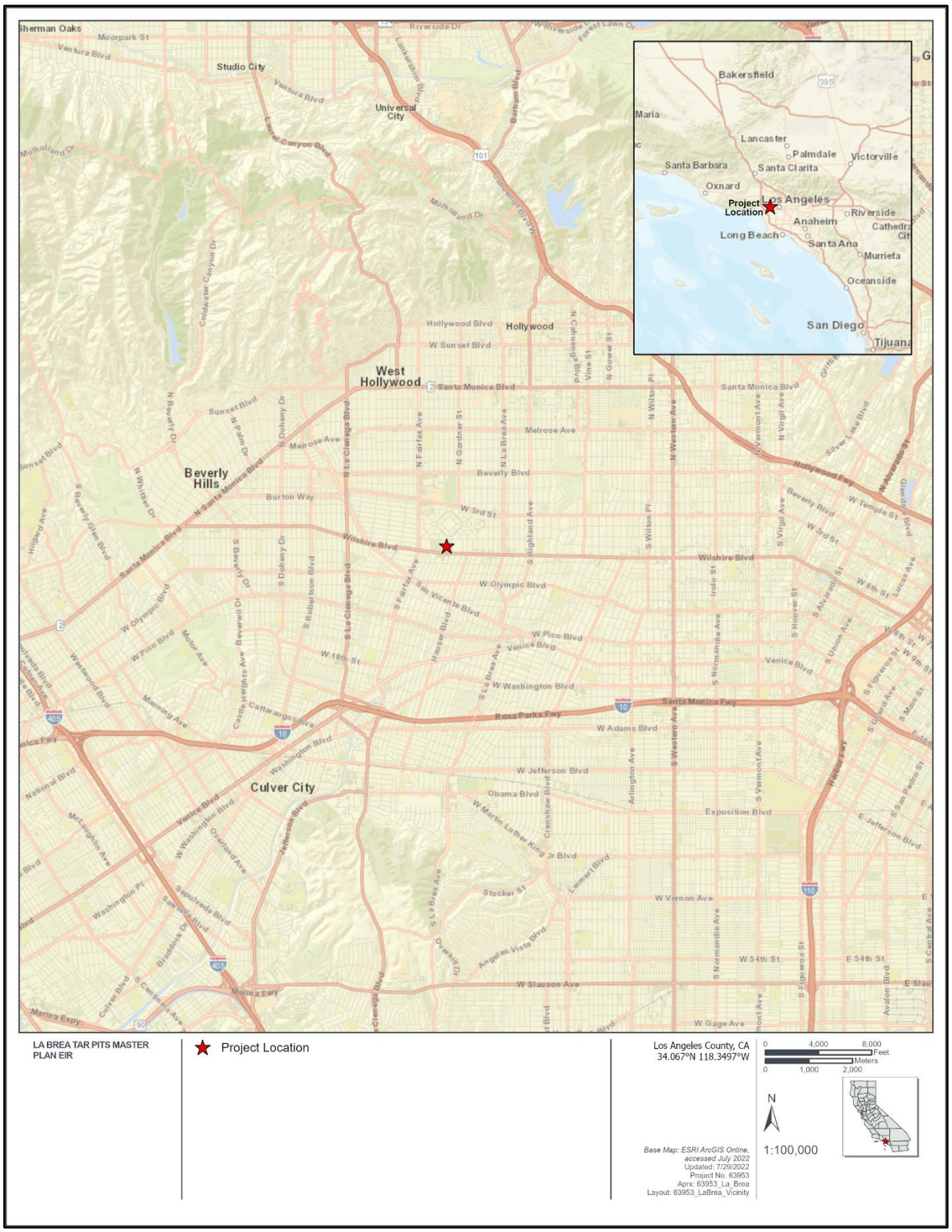


Figure 3-1. Project vicinity map.

Figure 3-2. Project location map.

Primary regional access to the project site is provided by Interstate 10, which runs east-west less than 2 miles south of the project site. The major arterials providing regional and subregional access to the project site vicinity include Wilshire Boulevard, La Brea Avenue, and Fairfax Avenue. The project site is well served by public transit. Specifically, the Los Angeles County Metropolitan Transportation Authority (Metro) 20 and 720 bus lines on Wilshire Boulevard and the Metro 217, 218, and 780 bus lines on Fairfax Avenue all stop within half a block of the project site.

In addition, Metro is currently constructing an extension of the Metro system D Line (formerly known as the Purple Line), providing three new heavy-rail subway stations along Wilshire Boulevard, which will serve the project site (Metro 2022). The new stations will be located at Wilshire Boulevard/La Brea Avenue, Wilshire Boulevard/Fairfax Avenue, and Wilshire Boulevard/La Cienega Boulevard. They are slated to open for service in 2024.

3.2 EXISTING SETTING

3.2.1 Surrounding Land Uses

The La Brea Tar Pits project site is surrounded by a variety of commercial uses, museums, residential buildings, and schools.

The project site is bounded by the Park La Brea Pool and multi-family residential uses to the north across West 6th Street, commercial and residential uses to the east across South Curson Avenue, the Craft Contemporary Museum and other museum and commercial uses south across Wilshire Boulevard, and museum and commercial uses to the west. LACMA is located to the south and west of the project site, including its Pavilion for Japanese Art and the future David Geffen Galleries, a building that is currently under construction to replace four of LACMA's older buildings. Beyond LACMA's facilities to the west are an outdoor public art installation and the Academy Museum of Motion Pictures.

The closest sensitive land uses to the project site are off-site residential uses located 50 to 150 feet from the project site. The nearest school to the project site is Fusion Academy Miracle Mile, a private learning institution for middle school and high school–age students, located approximately 0.12 mile away, and the nearest daycare is Michal Daycare located approximately 0.28 mile away.

3.2.2 Project Site Background

The project site is located within the former Rancho La Brea, a 4,439-acre Mexican land grant given to Antonio Jose Rocha and Nemisio Dominguez in 1828. Rancho La Brea consisted of approximately 4,500 acres of land in current-day Wilshire's Miracle Mile neighborhood, Hollywood, and parts of West Hollywood. In 1860, Rancho La Brea was deeded to Henry Hancock and eventually subdivided and developed. The first published mention of the occurrence of extinct fauna and fossils at Rancho La Brea was made by William Denton in 1875. In 1902, the Salt Lake Oil Field was discovered, which is the source of long-term seepage of crude oil to the ground surface within the project site. In 1913, George Hancock gave the County the exclusive right to excavate fossils and specimens for a 2-year period within and around the asphaltic deposits of the site. The largest and best documented collections at that time were made between 1913 and 1915. During this period, 96 sites were excavated, yielding well over 750,000 specimens of plants and animals.

The County acquired Hancock Park in 1924, through a donation by George Hancock (Natural History Museums of Los Angeles County 2022). Recognizing the site as scientifically valuable, Hancock donated the site under the condition that the County would develop the park as a scientific monument known as La Brea Tar Pits. After Hancock Park was established in 1924, little in the way of formal excavation was

accomplished for the next 45 years (Natural History Museums of Los Angeles County 2022). In 1969, the Rancho La Brea Project began by resuming excavation of a major deposit of fossils in Pit 91 that had been discovered in 1915. In 1975, philanthropist George C. Page donated funds to construct an on-site museum. The Page Museum opened to the public in 1977.

Currently, Hancock Park is registered as California Historical Landmark No. 170, and La Brea Tar Pits is a U.S. National Natural Landmark (California State Parks 2022). The asphalt seeps at La Brea Tar Pits are the only actively excavated urban Ice Age fossil dig sites in the world (Natural History Museums of Los Angeles County 2022).

3.2.3 Existing Project Site Conditions

As described above, the project site includes 13 acres of the eastern and northwestern portions of Hancock Park and broadly encompasses what is known as La Brea Tar Pits, which includes the Page Museum (Figure 3-3). As shown in Figure 3-3, the existing two-story Page Museum is located within the eastern portion of the project site. The first floor of the museum is set into a large earthen berm which opens onto the Central Green, which is a 28,000-square-foot multipurpose grass lawn to the west of the Page Museum. At the top of the earthen berm on the second floor is a 30-foot-wide rooftop covered viewing platform which surrounds the first-floor central atrium courtyard.

The project site contains multiple fossil quarries, commonly called "tar pits." The tar pits (Pits 3, 4, 9, 13, 61, 67, and 91) are within the northwestern portion of the project site. These tar pits are fenced and include informational placards. Pit 10 is not open for public viewing as it is within the research facilities enclosing Project 23.[2] Numerous small tar seeps (an upwelling of asphaltum to the ground surface) are spread throughout the project site.

To the south of the Page Museum is the Wilshire Boulevard entrance and the largest asphaltic feature on the grounds of Hancock Park, the Lake Pit. The Lake Pit, which is the result of asphalt mining operations dating to the late 1880s, is one of more than 96 mining and paleontological excavation pits that once filled the park. In 1967, statues of Columbian mammoths were put on display in the Lake Pit, conveying the struggle prehistoric fauna encountered when accidentally entering a tar deposit. The statues remain there today, along with an approximately 8-foot-high fence surrounding the Lake Pit for safety and security purposes. A comfort station, with public restrooms, picnic benches, and vending machines, is adjacent to the Lake Pit to the west.

Oil Creek, a historic ephemeral creek supported by underground drainage, runs from the northeast by the parking area off South Curson Avenue to the southwest through the project site.

The entirety of Hancock Park is enclosed with an 8- to 10-foot-high metal fence that serves to secure the site by providing full closure of Hancock Park when La Brea Tar Pits, Page Museum, and LACMA are closed in the evenings.

For additional information on the current site conditions, refer to Chapter 4, Environmental Setting.

[2] Project 23 is an active fossil recovery site. In 2006, the LACMA began work on a new underground parking garage. During the course of construction, 16 new fossil deposits were discovered, including an almost-complete skeleton of an adult mammoth. Construction was halted, and 23 large wooden boxes were built around each fossil deposit (hence the short-hand descriptor, "Project 23"). These boxes and numerous buckets of fossil material were moved to the Project 23 current location for recovery. Adjacent covered research and storage areas support the ongoing fossil recovery.

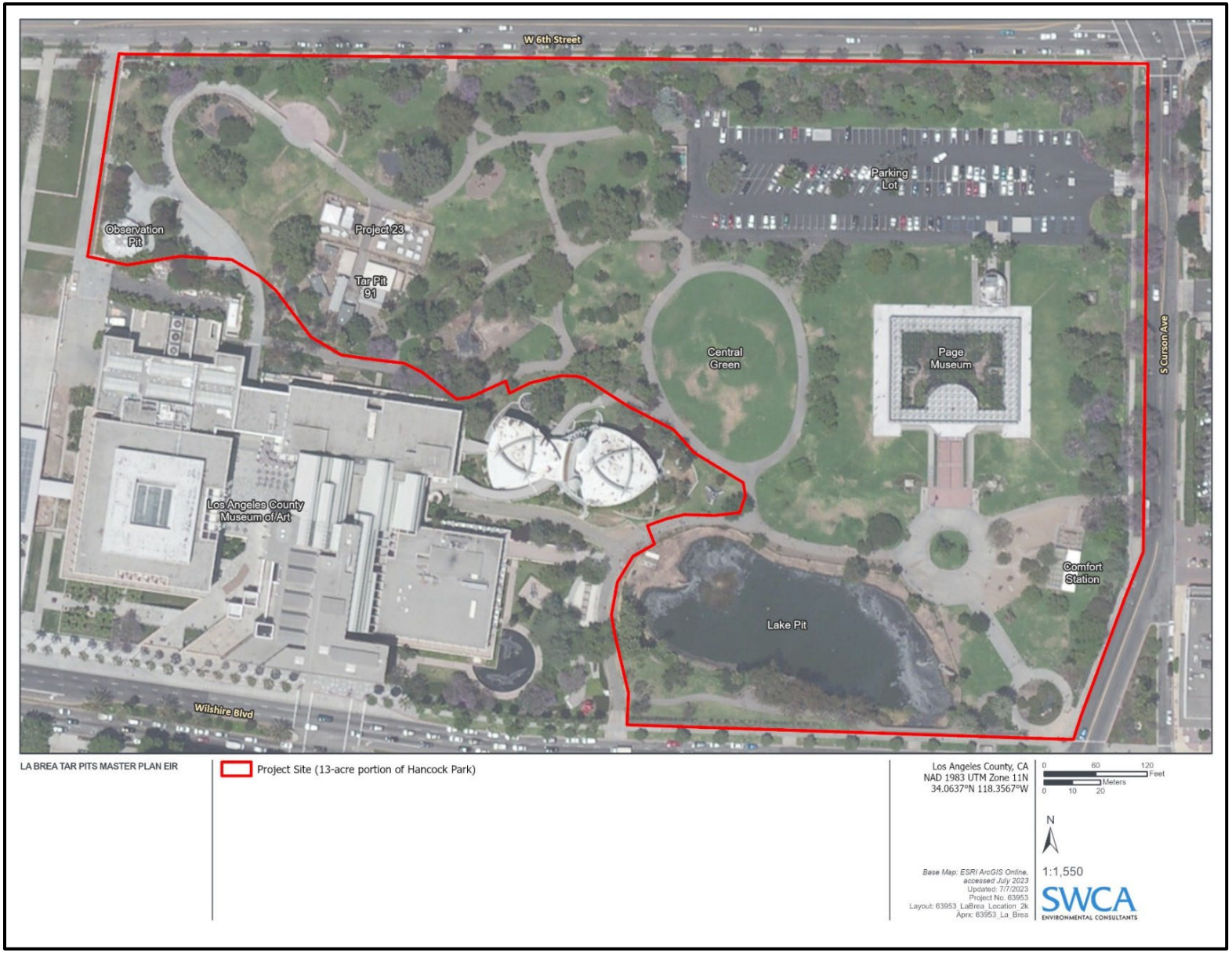


Figure 3-3. Existing site–Page Museum and Hancock Park.

3.3 PROJECT OBJECTIVES

Section 15124(b) of the State CEQA Guidelines states that a project description shall contain "a statement of the objectives sought by the proposed project," and further states that "the statement of objectives should include the underlying purpose of the project." The Los Angeles County Museum of Natural History, as a departmental unit of the County, and the Foundation have identified the following objectives for the project:

1. Renovate and expand the existing museum structure to address deferred maintenance of the building envelope and systems, to meet modern seismic, electrical, building code standards, and universal design standards, and to meet sustainability goals consistent with the County's sustainability plan (County of Los Angeles 2019).
2. Provide expanded collections storage facilities that enable access for scientific research, and preserve, protect, and allow future growth of the museum's world-class collections.
3. Provide expanded state-of-the-art laboratory research facilities to accommodate internationally significant and advanced research in paleontology.
4. Provide state-of-the-art exhibition facilities and learning environments within the park and museum to enrich the visitor experience and to support active educational and public programming.
5. Improve access and entry for different visitor types, increase connections between the museum and the park, as well as support increased visitation, special events, and revenue-producing amenities within the park and museum.
6. Expand the museum exhibits, educational classrooms, collection spaces, offices, and laboratory research facilities in one unified, cohesive facility, with the fewest impacts to historical resources possible.
7. Create a central entrance to the museum facilities to enhance the visitor experience of the museum and Hancock Park.
8. Preserve and protect the National Natural Landmark—La Brea Tar Pits—to allow access for future research and excavation, support cultural and educational interpretation, and enable the ongoing natural processes of the asphaltic seeps.
9. Redesign and renovate the Hancock Park community park green space as an expression of the goals of the County of Los Angeles's General Plan Conservation and Natural Resources Element and the City of Los Angeles's Open Space and Conservation Elements of the General Plan, to increase sustainable landscape and site design, to support passive recreational use, to increase the legibility of this important cultural destination, and to enhance connections to the quickly evolving Miracle Mile neighborhood.

3.4 PROPOSED PROJECT

The project would result in renovations and upgrades throughout the project site. The project would result in a reimagined site design, expansion, and upgrades for the Tar Pits complex and the 13-acre portion of Hancock Park, including renovations to the Page Museum (Figure 3-4). Table 3-1 provides a summary of the project components; more detail on the project components is provided in the following sections.

Table 3-1. Project Components Summary

Project Component	Description
Page Museum Renovations	Renovate existing building within the same footprint (approximately 63,200 square feet).
New Museum Building	Construct a new two-story, 40,000-gross-square-foot (gsf) museum building northwest of the Page Museum, including two new theaters. The construction of the new museum building would require the removal of vegetation in the footprint of the new building.
Wilshire Gateway	Renovate the existing entrance to La Brea Tar Pits at Wilshire Boulevard and South Curson Avenue with shaded canopy and new welcome pavilion.
6th Street Gateway	Renovate the existing entrance at the northwest corner of West 6th Street and the entrance to the LACMA service drive with shaded canopy and new welcome pavilion.
Tar Pits (Pits 3, 4, 9, 13, 61, 67, and 91; Project 23)	Renovate the existing facilities at all the tar pits in the northwestern portion of the project site. These renovations would require the removal and replacement of some vegetation, although the exact amount and nature of the vegetation removal and enhancements have not been determined at the time of this report.
Pedestrian Path and Recreation Areas	Reconfigure the existing pedestrian pathways on-site into a continuous paved path linking existing features on the project site. Provide improvements to the Central Green. Establish a children's play area, picnic areas, and a possible future small dog park.
Circulation and Parking	Relocate the parking lot approximately 50 to 70 feet to the north. The size of the parking lot (63,000 square feet) and the number of parking spaces would not change. The shifting of the parking lot on the northern side of the project site may require removal or relocation of the trees between the existing parking lot and West 6th Street. If these trees need to be removed or relocated, they would be either moved to another location within the 13-acre project site or replaced elsewhere within the project site. Add new landscaping and vehicle access lanes to the parking lot. Establish a new school drop-off/loading area approximately 215 to 230 feet long on South Curson Avenue adjacent to the Wilshire Gateway picnic area.
Landscaping Concept Plan	Establish three distinct landscaping zones encircled by a looping pedestrian path. More than 330 trees are currently on the project site. The project would require removal and replacement and/or relocation of between 150 and 200 trees. The planting strategy includes the planting (introduction or relocation) of a similar number of trees as would be removed. It is preliminarily estimated that 10 percent of the 150 to 200 trees to be removed would be relocated rather than replaced. Create three biofiltration areas for stormwater management.

3.4.1 Page Museum Renovations

The project would include renovation of the existing Page Museum to allow for enlarged exhibition space, additional storage, a ground floor café, and retail space (Figure 3-5). The vegetation in the existing central atrium of the Page Museum would be removed. The central atrium would be renovated to provide additional exhibitions, an additional classroom, and visible laboratory space (Figure 3-6). The renovation would also allow much of the collection space to be reorganized and enlarged to provide better display of the collections to the public. The enlarged storage for the collections would accommodate up to 2,000 cubic feet of additional storage. In addition, space for visiting researchers and approximately 17 new employees would be added.

The second floor of the Page Museum would contain a multipurpose space. An outdoor café would be located next to these spaces on the center terrace on the west side of the Page Museum. The existing Page Museum entrance would be converted to an educational group and tour entrance, which would be connected to a new school drop-off area on South Curson Avenue.

Figure 3-4. Conceptual site plan.

Figure 3-5. Proposed museum ground-floor building program.

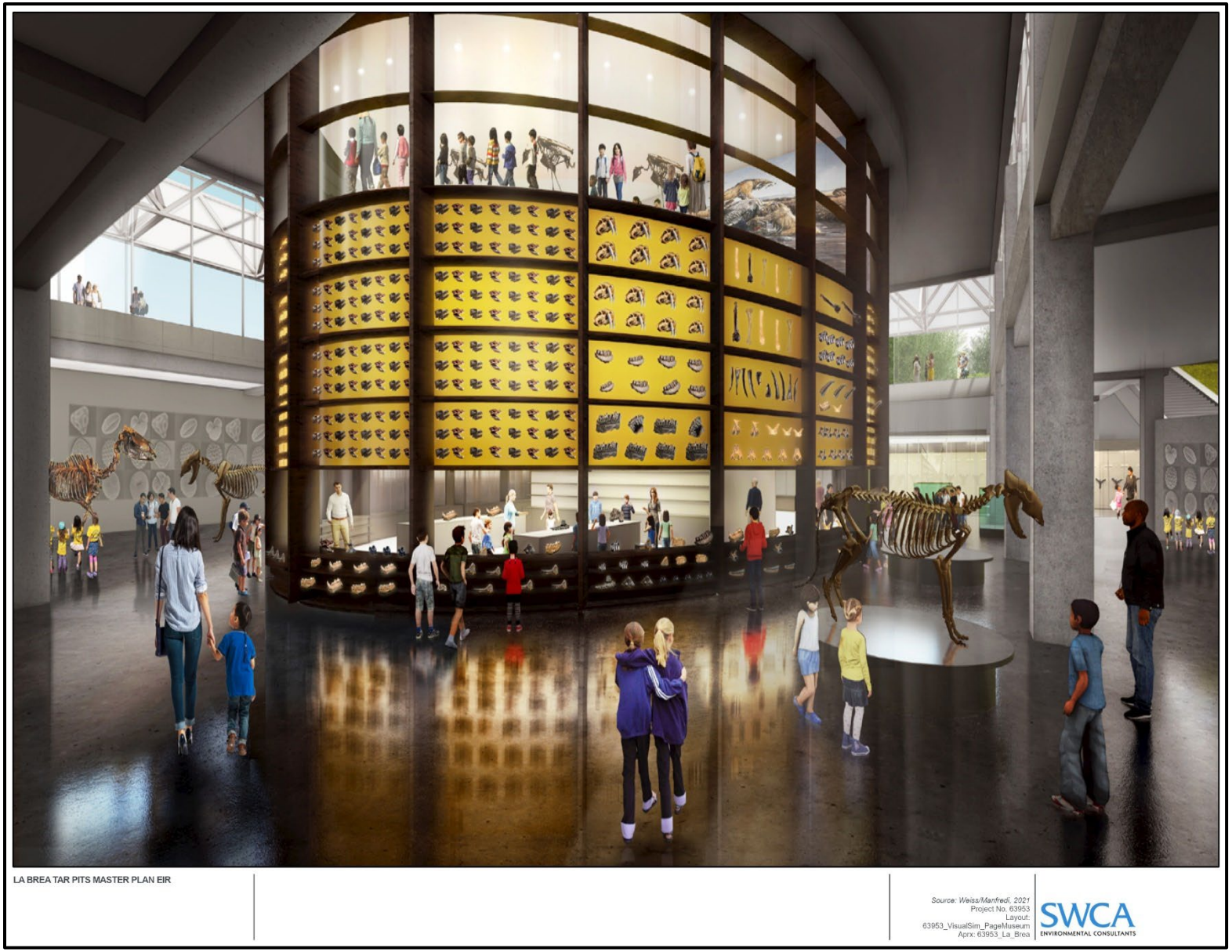


Figure 3-6. Visual simulation: Page Museum renovation.

The project would add extensive sustainability features to the Page Museum, including enhanced daylighting, rainwater collection leading to bioswales, and rooftop solar photovoltaic panels.

3.4.2 New Museum Building

The two-story new museum building would be located to the northwest of the Page Museum, in an area currently occupied by a portion of the parking lot. As described below in Section 3.4.9, the parking lot would be shifted from its current position to the northeast. The building would be approximately 40,000 gsf and would increase the total museum square footage to 104,000 gsf. The new museum building would include an extended central lobby, exhibit spaces, two theaters, a mechanical equipment room, research and collections laboratories, administration spaces, and a loading dock. The new building would have a maximum building height of 30 feet when measured from the terrace level and up to 60 feet when measured from the finished floor of the new building.

The Page Museum and new museum building would be continuously connected on the first floor (see Figure 3-5). The first-floor central lobby would face southwest toward the Central Green and branch off into the Page Museum to the east and the new museum building to the west. An updated retail space and café would be located off the lobby and look out over the Central Green.

The buildings would be disconnected on the second floor, which would rise above the earthen berm. Interior staircases would lead to the upper floors and the two separated facilities would be accessible through sloped outdoor walkways from the Central Green.

There would be pedestrian entrances leading into the central lobby from the Central Green and from the parking lot.

3.4.3 Wilshire Gateway and Lake Pit

The project would renovate the existing entrance to La Brea Tar Pits located at Wilshire Boulevard and South Curson Avenue. A large, shaded canopy would stretch down Wilshire Boulevard and curve around to South Curson Avenue to create a new welcome pavilion and shaded entry plaza; this would provide orientation, spaces for gathering and queuing, and restrooms (Figure 3-7). A picnic area would also be located under the shaded canopy.

A pedestrian bridge and walking path may be constructed over the Lake Pit. If constructed, it would include interpretive signage and explanations related to the former industrial heritage of the site. Other features may be incorporated into the Lake Pit area (e.g., around the shore) to enhance the visitor experience and improve management of the lake. Directly to the east of the Lake Pit, a new garden bioswale would be installed to manage stormwater and would include vegetation related to the Pleistocene era.

A school drop-off area on South Curson Avenue would lead directly to the education museum entrance, enabling the management of student tour itineraries that are distinct from general museum visitors and other tour groups.

3.4.4 6th Street Gateway

The project would renovate the existing entrance at the northwest corner of West 6th Street and the entrance to the LACMA service drive. Like the Wilshire Gateway, a shaded canopy and welcome pavilion would provide orientation, legibility, and amenities. The intent of this entry is to provide a visible point of arrival from the residential communities to the north, providing access to the different

destinations at the Tar Pits site, including play areas, picnic areas, seating, and interpretation zones at the protected tar seeps.

3.4.5 Tar Pits

The project would renovate the existing facilities at all the tar pits in the western portion of the project site. The existing fencing around Pit 9, Pit 13, and Pits 3, 4, 61, and 67 would be removed. The project would construct clearly defined viewing areas around each of the tar pits, with improved pit protection zones and fencing, seating, and interpretive signage.

The project would relocate the wooden fossil boxes, research facilities, and ongoing excavation associated with Project 23 to space within and adjacent to the new museum building. The temporary storage and research buildings adjacent to Project 23 would be demolished or repurposed within the project site.

Pit 91 would continue to be a key research and interpretation destination in the park. The project includes the demolition of the current viewing station overlooking Pit 91. In addition, a shaded outdoor classroom, a canopy, built-in seating, and a possible support structure would be constructed (Figure 3-8 and Figure 3-9). While excavation at Pit 91 could be completed in a few years, the site would be maintained and enhanced to support future excavation and educational opportunities. In addition, the new support facilities at Pit 91 would continue to support temporary excavation sites at adjacent Pit 10 or other future field sites.

3.4.6 Pedestrian Path and Recreation

The project would reconfigure the existing pedestrian pathways on-site into a continuous paved pedestrian path linking the existing elements of the site: the Lake Pit and Wilshire Gateway in the southeast, the Central Green, museum, and tar seeps, and the 6th Street Gateway in the northwest (Figure 3-10). The pathway would be a series of three interconnected loops (see Figure 3-10 and Figure 3-11). Each of the three loops would contain distinct themes and programming.

The Central Green would be at the center of the project site, directly southwest of the Page Museum and new museum building (see Figure 3-4). This large common grass lawn provides a setting for community activities, recreation, events, and public gathering. The project would improve the infrastructure to create a drivable path for food trucks to access the Central Green.

To the west of the 6th Street Gateway, the project would add a children's play area, picnic areas, and a possible small dog park. Vegetated berms around recreation areas would create seating areas and elevated vantage points.

Figure 3-7. Visual simulation: Wilshire Gateway.

Figure 3-8. Visual simulation: Pit 10 and Pit 91 outdoor classroom.

Figure 3-9. Visual simulation: Pit 91 interior.

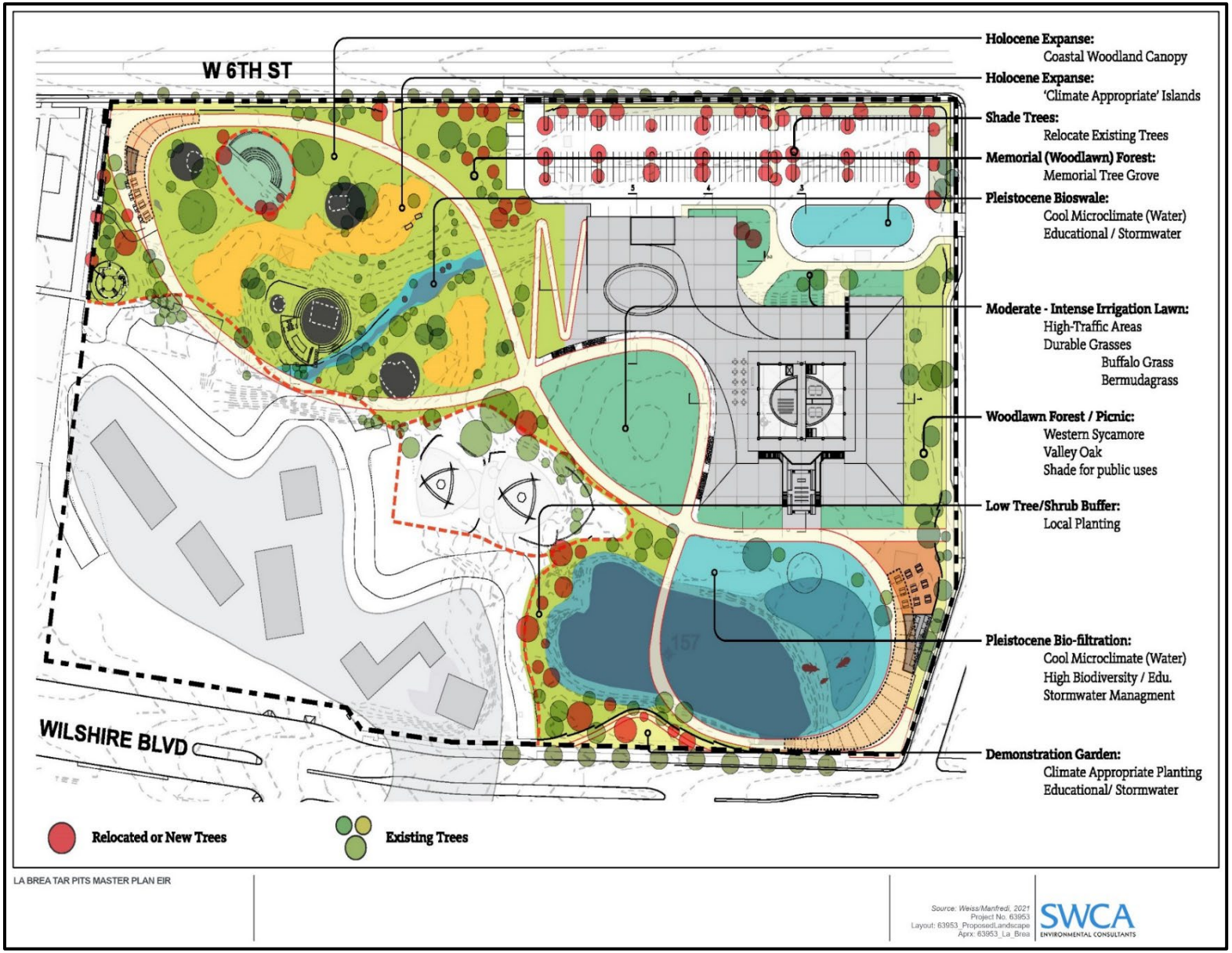


Figure 3-10. Proposed landscaping concept.

Figure 3-11. Visual simulation: pedestrian pathway.

3.4.7 Landscaping

As shown in Figure 3-10, the planting and landscaping concept for La Brea Tar Pits would be divided into three distinct zones encircled by the looping path system. Each loop of the pedestrian path would have a theme that represents different geologic epochs—Pleistocene in the southeastern loop, Holocene in the northwestern loop, and Anthropocene in the central loop (Figure 3-12 through Figure 3-14).
The Pleistocene Garden, located directly east of the Lake Pit, would be approximately 10,000 to 11,000 square feet in size, and incorporate a biofiltration area to help manage stormwater. It would be planted with herbaceous and woody species and the mammoth and mastodon sculptures currently located in the Lake Pit would be relocated there. The western loop would consist of a Holocene landscape with climate-appropriate native plantings to ease water consumption, ensure appropriate maintenance, and promote sustainable growth. A forested woodland consisting of Torrey pine and coast live oak would be planted with the intention of providing a focal area and shade. The western loop also contains Oil Creek, which would be developed into a biofiltration zone for stormwater management and would be planted with sequoia and Monterey pine trees in wetter pockets.

The woodland forest zone of the western loop would be extended along the park's peripheral edges (northern, southern, eastern, and western) to provide shade to the picnic areas and the parking lot to the north. Tree species are expected to include Torrey pine, coast live oak, western sycamore, and valley oak and would support the development of a unified canopy across the site. A 6,000 to 7,000-square-foot biofiltration area would be located within the center of the vehicular drop-off loop to manage stormwater flows from the parking lot.

3.4.7.1 Tree Removal, Relocation, and Planting Strategy

More than 330 trees are currently on the project site. The project would require removal and replacement and/or relocation of between 150 and 200 trees. The planting strategy includes the introduction or relocation of a similar number of trees as would be removed. It is preliminarily estimated that 10 percent of the 150 to 200 trees to be removed would be relocated rather than replaced. The relocated trees would be from existing locations within the project site. New plantings would be consistent with the planting and landscape concept and plant palette included in the La Brea Tar Pits Master Plan. New plantings would be selected for resilience to disease and with consideration for their ability to create shaded areas at the park. Trees that would be removed include non-native trees and/or trees that are diseased or are not in good health. Species such as the western sycamore and California buckeye would be preserved, unless they are diseased or in locations where new built features are planned (e.g., the pathway, museum expansion, and shifted parking lot on the northern side of the project site). Trees could be relocated to other locations of the 13-acre site if the trees are healthy and if it is determined through the more detailed design process that relocation is feasible. It is preliminarily estimated that 10 percent of the 150 to 200 trees to be removed would be relocated rather than replaced.

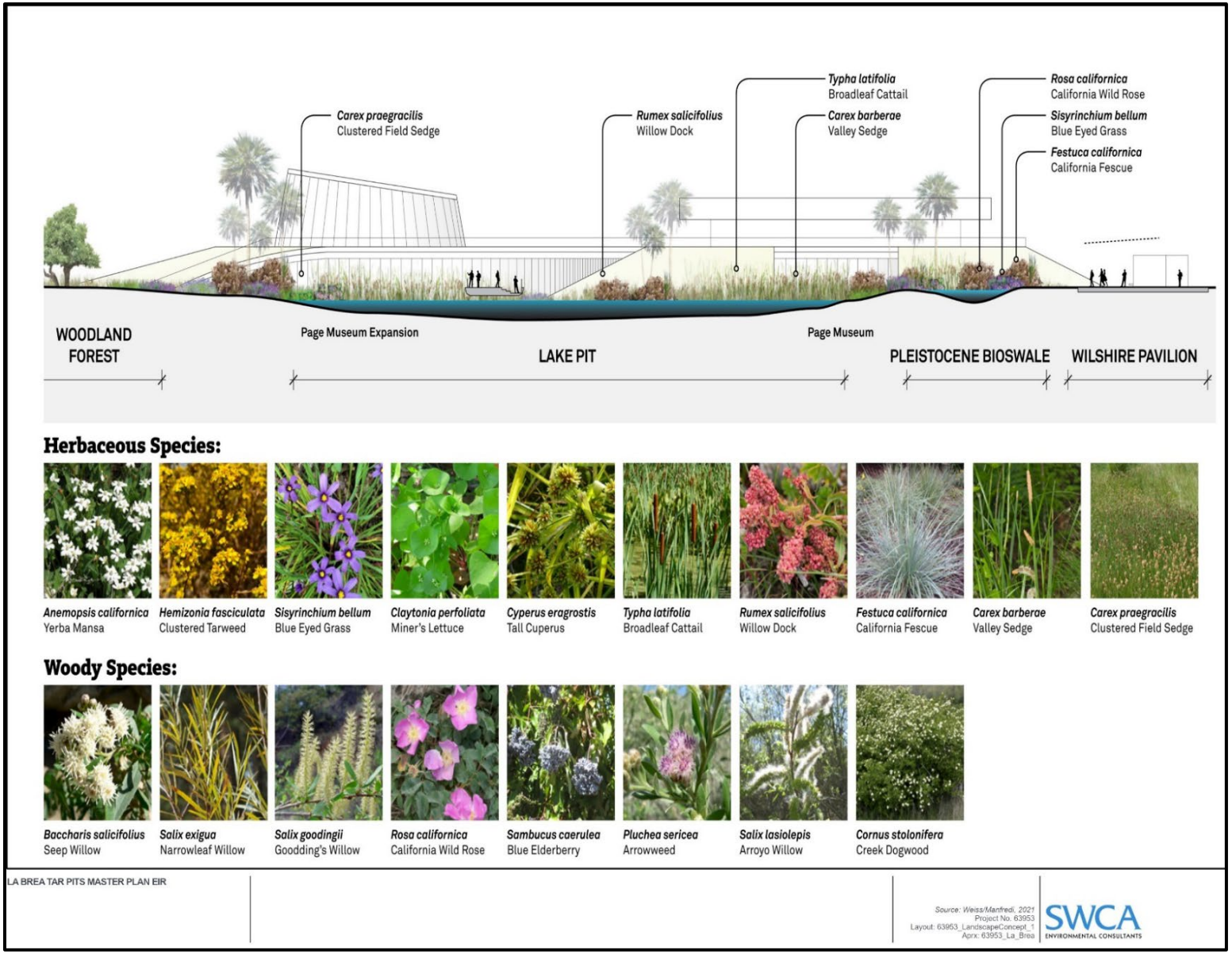


Figure 3-12. Landscape concept: Lake Pit and Pleistocene bioswale.

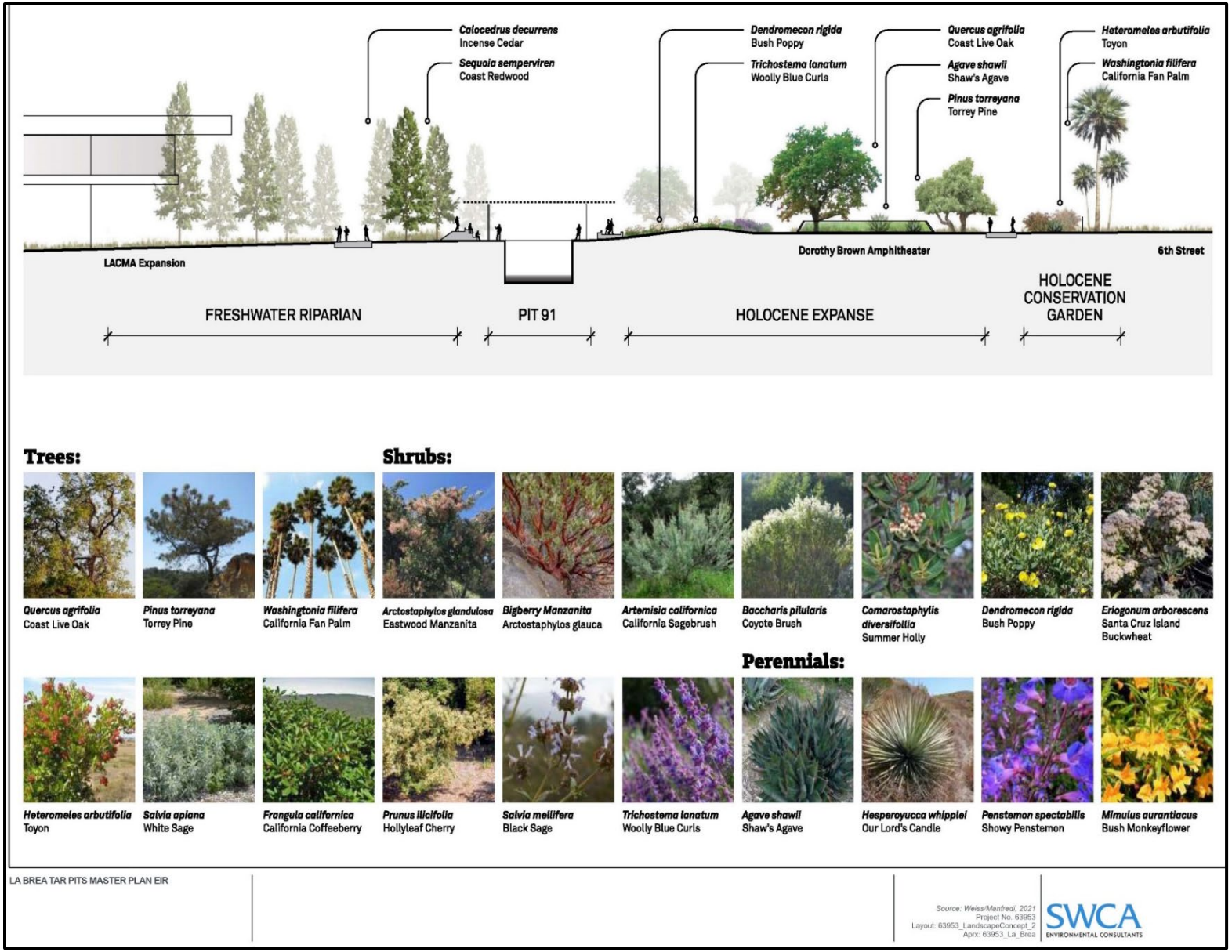


Figure 3-13. Landscape concept: late Pleistocene-Holocene.

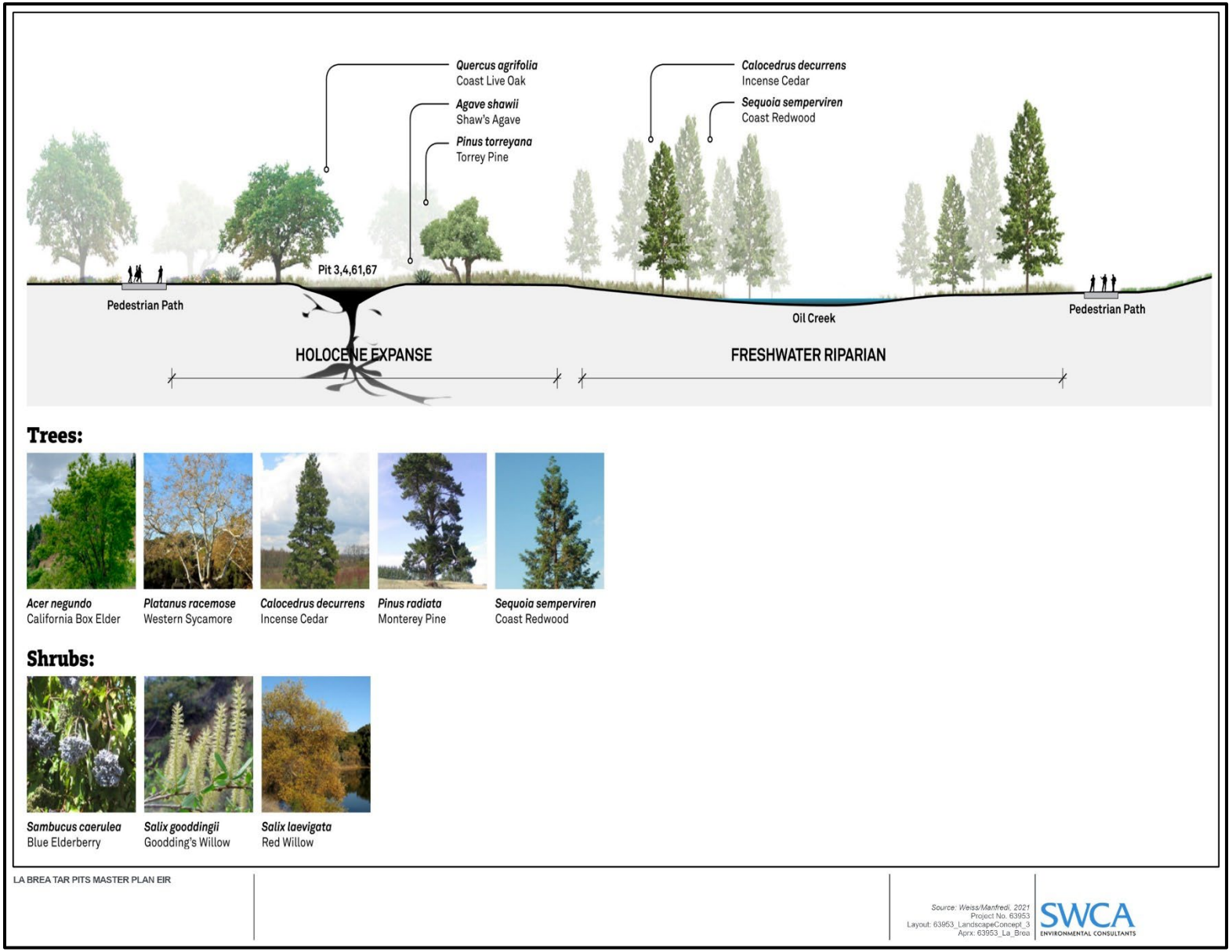


Figure 3-14. Landscape concept: Holocene and freshwater riparian.

3.4.7.2 Biofiltration Areas

The project includes three biofiltration features to manage stormwater runoff. The three features are biofiltration planters, which are shallow vegetated planters that are designed to receive and detain stormwater runoff from the building and site, filter the runoff, and eventually discharge the filtered runoff to the public storm drain system. The proposed biofiltration planters have been sized based on tributary area and are as follows:

- In the northwestern portion of the site, Oil Creek is proposed to be refurbished as a bioswale. The existing creek drainage would be cleared, lined with an impermeable liner, and partially filled with gravel subdrainage with a perforated pipe, amended soil, and plants. Runoff would be conveyed to the creek via sheet flow and existing or relocated underground pipes. After being filtered by the biofiltration media, stormwater would be collected at the bottom of the system and connected to the existing downstream stormwater system.
- In the northeastern portion of the site, the large planter within the proposed drop-off area would be constructed as a biofiltration planter. The planter would be excavated down 4 to 5 feet, lined with an impermeable liner, and filled with gravel subdrainage with a perforated pipe, amended soil, and plants. Supporting wall structures would likely be required underground (appearing at the surface as curbs), to separate the compacted soil for traffic loading and the uncompacted biofiltration media. Runoff would be conveyed to the system via sheet flow, filtered by the system, and then collected in the perforated subdrain and piped to the existing site stormwater system.
- In the southeastern portion of the site, east of Lake Pit, an in-ground biofiltration planter would be installed. The construction of this system would be similar to the Oil Creek system as described above. Subdrainage would be connected into public storm drain mains in either Wilshire Boulevard or South Curson Avenue.

3.4.8 Circulation and Vehicle Parking

The existing parking lot in the northeast corner of Hancock Park would be shifted approximately 50 to 70 feet, along the boundary of West 6th Street. The new parking lot would provide a minimum of the same amount of parking spaces as the existing parking lot (154 spaces). The project would add new landscaping and vehicle access lanes to the parking lot. A vehicular drop-off loop would facilitate vehicle circulation and visitor entry through a pedestrian entrance to the museum leading from the parking lot.

Three loading and service entrances would accommodate deliveries for laboratories, exhibition material, food service, events, and staff offices. Two of the entrances would be from the parking lot into the new museum building on the north side, and the third entrance would be from the parking lot into the Page Museum, also on the north side.

The proposed project includes a new school drop-off area from South Curson Avenue, adjacent to the Wilshire Gateway picnic area. This inset loading area would be 215 to 230 feet long to accommodate school buses. School buses would also be able to access the parking lot from South Curson Avenue and drop-off in the loading area in the parking lot.

Emergency vehicle access into the project site would be provided from the two site entrances off South Curson Avenue and off West 6th Street.

The project does not include any circulation improvements beyond the 13-acre project site.

The proposed project includes a new school drop-off area from South Curson Avenue, adjacent to the Wilshire Gateway picnic area. This inset loading area would be 215 to 230 feet long to accommodate school buses. School buses would also be able to access the parking lot from South Curson Avenue and drop-off in the loading area in the parking lot.

Emergency vehicle access into the project site would be provided from the two site entrances off South Curson Avenue and off West 6th Street.

3.4.9 Utilities

Delivery of potable water to the project site would be provided by the Los Angeles Department of Water and Power (LADWP). Proposed on-site water delivery infrastructure would include a 3-inch water line and a 3-inch fire line at the northeast corner of the site beneath the proposed parking lot, which would connect to the existing water meter in the sidewalk on South Curson Avenue (KPFF Consulting Engineers 2021). From there, the project site is served by three water mains that include two 8-inch asbestos-cement pipelines along Wilshire Boulevard and Curson Avenue, and a cast-iron pipeline along 6th Street (LADWP 2022).

Wastewater discharge from the project site is directed to the east where it connects by gravity to an existing City of Los Angeles public sewer main. The sewage infrastructure in the vicinity of the project site includes an existing 12-inch line on South Curson Avenue. The 12-inch line feeds into an 18-inch line on Wilshire Boulevard then into a 39-inch line on Crescent Heights Boulevard before discharging into a 48-inch sewer line also located on Crescent Heights Boulevard (Los Angeles Sanitation and Environment [LASAN] 2022). Wastewater generated from the new project elements, as proposed, would be conveyed from the sewer line at the northeast corner of the site beneath the proposed parking lot to the existing 12-inch sewer main along South Curson Avenue. On-site sewer lines would connect to the existing sewer main along South Curson Avenue. Detailed gauging and calculation of available sewer line capacities would be required as part of the permit process that would occur after the CEQA process, which would occur when building plans are more fully developed.

Water and wastewater pipelines, connections, and other related infrastructure are the most significant infrastructure needs that would be implemented at the 13-acre project site. However, other more minor infrastructure needs and connections (e.g., telecommunications, electricity) would also be needed, most of which would be below the ground surface (bgs). In addition, adjustments to the current plans for the on-site infrastructure may occur through the design development and permitting process. To provide flexibility during the design development process, this analysis assumes ground disturbance related to infrastructure and utilities could occur anywhere on the 13-acre site. The parameters and assumed depths of ground disturbing and excavation activities are described in Section 3.4.10, Project Construction. Improvements beyond the 13-acre site are not anticipated to be required and, thus, have not been addressed by the project-level analysis contained in this EIR.

The Foundation would coordinate with LASAN during project permitting. Following implementation of the project, LADWP would maintain the project site's water and electricity infrastructure, and LASAN would maintain the sewer and stormwater drainage infrastructure.

3.4.10 Project Construction

Construction of the project would occur when all design and construction plans are completed and approved by the County and other required agencies. Construction activities would include demolition of the existing museum entrances, grading and excavation, and construction of new structures and related infrastructure. All construction activities, including construction staging of equipment, would be situated

entirely within the project site. Typical construction equipment would be used during all phases of the project construction and would be stored within the staging area, including excavators, dozers, backhoes, dump trucks, water trucks, sand blasters, rollers, pavers, generators, scrapers, forklifts, delivery trucks, paving equipment, cranes, and air compressors. The grading and construction phase would be the peak period of construction with the highest number of construction vehicles. The grading phase is estimated to result in up to 127 one-way truck trips (e.g., vendor, hauling) and 75 worker vehicle trips per day. The building construction phase is estimated to result in up to 24 one-way truck trips and 200 worker vehicle trips per day.

Any hazardous materials found during construction and renovation would be abated and removed during the construction process in accordance with the applicable hazardous materials standards and requirements. Due to anticipated soil conditions, on-site soils are not expected to be suitable for reuse and would need to be exported for remediation and disposal (KPFF Consulting Engineers 2021). Therefore, it is anticipated that project earthwork activities would include an estimated 53,000 cubic yards of cut/export and potentially 37,000 cubic yards of imported fill (KPFF Consulting Engineers 2023). At the time of preparation of this EIR, final engineering, design, and grading plans for the project had not been finalized. Because the project design is at a preliminary stage, the level of detail needed to determine the precise depth of ground disturbance is not known. However, the level of design that has occurred to-date allows for a general characterization of the overall ground disturbance and excavation that would be necessary for the project. The project design team worked with the Foundation and the County to characterize a "worst-case" ground-disturbance estimate, which represents the most-impactful scenario in terms of depths and amount of excavation that includes all project elements. While separate estimates for each project element (e.g., the new museum building) are not yet available, the estimate based on the worst-cast scenario provides a reasonable basis on which the potential for environmental impacts can be analyzed.

Under the most-impactful scenario, the project would maximally require excavations from 6 to 10 feet bgs. In general, the new museum building would require the most ground disturbance and excavation. While the final elevation of the foundation for the new museum building is not known at this time, it may be below the existing ground surface to provide a smooth connection to the existing Page Museum.

The expansion of the new parking lot to the north and west of the existing lot would likely also require grading and imported sediments to create a level surface as a base beneath the new surface, estimated as requiring approximately 3.3 feet or less. The pedestrian paths, recreation areas, pit renovations, and landscaping would all require shallow to moderate excavation not to exceed approximately 5 feet; deeper excavation could possibly be required for tree planting/removal, although many of the ground-disturbances for these components would be at more shallow depths (e.g., 18 inches), for example to complete smaller plantings and construct/remove pathways.

Pile-drilling could be required to construct the structural supports for the new walkway over the Lake Pit and possibly the two gateway entrances, and ground disturbances are expected to be approximately consistent with the maximum depths of 10 feet considered for the project but contained with the relatively narrow diameter of the bore and in a limited number of locations.

While certain project elements are expected to require less excavation than the new museum, this EIR assumes that excavations could occur up to 10 feet deep throughout the 13-acre project site to allow maximum flexibility as the project designs become more refined.

3.4.11 Project Operation

Once the project is constructed and operational, there could be modest changes in project operation and maintenance, which are considered in this EIR. However, much of the maintenance of the 13-acre Hancock Park would occur as it does today with no measurable changes. Due to the increase in facility square footage, a modest increase in staffing to support La Brea Tar Pits and the Page Museum is anticipated. While an exact increase in the number of staff to be added to manage the site is not known, for EIR purposes, an estimate of approximately 20 additional staff is assumed. This factor of employee growth is based on the anticipation that, in the future, the buildings would have the same ratio of employees to building square footage as is present today.

The project would result in an expected increase in visitation to the project site upon project completion. Existing visitation at the Page Museum was estimated through the effort completed for the Transportation Assessment by using attendance counts from July 2017 (see Appendix J for more detail). It is estimated that a typical summer visitation is currently around 2,000 visitors on an average weekday and 2,600 daily visitors on Saturdays. Estimated increases in visitors to the Page Museum resulting from the project have been estimated based on the increase in square footage of the museum space (67%). Using this approach, the increase in visitors on weekdays would be around 1,350 people, and on Saturdays the increase would be approximately 1,750 people. Additional visitors also currently use the park without visiting the museum; this is expected to also increase modestly with the improvements to the project site. There currently is not a quantification of this pass-through and/or passive visitation available.

The Foundation and the County do not anticipate other operational changes occurring with implementation of the Master Plan.

3.5 AGENCY APPROVAL REQUIREMENTS AND INTENDED USES OF THIS EIR

The County of Los Angeles is the Lead Agency for the project under CEQA. While the project site is located within the city of Los Angeles, it is owned by the County of Los Angeles and is proposed for uses that benefit the public. Accordingly, the project is not subject to City of Los Angeles regulatory controls. Table 3-2 summarizes federal, state, and local approvals and/or permits that may be required for the project and the agencies that are expected to use the EIR in their decision-making processes.

Table 3-2. Agency Approval Requirements

Agency	Approval Required
County of Los Angeles	Certification of the EIR Approval of project as described in the EIR Approval of Grading and Building Plans
Regional Water Quality Control Board	Construction General Permit Section 401 under the Clean Water Act (potentially)
U.S. Army Corps of Engineers	Section 404 Permit under Clean Water Act (potentially)
California Department of Fish and Wildlife	Authorization under Section 1602, Lake and Streambed Alteration Agreement (potentially)

3.6 ENVIRONMENTAL REVIEW OF SUBSEQUENT ACTIONS

This EIR is intended to expedite the processing of future development that is consistent with the La Brea Tar Pits Master Plan and with the analyses and findings of this EIR. Although more detailed final design is forthcoming, this EIR evaluates a reasonable and likely maximum development scenario that would be anticipated based on the level of information that is currently available.

If the Master Plan is approved, and when considering subsequent development, the County would be required to determine whether the final design and development plans are consistent with the parameters and assumptions described herein and would not result in new or more severe significant environmental effects or require additional mitigation. If no additional or more severe environmental effects would have the potential of occurring, the County could approve the final design and development without additional environmental review. However, if there are significant changes proposed that are not consistent with the approved Master Plan or the type and level of development analyzed in this EIR, and the County concludes that these may result in new significant environmental impacts, additional environmental review would be required consistent with the requirements of the State CEQA Guidelines Sections 15162 through 15164.

CHAPTER 4. ENVIRONMENTAL SETTING

This chapter introduces the project's environmental setting, including the physical conditions of the project site and its vicinity. Pursuant to State CEQA Guidelines Section 15125, the impacts of a project must be evaluated by comparing expected environmental conditions after project implementation to conditions at a point in time referred to as the baseline. The changes in environmental conditions between those two scenarios represent the environmental impacts of the project. The description of the environmental conditions of the project site under baseline conditions is referred to as the environmental setting. The following guidance for establishing baseline conditions provided in the State CEQA Guidelines Section 15125 is as follows:

> *An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.*

For the purpose of establishing baseline environmental conditions for the project, this EIR uses the date of publication for the Notice of Preparation (NOP), which was published on February 14, 2022. More detailed descriptions of the environmental setting under baseline conditions for each environmental issue area can be found in the corresponding sections in Chapter 5, Environmental Impact Analysis, of this EIR.

This chapter also provides context for the cumulative analyses provided in this EIR, including a discussion about the approach to analyzing the project's potential cumulative impacts, defining the geographic scope of the cumulative study area, as well as providing regional growth projections and a list of related development projects considered to be the cumulative development scenario for the project. A cumulative impact analysis for each environmental issue area can be found in the corresponding sections in Chapter 5, Environmental Impacts Analysis, of this EIR.

4.1 PHYSICAL SETTING

4.1.1 Regional Setting

Los Angeles County is geographically one of the largest counties in the country, encompassing approximately 4,083 square miles of land with an estimated population of 9,829,544, as of July 2021 (U.S. Census Bureau 2021). Los Angeles County stretches along 75 miles of the Pacific Coast of Southern California and is bordered to the east by Orange County and San Bernardino County, to the north by Kern County, and to the west by Ventura County.

The county is a land of beaches, valleys, mountains, and deserts. Overall, the climate can be characterized as "Mediterranean," with hot, dry summers and mild, wet winters. The diversity of the topography results in localized climate zones that are roughly divided by the Transverse Ranges (Santa Monica Mountains and San Gabriel Mountains). There are three climate zones—coastal plain, mountain, and high desert—which are closely tied to geologic landforms and vary based on elevation changes and distance from the ocean.

4.1.2 Local Setting

The project site is located approximately 5.5 miles west of downtown Los Angeles and approximately 8.6 miles east of the Pacific Ocean. It is bounded by West 6th Street to the north (an approximately 1,200-foot-long frontage), South Curson Avenue to the east (an approximately 830-foot-long frontage), Wilshire Boulevard to the south (an approximately 500-foot-long frontage), and the Los Angeles County Museum of Art (LACMA) to the west (approximately 250-foot-long frontage). The area is known as the Miracle Mile neighborhood of the city of Los Angeles.

Primary regional access to the project site is provided by Interstate 10, which runs east-west less than 2 miles south of the project site. The major arterials providing regional and subregional success to the project site vicinity include Wilshire Boulevard, La Brea Avenue, and Fairfax Avenue.

4.1.3 Existing Project Site Characteristics

The project site includes 13 acres of the eastern and northwestern portions of Hancock Park and broadly encompasses what is known as La Brea Tar Pits, which includes the George C. Page Museum (Page Museum). The entirety of the 23-acre Hancock Park is enclosed with an 8- to 10-foot-high metal fence that serves to secure the site by providing full closure of Hancock Park when La Brea Tar Pits, the Page Museum, and LACMA are closed in the evenings. LACMA's portion of Hancock Park has been almost entirely developed. In contrast, the property known as La Brea Tar Pits is generally a park-like setting.

The topography of the project site is primarily level, with sloped areas adjacent to the existing Page Museum. The current landscape is dominated by a large lawn surrounding the museum and extending to the west. Paved walkways meander through the project site, with mature trees and shrubs, primarily non-native.

Because entrance to the park grounds is free, it is well used by the public. People walk dogs, jog, picnic, and play on the large lawn area. Numerous people, large school groups, and leashed dogs were present during the field surveys. The outer perimeter of the project site is surrounded by a metal fence with gates at several locations. These gates are open during park operating hours and closed at night. The tar pits are separately fenced inside the park.

4.1.3.1 George C. Page Museum

The two-story Page Museum is located within the eastern portion of the project site. The exterior museum is shaped like a truncated pyramid. The first floor of the museum is set into a large earthen berm which opens onto the Central Green (Figure 4-1). At the top of the earthen berm on the second floor is a 30-foot-wide rooftop covered viewing platform which surrounds the first-floor Central Atrium courtyard.

On average, 700 to 1,000 people visit the Page Museum per day and 425,000 people visit per year. It currently operates from 9:30 a.m. to 5:00 p.m., 7 days a week (it is closed on the first Tuesday of each month). The surrounding Hancock Park is open from 6:00 a.m. to 10:00 p.m., 7 days a week. Hancock Park and the Central Green receive approximately 2 million visitors per year. Approximately 25 staff are employed at the Page Museum, including excavators, preparators, collections managers, and support staff.

The museum is approximately 63,200 square feet in size and contains scientific exhibitions, fossil laboratories, collections storage, theaters, classrooms, and office wings. The museum currently has a collection of over 3.5 million specimens on-site, although only a fraction of the collection is on display. There are approximately 8,000 square feet of collections storage. Within the museum, exhibitions are approximately 19,600 total square feet, and research and collections (fossil laboratories, collections

storage, and office support) are approximately 11,00 square feet. The West, North, East, and Timeline exhibits currently surround the Central Atrium, an 8,700-square-foot outdoor garden and courtyard filled with non-native vegetation and an artificial waterfall. Although open to the air, the atrium has a metal lattice stretching across the ceiling. The Page Museum also includes an active paleontological laboratory. Through the glass, visitors can observe volunteers and scientists clean and conserve the fossils discovered in the tar pits on-site. A 1,500-square-foot retail shop exists in the lobby.

Approximately 5,300 square feet of educational space exists within the museum, spread over two classrooms, the 2D Theater, the Ice Age Theater, and the 3D Theater. The 2D Theater is open for school groups and 3D Theater and Ice Age Theater are currently open to the public. Theater capacities for each resource include: 57 fixed seats in the 3D Theater, 100 floor seats in the 2D theater, and 100 floor seats in the Ice Age Theater. The 3D Theater operates 6 days a week, showing the movie "Titans of the Ice Age"; the 2D Theater is used for school groups; and the Ice Age Theater is used 3 days a week for "Ice Age Encounters" and other activities, as needed. The classrooms are used for summer camps and internships.

4.1.3.2 Tar Pits

The project site contains multiple active fossil quarries, commonly called "tar pits." The active tar pits (Pits 3, 4, 9, 13, 61, 67, and 91) are within the northwestern portion of the project site (Figure 4-2). These tar pits are fenced and include informational placards. Pit 10 is not open for public viewing as it is within the research facilities enclosing Project 23, as described below. Numerous small tar seeps (an upwelling of asphaltum to the ground surface) are spread throughout the project site.

OBSERVATION PIT

The Observation Pit is a small building on the western boundary of the project site. Opened in 1952, the domed pit served as the park's only staged exhibit of scientific discovery until the Page Museum opened in 1977. Built over an active pit (i.e., Pit 101), the Observation Pit replicates the experience of a fossil pit, with a mix of real fossils and staged casts of fossils to mimic excavation.

PROJECT 23 AND PIT 91

Project 23 is an active fossil recovery site. During construction on the LACMA parking garage in 2006, 16 new paleontological deposits were discovered, including an almost-complete skeleton of an adult mammoth. Given the size of the discoveries, 23 large wooden boxes were built around the various deposits, allowing many of the discoveries to remain intact. "Project 23" has now become the short-hand descriptor for the location and activities related to the excavation of deposits within the 23 large wooden boxes that is now occurring in a portion of the La Brea site. These boxes and numerous buckets of fossil material were moved to the Project 23 current location for recovery. Adjacent covered research and storage areas support the ongoing fossil recovery.

Pit 91, an active excavation site, is directly adjacent to Project 23. There is a small indoor viewing station that allows visitors to observe the ongoing excavation activities.

Figure 4-1. Existing site photographs: Page Museum.

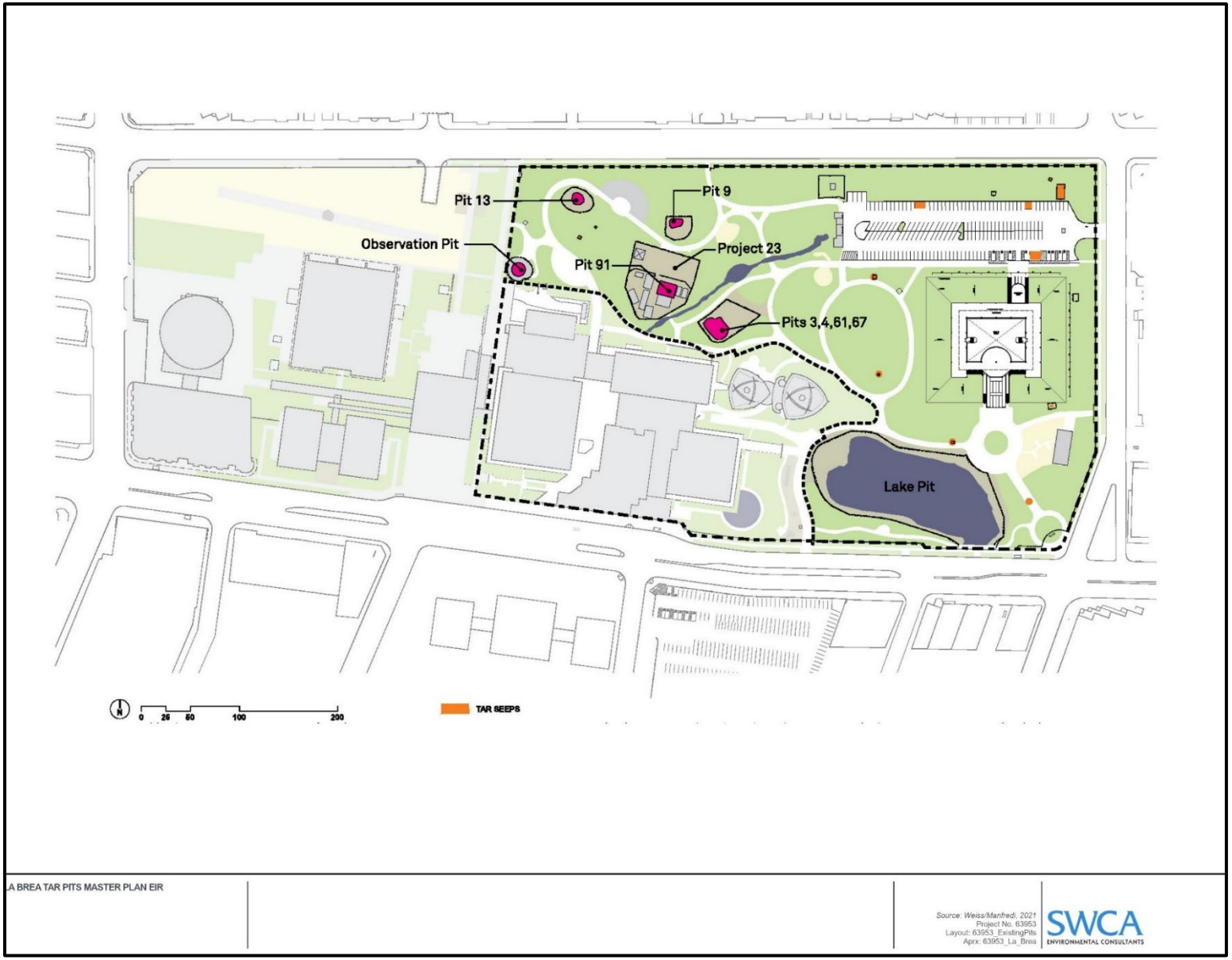


Figure 4-2. Existing pits and tar seeps.

LAKE PIT

To the south of the Page Museum is the Wilshire Boulevard entrance and the largest pit on the grounds of Hancock Park, the Lake Pit. The Lake Pit, which is the result of asphalt mining operations dating to the late 1880s, is one of the more than 96 mining and paleontological excavation pits that once filled the park. All of the pits have gradually accumulated rain, groundwater, asphaltum, sediments, and leaves, yet the Lake Pit is distinct due to its large size and the volume of water it contains. Due to a deep underground oil field, the Lake Pit produces visible methane gas bubbles that emit a distinctive odor. In 1967, statues of Columbian mammoths were put on display in the Lake Pit, conveying the struggle prehistoric fauna encountered when accidentally entering a tar deposit. Today, an approximately 8-foot-high fence surrounds the Lake Pit for safety and security purposes; a comfort station, with public restrooms, picnic benches, and vending machines is adjacent to the Lake Pit to the west.

4.1.3.3 Natural Environment and Landscape Features

Project site vegetation consists of large expanses of lawn with primarily non-native planted trees and shrubs, including pines (*Pinus* spp.), gum trees (*Eucalyptus* spp.), Brazilian peppertree (*Schinus terebinthifolius*), various species of palm tree (e.g., fan; queen), London planetrees (*Platanus x hispanica*), and other trees. Native trees are present, including coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata),* California [western] sycamore (*Platanus racemosa*), buckeye (*Aesculus californica*), and coast redwood (*Sequoia sempervirens*). It is estimated that approximately 330 to 340 trees currently exist within the 13-acre project boundary. Within these existing trees, there are 13 native oak trees (12 *Quercus agrifolia* and one *Quercus lobata*). The highest concentration of landscaping occurs in the northern perimeter along West 6th Street and the eastern perimeter along South Curson Boulevard, which includes a mix of shrubs, non-native ornamental trees, and palm trees. In addition, an ephemeral creek, referred to as Oil Creek, flows from the northeast to the southwest, from the southwestern end of the parking area to the southeast side of Pit 91.

An approximately 28,000-square-foot multipurpose grass lawn, known as the Central Green, is located to the west of the Page Museum.

Oil Creek, a historic drainage, appears to originate from underground sources and conveys flow from the northeast to the southwest through the project site. As early as 1941 (based on historical aerial imagery), the creek conveyed flow from approximately the intersection of 6th Street and South Curson Avenue southwest to the intersection of Wilshire Boulevard and South Ogden Drive. In its current state, Oil Creek appears to receive its primary hydrologic input source from groundwater. Oil Creek also receives hydrologic inputs from precipitation and irrigation system runoff. Dense vegetation and heavy leaf litter exist in the northeastern portion of the creek. The drainage has been disturbed and manipulated over time. It is partially paved where the parking lot is located and is channelized with pavers near its terminus. Oil Creek is dominated by non-native mowed grasses along with a mix of other native and non-native low-lying vegetation.

The 9/11 Memorial Stone, a memorial plaque on a boulder dedicated to the September 11, 2001 attacks, is in the northwest corner of the project site. Approximately 24 trees are located around Hancock Park to honor those killed during the September 11, 2001 terrorist attacks.

The Central Green and open space areas within the greater Hancock Park are the only public green spaces within a 1.5-mile radius of the project site.

4.1.3.4 Circulation and Vehicle Parking

Parking for La Brea Tar Pits is located in the northeast corner of the project site, at the corner of South Curson Avenue and West 6th Street. Vehicles enter and depart the lot from both directions on South Curson Avenue. The parking lot is approximately 63,000 square feet and contains 154 surface parking spaces. Operating hours are between 6:00 a.m. and 10:00 p.m., 7 days a week.

There are several pedestrian access points to La Brea Tar Pits: the southeast entrance at Wilshire Boulevard and South Curson Avenue, the east sidewalk off South Curson Avenue, and the north and northwest sidewalks off West 6th Street. There are paved walking paths and dirt trails throughout the project site.

4.1.3.5 Utilities

While the project site is owned by the County of Los Angeles (County), the project site is within the jurisdictional boundaries of the City of Los Angeles (City). Given the location of the project site within the City's jurisdictional boundaries, the project's water and wastewater services, as well as stormwater conveyance facilities and electricity, are provided by various departments associated with the City, including the Los Angeles Department of Water and Power (LADWP) and City of Los Angeles Bureau of Sanitation (referred to as Los Angeles Sanitation and Environment [LASAN]).

LADWP is responsible for providing water within the city of Los Angeles, including the project site. Potable water for fire suppression systems, domestic cold water, and irrigation is provided by the LADWP from a water main in South Curson Avenue. The existing fire suppression water line is served from a pipe connection to the public water main in South Curson Avenue adjacent to the northwest corner of the Page Museum. There is one 3.5-inch, domestic cold-water meter in the sidewalk on South Curson Avenue adjacent to the southeast corner of the Page Museum. Downstream from the meter is a 2.5-inch irrigation connection.

The sewer system and wastewater treatment facilities serving the project site are owned and operated by LASAN. Wastewater flows in a cast-iron pipe from the Page Museum to the north to a 4-inch sewer main, which flows east to a public sewer line in South Curson Avenue. The sewage infrastructure in the vicinity of the project site includes an existing 12-inch line on South Curson Avenue. The sewage from the existing 12-inch line feeds into an 18-inch line on Wilshire Boulevard then into a 39-inch line on Crescent Heights Boulevard before discharging into a 48-inch sewer line, also located on Crescent Heights Boulevard (LASAN 2022). The Observation Pit and Project 23 sewer connections tie into LACMA infrastructure.

Stormwater conveyance facilities serving the project site include both LASAN and the Los Angeles County Flood Control District infrastructure. The existing project site drainage system is composed of a combination of surface flows, drain inlets, storm drainage pipes, and pump stations. Stormwater runoff generally flows to either Pit 91 or the Lake Pit; the stormwater that flows to Pit 91 is pumped to the Lake Pit. From the existing Lake Pit, the water is pumped through an existing water quality treatment system to the County storm drain system in Wilshire Boulevard.

The Los Angeles County Department of Public Works (County Public Works) operates the solid waste management system countywide, while a private waste management company, Southland Disposal Company, is responsible for the collection, disposal, and recycling of solid waste generated at the project site. Solid waste collection and disposal services are primarily at the Azusa Land Reclamation Company Landfill (Azusa Land Reclamation), which is a regional landfill that provides disposal services for communities, businesses, and industries serving the Los Angeles metropolitan area and eastern Los

Angeles County. Additional information about landfills serving the project site can be found in Section 5.15, Utilities and Service Systems.

4.1.4 Surrounding Land Uses

The La Brea Tar Pits Master Plan project site is surrounded by a variety of commercial uses, museums, residential buildings, and schools.

The project site is bounded by the Park La Brea pool and multi-family residential uses to the north across West 6th Street, commercial and residential uses to the east across South Curson Avenue, the Craft Contemporary Museum and other museum and commercial uses south across Wilshire Boulevard, and museum and commercial uses to the east. LACMA is located to the south and west of the project site, including its Pavilion for Japanese Art and the future David Geffen Galleries, a building that is currently under construction to replace four of LACMA's older buildings. Beyond LACMA's facilities to the west are an outdoor public art installation and the Academy Museum of Motion Pictures.

The Central Green and open space areas within the greater Hancock Park are the only public green spaces within an approximately 1-mile radius of the project site. The nearest larger open space areas to the project site are Griffith Park, approximately 5.5 miles to the northeast, and Kenneth Hahn State Recreation Area, approximately 5 miles south of the site.

4.2 CUMULATIVE CONTEXT

This section provides context for the cumulative analyses provided in the individual topical sections of Chapter 5 of this EIR, including CEQA requirements for cumulative analyses and the approach to analyzing the project's potential cumulative impacts, including defining the geographic scope of the cumulative study area as well as providing regional growth projections and a list of related development projects considered as the cumulative development scenario for the project. A cumulative impact analysis for each environmental issue area can be found in the corresponding topical sections of Chapter 5, Environmental Impacts Analysis, of this EIR.

4.2.1 CEQA Requirements for Cumulative Analyses

State CEQA Guidelines Section 15130 requires that an EIR shall discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." "Cumulative impacts" are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (State CEQA Guidelines, Section 15355; see also California Public Resources Code, Section 21083(b)). In other words, "a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts" (State CEQA Guidelines, Section 15130(a)(1)). The definition of cumulatively considerable is provided in Section 15065(a)(3):

> *"Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.*

According to Section 15130(b) of the State CEQA Guidelines:

> *[t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality*

> *and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.*

State CEQA Guidelines Section 15355 defines "cumulative impact" as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. Cumulative impacts are changes in the environment that result from the incremental impact of development of the proposed project and all other nearby "related" projects. For example, the traffic impacts of two projects in proximity may be insignificant when analyzed separately but could have a significant impact when the projects are analyzed together.

4.2.2 Approach to the Cumulative Analysis in this EIR

To analyze the project's potential contribution to cumulative impacts, this section defines the geographic scope of the cumulative study area for each of the environmental topics addressed in this EIR. In addition, this section provides regional growth projections and a list of the related development projects considered as the cumulative development scenario for the project, which is the context from which to analyze the potential for cumulative impacts and the project's contribution to cumulative impacts.

The cumulative impact analysis for each environmental issue area can be found in the corresponding topical sections in Chapter 5, Environmental Impact Analysis, generally found as the last section in each of the environmental sections (for example, the cumulative analysis for Aesthetics is found in Section 5.1.6; similarly, the cumulative analysis for Air Quality is found in Section 5.2.6, and so on).

4.2.2.1 Geographic Scope

The geographic area affected by the project and its potential to contribute to cumulative impacts varies depending on the environmental resource or topic under consideration. Generally, the geographic areas associated with the environmental effects of the project as described in Chapter 3 define the boundaries of the area used for compiling the list of past, present, and reasonably foreseeable future related projects considered in the cumulative impact analysis. However, each individual resource or topical area considers each topic's unique cumulative context and appropriate geographic scope for the analysis. For instance, the air quality analysis includes consideration of regional air emissions (e.g., reactive organic gases/nitrogen oxides, and particulate matter); therefore, the geographic scope is the entire air basin. Similarly, a larger geographic scope is important for archaeological resources and tribal cultural resources given a larger area is appropriate to consider the traditional Gabrielino territory and relevant historical and contemporary administrative boundaries. Conversely, in the case of noise impacts, given the localized impact area of concern, a smaller, more localized area surrounding the immediate project site is appropriate for consideration.

Table 4-1 presents the geographic areas included within this analysis for purposes of determining whether the project's contribution to a particular impact would be cumulatively considerable and therefore significant. An explanation of the geographic scope selected for each resource is also briefly included in Chapter 5 under the impact analysis.

Table 4-1. Geographic Scope of Cumulative Impact Analysis

Resource Issue Area	Geographic Scope
Aesthetics	Project site and immediate adjacent area*
Air Quality	South Coast Air Basin
Biological Resources	Project site and 1-mile radius around the project site
Cultural Resources – Archaeological Resources	Northwestern Los Angeles Basin†
Cultural Resources – Historical Resources	Project site and immediate adjacent area*
Geology and Soils	Project site and immediate adjacent area For paleontological resources, the Pleistocene deposits of the Los Angeles Basin
Greenhouse Gas Emissions	Global
Hazards and Hazardous Materials	Project site and immediate adjacent area*
Hydrology and Water Quality	Project site and immediate adjacent area that would flow into the same drainage area within the Ballona Creek Watershed
Land Use and Planning	Los Angeles county, including the property within the incorporated boundary of the City of Los Angeles
Noise	Project site and immediate adjacent area*
Recreation	2-mile distance around the project site
Transportation	0.5-mile radius from the project site‡
Tribal Cultural Resources	Northwestern Los Angeles Basin†
Utilities and Service Systems	City of Los Angeles jurisdictional boundaries

* Immediate adjacent area is defined as the directly adjacent LACMA parcel, and all land uses and roadways directly immediately surrounding the project site, including those on West 6th Street, South Curson Avenue, and Wilshire Boulevard.

† For the analysis of cumulative impacts for archaeological resources and tribal cultural resources, the northwestern Los Angeles Basin provides an area large enough to contain a representative sample of Native American archaeological sites, the traditional Gabrielino territory, and relevant historical and contemporary administrative boundaries, while being small enough to account for the cumulative impacts from projects on a more local scale. For more information, see Sections 5.4.6 and 5.14.6 of this EIR.

‡The Los Angeles Department of Transportation (LADOT) Transportation Assessment Guidelines require consideration of related projects within a 0.5-mile radius from a project site for CEQA analysis, and 0.25-mile beyond the farthest study intersection for non-CEQA circulation analysis (LADOT 2020). Related projects included in the cumulative analysis for transportation impacts, as described in Section 5.13 Transportation, meet the requirements of the LADOT Transportation Assessment Guidelines and were agreed upon by the City of Los Angeles and the NHMLAC as part of the memorandum of understanding process for the project.

4.2.2.2 Temporal Scope

This cumulative impact analysis considers other projects that have been recently completed, are currently under construction, or are reasonably foreseeable (e.g., for which an application has been submitted, or an agency has proposed). Both short-term and long-term cumulative impacts of the identified project, in conjunction with other cumulative projects in the area, are considered. The schedule and timing of the project and other cumulative projects is relevant to the consideration of cumulative impacts, since many of the activities associated with construction are temporary. Where relevant, the cumulative impact analyses in Chapter 5 pay particular attention to any cumulative projects with implementation schedules that could overlap with the proposed schedule of the La Brea Tar Pits Master Plan.

4.2.2.3 Cumulative Analysis Approaches Allowed by the CEQA Guidelines

State CEQA Guidelines Section 15130 provides that the following two approaches can be used to adequately address cumulative impacts:

- Regional Growth Projections Method: A summary of projections contained in an adopted local, regional, or statewide plan or related planning document that describes or evaluates conditions contributing to the cumulative effect, or in a prior environmental document for such a plan which has been adopted or certified.
- List Method: A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency.

As previously noted, the cumulative impact analysis for each environmental issue area can be found in the corresponding sections in Chapter 5, Environmental Impact Analysis. The cumulative analyses contained in Chapter 5 of this EIR use both approaches noted above (regional growth projections method and list method). This is due to the localized and specific nature of the project, and also because the project site is in an area that has and is anticipated to continue to experience some regional growth. Additionally, a combined approach is appropriate as some resource topics (such as air quality, transportation, and utilities) consider a more growth-based approach, while others (such as aesthetics, biological resources, and noise) necessitate a more list-based approach. This allows for a thorough, project-based cumulative analysis within the relevant geographic areas and timing of the project activities.

Each environmental issue area's cumulative impact analysis uses the same thresholds of significance used to determine project impacts. In addition, the cumulative impact threshold included in State CEQA Guidelines Appendix G, Section XXI, Mandatory Findings of Significance, was also examined in Section 5.16 of this EIR.

In Chapter 5, a three-step approach was used to analyze cumulative impacts, as described in the following bullets.

- First, if the project was determined to have no impact in a particular impact area, then the analysis states that the project would not have a cumulative contribution to impacts related to that threshold.
- If the project could result in less than significant or significant impacts, then the second step was to determine whether the combined effects from the project and other projects would be cumulatively significant. This was done by considering the project's incremental impact to the estimated anticipated impacts of other probable future projects and/or reasonably foreseeable development.
- The third step was to evaluate whether the project's incremental contribution, if any, to the combined significant cumulative impact would be cumulatively considerable, and thus significant as required by State CEQA Guidelines Section 15130(a).

It should be noted that State CEQA Guidelines Section 15064, subdivision (h)(4) states that "[t]he mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the project's incremental effects are cumulatively considerable." Therefore, it is not necessarily true that, even where cumulative impacts of other projects are significant, the Lead Agency must deem any level of incremental contribution to be cumulatively considerable. If the project's individual impact is less than significant, however, its contribution to a significant cumulative impact could nevertheless be deemed cumulatively considerable depending on the nature of the impact and the

existing environmental setting. If, for example, a project is located in an air basin determined to be in extreme or severe nonattainment for a particular criteria pollutant, a project's relatively small contribution of the same pollutant could be found to be cumulatively considerable. Thus, depending on the circumstances, an impact that is less than significant when considered individually may still be cumulatively considerable in light of the impact caused by all projects considered in the analysis.

REGIONAL GROWTH PROJECTIONS

The Southern California Association of Governments (SCAG) is responsible for developing growth projections for population, housing, and employment throughout Southern California. These growth projections are used in the preparation of planning documents and analyses. SCAG computes population projections by adding the current population with the births and ingress into a region during a projection period and subtracting the number of deaths and the number of persons leaving the region (SCAG 2020). Regional and localized population growth has the potential to result in numerous environmental impacts such as traffic congestion, air quality degradation, and other environmental changes. The project is located within a region (city of Los Angeles, Los Angeles County, California) that has experienced recent growth, and is projected to experience population increases in the future. This cumulative analysis considers the regional population, households, and employment growth trends shown in Table 4-2 and the more specific individual projects that are discussed in this chapter.

Table 4-2. SCAG Regional Population, Housing, and Employment Growth Projections

	Population			Households			Employment		
Jurisdiction	2016	2045	% Change	2016	2045	% Change	2016	2045	% Change
Los Angeles County	10,110,000	11,674,000	13%	3,319,000	4,119,000	19%	4,743,000	5,382,000	12%
Los Angeles County, Unincorporated	1,044,500	1,258,000	17%	294,800	419,300	30%	269,100	320,100	16%
City of Los Angeles	3,933,800	4,771,300	18%	1,367,000	1,793,000	24%	1,848,300	2,135,900	13%
City of Beverly Hills	34,700	35,800	3%	14,800	15,700	6%	74,600	81,300	8%
City of West Hollywood	36,700	42,600	14%	26,000	30,100	14%	21,700	38,100	43%

Source: SCAG Connect SoCal Demographics and Growth Forecast (SCAG 2020)

LIST OF RELATED PROJECTS IN THE PROJECT VICINITY

The project is located on the County-owned land within the city of Los Angeles; thus, nearby related projects in the city of Los Angeles are a primary contributor to the list of related projects in the project vicinity. As well, jurisdictions that are relatively close to the project site that could have projects that contribute to the anticipated project's developed in the vicinity include the cities of Beverly Hills and West Hollywood. Further, the County was consulted to determine if there were any projects that could contribute to cumulative impacts in the project vicinity; however, no County projects were identified as a result of this inquiry.

A summary of the projects identified within this identified general vicinity of the project site is provided in Table 4-3 and shown in Figure 4-3. This is not intended to be an exhaustive list of projects in the region, but represents those projects in the vicinity of the project site that may have some related

environmental impact to the project and are: 1) currently under construction or implementation or beginning construction or implementation, 2) pending construction with approved entitlements, 3) proposed and under environmental review, or 4) reasonably foreseeable (i.e., projects for which an application has been submitted and reasonably foreseeable public projects).

Table 4-3. Cumulative Development Scenario Project List

Figure 4-3 Map Key	Name	Location	Project Type	Description	Project Status*
Regional					
1	Metro D (Purple) Line Extension	Metro Wilshire/ Western Station to Metro Westwood/ Veterans Administration Hospital Station	Infrastructure	Extend rail service with seven new transit stations by year 2027.	Under construction. First phase (Wilshire/ La Brea, Wilshire/ Fairfax, and Wilshire/ La Cienega Stations) is anticipated to be completed and in operation by 2024.
County of Los Angeles					
2	LACMA Renovation	5906 West Wilshire Boulevard	Museum/Public Facilities	Replace 392,871 square feet (sf) museum with 368,300 sf museum	Under construction
City of Los Angeles					
3	Wilshire Curson Project	5700-5780 Wilshire Boulevard; 712-752 South Curson Avenue; 5721-5773 West 8th Street; 715-761 South Masselin Avenue	Office and Commercial	2,222,952 sf office 117,600 sf commercial Retain and renovate the southern portion of the existing buildings and would demolish the northern portion of the two existing office buildings.	Under review
4	5891 West Olympic Boulevard Apartments	5891 West Olympic Boulevard	Residential	46 apartments	Entitlements approved. Not constructed.
5	Fairfax Avenue Apartments and Restaurant	800-840 South Fairfax Avenue	Residential and Restaurant	209 apartments 2,653 sf of restaurant use	Under review
6	Wilshire Boulevard Mixed-Use Project	5411 Wilshire Boulevard	Mixed-Use	348 apartments (including 38 affordable housing units) 10,716 sf commercial	Under review
7	6052-6066 West Olympic	6052-6066 West Olympic Boulevard	Commercial and Residential	5,135 sf of commercial retail space 120 residential units (including 12 affordable housing units)	Entitlements approved. Not constructed.
8	3rd and Fairfax Mixed-Use Project	300-370 South Fairfax Avenue; 6300-6370 West 3rd Street; 347 South Ogden Drive	Commercial and Residential	83,994 sf of commercial space 331 apartments	Entitlements approved. Pending demolition and construction.

Figure 4-3 Map Key	Name	Location	Project Type	Description	Project Status*
9	Olympic Boulevard Residential Mixed-Use Project	6001-6011 West Olympic Boulevard	Commercial Retail and Residential	57 apartments (including 6 affordable housing units) 1,596 sf of ground-floor retail	Under construction
10	Television City (TVC) 2050 Plan	7716-7860 West Beverly Boulevard	Office and Commercial Retail	1,874,000 sf of sound stage production support, production office, general office, and retail uses	Under review
11	South San Vicente Medical Office	650-676 South San Vicente Boulevard	Medical Office and Retail Commercial	140,305 sf medical office 4,000 sf restaurant/ retail 1,000 sf commercial uses	Under review
12	333 San Vicente Boulevard Apartments	333 San Vicente Boulevard	Residential and Church	153 apartments 31,000 sf church	Under review
13	488 San Vicente Boulevard	488 San Vicente Boulevard	Residential and Commercial	53 apartments 7,000 sf retail	Entitlements approved. Not constructed.
14	8000 West 3rd Street	8000 West 3rd Street	Residential and Commercial	50 apartments 7,065 sf retail	Entitlements approved. Not constructed.
15	Unified Elder Care Facility/Mixed-Use	8052 West Beverly Boulevard	Elder Care Facility	5,000 sf of synagogue use 102 apartments 15,000 sf of medical office 1,000 sf of retail use	Entitlements approved. Demolition complete. Grading permit issued October 2022.
16	7901 Beverly Boulevard	7901 Beverly Boulevard	Residential and Commercial	71 apartments 12,000 sf retail	Entitlements approved. Not constructed.
17	8000 Beverly Mixed-Use	8000 West Beverly Boulevard	Residential and Restaurant Use	48 apartments 7,400 sf restaurant	Entitlements approved. Not constructed.
18	8001 Beverly Boulevard	8001 Beverly Boulevard	Office and Commercial	11,000 sf office 23,000 sf restaurant	Entitlements approved. Not constructed.
19	7951 Beverly Mixed-Use	7951 West Beverly Boulevard	Residential, Restaurant, and Retail Use	51 apartments 6 affordable housing units 6,294 sf restaurant 1,142 sf retail	Entitlements approved. Demolition commenced as of October 2022.
20	333 La Cienega Boulevard Project	333 South La Cienega Boulevard	Residential and Restaurant Use	145 apartments 27,685 sf commercial (supermarket) 3,370 sf restaurant	Entitlements approved. Not constructed.
21	316 North La Cienega Boulevard Project	316 North La Cienega Boulevard	Residential and Commercial	61 apartments 4,097 sf retail	Entitlements approved. Not constructed.

Figure 4-3 Map Key	Name	Location	Project Type	Description	Project Status*
22	431 North La Cienega Boulevard Apartments	431 North La Cienega Boulevard	Residential	72 apartments	Entitlements approved. Not constructed.
23	Wilshire & La Jolla Tower	6401-6419 Wilshire Boulevard	Residential and Retail Use	90 apartments 5,100 sf retail	Not constructed.
24	750 North Edinburgh Avenue	750 North Edinburgh Avenue	Residential	8 single-family residences	Tract Map approved. Not constructed.
City of Beverly Hills					
25	332 South Doheny Drive	332 South Doheny Drive	Residential	9 apartments	Under review
26	55 North La Cienega Boulevard	55 North La Cienega Boulevard	Mixed-Use	105 apartments	Under review
27	227 Tower Drive	227 Tower Drive	Residential	10 condominiums	Under review, Applicant to submit corrections
28	300 South Wetherly Drive	300 South Wetherly Drive	Residential	140 condominiums	Under review
City of West Hollywood					
29	Santa Monica Boulevard Mixed-Use Project	8555 Santa Monica Boulevard	Mixed-Use	111 apartments (including 17 affordable housing units) 15,494 sf of live/work use (12 units) 24,842 sf commercial retail 3,938 sf of restaurant and cafe uses	Under review
30	Robertson Lane Hotel Project	645, 647, 653, 655, 661, 665, and 681 North Robertson Boulevard and 648, 650, 652, and 654 North La Peer Drive	Mixed-Use	225,215 sf hotel 47,415 sf commercial/ restaurant	Under review. Construction is anticipated to start in late 2022 or early 2023.
31	8850 Sunset Boulevard Project	8850-8878 Sunset Boulevard and 1025-1029 Larrabee Street	Mixed-Use	240,000 sf hotel (115 guest rooms with ancillary uses) 41 apartments	Under review
32	9034 Sunset Boulevard	9034 Sunset Boulevard	Mixed-Use	10 condominiums 237-room hotel 11,000 sf commercial	Under review
33	948 North San Vicente Boulevard	948 North San Vicente Boulevard	Residential	24 apartments	Under review
34	560 Orlando Avenue	560 Orlando Avenue	Residential	4 apartments	Under review
35	855 West Knoll Drive	855 West Knoll Drive	Residential	4 condominiums	Under review
36	862 West Knoll Drive	862 West Knoll Drive	Residential	3 townhomes	Under review
37	1006 Edinburgh Avenue	1006 Edinburgh Avenue	Residential	14 apartments	Under review

Sources: City of Beverly Hills (2022); City of Los Angeles (2022a, 2022b); City of West Hollywood (2022); Kittelson and Associates, Inc. (2022).

* "Under review" means the project has not yet been entitled.

Figure 4-3. Cumulative development scenario project locations.

CHAPTER 5. ENVIRONMENTAL IMPACT ANALYSIS

This chapter evaluates the potential environmental effects that would result from construction and operation of the La Brea Tar Pits Master Plan and identifies mitigation measures for impacts found to be potentially significant. Table 5-1 provides a brief summary of the results of the analysis.

Table 5-1. Summary of Environmental Impacts Analysis

Environmental Resource	Significant and Unavoidable Impact	Less than Significant Impact with Mitigation	Less than Significant Impact
Aesthetics		X	
Agriculture and Forestry Resources*			X
Air Quality		X	
Biological Resources		X	
Cultural Resources – Archaeological Resources		X	
Cultural Resources – Historic Resources	X		
Energy*			X
Geology and Soils		X	
Greenhouse Gas Emissions		X	
Hazards and Hazardous Materials		X	
Hydrology and Water Quality		X	
Land Use and Planning	X		
Mineral Resources*			X
Noise and Vibration		X	
Population and Housing*			X
Public Services*			X
Recreation		X	
Transportation	X		
Tribal Resources		X	
Utilities and Service Systems		X	
Wildfire*			X

* Issues evaluated in Section 7.5, Environmental Effects Found Not to be Significant. Based on preliminary analysis and discussions with the Los Angeles County Museum of Natural History Foundation, it was determined that the project would not result in significant impacts related to agricultural and forestry resources, energy, mineral resources, population and housing, public services, and wildfire.

Each environmental issue area discussed in Chapter 5 of this EIR has been divided into subsections, as follows:

Existing Conditions: The description of the physical environmental conditions in the vicinity of the project, as they exist at the time of the established baseline physical conditions.

Regulatory Setting: The regulations in effect at the time the Notice of Preparation was published. These are the applicable regulations governing each environmental topic, such as the California Endangered Species Act (CESA) and its requirements for protecting rare and endangered species. This is not an exhaustive analysis of the regulations, but rather information to assist the reader in understanding the potential impacts of the project from a regulatory perspective.

Thresholds of Significance: The thresholds used to evaluate each environmental topic based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines and other sources.

Impact Assessment Methodology: Methods used to determine the impacts associated with the project, such as measurements or field investigative processes.

Environmental Impact Analysis: The statement of the level of significance of potential environmental effects of the project. These include the significant environmental effects of the project, as further defined below. The impacts are identified and then are followed by the mitigation measures that can minimize significant impacts; mitigation measures must be enforceable and feasible. In addition, there must be an essential nexus between the mitigation measure and a legitimate governmental interest, and the mitigation measure also must be "roughly proportional" to the impacts of the project.

Cumulative Impact Analysis: The cumulative effects of the project when the project's incremental effect is considered in combination with other closely related past, present, and reasonably foreseeable probable future projects.

All impacts in this EIR, following the application of any recommended mitigation measures, have been classified according to the following criteria (note: CEQA does not recognize a beneficial effect as an impact):

A *significant and unavoidable impact* would cause a substantial adverse effect on the environment that meets or exceeds the applicable significance criteria thresholds for a particular resource, and no feasible mitigation measures would be available to reduce the impact to a less-than-significant level.

A *less than significant impact with mitigation* is an adverse impact that would cause a substantial adverse effect that meets or exceeds the applicable significance criteria thresholds for a particular resource but can be reduced to a less-than-significant level through successful implementation of identified mitigation measures.

A *less than significant impact* or a conclusion of *no impact* means the effect does not meet or exceed the applicable significance criteria thresholds for a particular resource. No mitigation measures are required for less than significant impacts or issue areas where no impact would occur; only compliance with standard regulatory conditions would be required.

The term "significance" is used throughout the EIR to characterize the magnitude of the projected impact. For this EIR, a significant impact is a substantial or potentially substantial change to resources in the project area or the area adjacent to the project. In the discussions of each issue area, thresholds of significance are identified to distinguish between significant impacts and impacts that would not arise to the level of significance.

Where feasible, measures have been identified to reduce project impacts to less-than-significant levels. CEQA states that public agencies should not approve projects as proposed if there are feasible mitigation measures available that would substantially lessen the environmental effects of such projects (Public Resources Code Section 21002).

5.1 AESTHETICS

This section identifies visual characteristics of the project site and analyzes the potential effects of the project related to aesthetics. Aesthetics are principally defined by how viewers perceive the visual attractiveness of an area. Based on this subjective perception, the key elements and features that create or enhance an area's visual quality are definable. In general, visual resources are features of urban (built) or natural environments with a high aesthetic or scenic value. Appendix G of the State CEQA Guidelines describes the concept of aesthetic resources in terms of scenic vistas, scenic resources (such as trees, rock outcroppings, and historic buildings within a State Scenic Highway), the visual character or quality of the project area, and light and glare.

5.1.1 Existing Conditions

5.1.1.1 Visual Characteristics of the Project Site

The project site is located at 5801 Wilshire Boulevard within the 23-acre Hancock Park. As illustrated in the aerial photograph in Chapter 3, Figure 3-2, the project site includes 13 acres of the eastern and northwestern portions of Hancock Park. It is bounded by West 6th Street to the north (an approximately 1,200-foot-long frontage), South Curson Avenue to the east (an approximately 830-foot-long frontage), Wilshire Boulevard to the south (an approximately 500-foot-long frontage), and the Los Angeles County Museum of Art (LACMA) to the west across the vacated Ogden Drive (approximately 250-foot-long frontage). The entirety of Hancock Park is currently enclosed with an 8- to 10-foot-high metal fence that serves to secure the site by providing full closure of Hancock Park when the facilities are closed in the evenings.

The project site includes active paleontological research areas and quarries, recreational facilities, and several buildings. Of particular note and prominence is the two-story (approximately 41 feet in height) George C. Page Museum (Page Museum) in the eastern portion of the project site. Numerous small tar seeps, an upwelling of asphalt to the ground surface, are also in various locations at the project site.

The exterior of the Page Museum is shaped like a truncated pyramid. The first floor of the museum is set into a large earthen berm which opens onto the Central Green, which is an approximately 28,000-square foot multi-purpose grass lawn to the west of the Page Museum. At the top of the earthen berm on the second floor is a 30-foot-wide rooftop covered viewing platform which surrounds the first-floor Central Atrium courtyard. The entire viewing platform is covered by an expansive projecting frieze, which appears as carved stone with a continuous bas relief sculpture depicting scenes from the Pleistocene period, prepared by sculptor Manuel La Paz and supported by an exposed space frame roof structure (Millington and Dietler 2023).

The project site contains multiple active paleontological quarries, commonly referred to as "pits." The active pits are scattered throughout the northeastern portion of the project site (Pits 3, 4, 9, 13, 61, 67, and 91.) These tar pits are fenced and include informational placards. Of paleontological and visitor interest, Pit 91 has an attached indoor viewing station (approximately 13 feet in height) that allows visitors to observe the ongoing excavation activities. Project 23, located on the north end of the excavations compound, describes the ongoing activities related to recovery of the deposits found during construction of the LACMA parking garage. [1] The Observation Pit is situated to the west of Project 23

[1] During construction on the LACMA parking garage in 2006, 16 new paleontological deposits were discovered, including an almost-complete skeleton of an adult mammoth. Given the size of the discoveries, 23 large wooden boxes were built around the various deposits, allowing many of the discoveries to remain intact. "Project 23" has now become the short-hand descriptor for the location and activities related to the excavation of deposits within the 23 large wooden boxes that is now occurring in a portion of the La Brea site.

along the project site boundary with LACMA. The Observation Put is a small domed building (approximately 12.5 feet in height) built over the active Pit 101 and replicates the experience of a fossil pit.

To the south of the Page Museum is the Wilshire Boulevard pedestrian entrance and the Lake Pit. Although it appears to resemble a small lake or pond, the Lake Pit is a pit left over from asphalt mining operations in the late 1800s and produces visible methane gas bubbles that emit a distinctive odor. In 1967, statues of Columbian mammoths were put on display in the Lake Pit. A comfort station with public restrooms, picnic benches, and vending machines is adjacent to the Lake Pit to the west.

Landscaping on the project site includes a variety of trees, bushes, and other vegetation interspersed within the project site and along the perimeter. Vegetation consists of primarily non-native planted trees, such as pines (*Pinus* spp.), gum trees (*Eucalyptus* spp.), Brazilian pepper (*Schinus terebinthifolius*), various species of palm tree (e.g., fan; queen), and other non-native ornamental trees. It is estimated that approximately 330 to 340 trees currently exist within the 13-acre project boundary. Within these existing trees, there are 13 native oak trees (12 *Quercus agrifolia* and one *Quercus lobata*). The highest concentration of landscaping occurs in the northern perimeter along West 6th Street and the eastern perimeter along South Curson Boulevard, which includes a mix of shrubs, non-native ornamental trees, and palm trees. In addition, an ephemeral creek, referred to as Oil Creek, flows from the northeast to the southwest from the southwestern end of the parking area to the southeast side of Pit 91. Oil Creek is dominated by non-native mowed grasses along with a mix of other native and non-native low-lying vegetation.

Visibility, or views of the project site's visual characteristics from adjacent uses, typically depends on the vantage point and location. Distant or panoramic views of the project site are generally constrained by the relatively flat topography of the project site within the surrounding dense urban development, street trees, and other landscaping. Long-range views of the project site are generally only available from elevated vantage points in the project vicinity, primarily private vantage points from taller buildings along Wilshire Boulevard, the residential towers in Park La Brea, and other residential and office high rise buildings in the area. From street level, visibility of the project site generally includes views of the existing fencing and existing landscaping and trees lining the project site's perimeter. Views of the Lake Pit, the Page Museum, and the Central Green can be seen from Wilshire Boulevard, looking north into the project site. From South Curson Street looking west into the project site, portions of Central Green as well as partially obstructed views of the Page Museum can be seen through the existing landscaping. In addition, views of the existing parking lot and existing entrance at the intersection of South Curson Street and Wilshire Boulevard are visible. Views from West 6th Street looking south into the project site include existing landscaping and perimeter trees, fencing, as well as obstructed views of Page Museum, Central Green, and the parking lot.

5.1.1.2 Visual Characteristics of the Surrounding Area

The project site is located approximately 5.5 miles west from downtown Los Angeles within the Miracle Mile neighborhood. The area is urbanized and is characterized primarily by low-, mid-, and high-rise buildings that are occupied by a mixture of urban uses, including museums, commercial, office, residential, and open space. The surrounding mix of uses ranges in height from one to 31 stories.

The Park La Brea Pool and Park La Brea, a residential neighborhood containing two-story garden apartment buildings, are located to the north across West 6th Street. The residential buildings associated with Park La Brea are generally oriented inward and consistent in massing. The heavy landscaping along West 6th Street contributes to a uniform visual character of the Park La Brea development.

A dense urban environment is located to the south across Wilshire Boulevard. The Craft Contemporary Museum and other museum and commercial buildings ranging in height from two stories to six stories are spread along the street. A 31-story commercial office building is also located across Wilshire Boulevard. Single- and multi-family residential uses are located farther to the south.

LACMA is located on the west and southwestern project site boundary. The buildings associated with LACMA include the Pavilion for Japanese Art, the "Urban Light" and "Levitated Mass" public artwork, and the future David Geffen Galleries. Although currently under construction, the David Geffen Galleries will be an approximately 65-foot-tall building that will replace four of LACMA's older buildings on-site, which range in height from approximately 46 to 100 feet (County of Los Angeles 2017). A portion of the David Geffen Galleries will extend across Wilshire Boulevard to the Spaulding Lot. Construction activities are estimated to be completed at the end of 2024 (LACMA 2023). Beyond LACMA's facilities to the west are an outdoor public art installation and the Academy Museum of Motion Pictures.

Commercial buildings, surface parking lots, a 21-story residential building, and a 5-story residential building are located across South Curson Avenue to the east.

5.1.1.3 Scenic Vistas and Views

A scenic viewshed provides a scenic vista from a given location, such as a highway, a park, a hiking trail, river/waterway, or even from a particular neighborhood. The boundaries of a viewshed are defined by the field of view. Scenic viewsheds vary by location and community and can include ridgelines, unique rock outcroppings, waterfalls, ocean views, or various other unusual or scenic landforms. This analysis relied on local and state guidance documents to identify important scenic vistas and views that should be protected in the project site. As designated and defined by both the City of Los Angeles (City) and County of Los Angeles (County), the project site is not located within or adjacent to a scenic viewshed, vista, feature, or ridgeline (City of Los Angeles 2001; County of Los Angeles 2015). Additional information regarding the regulatory setting in consideration of the aesthetics analysis contained herein is provided in Section 5.1.2, Regulatory Setting.

Public views are those that can be seen from vantage points that are publicly accessible, such as streets, freeways, parks, and vista points. Views can be defined as focal views (i.e., views of a particular object, scene, setting, or feature of visual interest) and panoramic views (i.e., views of a large geographic area for which a view may be wide and extend into the distance). Within the project vicinity, panoramic views are only available from elevated vantages, including the taller buildings along Wilshire Boulevard, the residential towers in Park La Brea, and other residential and commercial office high-rise buildings in the area. Given the relative lack of buildings on the site compared with the surrounding dense urban development, street trees, and other landscaping, panoramic views are not generally limited from the project site. Pedestrian-level, panoramic views of the Hollywood Hills may be available from certain roadway segments in the area (e.g., Fairfax Avenue). However, panoramic east-west views along Wilshire Boulevard are limited by the bend in the roadway that begins adjacent to the project site, between Stanley Avenue and Spaulding Avenue, and trends northward to the west for several miles. As a result, panoramic views along this roadway generally terminate at the buildings where this bend occurs.

Views from the project site from most public street-level locations are focal views and primarily available to viewers at adjacent locations (i.e., pedestrians and motorists along Wilshire Boulevard, West 6th Street, and Ogden Drive). In general, surrounding views consist of the urban landscape, which include a variety of low-, mid-, and high-rise buildings, both old and new, occupied by commercial, residential, and office uses; parking uses; and intermittent views of open space areas such as Hancock Park. Notable buildings and features that can be seen within the same viewshed as the project site are limited to those that are located on or adjacent to the project site, such as the Wilshire Boulevard streetlights, the Pavilion for

Japanese Art, the Observation Pit building, the high-rise building at 5900 Wilshire Boulevard, and the building at 5850 Wilshire Boulevard, which is adjacent to the Spaulding Lot.

5.1.1.4 Scenic Highways and Scenic Resources

The California Scenic Highway Program identifies State- and County-designated scenic highways. The State-designated scenic highway is Route 2, the Angeles Crest Highway, located approximately 12 miles north of the project site (California Department of Transportation [Caltrans] 2018). The County-designated scenic highways are two sections of Mulholland Highway and the Malibu Canyon-Los Virgenes Highway, which are both located more than 20 miles to the northwest of the project site (Caltrans 2015). In addition, Route 210, the Foothill Freeway, is an eligible State Scenic Highway but is not officially designated. Route 110, the Pasadena Freeway or Arroyo Seco Parkway, is recognized by the California Scenic Highway Program as a federal Historic Parkway. Route 210 is approximately 12 miles north of the project site and Route 110 is approximately 5 miles east.

In addition to the designation of highways under the California Scenic Highway Program, the City's *Mobility Plan 2035* provides an inventory of City-designated scenic highways, special controls for protection and enhancement of scenic resources, and Scenic Highway guidelines for those designated scenic highways for which there is no adopted scenic corridor plan (City of Los Angeles 2016). The *Mobility Plan 2035* lists the following two segments of Wilshire Boulevard as a Scenic Highway: the segment from where the jurisdictional boundaries of the City of Beverly Hills and City of Los Angeles meet to Malcom Avenue (the Wilshire–Westwood Scenic Corridor) and the segment between Sycamore Avenue and Fairfax Avenue. Thus the project site is adjacent to a City-designated Scenic Highway. Specifically, this portion of Wilshire Boulevard is notable due to the landscaped median that extends along this portion of Wilshire Boulevard, as well as its location within the Miracle Mile.

In summary, the project site is not within the viewshed of a State- or County-designated scenic highway due to distance and the built-out nature of the area surrounding the project site. Based on a review of the applicable County and City plans, there are no other designated scenic resources within a State Scenic Highway that would be visible from the project site (City of Los Angeles 2001; County of Los Angeles 2015).

Of note and discussed in detail in Section 5.5, Cultural Resources – Historical Resources, the Page Museum, the Observation Pit, and the La Brea Tar Pits Historic District are considered historical resources for the purposes of CEQA. These historical resources are defining visual characteristics of project site and are visible from the City-designated scenic highway segment of Wilshire Boulevard. Discussion of proposed modifications to these resources as they pertain to aesthetics and visual resource impacts is included for informational purposes in the environmental impact analysis in Section 5.1.5.

5.1.1.5 Light and Glare

Given the nature of high-density urban development, most of Wilshire Boulevard and the project vicinity is characterized by moderate to high intensities of illumination. Artificial lighting in the project vicinity includes street lighting, security lighting in parking lots, signs and billboards, recreational facilities, and exterior and interior lighting of residential and nonresidential buildings. Light is also emitted from the headlights of vehicles traveling along Wilshire Boulevard and surrounding streets. Streetlights on Wilshire Avenue, particularly at intersections, illuminate most of the streets in the area. The bulk of the existing streetlights are on approximately 40-foot-tall streetlight poles. Ornamental pedestrian-level lighting is provided on some corridors, such as portions of West 6th Street. In general, the project vicinity is an urban area with many sources of ambient illumination, including light emitted from industrial and commercial properties and streetlights lining the streets, as well as from the headlights of vehicles traveling along Wilshire Boulevard.

Lighting within the project site includes interior and exterior lights adjacent to the buildings. Exterior lighting on the park facilities and buildings (e.g., the Page Museum and the Observation Pit building) and free-standing lights in the park grounds of La Brea Tar Pits are primarily located in the parking lot and along the park pathways for security and wayfinding purposes. In addition, lighting for accent signage, parking information, and architectural features is also present within the project site. Additional temporary lighting is periodically used on the park grounds of the project site, which are plugged into the bottom of the existing, free-standing light fixtures (which have electrical outlets at their bases).
All outdoor lights within the project site operate on a timer, turning on at 6:00 p.m. and turning off at 7:00 a.m. every day, and conform to the requirements set forth in the County's Municipal Code Section 22.44.1270 for exterior lighting.

5.1.2 Regulatory Setting

5.1.2.1 Federal

There are no federal regulations related to aesthetics that are applicable to the project.

5.1.2.2 State

CALIFORNIA SCENIC HIGHWAY PROGRAM

The State Scenic Highway Program was created in 1963 to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. According to state guidelines, a highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. Caltrans defines a State Scenic Highway as any freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality. Eligibility for designation as a State Scenic Highway is based on vividness, intactness, and unity of the roadway. As previously described, the project site is not within the viewshed of a State-designated scenic highway.

CALIFORNIA GREEN BUILDING STANDARDS

The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as the 2019 CALGreen Code. The CALGreen Code stipulates maximum allowable light levels, efficiency requirements for lighting, miscellaneous control requirements, and light trespass requirements for electric lighting and daylighting. Paragraph 5.106.8 Light Pollution Reduction specifies that all non-residential outdoor lighting must comply with the following:

- The minimum requirements in the California Energy Code for Lighting Zones 0-4 as defined in Chapter 10, Section 10-114 of the California Administrative Code; and
- Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8); and
- Uplight and Glare ratings as defined in the California Energy Code (shown in Tables 130.2-A and 130.2-B in Chapter 8); and
- Allowable Backlight, Uplight and Glare ratings not exceeding those shown in Table A5.106.8(N); or comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

5.1.2.3 County of Los Angeles

COUNTY OF LOS ANGELES 2035 GENERAL PLAN

Given the location of the project entirely on County-owned land, the County of Los Angeles 2035 General Plan (County General Plan) is an important applicable guiding policy document (County of Los Angeles 2015). The County General Plan provides the policy framework and establishes the County's long-range vision for how the County will grow, and establishes goals, policies, and programs to foster healthy, livable, and sustainable communities. The County of Los Angeles Board of Supervisors adopted the County General Plan on October 6, 2015. Chapter 6, the Land Use Element, was updated in 2022. The objectives and policies of the Land Use, Conservation and Open Space, and Mobility Elements related to aesthetics are listed in Table 5.1-1.

Table 5.1-1. County of Los Angeles General Plan, Relevant Goals and Policies

Objective/Policy	Objective/Policy Description
Land Use Element	
Goal LU 7	Compatible land uses that complement neighborhood character and the natural environment.
Goal LU 10	Well-designed and healthy places that support a diversity of built environments.
Policy LU 10.1	Encourage community outreach and stakeholder agency input early and often in the design of projects.
Policy LU 10.2	Design development adjacent to natural features in a sensitive manner to complement the natural environment.
Policy LU 10.3	Consider the built environment of the surrounding area and location in the design and scale of new or remodeled buildings, architectural styles, and reflect appropriate features such as massing, materials, color, detailing or ornament.
Policy LU 10.10	Promote architecturally distinctive buildings and focal points at prominent locations, such as major commercial intersections and near transit stations or open spaces.
Goal LU 11	Development that utilizes sustainable design techniques.
Policy LU 11.2	Support the design of developments that provide substantial tree canopy cover, and utilize light-colored paving materials and energy-efficient roofing materials to reduce the urban heat island effect.
Conservation and Open Space Element	
Goal C/NR 13	Protected visual and scenic resources.
Policy C/NR 13.1	Protect scenic resources through land use regulations that mitigate development impacts.
Policy C/NR 13.3	Reduce light trespass, light pollution, and other threats to scenic resources.
Policy C/NR 13.4	Encourage developments to be designed to create a consistent visual relationship with the natural terrain and vegetation.
Policy C/NR 13.5	Encourage required grading to be compatible with the existing terrain.
Policy C/NR 13.6	Prohibit outdoor advertising and billboards along scenic routes, corridors, waterways, and other scenic areas.
Mobility Element	
Policy M 2.9	Encourage the planting of trees along streets and other forms of landscaping to enliven streetscapes by blending natural features with built features.
Policy M 2.11	In urban and suburban areas, promote the continuity of streets and sidewalks through design features, such as limiting mid-block curb cuts, encouraging access through side streets or alleys, and promoting shorter block lengths.

COUNTY OF LOS ANGELES CODE SECTION 22.44.1270 EXTERIOR LIGHTING

Section 22.44.1270 establishes light performance standards for development within the County, including standards related to acceptable power of lighting, types of lighting, height of lighting support structures, lighting shielding, sign lighting, and hours of operation.

COUNTY OF LOS ANGELES SECTION 22.174 OAK TREE PERMIT ORDINANCE

The County of Los Angeles Oak Tree Permit Ordinance protects all oak trees, whether native (indigenous) or not (Title 22 Division 8 Chapter 22.174). Under this ordinance, oak trees 8 inches or more in diameter measured at 4.5 feet above mean natural grade (i.e., diameter at breast height [dbh]), or in the case of oaks with multiple trunks, a combined diameter of 12 inches dbh or more of the two largest trunks, are protected. A permit is required to cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone. The protected zone is the diameter of the tree's canopy, plus 5 feet (County of Los Angeles Zoning Code). Exemptions to the ordinance include cases of emergency caused by an oak tree being in a hazardous or dangerous condition, or being irretrievably damaged or destroyed through flood, fire, wind, or lightning, as determined after visual inspection by a licensed forester with the Department of Forestry and fire warden.

There are 13 native oak trees on the project site that meet threshold criteria for protection under the County of Los Angeles Oak Tree Permit Ordinance.

5.1.2.4 City of Los Angeles

While the project site is located within the city of Los Angeles, it is owned by the County of Los Angeles and is proposed for uses that benefit the public. Accordingly, the project is not subject to the regulatory controls of the City of Los Angeles. Nonetheless, City regulatory and planning documents that are most relevant to the project as they relate to aesthetics and visual resources are provided herein for informational purposes.

CITY OF LOS ANGELES GENERAL PLAN

The City of Los Angeles City Council originally adopted the City of Los Angeles General Plan (City General Plan) in 1974 to serve as a comprehensive, long-term plan for future development of the City. The City General Plan Elements have been gradually updated over time and set forth goals, objectives, and programs to guide land use policies and meet the existing and future needs of the City. City objectives and policies of the Framework, Conservation, and Mobility Plan Elements related to aesthetics are provided in Table 5.1-2.

Table 5.1-2. City of Los Angeles General Plan, Relevant Policies and Objectives

Objective/Policy	Objective/Policy Description
Framework Element	
Policy 3.2.1	Provide a pattern of development consisting of distinct districts, centers, boulevards, and neighborhoods that are differentiated by their functional role, scale, and character. This shall be accomplished by considering factors such as the existing concentrations of use, community-oriented activity centers that currently or potentially service adjacent neighborhoods, and existing or potential public transit corridors and stations.

Objective/Policy	Objective/Policy Description
Policy 5.2.2	Encourage the development of centers, districts, and selected corridor/boulevard nodes such that the land uses, scale, and built form allowed and/or encouraged within these areas allow them to function as centers and support transit use, both in daytime and nighttime (see Chapter 3: Land Use). Additionally, develop these areas so that they are compatible with surrounding neighborhoods, as defined generally by the following building characteristics: • Buildings in community centers generally should be two to six stories in height, with the first several stories located along the sidewalk. They should also incorporate the pedestrian-oriented elements defined in policy 5.8.1. Either housing or office space may be located above the ground floor storefronts. • The built form of regional centers will vary by location. In areas such as Wilshire and Hollywood Boulevards, buildings will range from low- to mid-rise buildings, with storefronts situated along pedestrian-oriented streets. In areas such as Century City and Warner Center, freestanding high rises that are not pedestrian-oriented characterize portions of these centers. Nevertheless, regional centers should contain pedestrian-oriented areas, and incorporate the pedestrian-oriented design elements defined in policy 5.8.1 and policies 3.16.1–3.16.3. • Buildings located at activity nodes along mixed-use boulevards generally shall have the same characteristics as either neighborhood districts or community centers, depending on permitted land use intensities. Housing over ground-floor storefronts or in place of commercial development shall be encouraged along mixed-use boulevards.
Policy 6.4.4	Consider open space as an integral ingredient of neighborhood character, especially in targeted growth areas, in order that open space resources contribute positively to the City's neighborhoods and urban centers as highly desirable places to live (see Chapter 5: Urban Form and Neighborhood Design).
Objective 9.38	Ensure that street lighting designs meet minimum standards for quality lighting to provide appropriate visibility dependent on the character and usage of streets and sidewalks with minimum impact on the environment and adjoining property.
Policy 9.40.1	Require lighting on private streets, pedestrian oriented areas, and pedestrian walks to meet minimum City standards for street and sidewalk lighting.
Policy 9.40.2	Require parking lot lighting and related pedestrian lighting to meet recognized national standards.
Mobility Plan 2035	
Policy 2.16 Scenic Highways	Ensure that future modifications to any Scenic Highway do not impact the unique identity or characteristic of that Scenic Highway.
Policy 3(c)	Outstanding specimens of existing trees and plants located within the public right-of-way of a Scenic Highway shall be retained to the maximum extent feasible within the same public right-of-way.
Policy 3(e)	Landscaped medians of Scenic Highways shall not be removed. Such medians may be reduced in width (1) to accommodate left turn channelization within one hundred feet of a signalized intersection; or (2) to accommodate a designated Class II bikeway provided that there is compliance with Guideline 3c above, and that the resulting median width is not less than eight (8) feet.
Policy 4(a,b)	Only traffic, informational, and identification signs shall be permitted within the public right-of-way of a Scenic Highway. Off-site outdoor advertising is prohibited in the public right of-way of, and on publicly-owned land within five hundred feet of the center line of, a Scenic Highway

WILSHIRE COMMUNITY PLAN

Thirty-five community plans comprise the Land Use Element of the City General Plan. The community plans implement the City General Plan Framework at the local level and consist of both text and an accompanying generalized land use map. Community plans are intended to provide an official guide for future development, propose approximate locations and dimensions for land use, and show the locations and characteristics of public service facilities.

The project site is located within the Wilshire Community Plan area, which was approved by the City Council on September 19, 2001 (City of Los Angeles 2001). The majority of the Wilshire Community Plan area consists of gently sloping plains and includes about 8,954 acres (about 14 square miles). The eastern edge of the plan area is about 6 miles west of downtown Los Angeles, and the western edge abuts the City of Beverly Hills.

The Wilshire Community Plan objectives and policies relevant to the project regarding aesthetics are shown in Table 5.1-3.

Table 5.1-3. Wilshire Community Plan, Relevant Policies and Objectives

Objective/Policy	Objective/Policy Description
Objective 2-3	Enhance the visual appearance and appeal of commercial districts
Policy 2-3.1	Improve streetscape identity and character through appropriate controls of signs, landscaping, and streetscape improvements; and require that new development be compatible with the scale of adjacent neighborhoods.
Light and Glare Policy	• Install on-site lighting along all pedestrian walkways and vehicular access ways. • Shield and direct on-site lighting down onto driveways and walkways, away from adjacent residential uses.

The Wilshire Community Plan also contains an Urban Design chapter (Chapter 5), which includes policies that establish baseline design guidelines for commercial, multiple-family residential, and limited industrial land uses in the Wilshire community. The Urban Design chapter also includes community design and landscaping guidelines that address streetscape improvements and landscaping in public spaces and rights-of-way. These design policies and guidelines ensure that projects incorporate specific elements of good design to promote a stable and pleasant environment. For commercial areas, the emphasis is on the provision and maintenance of the visual continuity of streetscapes, and the creation of an environment that encourages both pedestrian and economic activity.

The Wilshire Community Plan includes four Designated Scenic Highways, including Wilshire Boulevard, east-west from La Brea Avenue to Fairfax Avenue. Designated Scenic Highways merit special controls and/or visual enhancement programs to protect scenic resources. The land contiguous to a scenic highway is known as a Scenic Corridor. It is appropriate that protective land use controls be established for these corridors, particularly with respect to signage and billboards.

5.1.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse impacts related to aesthetics if it would:

a) have a substantial adverse effect on a scenic vista;

b) substantially damage scenic resources including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway;

c) conflict with applicable zoning and other regulations governing scenic quality, if the project is in an urbanized area; and/or

d) create a new source of substantial light and glare which would adversely affect daytime or nighttime views in the area.

5.1.4 Impact Assessment Methodology

The evaluation of aesthetics and aesthetic impacts is inherently subjective by nature. It requires the application of a process that objectively identifies the visual features of the environment and their importance. Aesthetic description involves identifying existing visual character, including visual resources and scenic vistas unique to the project site and the surrounding area. Visual resources are determined by identifying landforms (e.g., topography and graded areas), views (e.g., scenic resources

such as natural features or urban characteristics), viewpoints/locations, and existing light and glare (e.g., nighttime illumination).

Changes to aesthetic resources due to implementation of the project are identified and evaluated based on the proposed modifications as described in Chapter 3, Project Description as they relate to the existing setting and the viewer's sensitivity. Due to the project's location within the dense urban environment and the relative lack of buildings on the site compared with the surrounding urban development, the visual receptors to the aesthetic alteration of the project site would include visitors to La Brea Tar Pits and its associated museums and publicly accessible facilities located throughout Hancock Park, including LACMA. Individuals in the surrounding residential buildings and commercial buildings, as well as motorists, cyclists, and pedestrians traveling along Wilshire Boulevard, South Curson Avenue, and West 6th Street, would also be considered visual receptors of the project site. Views from private property such as balconies, rooftops, or interior living spaces are not considered public views and, thus, are not considered further in this analysis.

The aesthetics analysis in this section considers the physical and visual changes to the existing structures on the project site as well as modifications to natural features, such as trees and landscaping, and introduced features, such as structures and lighting. The analysis also considers the project's consistency with relevant plans and regulations that address issues related to visual character, scenic views, scenic highways, and light and glare. As necessary, mitigation measures are identified to minimize impacts on aesthetics to less than-significant levels.

5.1.5 Environmental Impact Analysis

a) Would the project have a substantial adverse effect on a scenic vista?

Given the topography in the project site and the relative lack of development as compared to the surrounding dense urban development, including street trees and other landscaping, scenic views or vistas are not visible from the project site. From the project site and the immediate vicinity, there are limited and intermittent views of the Hollywood Hills, located approximately 3 miles to the northwest. Additionally, no formally designated scenic viewsheds, vistas, features, or ridgelines as designated and defined by both the City and County of Los Angeles are located within or adjacent to the project site (City of Los Angeles 2001; County of Los Angeles 2015).

CONSTRUCTION

During construction of the project, the visual appearance of the project site would be temporarily altered to accommodate construction activities such as site preparation and grading, staging equipment and materials storage, renovation and construction of existing and new structures, removal and relocation of the existing surface parking lot, and modifications to landscaping and existing trees on-site. However, given there are no formally designated scenic viewsheds, vistas, features, or ridgelines located within or adjacent to the project site, construction activities associated with the project would not result in a substantial adverse effect on a scenic vista. Impacts would be *less than significant*.

OPERATION

The project would renovate the exiting Page Museum, introduce a new structure (the new museum building), relocate the parking lot by shifting its location north approximately 50 to 70 feet, and enhance landscaping features that would be visible directly from adjacent off-site locations, including high-rise residential and commercial buildings. However, due to the topography of the project site and relative lack of buildings on the site compared with the surrounding dense urban development, view changes would typically occur at limited vantage points, as opposed to along extensive roadway segments or from entire

large geographic areas. Furthermore, the new museum building would be two stories in height and integrate with the surrounding urban development along Wilshire Boulevard and the park setting of Hancock Park. Thus, while project implementation would alter the existing visual character of the project site, it would not adversely affect a scenic vista or obstruct views of visual resources. Furthermore, educational facilities and amenities on the second floor of the new museum building, which would rise above the existing earthen berm, would provide an opportunity for visitors to experience panoramic views of Hancock Park and the Hollywood Hills to the north, as well as more open, albeit focal-range views along Wilshire Boulevard. While the project site could be visible within panoramic views, such as from the Hollywood Hills to the north and west of the project site, the project site contributes to the existing urban setting of the area and would not be especially discernible among the surrounding urban development. Therefore, implementation of the project would not have a substantial adverse effect on a scenic vista and impacts would be *less than significant*.

AES Impact 1
The project would not have a substantial effect on a scenic vista either during project construction or operation. Impacts during project construction and operation would be less than significant. (CEQA Checklist Appendix G Threshold I. a)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to scenic vistas would be less than significant.

b) Would the project substantially damage scenic resources including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

As described in Section 5.1.1.4, there are no State-designated scenic highways adjacent to or within the vicinity of the project site. The closest State-designated highway is Route 110, Arroyo Seco Historic Parkway, a federal byway located approximately 5 miles to the east (Caltrans 2018). However, the portion of Wilshire Boulevard between Fairfax Avenue and Sycamore Avenue, adjacent to the project site, is a City-designated scenic highway. The landscaped median is a primary feature that contributes to the scenic value of this portion of the roadway (City of Los Angeles 2016). The Designated Scenic Highways and Guidelines contained within the Mobility Plan 2035 of the City General Plan describe roadway design, earthwork, and grading design. However, these guidelines would not be applicable to the project since the project would not be modifying Wilshire Boulevard and no earthwork along Wilshire Boulevard is proposed. The unique identity and characteristics of the Wilshire Boulevard would not be impacted during either construction or operation of the project.

CONSTRUCTION

While construction activities would involve the use of the surrounding and nearby roadways for trucks and workers to access the project site, there are no State-designated scenic highways adjacent to or within the vicinity of the project site. In addition, the project would not involve earthwork or construction activities within the landscaped median along the City-designated scenic highway portion of Wilshire

Boulevard. As such, impacts associated with the project's construction activities would be *less than significant.*

OPERATION

While there are no designated scenic resources within a State Scenic Highway that would be visible from the project site, the project site does include features that are considered historical resources for the purposes of CEQA, including the Page Museum building and the Observation Pit. These are defining visual characteristics of the project site and are visible from the City-designated scenic highway segment of Wilshire Boulevard. Project implementation would result in modifications and enhancements to these project site features as described in Chapter 3, Project Description. Although project implementation would result in changes to the visual landscape as seen from Wilshire Boulevard, it would not substantially damage or altogether remove visually prominent or character-defining features of the project site, nor would the project alter the landscaped median of Wilshire Boulevard. Further, there are no rock outcroppings or significant topographic features on the project site. As described, the project site includes a variety of trees and vegetation interspersed within and along the perimeter; however, none of the trees are designated as scenic resources.

Given there are no designated scenic resources within a State Scenic Highway that would be visible from the project site and the project would not substantially damage or altogether remove visually prominent or character-defining features of the project site nor alter the landscaped median of Wilshire Boulevard, implementation of the project would not substantially damage scenic resources within a State- or City-designated scenic highway. For these reasons, impacts associated with project operation would be *less than significant.*

AES Impact 2
The project would not substantially damage scenic resources within a State- or City-designated Scenic Highway during either project construction or operation. Impacts during construction and operation of the project would be less than significant. (CEQA Checklist Appendix G Threshold I. b)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts to scenic resources within a State- or City-designated Scenic Highway would be less than significant.

c) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The project is in a highly urbanized area in the city of Los Angeles. The analysis of the zoning and other regulations governing scenic quality applicable to the project is primarily provided as a policy consistency-level analysis from a project operation perspective only as most of the applicable policies would not apply to the project's construction activities, except for the County's Oak Tree Permit Ordinance as described further in the analysis below.

The project would result in the renovation of the Page Museum and construction of a new museum building to allow for enlarged exhibition space, additional storage, a ground floor café, and retail space.

The new museum building would present a design that would be both distinctive and complementary to the Page Museum and would create a cohesive extension of the educational facilities. The project would require the removal of most of the existing landscaping on the project site, a significant portion of which is visible from Wilshire Boulevard. Given the visual dominance of the project site greenery, the removal of landscaping would alter the visual character of the project site. Native trees such as Coast live oak, California [western] sycamore (*Platanus racemosa*), and buckeye (*Aesculus californica*) would be preserved unless diseased or in conflict with the new construction (e.g., the pathway, the museum expansion, the shifted parking lot on the northern side of the project site). The shifting of the parking lot on the northern side of the project site may require removal or relocation of the trees between the existing parking lot and West 6th Street; the determination of whether it is feasible to retain the existing trees on the north side of the parking lot would occur after approval of the conceptual Master Plan. If these trees need to be removed or relocated, they would be either moved to another location within the 13-acre project site or replaced elsewhere within the project site. Non-native trees and/or trees in poor health would be removed. Planted trees would be consistent with or complementary to the existing streetscape. The trees and added landscaping would reflect the redesigned pedestrian pathway that would loop through the project site and connect disparate buildings. Thus, given that the loss of on-site trees and landscaping would be temporary, that removed trees would be replaced or relocated within the 13-acre project site, and that the project would enhance the overall landscaping at the project site, the removal, relocation, and replacement of trees and landscaping would not substantially and adversely alter or degrade the existing visual character of the project site or surrounding area.

As described in Section 5.1.2.4, the project site is owned by the County of Los Angeles and the project is not subject to the regulatory controls of the City of Los Angeles. Generally, because the project is being proposed by the County on County-owned property, the project is subject to the directives and guidance of County policies and regulations. Nonetheless, plans and policies of the City of Los Angeles that are most relevant to the project are also addressed in this section for informational purposes.

COUNTY OF LOS ANGELES 2035 GENERAL PLAN

The County of Los Angeles 2035 General Plan provides policies that govern scenic quality in several elements. The project would be consistent with the Land Use Element and support the County's Goal C/NR 13 and Policy C/NR 13.1 to protect visual and scenic resources by developing compatible land uses that complement the character and existing uses within the project site and Hancock Park. The project would expand access to open space and facilitate pedestrian circulation. Further, the project would

support the County's policies to consider the built environment of the surrounding area and location in the design and scale of new buildings while promoting architecturally distinctive buildings at prominent locations. The project would also be designed to be modern, efficient, and sustainable pursuant to the County's Best Practices for Design Excellence (County of Los Angeles 2022). Therefore, implementation of the project would not conflict with the policies that govern scenic quality in the County of Los Angeles 2035 General Plan.

COUNTY OF LOS ANGELES OAK TREE PERMIT ORDINANCE

Thirteen native oak trees are currently within the La Brea Tar Pits project site. All native oaks on-site are protected by the Los Angeles County Oak Tree Permit Ordinance; therefore, disturbance (removal or relocation) of these trees during project construction has the potential to conflict with the Los Angeles County Oak Tree Permit Ordinance. While the project is exempt from obtaining a permit under the ordinance because the project is on County-owned property, the Los Angeles County Museum of Natural History Foundation (Foundation) and the County intend to ensure compliance with the Los Angeles County Oak Tree Permit Ordinance. Mitigation measures are outlined in Section 5.3, Biological Resources, to provide appropriate mitigation for any relocation or removal of native oak trees.

The Foundation and/or the County Museum of Natural History would coordinate with the County of Los Angeles Department of Regional Planning prior to commencement of any work on-site. Therefore, implementation of the project would not conflict with the County of Los Angeles Oak Tree permit during both construction and operation of the project.

CITY OF LOS ANGELES GENERAL PLAN AND MOBILITY PLAN 2035

Regarding consistency with the City of Los Angeles General Plan, the project would support the City's policy to provide a pattern of development consisting of distinct districts, centers, boulevards, and neighborhoods by enhancing museum uses within an area historically associated with a large concentration of museums, consistent with Policy 3.2.1. Similarly, the project would contribute to the City's policies that provide for the siting and design of new development that enhances the character of commercial districts and are adjacent to existing or potential public transit. The new museum building would be similar in height and scale to the Page Museum and surrounding buildings. The project would revitalize a publicly accessible outdoor open space that is integral to neighborhood character, as emphasized in Framework Element Policies 6.1.6 and 6.4.4. The project would also enhance pedestrian activity by providing landscaping and pedestrian pathways that would be designed to integrate the new museum building and existing uses within Hancock Park. These pedestrian pathways would connect to surrounding streets, providing access to nearby neighborhoods and transit. Therefore, the project would be generally consistent with the applicable objectives and policies that support the goals set forth in the Framework Element.

As discussed in AES Impact 2, the project would be consistent with Mobility Element Policy 2.16 and would not modify the unique identity or character of a Scenic Highway. The project would adhere to Mobility Element Policy 3(c) as much as feasible and design the landscaping plan to retain outstanding specimens of existing trees and plants located within the public right-of-way of a Scenic Highway. Therefore, implementation of the project would not conflict with the policies that govern scenic quality in the City of Los Angeles General Plan nor the Mobility Plan 2035.

WILSHIRE COMMUNITY PLAN

Regarding consistency with the Wilshire Community Plan, the project would orient the new museum building toward Wilshire Boulevard, preserve the existing open space, and enhance the pedestrian access through the expansion of the Wilshire Gateway and West 6th Street Gateway. This would contribute to the project's consistency with Objective 2-3 of the Wilshire Community Plan. The site planning of the new museum building and the rehabilitation of existing buildings would promote the continuity of the historic context of buildings in relationship to the existing pattern and scale of streets, sidewalks, and parking. As stated previously, the new museum building would be similar in height to the Page Museum and smaller in scale than most of the buildings along Wilshire Boulevard.

The project would expand educational facilities, outdoor dining opportunities, and recreational amenities, including pedestrian pathways through the site. Project signage would be improved and consistent with existing museum signage and other signage in the vicinity of the project site. New landscaping would be provided along Wilshire Boulevard that would extend and be compatible with the existing landscaping along the perimeter of Hancock Park. The project would also retain the landscaped median along Wilshire Boulevard. Therefore, implementation of the project would not conflict with the policies that govern scenic quality in the Wilshire Community Plan.

CONCLUSION

The project would be consistent with the applicable policies that govern scenic quality in both County and City plans during project construction and operation. Therefore, the project would not conflict with

applicable zoning and other regulations governing scenic quality, and impacts would be *less than significant*.

AES Impact 3
The project would not conflict with applicable zoning and other regulations governing scenic quality during either project construction or operation. Impacts during construction and operation of the project would be less than significant (CEQA Checklist Appendix G Threshold I. c).
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to conflict with applicable zoning and other regulations governing scenic quality would be less than significant.

d) Would the project create a new source of substantial light and glare which would adversely affect daytime or nighttime views in the area?

Existing sources of lighting on and around the project site include street, security, and wayfinding outdoor lighting, vehicle headlights, and interior building illumination. Implementation of the project would result in the renovation of the Page Museum, construction of the new museum building, and enhanced landscaping features that collectively would introduce new and redesigned sources of lighting on-site that would be visible from adjacent off-site locations. Impacts associated with project implementation are discussed for construction and operation of the project.

CONSTRUCTION

Construction of the project has the potential to generate light and glare spillover to off-site visual receptors in the vicinity of the project site, including visitors to the publicly accessible facilities located throughout Hancock Park and individuals in the surrounding residential buildings and commercial buildings adjacent to the project site, as well as motorists, cyclists, and pedestrians traveling along Wilshire Boulevard, South Curson Avenue, and West 6th Street. Sources of artificial light associated with construction activities could include floodlights, spotlights, and/or headlights. Daytime glare could potentially occur during construction activities if reflective construction materials were positioned in highly visible locations where the reflection of sunlight could occur. Given that construction of the project is anticipated to occur over a period of 3 to 4 years, impacts from project-related sources of artificial light and glare during construction and demolition of project could be significant.

OPERATION

Upon project completion, lighting within the project site would include interior and low-level exterior lights adjacent to the buildings and along pathways for security and wayfinding purposes. In addition, low-level lighting for accent signage, parking information, and architectural features would also be incorporated. The new museum building would introduce a new source of light that would include exterior lights adjacent to the building and for the second-floor outdoor amenities when in use.
The current design of the project does not include electronic signage or signs with flash, mechanical, or strobe lights. However, given the conceptual nature of the project at this stage of design and development,

the resulting lighting and design features cannot be determined with certainty, and design details that could create light and potential glare may be introduced as the building plans are more fully developed.

The County's Zoning Ordinance (Title 22 of the County Code) contains provisions intended to limit adverse light and glare impacts. Application of the requirements of Section 22.44.1270, Exterior Lighting, of the County Code related to lighting and shielding would limit the potential of increased lighting on sensitive uses. Additionally, the California Building Code contains standards for outdoor lighting that are intended to reduce light pollution by regulating light power and brightness, shielding, and sensor controls. Currently, the façade of the new museum building and the renovated Page Museum would be constructed using nonreflective materials, consistent with the exterior materials of nearby buildings. However, the architectural plans for the new buildings are at a conceptual stage and reflective materials, obtrusive lighting, and other design features could be introduced during the later design stages that may not be consistent with specifications included in Title 22 of the County Code. Further, given the project site is not zoned by the County, enforcement of the application of Title 22 of the County Code cannot be assured without the provision of a mitigation measure requiring application of these requirements. For these reasons, light and glare impacts after construction of the project could be *significant*.

AES Impact 4	
The project could create a new source of substantial light or glare during both construction activities and project operation as part of the final building and project design which could adversely affect daytime or nighttime views in the area. Impacts during construction and operation of the project could be significant. (CEQA Checklist Appendix G Threshold I. d)	
Mitigation Measures	
Construction Mitigation	
AES/mm-4.1	*During project construction, the following measures shall be required:* • *The hours of construction activities shall be limited to between 7:00 a.m. and 9:00 p.m. on weekdays and between 8:00 a.m. and 6:00 p.m. on Saturdays and national holidays, with no construction permitted on Sundays.* • *If construction during evening hours is deemed necessary, construction-related illumination shall be used for safety and security purposes only. Additionally, any construction lighting shall be directed toward the area undergoing work, which requires that construction lighting be shielded and/or aimed so that no direct beam illumination would fall outside of the project site boundary.*
Operational Mitigation	
AES/mm-4.2	*The project shall implement the following design features:* • *All facades and/or building surfaces including glass windows shall be constructed using non-reflective materials or be treated with non-reflective coating.* • *All light emanating from new uses shall be either low scaled lighting or shielded to focus lighting and prevent lighting from spilling onto adjacent sensitive uses.* • *The project shall not include outdoor lighting that causes residential property to be illuminated by more than two footcandles of lighting intensity or receive direct glare from the light source.* • *All lights used to illuminate parking areas shall be designed, located, and arranged to reflect the light away from any street and any adjacent premises.*

AES Impact 4	
	• *Signage with a light intensity of greater than three footcandles above ambient lighting, as measured at the property line of the nearest residentially zoned property, shall be prohibited.*
Impacts Following Mitigation	
Implementation of Mitigation Measures AES/mm-4.1 during project construction and AES/mm-4.2 during project operation would reduce impacts related to light and glare to less than significant.	

5.1.6 Cumulative Impact Analysis

A list of related development projects and their locations relative to the project site is provided in Chapter 4, Environmental Setting. Identified related projects in the vicinity of the project are at varying stages of approval/entitlement/development and consist of a variety of land uses, including residential, institutional, commercial, office, and mixed use. These related projects occur primarily as urban infill within the existing land use setting of the downtown Los Angeles area.

The geographic context for the cumulative impact analysis of aesthetics, scenic views, and lighting is the immediate project vicinity (defined as the area directly adjacent to the project site and roadways directly surrounding the project site), as such impacts are highly localized given the relatively flat topography of the project site and the developed nature of the surrounding land uses. As shown in Figure 4-3 in Chapter 4, Environmental Setting, the related projects within the project site's viewshed would include the following:

- **LACMA Renovation:** Located directly adjacent to the project site (on parcels directly west and south across Wilshire Boulevard) at 5906 West Wilshire Boulevard. The project includes museum renovation and is under construction. Construction activities are estimated to be completed at the end of 2024.
- **Wilshire Curson Project (Wilshire Courtyard Redevelopment Project):** Located approximately 0.03 mile southeast of the project site at 5700–5780 Wilshire Boulevard, 712–752 South Curson Avenue, 5721–5773 West 8th Street, and 715–761 South Masselin Avenue. The project includes office and commercial uses and would involve both the renovation of existing buildings as well as the demolition and construction of new buildings. The project is currently under environmental review and the anticipated construction timeframe was not available at the date of publication for this EIR.

As identified in the project analysis above, formally designated scenic viewsheds, vistas, features, or ridgelines (as designated and defined by both the City and County of Los Angeles) are not located within or adjacent to the project site (threshold a). In addition, the project would not substantially damage scenic resources within a State- or City-designated Scenic Highway (threshold b), nor would it conflict with applicable zoning and other regulations governing scenic quality (threshold c). Accordingly, the project could not contribute to cumulative impacts related to these topics. Furthermore, related developments would be subject to applicable regulations and zoning requirements, such as height limits, density, and setback requirements, and would be reviewed by the City to ensure consistency with adopted guidelines and standards that relate to aesthetics. The design of these projects would also be required to be consistent with the Mobility Plan 2035 Designated Scenic Highways and Guidelines related to the designation of Wilshire Boulevard as a Scenic Highway. As such, the project would not result in cumulative contributions to impacts related to these thresholds, and impacts would not be cumulatively considerable when viewed in conjunction with related development projects.

However, the project, in conjunction with the identified related projects, could contribute to the cumulative increase in light and glare in and around the project site during both construction activities and during operation of the project (threshold d) and impacts could be cumulatively considerable. Mitigation Measures AES/mm-4.1 and AES/mm-4.2 would be required to reduce project impacts to less than significant. The area surrounding the project site and related projects is urbanized and generates ambient light. Similar to the project, the related projects would be required to minimize excessive light and glare that would be inappropriate for the setting. With implementation of these project mitigation measures, impacts from the project would not be cumulatively considerable and cumulative impacts associated with light and glare would be *less than significant*.

AES Impact 5 (Cumulative Impacts)
The project has the potential to contribute considerably to cumulative impacts associated with light and glare during both project construction and operation.
Mitigation Measures
Implement Mitigation Measures AES/mm-4.1 and AES/mm-4.2.
Impacts Following Mitigation
With implementation of the identified mitigation measures, the project's contribution to cumulative impacts related to aesthetics would be less than significant.

5.2 AIR QUALITY

This section describes the existing air quality conditions of the site and the regulatory setting and evaluates potential impacts resulting from construction and operation of the proposed project. This section is based on the following document (included in Appendix C of this EIR): *Air Quality and Greenhouse Gas Technical Report for the La Brea Tar Pits Master Plan* (SWCA 2023).

5.2.1 Existing Conditions

5.2.1.1 Overview of Air Pollution and Potential Health Effects

CRITERIA AIR POLLUTANTS

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of specific pollutants in order to protect the public health and welfare. These pollutants are referred to as "criteria air pollutants" and the national and state standards have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment, either directly or in reaction with other pollutants due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in the air quality with the South Coast Air Basin (Air Basin). The criteria air pollutants for which national and state standards have been promulgated and which are most relevant to current air quality planning and regulation in the Air Basin include carbon monoxide (CO), ozone (O_3), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead, sulfates, and hydrogen sulfide (H_2S). These pollutants, as well as volatile organic compounds (VOCs) and toxic air contaminants (TACs), are discussed in the following paragraphs. The national and state criteria pollutants and the applicable ambient air quality standards are listed in Table 5.2-1.

Ozone

O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly oxides of nitrogen (NO_x) and VOCs. The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O3 exists in the upper atmosphere O_3 layer (stratospheric ozone) and at the Earth's surface in the troposphere (ozone). The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good" O_3 is found naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

Table 5.2-1. State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	
			Primary	Secondary
Ozone (O_3)	1 hour	0.09 ppm (180 µg/m³)	–	Same as Primary
	8 hour	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)	
Respirable particulate matter (PM_{10})	24 hour	50 µg/m³	150 µg/m³	Same as Primary
	Annual mean	20 µg/m³	–	
Fine particulate matter ($PM_{2.5}$)	24 hour	–	35 µg/m³	Same as Primary
	Annual mean	12 µg/m³	12.0 µg/m³	15 µg/m³
Carbon monoxide (CO)	1 hour	20 ppm (23 µg/m³)	35 ppm (40 mg/m³)	–
	8 hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	–
Nitrogen dioxide(NO_2)	1 hour	0.18 ppm (339 µg/m³)	100 ppb (188 µg/m³)	–
	Annual mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	Same as Primary
Sulfur dioxide (SO_2)	1 hour	0.25 ppm (655 µg/m³)	75 ppb (196 µg/m³)	–
	3 hour	–	–	0.5 ppm (1,300 µg/m³)
	24 hour	0.04 ppm (105 µg/m³)	0.14 ppm	–
	Annual mean	–	0.030 ppm	–
Lead	30-day average	1.5 µg/m³	–	–
	Calendar quarter	–	1.5 µg/m³	Same as Primary
	Rolling 3-month average	–	0.15 µg/m³	Same as Primary
Visibility-reducing particles	8 hour	10-mile visibility standard, extinction of 0.23 per kilometer	No National Standards	
Sulfates	24 hour	25 µg/m³		
Hydrogen sulfide (H_2S)	1 hour	0.03 ppm (42 µg/m³)		
Vinyl chloride	24 hour	0.01 ppm (265 µg/m³)		

Source: California Air Resources Board (2016)

Notes: ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter; – = no standard.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2022a). These health problems are particularly acute in sensitive receptors such as the sick, the elderly, and young children.

Nitrogen Dioxide

NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2022a).

Carbon Monoxide

CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions (EPA 2022a).

Sulfur Dioxide

SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter, SO_2 can injure lung tissue and reduce visibility and the level of sunlight. SO_2 can also yellow plant leaves and erode iron and steel (EPA 2022a).

Particulate Matter

Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) is 10 microns or less in diameter and is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) is 2.5 microns or less in diameter and is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SOx), NO_x, and VOCs.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead,

sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

People with influenza, people with chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in $PM_{2.5}$ and PM_{10} (EPA 2022a).

Lead

Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient (IQ) performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead (EPA 2022a).

Others

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere. Sulfates can result in respiratory impairment, as well as reduced visibility.

Vinyl chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen sulfide. H_2S is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of H_2S include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to H_2S can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

VOLATILE ORGANIC COMPOUNDS

VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids. Some VOCs are also classified by the State as TACs. While there are no specific VOC ambient air quality standards, VOC is a prime component (along with NO_x) of the photochemical processes by which such criteria pollutants as O_3, NO_2, and certain fine particles are formed. They are, thus, regulated as “precursors” to the formation of those criteria pollutants.

TOXIC AIR CONTAMINANTS

TACs refer to a diverse group of "non-criteria" air pollutants that can affect human health but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above, but because their effects tend to be local rather than regional. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the state of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hot spots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

The federal TACs are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health, although there are no ambient standards established for TACs. Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or other acute (short-term) or chronic (long-term) health problems. For TACs that are known or suspected carcinogens, the CARB has consistently found that there are no levels or thresholds below which exposure is risk free. Individual TACs vary greatly in the risks they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another. For certain TACs, a unit risk factor can be developed to evaluate cancer risk. For acute and chronic health effects, a similar factor, called a Hazard Index, is used to evaluate risk. TACs are identified and their toxicity is studied by the California Office of Environmental Health Hazard Assessment (OEHHA). Examples of TAC sources include industrial processes, dry cleaners, gasoline stations, paint and solvent operations, and fossil fuel combustion sources. The TACs that are relevant to the implementation of the project include diesel particulate matter (DPM) and airborne asbestos.

DPM was identified as a TAC by the CARB in August 1998 (CARB 1998). DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute approximately 40% of the statewide total, with an additional 57% attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources, contributing about 3% of emissions, include shipyards, warehouses, heavy-equipment repair yards, and oil and gas production operations. Emissions from these sources are from diesel-fueled internal combustion engines. Stationary sources that report DPM emissions also include heavy construction, manufacturers of asphalt paving materials and blocks, and diesel-fueled electrical generation facilities.

Exposure to DPM can have immediate health effects. DPM can have a range of health effects including irritation of eyes, throat, and lungs, causing headaches, lightheadedness, and nausea. Exposure to DPM also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks. Children, the elderly, and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. In California, DPM has been identified as a carcinogen.

Naturally occurring asbestos areas are identified based on the type of rock found in the area. Asbestos-containing rocks found in California are ultramafic rocks, including serpentine rocks. Asbestos has been designated a TAC by the CARB and is a known carcinogen. When this material is disturbed in connection with construction, grading, quarrying, or surface mining operations, asbestos-containing dust can be generated. Exposure to asbestos can result in adverse health effects such as lung cancer, mesothelioma

(cancer of the linings of the lungs and abdomen), and asbestosis (scarring of lung tissues that results in constricted breathing) (Van Gosen and Clinkenbeard 2011). According to the California Geologic Survey, the project site is not located in an area of naturally occurring asbestos (CARB 2000).

Asbestos-containing materials become a health hazard once they are disturbed. Intact, asbestos fibers imbedded within construction materials and components are inert and do not pose a health hazard; however, once they are disturbed, through physical contact or building renovation and demolition activities, asbestos fibers may be rendered airborne (South Coast Air Quality Management District [SCAQMD] 2007).

ODORS

Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. In a phenomenon known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

A unique feature of the project is the existing subsurface conditions which consist of a relatively thin layer of artificial fill overlying alluvial deposits. The alluvial deposits consist of stiff clay and dense tar-bearing sands. Tar-bearing sands are saturated with hydrocarbons, whereas the upper clay soils contain less hydrocarbons. The presence of the hydrocarbons in the sediments is the result of the project site being over an oil field. Hydrogen sulfide and methane gases generated within the oil field are present in the subsurface. Because the project site is located within an area of known shallow methane and H_2S gas accumulation, crude oil and methane gas leak out from the petroleum deposits and migrate through fractures and faults located within the bedrock until encountering the alluvial soils, where they permeate into the alluvium and continue to travel upward to the ground surface. These unique subsurface conditions are a potential source of odors due to the presence of H_2S. Many of the light petroleum components are lost to evaporation and biogenic processes, resulting in viscous tar seeping out of the ground surface (Deane et al. 2018).

5.2.1.2 Existing Air Quality Conditions in the Project Area

The project is located within the South Coast Air Basin, an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and San Diego County to the south. The South Coast Air Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the Coachella Valley area in Riverside County. The air quality within the Air Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, and industry.

Air pollutant emissions within the Air Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack, such as combustion equipment that produces electricity or generates heat. Area sources are widely distributed and include residential and commercial water heaters, agricultural fields, landfills, and others. Mobile sources include emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified

as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

REGIONAL AIR QUALITY

The Southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatology pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The regional climate within the Air Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity.

The extent and severity of air pollution in the Air Basin is a function of the area's natural physical characteristics (e.g., weather and topography), as well as human-made influences (e.g., land use development patterns, heavy vehicular traffic, and industry). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography affect the accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential.

Pollutant concentrations in the Air Basin vary with location, season, and time of day. O_3 concentrations, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Bain and adjacent desert. The most severe air pollution throughout the Air Basin occurs from June through September. This condition is generally attributed to the large amount of pollutant emissions, light winds, and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, causing elevated air pollution levels. Over the past 30 years, substantial progress has been made in reducing air pollution levels in Southern California (CARB 2018). However, the Air Basin still fails to meet the national standards for O_3 and $PM_{2.5}$. In addition, Los Angeles County still fails to meet the national standard for lead. On May 24, 2012, the CARB approved the State Implementation Plan (SIP) revision for the federal lead standard, which the EPA revised in 2008. The SIP revision addresses attainment of the federal lead standard in the South Coast Air Basin portion of Los Angeles County, the only area in California designated as nonattainment for lead. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. SCAQMD has the responsibility for ensuring that all national and state air quality standards are achieved and maintained throughout the Air Basin. To meet the standards, SCAQMD has adopted a series of air quality management plans (AQMPs), discussed below in Section 5.2.2, Regulatory Setting.

REGIONAL ATTAINMENT STATUS

Depending on whether the applicable ambient air quality standards are met or exceeded, the Air Basin is classified on a federal and state level as being in "attainment" or "nonattainment." The EPA and CARB determine the air quality attainment status of designated areas by comparing ambient air quality measurements from state and local ambient air monitoring stations with the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). These designations are determined on a pollutant-by-pollutant basis. Consistent with federal requirements, an unclassifiable/unclassified designation is treated as an attainment designation. The Air Basin currently fails to meet the NAAQS for lead, O_3, and $PM_{2.5}$. Therefore, Los Angeles County South Coast Air Basin is considered a "non-attainment" area for these pollutants on the federal level. As of September 2022, the Air Basin is also considered in non-attainment for O_3, $PM_{2.5}$, and PM_{10} on the state level (EPA 2022b).

REGIONAL MULTIPLE AIR TOXICS EXPOSURE STUDY

The SCAQMD has released an Air Basin–wide air toxics study, the Multiple Air Toxics Exposure Study V (MATES V). The MATES V study was developed to evaluate the cancer risk from toxic air emissions

throughout the Air Basin by conducting a comprehensive monitoring program, an updated emissions inventory of TACs, and a modeling effort to fully characterize health risks for those living in the Air Basin. In the past iterations of the MATES study, the air toxics cancer risks were evaluated based on inhalation exposures only. However, in MATES V, the methodology was updated to include multiple exposure pathways, such as oral and dermal. The MATES V study concluded that the average carcinogenic risk from air pollution in the Air Basin is approximately 424 in 1 million over a 70-year duration (SCAQMD 2021a). Mobile sources (e.g., cars, trucks, trains, ships, aircraft, etc.) represent the greatest contributors. Approximately 50% of the risk is attributed to diesel particulate emissions, approximately 25% to other toxic emissions associated with mobile sources (including benzene, butadiene, and carbonyls), and approximately 25% of all carcinogenic risk is attributed to stationary sources, which include large industrial operations, such as refineries and metal processing facilities, as well as smaller businesses, such as gas stations and chrome plating.

As part of the MATES V study, the SCAQMD prepared a series of maps that shows regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of the ongoing effort to provide insight into relative risks. The maps' estimates represent the number of potential cancers per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years) in parts of the area. The MATES V map is the most recently available map to represent existing conditions near the project site. The estimated cancer risk for the vast majority of the urbanized area within the Air Basin ranges from 200 to 1,000 cancers per million over a 70-year duration. Generally, the risk from air toxics is lower near the coastline, with higher risks concentrated near large diesel sources (e.g., freeways, airports, and ports).

LOCAL AIR QUALITY

Air pollutants emissions are generated in the local vicinity by stationary and area-wide sources, such as commercial and industrial activity, space and water heating, landscape maintenance, consumer products, and mobile sources primarily consisting of automobile traffic. Motor vehicles are the primary source of pollutants in the local vicinity.

Existing Criteria Pollutant Levels at Nearby Monitoring Stations

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin and has divided the Air Basin into 38 source receptor areas (SRAs) in which 31 monitoring stations operate. The project site is located within SRA 1, which covers the Central Los Angeles area. The monitoring station most representative of the project site is the North Main Street Station, located at 1630 North Main Street in the city of Los Angeles, approximately 7.3 miles east of the project site. Criteria pollutants monitored at this station include PM_{10}, $PM_{2.5}$, O_3, CO, NO_2, lead, and sulfate. Table 5.2-2 shows the ambient pollutant concentrations that have been measured in SRA 1 for the period 2018–2020, as well as any exceedances of the NAAQS and CAAQS.

Table 5.2-2. Summary of Ambient Air Quality in the Central Los Angeles Area

Pollutant		Year		
		2018	2019	2020
O_3	Maximum 1-hour concentration (ppm)	0.098	0.085	0.185
	Days exceeding CAAQS (0.09 ppm)	2	0	14
	Maximum 8-hour concentration (ppm)	0.073	0.08	0.118
	Days exceeding NAAQS (0.07 ppm)	4	2	22
	Days exceeding CAAQS (0.07 ppm)	4	2	22

Pollutant		Year		
		2018	2019	2020
Respirable PM_{10}	Maximum 24-hour concentration (µg/m^3)	81	62	77
	Days exceeding NAAQS (150 µg/m^3)	0	0	0
	Days exceeding CAAQS (50 µg/m^3)	31	3	24
	Annual arithmetic mean (µg/m^3)	34.1	25.5	23
	Does measured AAM exceed CAAQS (20 µg/m^3)?	Yes	Yes	Yes
Fine $PM_{2.5}$	Maximum 24-hour concentration (µg/m^3)	43.8	43.5	47.3
	Days exceeding NAAQS (35 µg/m^3)	3	1	2
	Annual arithmetic mean (µg/m^3)	12.58	10.85	12.31
	Does measured AAM exceed NAAQS/CAAQS (12 µg/m^3)?	Yes	No	Yes
CO	Maximum 1-hour concentration (ppm)	2.0	2.0	1.9
	Days exceeding NAAQS (35.0 ppm)	0	0	0
	Days exceeding CAAQS (20.0 ppm)	0	0	0
	Maximum 8-hour concentration (ppm)	1.7	1.6	1.5
	Days exceeding NAAQS and CAAQS (9 ppm)	0	0	0
NO_2	Maximum 1-hour concentration (ppm)	0.0701	0.0697	0.0618
	Days exceeding CAAQS (0.18 ppm)	No	No	No
	Annual arithmetic mean (ppm)	0.0185	0.0177	0.0169
	Does measured AAM exceed NAAQS (0.0534 ppm)?	No	No	No
	Does measured AAM exceed CAAQS (0.03 ppm)?	No	No	No
SO_2	Maximum 1-hour concentration (ppm)	0.0179	0.01	0.0038
	Days exceeding CAAQS (0.25 ppm)	0	0	0
	Maximum 24-hour concentration (ppm)	0.003	0.003	0.003
	Days exceeding CAAQS (0.04 ppm)	0	0	0
	Days exceeding NAAQS (0.14 ppm)	0	0	0
	Annual arithmetic mean (ppm)	0.001	0.001	0.001
	Does measured AAM exceed NAAQS (0.030 ppm)?	No	No	No
Lead	Maximum 30-day average concentration (µg/m^3)	0.011	0.012	0.013
	Does measured concentration exceed NAAQS (1.5 µg/m^3)?	No	No	No
	Maximum calendar quarter concentration (µg/m^3)	0.011	0.01	0.011
	Does measured concentration exceed CAAQS (1.5 µg/m^3)?	No	No	No
Sulfates	Maximum 24-hour concentration (µg/m^3)	4.5	5.1	3.3
	Does measured concentration exceed CAAQS (25 µg/m^3)?	No	No	No

Source: SCAQMD (2022b)

Notes: AAM = annual arithmetic mean; ppm = parts per million; µg/m^3 = micrograms per cubic meter

Existing Health Risks in the Project Vicinity

Based on the MATES V model, the multi-pathway cancer risk in the area immediately surrounding the project site in the 90036 zip code is approximately 495 in 1 million (SCAQMD 2021b). The cancer risk in this area includes diesel particulate matter, benzene, formaldehyde, and arsenic. However, the cancer risk is predominantly related to nearby sources of diesel particulate (e.g., the Harbor Freeway [Interstate

110]). In general, the risk at the project site is comparable to other urbanized areas in Los Angeles as air toxics cancer risk in this zip code is higher than 63.0% of the South Coast AQMD population (OEHHA 2021).

OEHHA, on behalf of the California Environmental Protection Agency (CalEPA), provides a screening tool called CalEnviroScreen that can be used to help identify California communities disproportionately burdened by multiple sources of pollution. According to CalEnviroScreen, the project is located in the 47th percentile, which means the project area is about average in comparison to other communities within California.

Sensitive Uses

Some population groups, including children, elderly, and acutely and chronically ill persons (especially those with cardiorespiratory diseases), are considered more sensitive to air pollution than others. A sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. The following are land uses where sensitive receptors are typically located:

- schools, playgrounds, and childcare centers
- long-term health care facilities
- rehabilitation centers
- convalescent centers
- hospitals
- retirement homes
- residences

The project site is located in a highly urbanized area and is surrounded by a mix of commercial uses, residential uses, and open spaces. Specifically, the project is bounded by the Los Angeles County Museum of Art, Park La Brea Pool, parking lots, commercial uses, and multi-family uses. The closest sensitive land uses to the project site are off-site residential uses located 50 to 150 feet from the project site. The nearest school to the project site is Fusion Academy Miracle Mile, a private learning institution for middle school and high school students, located approximately 0.12 mile away, and the nearest daycare is Michal Daycare located approximately 0.28 mile away.

5.2.2 Regulatory Setting

5.2.2.1 Federal

FEDERAL CLEAN AIR ACT

The federal Clean Air Act (CAA), which was passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The CAA delegates primary responsibility for clean air to the EPA. The EPA develops rules and regulations to preserve and improve air quality and delegates specific responsibilities to state and local agencies. Under the act, the EPA has established the NAAQS for six criteria air pollutants that are pervasive in urban environments and for which state and national health-based ambient air quality standards have been established. O_3, CO, NO_2, SO_2, lead, and particulate matter (PM_{10} and $PM_{2.5}$) are the six criteria air pollutants. Ozone is a secondary pollutant; NO_x and VOCs are of particular interest as they are precursors to ozone formation. The NAAQS are divided into primary and secondary standards; the primary standards are set to protect human health within an adequate margin

of safety, and the secondary standards are set to protect environmental values, such as plant and animal life. The standards for all criteria pollutants are presented in Table 5.2-1.

The CAA requires the EPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant, based on whether the NAAQS have been achieved. The act also mandates that the State submit and implement a state implementation plan for areas not meeting the NAAQS. These plans must include pollution control measures that demonstrate how the standards will be met.

TOXIC SUBSTANCE CONTROL ACT

The Toxic Substances Control Act (TSCA) of 1976 provides the EPA with authority to require reporting, recordkeeping, and testing, and provides restrictions relating to chemical substances and/or mixtures. TSCA became law on October 11, 1976, and became effective on January 1, 1977. The TSCA authorized the EPA to secure information on all new and existing chemical substances, as well as to control any of the substances that were determined to cause unreasonable risk to public health or the environment. Congress later added additional titles to the act, with this original part designated at Title I – Control of Hazardous Substances. TSCA regulatory authority and program implementation rests predominantly with the federal government (i.e., the EPA). However, the EPA can authorize States to operate their own, EPA-authorized programs for some portions of the statute. TSCA Title IV allows States the flexibility to develop accreditation and certification programs and work practice standards for lead-related inspection, risk assessment, renovation, and abatement that are at least as protective as existing federal standards.

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (ASBESTOS)

The EPA air toxics regulation for asbestos is intended to minimize the release of asbestos fibers during activities involving the handling of asbestos. Asbestos was one of the first hazardous air pollutants regulated under the air toxics program as there are major health effects associated with asbestos exposure (lung cancer, mesothelioma, and asbestosis). On March 31, 1971, the EPA identified asbestos as a hazardous pollutant, and on April 6, 1973, EPA promulgated the Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP), currently found in 40 Code of Federal Regulations 61(M). The Asbestos NESHAP has been amended several times, most comprehensively in November 1990. In 1995, the rule was amended to correct cross-reference citations to Occupational Safety and Health Administration, Department of Transportation, and other EPA rules governing asbestos. Air toxics regulations under the CAA have guidance on reducing asbestos in renovation and demolition of buildings; institutional, commercial, and industrial building; large-scale residential demolition; exceptions to the asbestos removal requirements; asbestos control methods; waste disposal and transportation; and milling, manufacturing, and fabrication.

5.2.2.2 State

CALIFORNIA CLEAN AIR ACT

The California Clean Air Act (CCAA) was adopted by the CARB in 1988. The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for O_3, CO, SO_2, and NO_2 by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. The CARB and local air districts are responsible for achieving CAAQS, which are to be achieved through district-level AQMPs that would be incorporated into the state implementation plan. In California, the EPA has delegated authority to prepare state implementation plans to CARB, which in turn, has delegated that authority to individual air districts. Each district plan is required to either

1) achieve a 5% annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or 2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

The State of California began to set its ambient air quality standards (i.e., CAAQS) in 1969, under the mandate of the Mulford-Carrell Act. The CCAA requires all air districts of the state to achieve and maintain the CAAQS by the earliest practical date. Table 5.2-1 shows the CAAQS currently in effect for each of the criteria pollutants, as well as the other pollutants recognized by the State. The CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, H_2S, vinyl chloride, and visibility-reducing particles (see Table 5.2-1).

CALIFORNIA CODE OF REGULATIONS

The California Code of Regulations (CCR) is the official compilation and publication of regulations adopted, amended, or repealed by the state agencies pursuant to the Administrative Procedure Act. The CCR includes regulations that pertain to air quality emissions. Specifically, Section 2485 in Title 13 of the CCR states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to 5 minutes at any location. In addition, Section 93115 in Title 17 of the CCR states that operation of any stationary, diesel-fueled, compression-ignition engine shall meet specified fuel and fuel additive requirements and emission standards.

TOXIC AIR CONTAMINANTS REGULATIONS

California regulates TACs primarily through the Toxic Air Contaminant Identification and Control Act of 1983 (AB 1807, also known as the Tanner Air Toxics Act) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588 – Connelly). In the early 1980s, the CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Tanner Air Toxics Act (AB 1807) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks (CARB 2011).

In August 1998, CARB identified DPM emissions from diesel-fueled engines as a TAC. In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles (CARB 2000b). The goal of the plan is to reduce diesel PM_{10} (inhalable particulate matter) emissions and the associated health risk by 75% in 2010, and by 85% by 2020. The plan identified 14 measures that target new and existing on-road vehicles (e.g., heavy-duty trucks and buses, etc.), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps, etc.), and stationary engines (e.g., stand-by power generators, etc.). During the control measure phase, specific statewide regulations designed to further reduce DPM emissions from diesel-fueled engines and vehicles were evaluated and developed. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce DPM emissions. The project would be required to comply with applicable diesel control measures.

SCAQMD has adopted two rules to limit cancer and noncancer health risks from facilities located within its jurisdiction. Rule 1401 (New Source Review of Toxic Air Contaminants) regulates new or modified facilities, and Rule 1402 (Control of Toxic Air Contaminants from Existing Sources) regulates facilities that are already operating. Rule 1402 incorporates requirements of the AB 2588 program, including implementation of risk reduction plans for significant risk facilities.

5.2.2.3 Regional

SCAQMD shares responsibility with CARB for ensuring that all state and federal ambient air quality standards are achieved and maintained throughout all of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, including all of Orange County and Los Angeles County, except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Air Basin is a subregion of the SCAQMD jurisdiction.

To meet the CAAQS and NAAQS, the SCAQMD has adopted a series of AQMPs. The 2016 AQMP incorporates the SCAG 2016 Regional Transportation Plan/Sustainable Community Strategy (2016-2040 RTP/SCS)[1] and updated emission inventory methodologies for various source categories. The 2016 AQMP also includes the new federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

The AQMP provides emissions inventories, ambient measurements, meteorological episodes, and air quality modeling tools. The AQMP also provides policies and measures to guide responsible agencies in achieving federal standards for healthful air quality in the Air Basin. It also incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources.

The SCAQMD adopts rules and regulations to implement portions of the AQMP. Several of these rules may apply to project construction or operation. For example, SCAQMD Rule 403 requires the implementation of best available fugitive dust control measures during active construction periods capable of generating fugitive dust emissions from on-site earthmoving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads.

The SCAQMD is currently in the process of replacing the CEQA Air Quality Handbook, approved in 1993, with the Air Quality Analysis Guidance Handbook (SCAQMD 2022a). In order to assist the CEQA practitioner in conducting an air quality analysis in the interim while this replacement air quality analysis guidance handbook is being prepared, supplemental guidance/information is provided on the SCAQMD website and includes: 1) EMission FACtor (EMFAC) on-road vehicle emission factors; 2) background CO concentrations; 3) localized significance thresholds (LSTs); 4) mitigation measures and control efficiencies; 5) mobile source toxics analysis; 6) off-road mobile source emission factors; 7) $PM_{2.5}$ significance thresholds and calculation methodology; and 8) updated SCAQMD air quality significance thresholds (SCAQMD 2022a). The SCAQMD also recommends using approved models to calculate emissions from land use products projects, such as the California Emission Estimator Model (CalEEMod) Version 2022.1.1.17 (California Air Pollution Control Officers Association [CAPCOA] 2022). These recommendations were followed in the preparation of this analysis.

The SCAQMD has also adopted land use planning guidelines in the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning* (SCAQMD 2005), which considers impacts to sensitive receptors from facilities that emit TAC emissions. SCAQMD's siting distance recommendations are the same as those provided by CARB. The SCAQMD document introduces land use–related policies that rely on design and distance parameters to minimize emissions and lower potential health risk.

[1] Due to the AQMD publish date of 2016, the 2016 Regional Transportation Plan was incorporated. As discussed in the 2020-2045 RTP/SCS, the actions and strategies included in the 2020-2045 RTP/SCS remain unchanged from those adopted in the 2012-2035 and 2016-2040 RTP/SCS.

SCAQMD's guidelines are voluntary initiatives recommended for consideration by local planning agencies. The following SCAQMD rules and regulations would be applicable to the project:

SCAQMD Rule 403 required projects to incorporate fugitive dust control measures at least as effectively as the following measures:

- Use water to control dust generation during demolition of structures;
- Clean up mud and dirt carried onto paved streets from the site;
- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site;
- All haul trucks would be covered or would maintain at least 6 inches of freeboard;
- All material transported off-site shall be sufficiently watered or securely covered to prevent excessive amounts of spillage or dust;
- Suspend earthmoving operations or additional watering would be implemented to meet Rule 403 criteria if wind gusts exceed 25 miles per hour;
- The owner or contractor shall keep the construction area sufficiently dampened to control dust caused by construction and hauling, and at all times provide reasonable dust control of dust caused by wind. All paved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust cover shall be used to reduce dust emissions; and
- An information sign shall be posted at the entrance to the construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. A construction relations officers shall be appointed to act as a community liaison concerning on-site activity, including investigation and resolution of issues related to fugitive dust generating.

SCAQMD Rule 1113 limits the volatile organic compound content of architectural coating.

SCAQMD Rule 1403 establishes survey requirements, notifications, and work practice requirements to prevent asbestos emissions from emanating during building renovation and demolition activities. Any activities at the project site that would renovate or modify the existing structures, including the proposed project, would be required to comply with this rule.

SCAQMD Regulation XIII, New Source Review, requires new on-site facility nitrogen oxide emissions to be minimized through the use of emission control measures (e.g., use of best available technology control technology for new combustion sources such as boilers and water heaters).

SCAQMD has adopted two rules to limit cancer and non-cancer health risks from facilities located within its jurisdiction. Rule 1401 (New Source Review of Toxic Air Contaminants) regulates new or modified facilities, and Rule 1402 (Control of Toxic Air Contaminants from Existing Sources) regulates facilities that are already operating. Rule 1402 incorporates requirements of the AB 2588 program, including implementation of risk reduction plans for significant risk facilities.

5.2.2.4 County of Los Angeles

The County Board of Supervisors adopted the County of Los Angeles 2035 General Plan (2035 General Plan) on October 6, 2015. The adopted County General Plan represents a compromise comprehensive update intended to reflect changing demographics, growth, and infrastructure conditions in the county.

The County General Plan contains an Air Quality Element that addresses air quality and related issues. Included in the Air Quality Element are goals encouraging mixed-use development, the use of "green building" principles, energy and water efficiency, reducing vehicle miles traveled and vehicle trips, and promoting alternative modes of transportation (County of Los Angeles 2015).

The Air Quality Element of the County General Plan establishes the following goals that are relevant to the project:

Goal AQ 1. Protection from exposure to harmful air pollutants

Goal AQ 2. The reduction of air pollution and mobile source emissions through coordinated land use, transportation, and air quality planning.

Goal AQ3. Implementation of plans and programs to address the impact of climate change.

> ***Policy AQ 3.2.*** Reduce energy consumption of County operations by 20% by 2015.
>
> ***Policy AQ 3.3.*** Reduce water consumption of County operations.
>
> ***Policy AQ 3.5.*** Encourage energy conservation in new development and municipal operations.
>
> ***Policy AQ 3.6.*** Support rooftop solar facilities on new and existing buildings.

The County has the authority and responsibility to reduce air pollution by assessing and mitigating air emissions resulting from its land use decisions. Consistent with CEQA, the County assesses the air quality impacts of new development projects and requires mitigation of potentially significant air quality impacts by applying required conditions to projects through the projects through the County approval process. Depending on the location, the County uses either SCAQMD's CEQA Air Quality Handbook and SCAQMD's supplemental online guidance/information or CEQA guidance from the Antelope Valley Air Quality Management District for the environmental review of plans and development proposals within its jurisdiction. These guidance documents are more specific than the 2035 General Plan goals and policies noted above. Implementation of these guidance documents and consistency with the thresholds contained therein generally ensures that development projects are supportive and consistent with the 2035 General Plan.

5.2.2.5 City of Los Angeles

While the project site is located within the city of Los Angeles, it is owned by the County of Los Angeles. Accordingly, the regulatory guidance of both the City and the County are provided in this section for informational purposes.

The Air Quality Element of the City General Plan was adopted on November 24, 1992, and sets forth the goals, objectives, and policies which guide the City in the implementation of its air quality improvement programs and strategies. The Air Quality Element acknowledges the interrelationships among transportation and land use planning in meeting the City's mobility and air quality goals. The Air Quality Element of the City General Plan establishes six goals:

Goal 1. Good air quality in an environment of continued population growth and healthy economic structure;

> ***Objective 1.1.*** It is the objective of the City of Los Angeles to reduce air pollutants consistent with the Regional Air Quality Management Plan (AQMP), increase traffic mobility, and sustain economic growth citywide.

Objective 1.3. It is the objective of the City of Los Angeles to reduce particulate air pollutants emanating from unpaved areas. parking lots, and construction sites.

Policy 1.3.1. Minimize particulate emissions from construction sites.

Policy 1.3.2. Minimize particulate emissions from unpaved roads and parking lots associated with vehicular traffic.

Goal 2. Less reliance on single-occupant vehicles with fewer commute and non-work trips;

Objective 2.1. It is the objective of the City of Los Angeles to reduce work trips as a step toward attaining trip reduction objectives necessary to achieve regional air quality goals.

Policy 2.1.1. Utilize compressed work weeks and flextime, telecommuting, carpooling, vanpooling, public transit, and improve walking/bicycling–related facilities in order to reduce vehicle trips and/or vehicle miles traveled (VMT) as an employer and encourage the private sector to do the same to reduce work trips and traffic congestion.

Policy 2.2.2. Encourage multi-occupant vehicle travel and discourage single-occupant vehicle travel by instituting parking management practices.

Objective 4.1. It is the objective of the City of Los Angeles to include regional attainment of ambient air quality standards as a primary consideration in land use planning.

Policy 4.1.1. Coordinate with all appropriate regional agencies in the implementation of strategies for the integration of land use, transportation, and air quality policies.

Objective 4.2. It is the objective of the City of Los Angeles to reduce vehicle trips and vehicle miles traveled associated with land use patterns.

Policy 4.2.2. Improve accessibility for the City's residents to places of employment, shopping centers, and other establishments.

Policy 4.2.3. Ensure that new development is compatible with pedestrians, bicycles, transit, and alternative fuel vehicles.

Policy 4.2.4. Require that air quality impacts be a consideration in the review and approval of all discretionary projects.

Policy 4.2.5. Emphasize trip reduction, alternative transit, and congestion management measures for discretionary projects.

Goal 3. Efficient management of transportation facilities and systems infrastructure using cost-effective system management and innovative demand-management techniques;

Objective 5.1. It is the objective of the City of Los Angeles to increase energy efficiency of City facilities and private developments.

Policy 5.1.2. Effect a reduction in energy consumption and shift to nonpolluting sources of energy in its buildings and operations.

Policy 5.1.4. Reduce energy consumption and associated air emissions by encouraging waste reduction and recycling.

Objective 5.3. It is the objective of the City of Los Angeles to reduce the use of polluting fuels in stationary sources.

Policy 5.3.1. Support the development and use of equipment powered by electric or low-emitting fuels.

Goal 4. Minimal impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality;

Objective 4.1. It is the objective of the City of Los Angeles to include regional attainment of ambient air quality standards as a primary consideration in land use planning.

Policy 4.1.1. Coordinate with all appropriate regional agencies in the implementation of strategies for the integration of land use, transportation, and air quality policies.

Objective 4.2. It is the objective of the City of Los Angeles to reduce vehicle trips and vehicle miles traveled associated with land use patterns.

Policy 4.2.2. Improve accessibility for the City's residents to places of employment, shopping centers, and other establishments.

Policy 4.2.3. Ensure that new development is compatible with pedestrians, bicycles, transit, and alternative fuel vehicles.

Policy 4.2.4. Require that air quality impacts be a consideration in the review and approval of all discretionary projects.

Policy 4.2.5. Emphasize trip reduction, alternative transit, and congestion management measures for discretionary projects.

Goal 5. Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels, and the implementation of conservative measures including passive measures such as site orientation and tree planting; and

Goal 6. Citizens' awareness of the links between personal behavior and air pollution, and participation and efforts to reduce air pollution.

In accordance with CEQA requirements. the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation. The City uses SCAQMD's CEQA Air Quality Handbook and SCAQMD's supplemental online guidance/information for the environmental review of plans and development proposals within its jurisdiction.

5.2.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse impacts related to air quality if it would:

a) Conflict with or obstruct implementation of the applicable air quality plan.

b) Result in a cumulatively considerable new increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

c) Expose sensitive receptors to substantial pollutant concentrations.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

5.2.4 Impact Assessment Methodology

The following impact analysis is based, in part, on the *Air Quality and Greenhouse Gas Technical Report for the La Brea Tar Pits Master Plan* (SWCA 2023; see Appendix C). The following analysis evaluates the potential increase in criteria air pollutants resulting from the project. The evaluation of potential impacts is based on the criteria discussed in the following paragraphs.

CONSISTENCY WITH APPLICABLE AIR QUALITY PLANS

State CEQA Guidelines Section 15125 requires an analysis of project consistency with applicable governmental plans and policies. In accordance with SCAQMD's CEQA Air Quality Handbook, the following criteria were used to evaluate the project's consistency with SCAQMD's AQMP and SCAG's regional plans and policies:

- Criterion 1: Will the project result in any of the following:
  - An increase in the frequency or severity of existing air quality violations;
  - Cause or contribute to new air quality violations; or
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP?
- Criterion 2: Will the project exceed the assumptions utilized in preparing the AQMP?
  - Is the project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;
  - Does the project include air quality mitigation measures; or
  - To what extent is the project development consistent with AQMP control measures?

As noted in Section 5.2.2.4, in the project area, the County assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by applying required conditions to projects through the County approval process in accordance with the SCAQMD's CEQA Air Quality Handbook (SCAQMD 2022a). This guidance document is more specific than the 2035 General Plan goals and policies as well as the Air Quality Element of the City General Plan. Adherence with the SCAQMD's CEQA Air Quality Handbook and AQMP control measures would ensure that the project is supportive of and consistent with the air quality goals and policies contained in the 2035 General Plan and the City General Plan.

CONSTRUCTION

The SCAQMD has established significance thresholds based on the State CEQA Guidelines. Specifically, based on criteria set forth in the SCAQMD CEQA Handbook Air Quality Significance Thresholds, the project would have a significant impact with regard to construction emissions if any of the following would occur:

- Regional emissions from both direct and indirect sources would exceed any of the following SCAQMD-prescribed threshold levels: 1) 100 pounds per day for NO_X; 2) 75 pounds per day for VOCs; 3) 150 pounds per day for PM_{10} or sulfur oxides; 4) 55 pounds per day for $PM_{2.5}$; or 5) 550 pounds per day for CO.

- Maximum on-site daily localized emissions exceed the LST, resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for CO (20 parts per million [ppm] over a 1-hour period, or 9.0 ppm averaged over an 8-hour period) and NO_2 (0.18 ppm over a 1-hour period, 0.1 ppm over a 3-year average of the 98th percentile of the daily maximum 1-hour average, 0.03 ppm averaged over an annual period).
- Maximum on-site localized PM_{10} or $PM_{2.5}$ emissions during construction exceed the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the project site to exceed the incremental 24-hour threshold of 10.4 micrograms per cubic meter ($\mu g/m^3$) or 1.0 $\mu g/m^3$ PM_{10} averaged over an annual period.

OPERATION

Based on criteria set forth in the SCAQMD CEQA Handbook Air Quality Significance Thresholds, the project would have a significant impact with regard to project operations if any of the following would occur:

- Operational emissions exceed any of the following SCAQMD prescribed threshold levels: 1) 55 pounds per day for NO_X; 2) 55 pounds per day for VOCs; 3) 150 pounds per day for PM_{10} or sulfur oxides; 4) 55 pounds per day for $PM_{2.5}$; or 5) 550 pounds per day for CO.
- Maximum on-site daily localized emissions exceed the LST, resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for CO (20 ppm over a 1-hour period or 9.0 ppm averaged over an 8-hour period) and NO_2 (0.18 ppm over a 1-hour period, 0.1 ppm over a 3-year average of the 98th percentile of the daily maximum 1-hour average, 0.03 ppm averaged over an annual period).
- Maximum on-site localized operational PM_{10} or $PM_{2.5}$ emissions exceed the incremental 24-hour threshold of 2.5 $\mu g/m^3$ or 1.0 $\mu g/m^3$ PM_{10} averaged over an annual period.
- The project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 ppm, respectively.
- The project creates an odor nuisance pursuant to SCAQMD Rule 402.

TOXIC AIR CONTAMINANTS

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- the regulatory framework for the toxic material(s) and process(es) involved;
- the proximity of the toxic air contaminants to sensitive receptors;
- the quantity, volume, and toxicity of the contaminants expected to be emitted;
- the likelihood and potential level of exposure; and
- the degree to which project design would reduce the risk of exposure.

Based on the criteria set forth in SCAQMD's CEQA Air Quality Handbook, the project may have a significant TAC impact if:

- The project results in the exposure of sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in 1 million or an acute or chronic hazard index of 1.0. For projects with a maximum incremental cancer risk between 1 in 1 million and

10 in 1 million, a project would result in a significant impact if the cancer burden exceeds 0.5 excess cancer cases.

5.2.5 Environmental Impact Analysis

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

According to the SCAQMD's CEQA Air Quality Handbook, in order to be consistent with the SCAQMD and SCAG regional plans and policies, including the AQMP, the project must be consistent with the air quality standards and the land use assumptions identified in the AQMP, as evaluated below.

AQMP AIR QUALITY STANDARDS

Construction of the project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (e.g., off-road construction equipment, soil disturbance, VOC off-gassing from asphalt pavement application) and off-site sources (e.g., vendor trucks, haul trucks, and worker vehicle trips). VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$ are the primary pollutants of concern during construction activities.

In addition, operation of the project would generate VOCs, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicle trips; area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment; water, waste, off-road, and stationary sources; and energy sources, including combustion of fuels used for space and water heating.

As described in detail in AQ Impact 2, below, the project would not increase the frequency or severity of an existing air quality violation or cause or contribute to new violations for any pollutants during either construction or operation of the project. As the project would not exceed any of the state and federal standards, the project would also not delay timely attainment of air quality standards or interim emission reductions specified in the AQMP. Therefore, the project would be consistent with air quality standards included in the AQMP during both construction and operation.

AQMP AIR QUALITY ASSUMPTIONS

Table 5.2-3 summarizes the project's consistency with the assumptions included in the AQMP. As shown in Table 5.2-3, the project would be consistent with the land uses assumptions identified in the AQMP.

Table 5.2-3. Consistency with Assumptions of the AQMP

	Assumptions
Is the project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based?	**Consistent.** The project would result in the renovation and expansion of an existing museum facility. The project would not directly contribute to population growth in the vicinity of the project as the project does not include new housing. Further, the project is not expected to create a significant increase in the number of employees because the proposed improvements are not expected to result in an increase in the average amount of programming, hours, or the daily or annual attendance levels that have been experienced at La Brea Tar Pits. Therefore, projected levels of project employees and visitors would be consistent with the population and employment forecast for the subregion as adopted by SCAG. Because these same projections form the basis of the 2016 AQMP, it could be concluded that the project would be consistent with the population and employment growth projections of the AQMP.

Assumptions	
Does the project include air quality mitigation measures?	**Consistent.** The project would incorporate a number of key control measures identified by the SCAQMD, which have been included as Mitigation Measure AQ/mm-3.1. As such, the project meets this AQMP consistency criteria since all feasible mitigation measures would be implemented.
To what extent is project development consistent with the AQMP land use policies?	**Consistent.** The project includes various characteristics that minimize VMT and vehicle trips to the project site, including providing a diversity and mix of uses on the project site and within the "Miracle Mile" area, which would minimize vehicle trips and VMT by encouraging walking and non-automotive forms of transportation, and improved design including developing ground-floor museum uses and improved streetscape, which would enhance walkability in the project vicinity, among other project characteristics. Mitigation Measure GHG/mm-1.1 has been included in Section 5.7, Greenhouse Gas Emissions, to reduce project employee and visitor vehicle trips and increase alternative modes such as walking, bicycling, public transit, and rideshare through the preparation and implementation of a Transportation Demand Management program, which will be developed in consultation with Los Angeles Department of Transportation. Because the project implements the County of Los Angeles, City of Los Angeles, and SCAQMD objectives of minimizing VMT and the related vehicular air emissions, the project would be consistent with AQMP land use policies.

CONCLUSION

As evaluated above, the project would not have a significant long-term impact on the region's ability to meet state and federal air quality standards. Further, the project would be consistent with the land use assumptions included in the AQMP. Therefore, the project would be consistent with the SCAQMD's AQMP during both project construction and operation, and impacts would be *less than significant*.

AQ Impact 1
The project would not conflict with or obstruct implementation of applicable air quality plans during either construction or operation. Construction and operation impacts would be less than significant. (CEQA Checklist Appendix G Threshold III. a)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to consistency with applicable air quality plans would be less than significant.

b) Would the project result in a cumulatively considerable new increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The Air Basin is designated as a nonattainment area for federal O_3 and $PM_{2.5}$ standards and the rolling 3-month average lead standard. It is designated as a nonattainment area for state O_3, PM_{10}, and $PM_{2.5}$ standards (CARB 2017; EPA 2022b). The Air Basin is designated as attainment or unclassified for all other federal and state pollutants.

CONSTRUCTION

Construction of the project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (e.g., off-road construction equipment, soil disturbance, VOC off-gassing from asphalt pavement application) and off-site sources (e.g., vendor trucks, haul trucks, and worker vehicle trips). Specifically, entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. Internal combustion engines used by construction equipment, haul trucks, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. Construction emissions can vary substantially from day to day depending on the level of activity; the specific type of operation; and, for dust, the prevailing weather conditions.

CalEEMod was used to calculate air pollutant emissions that would occur during proposed construction activities, which is anticipated last a total of approximately 4 years. Table 5.2-4 identifies the estimated unmitigated maximum daily construction emissions generated during construction of the project in comparison to the applicable SCAQMD regional significance thresholds. See Appendix C for a description of modeling inputs.

Table 5.2-4. Unmitigated Daily Construction Emissions Summary

	Unmitigated Construction Emissions Summary					
	ROG	NOx	CO	PM10	PM2.5	SO2
Construction Year	Pollutant Emission (pounds per day)					
2024	1.66	29.6	48.3	21.8	9.7	0.11
2025	1.47	12.0	30.4	4.74	0.96	0.03
2026	8.96	11.8	32.2	6.38	1.19	0.03
2027	1.76	11.7	38.6	6.5	1.21	0.04
Peak daily emission	*8.96*	*29.6*	*48.3*	*21.8*	*9.7*	*0.11*
SCAQMD regional significance thresholds	*75*	*100*	*550*	*150*	*55*	*150*
Threshold exceeded?	*No*	*No*	*No*	*No*	*No*	*No*

Note: ROG = reactive organic gases. Emissions were quantified using CalEEMod version 2022.1.1.17 (CAPCOA 2022).

Summer model results are presented above. Model results (summer, winter, and annual) and assumptions are provided in Appendix A of the Air Quality and Greenhouse Gas Technical Report (see Appendix C) (SWCA 2023).

As shown in Table 5.2-4, estimated unmitigated construction emissions for all pollutants are below SCAQMD regional significance thresholds.

The project would be required to comply with SCAQMD Rule 403 to control dust emissions generated during any dust-generating activities. Standard construction practices that would be employed to reduce fugitive dust emissions include watering of the active dust areas up to three times per day, depending on weather conditions, using water to control dust emissions during demolition activities, washing vehicle wheels before they leave the site, etc. Adherence to SCAQMD Rule 403 would further reduce construction-related emissions of fugitive dust at the project site. Therefore, construction-related impacts would be *less than significant*.

OPERATION

Project operations would generate VOCs, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicle trips; area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment; water, waste, off-road, and stationary sources; and energy sources, including combustion of fuels used for space and water heating.

CalEEMod was used to calculate the maximum daily emissions associated with operation of the project in 2028 at buildout. Table 5.2-5 identifies the estimated unmitigated maximum daily operational emissions of the project in comparison to the applicable SCAQMD regional significance thresholds. See Appendix C for a description of modeling inputs.

Table 5.2-5. Unmitigated Daily Operational Emissions Summary

	Unmitigated Operations Emissions Summary					
	ROG	**NOx**	**CO**	**PM10**	**PM2.5**	**SO2**
Operations Source Type	**Pollutant Emission (pounds per day)**					
Mobile	4.98	3.17	37.0	8.40	2.17	0.09
Area	2.59	0.04	4.61	0.01	0.01	<0.005
Energy	0.17	3.02	2.54	0.23	0.23	0.02
Off-road	0.03	0.29	0.52	0.01	0.01	<0.005
Stationary	0.84	2.73	3.04	0.12	0.12	<0.005
Total	***8.61***	***9.25***	***47.71***	***8.77***	***2.54***	***0.13***
SCAQMD regional operational significance thresholds	*55*	*55*	*550*	*150*	*55*	*150*
Threshold exceeded?	*No*	*No*	*No*	*No*	*No*	*No*

Note: ROG = reactive organic gases. CalEEMod emissions were quantified using CalEEMod, version 2022.1.1.17 (CAPCOA 2022).

Summer model results are presented above for daily emissions. Model results (summer, winter, and annual) and assumptions are provided in Appendix A of the Air Quality and Greenhouse Gas Technical Report (see Appendix C) (SWCA 2023).

The values for each operational source type shown are the maximum summer daily emissions results from the CalEEMod output, assuming operational year 2028. The total values may not sum exactly due to rounding.

As shown in Table 5.2-5, maximum daily operational emissions of VOCs, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ generated by the project would not exceed the SCAQMD's significance thresholds. Therefore, operational impacts would be *less than significant*.

AQ Impact 2
The project would not result in a cumulatively considerable net increase of criteria pollutants that would exceed applicable SCAQMD thresholds during either construction or operation. Construction and operation impacts would be less than significant. (CEQA Checklist Appendix G Threshold III. b)
Mitigation Measures
No mitigation is required.

AQ Impact 2
Impacts Following Mitigation
Not applicable. Impacts related to a net increase of criteria pollutants would be less than significant.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Project construction activities would result in temporary sources of on-site criteria air pollutant emissions associated with construction equipment exhaust and dust-generating activities, which could adversely affect nearby sensitive land uses. The closest sensitive land uses to the project site are off-site residential uses located between 50 to 150 feet from the project site.

A localized significance threshold (LST) analysis was performed to evaluate localized air quality impacts to sensitive receptors in the immediate vicinity of the project as a result of project activities. A detailed description of the localized significance threshold analysis is included in Appendix C. Table 5.2-6 shows the maximum daily on-site construction emissions generated during construction of the project in comparison to SCAQMD thresholds.

Table 5.2-6. Construction Localized Significance Thresholds Analysis

	NOx	CO	PM10	PM2.5
Year	Pounds per Day*			
2024	29.6	48.3	9.01	4.07
2025	12.0	30.4	3.39	0.85
2026	11.8	32.2	4.05	0.97
2027	11.7	38.6	4.02	0.99
SCAQMD construction LST criteria	*161*	*1,861*	*16*	*8*
Threshold exceeded?	*No*	*No*	*No*	*No*

Source: SCAQMD (2009)

* Localized significance thresholds are shown for a 5.0-acre disturbed area corresponding to a distance to a sensitive receptor of 25 meters in SRA 1. Conservatively includes on-site and off-site emissions.

As shown in Table 5.2-6, proposed construction activities would not generate emissions in excess of LSTs for the Central Los Angeles area; therefore, project construction would not expose sensitive receptors to localized emissions concentrations in excess of SCAQMD standards, and construction impacts related to localized emissions concentrations would be *less than significant*.

In addition to construction-related emissions, maximum daily on-site operational emissions in comparison to SCAQMD thresholds are shown in Table 5.2-7.

As shown in Table 5.2-7, proposed operations would not generate emissions in excess of site-specific LSTs; therefore, project operation would not expose sensitive receptors to localized emissions concentrations in excess of SCAQMD standards, and operation impacts related to localized emissions concentrations would be *less than significant*.

Table 5.2-7. Operational Localized Significance Thresholds Analysis

Year	NOx	CO	PM10	PM2.5
	Pounds per Day (On-site)*			
2028	6.08	10.71	0.37	0.37
SCAQMD operational LST criteria	*161*	*1,861*	*4*	*2*
Threshold exceeded?	*No*	*No*	*No*	*No*

Source: SCAQMD (2009)

* Localized significance thresholds are shown for a 5.0-acre disturbed area corresponding to a distance to a sensitive receptor of 25 meters in SRA 1.

TOXIC AIR CONTAMINANTS CONSTRUCTION HEALTH RISK ASSESSMENT

A construction health risk assessment (HRA) was performed to estimate the Maximum Individual Cancer Risk and the Chronic Hazard Index for residential receptors resulting from project construction. Table 5.2-8 summarizes the results of the construction HRA.

As shown in Table 5.2-8, the HRA results from the unmitigated scenario show that project construction would result in a Residential Chronic Hazard Index of 0.08, which is below the 1.0 significance threshold; however, project construction would result in cancer risks exceeding the 10 in 1 million threshold. For these reasons, without mitigation, project construction could result in toxic air contaminants exposure that could be *significant*.

Table 5.2-8. Construction Health Risk Assessment Results – Unmitigated

Impact Parameter	Unit	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	per million	78.07	10	Potentially Significant
Chronic Hazard Index – Residential	Index Value	0.08	1.0	Less than Significant

Source: SCAQMD (2019)

Note: See Appendix C (SWCA 2023) for detailed results.

TOXIC AIR CONTAMINANTS OPERATIONAL HEALTH RISK ASSESSMENT

In addition, an operational HRA was performed to estimate the Maximum Individual Cancer Risk and the Chronic Hazard Index for residential receptors as a result of operation of the project, including truck trips and off-road/stationary equipment. Table 5.2-9 summarizes the results of the operational HRA.

Table 5.2-9. Operational Health Risk Assessment Results – Unmitigated

Impact Parameter	Unit	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	per million	7.81	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.003	1.0	Less than Significant

Source: SCAQMD (2019)

Note: See Appendix C (SWCA 2023) for detailed results.

As shown in Table 5.2-9, project operational activities would result in a Residential Maximum Individual Cancer Risk of 7.81 in 1 million, which would be less than the significance threshold of 10 in 1 million.

Project operations would also result in a Residential Chronic Hazard Index of 0.003, which is below the 1.0 significance threshold. Thus, operational impacts associated with potential cancer risk would be *less than significant*.

LOCAL CARBON MONOXIDE CONCENTRATIONS

At the time that the SCAQMD 1993 Handbook was published, the Air Basin was designated nonattainment under the CAAQS and NAAQS for CO. In 2007, the SCAQMD was designated in attainment for CO under both the CAAQS and NAAQS as a result of the steady decline in CO concentrations in the Air Basin due to turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities. The SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the Air Basin: 1) Wilshire Boulevard and Veteran Avenue, 2) Sunset Boulevard and Highland Avenue, 3) La Cienega Boulevard and Century Boulevard, and 4) Long Beach Boulevard and Imperial Highway. At the time the 2003 AQMP was prepared, the intersection of Wilshire Boulevard and Veteran Avenue was the most congested intersection in Los Angeles County, with an average daily traffic volume of about 100,000 vehicles per day. Using CO emission factors for 2002, the peak modeled CO 1-hour concentration was estimated to be 4.6 ppm at the intersection of Wilshire Boulevard and Veteran Avenue. When added to the maximum 1-hour CO concentration from 2018 through 2020 at the North Main Street monitoring station, which was 2 ppm in 2019, the 1-hour CO would be 6.6 ppm, while the CAAQS is 20 ppm.

The 2003 AQMP also projected 8-hour CO concentrations at these four intersections for 1997 and from 2002 through 2005. From years 2002 through 2005, the maximum 8-hour CO concentration was 3.8 ppm at the Sunset Boulevard and Highland Avenue intersection in 2002; the maximum 8-hour CO concentration was 3.4 ppm at the Wilshire Boulevard and Veteran Avenue in 2002. Adding the 3.8 ppm to the maximum 8-hour CO concentration from 2018through 2020 at the North Main Street monitoring station, which was 1.7 ppm in 2018, the 8-hour CO would be 5.5 ppm, while the CAAQS is 9.0 ppm. Accordingly, CO concentrations at congested intersections would not exceed the 1-hour or 8-hour CO CAAQS unless projected daily traffic would be at least over 100,000 vehicles per day. Because the project would not increase daily traffic volumes at any study intersection to more than 100,000 vehicles per day as shown in the La Brea Tar Pits Master Plan Final Transportation Assessment (Kittelson and Associates, Inc. 2022), a CO hot spot is not anticipated to occur during either construction or operation, and associated impacts would be *less than significant*.

AQ Impact 3	
The project could expose sensitive residential receptors to substantial pollutant concentrations during construction related to diesel exhaust. Construction impacts could be significant. Operation of the project would not expose sensitive residential receptors to substantial pollutant concentrations. Operation impacts would be less than significant. (CEQA Checklist Appendix G Threshold III. c)	
Mitigation Measures	
AQ/mm-3.1	*To reduce the potential for health risks as a result of construction of the project, the following measures shall be implemented:* • *Prior to the start of construction activities, it shall be ensured that all 75 horsepower or greater diesel-powered equipment are powered with CARB-certified Tier 4 Interim engines, except where the County establishes that Tier 4 Interim equipment is not available.*

AQ Impact 3	
	There are several other SCAQMD rules and regulations that serve as mitigation measures for the project construction. These rules are: • *SCAQMD Rule 403, which requires projects to incorporate fugitive dust control measures;* • *SCAQMD Rule 1113, which limits the volatile organic compound content of architectural coating; and* • *SCAQMD Regulation XIII, New Source Review, which requires new on-site facility nitrogen oxide emissions to be minimized through the use of emission control measures (e.g., use of best available technology control technology for new combustion sources such as boilers and water heaters).*
Impacts Following Mitigation	
With implementation of Mitigation Measure AQ/mm-3.1, diesel particulate matter would be reduced during the construction period and substantial pollutant concentrations would be less than significant, as demonstrated by the analysis conducted to calculate the effectiveness of the mitigation measures, shown in Table 5.2-10.	

Mitigation Measure AQ/mm-3.1 has been identified to reduce project construction-generated DPM emissions to the extent feasible through requiring all 75 horsepower or greater diesel-powered equipment to be powered with CARB-certified Tier 4 Interim engines. The HRA results following implementation of Mitigation Measure AQ/mm-3.1 are presented in Table 5.2-10. With the implementation of Mitigation Measure AQ/mm-3.1, the estimated cancer risk during project construction would be reduced below the SCAQMD threshold of 10 in 1 million (see Table 5.2-10).

Table 5.2-10. Construction Health Risk Assessment Results – Mitigated

Impact Parameter	Unit	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	per million	8.59	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.007	1.0	Less than Significant

Source: SCAQMD (2019)

Note: See Appendix C (SWCA 2023) for detailed results.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The project does not include any uses identified by the SCAQMD as being associated with odors.

CONSTRUCTION

Construction activities associated with the project may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. However, construction-related odors would be temporary and would not generate a new, long-term source of odor within the project area. In addition, the project would be required to comply with 13 CCR 2449(d)(3) and 2485, which require minimizing construction equipment idling time by either shutting it off when not in use or by reducing the time of idling to no more than 5 minutes, which would further reduce the detectable odors from heavy-duty equipment exhaust. The project would also be required to comply with the SCAQMD Regulation XI, Rule 1113 –

Architectural Coating, which would minimize odor impacts from reactive organic gas emissions during architectural coating. The project site is not located in an area of naturally occurring asbestos and asbestos-containing materials are a potential due to a small amount of demolition. However, any modification to the existing buildings would be required to comply with SCAQMD Rule 1403, which specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials. SCAQMD Rule 403 also contains measures that are required to be incorporated that would further reduce any odors associated with construction emissions. Therefore, impacts related to the generation of adverse odors or other emissions during project construction would be *less than significant*.

OPERATION

Operation of the project does not include any component with the potential to generate odorous emissions that could affect a substantial number of people. Therefore, impacts related to the generation of adverse odors or other emissions during project operation would be *less than significant*.

AQ Impact 4
The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people during either project construction or operation. Construction and operation impacts would be less than significant. (CEQA Checklist Appendix G Threshold III. d)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to adverse odors and other emissions would be less than significant.

5.2.6 Cumulative Impact Analysis

The geographic area affected by the project and its potential to contribute to cumulative impacts varies based on the environmental resource under consideration. For air quality, the geographic scope for the project's cumulative impact analysis encompasses the Air Basin.

Based on SCAQMD guidance, individual construction projects that exceed SCAQMD's recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Air Basin is in non-attainment, as discussed below (SCAQMD 2003):

> *As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR… Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.*

Therefore, consistent with the accepted and established SCAQMD cumulative impact evaluation methodologies, the project's construction or operation emissions would be considered cumulatively considerable if project-specific emissions exceed an applicable SCAQMD-recommended significance threshold.

As analyzed in Section 5.2.5, the project would be consistent with the SCAQMD's AQMP during both project construction and operation (threshold a), and the project would not result in a cumulatively considerable net increase of criteria pollutants that would exceed applicable SCAQMD thresholds during either construction or operation (threshold b). In addition, the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people during either project construction or operation (threshold d). As such, and consistent with SCAQMD guidance, the project would not contribute significantly to cumulative impacts associated with these issues.

However, the project's toxic air contamination HRA determined the project could expose sensitive residential receptors to substantial pollutant concentrations during construction related to diesel exhaust emissions (threshold c). Given the construction and diesel exhaust emissions that could occur in the vicinity of the project concurrent with project construction, prior to mitigation, this impact could be considered both a direct impact and a contribution to cumulative impacts related to diesel emissions.

In summary, for most of the threshold issue areas for the topic of air quality, the project would not contribute significantly to cumulative impacts. However, regarding toxic air contamination, the HRA determined that the project could contribute significantly to pollutant concentrations during construction (threshold c). Prior to mitigation, this contribution would be both a significant direct impact of the project as well as a potentially significant contribution to cumulative toxic air contamination in the vicinity of the project. The project's air pollutant emissions related to diesel exhaust during construction could result in a cumulative contribution to air pollution in the region, which would be *significant*. Operation of the project would not result in a significant contribution to air pollution in the region.

Implementation of Mitigation Measure AQ/mm-3.1 would reduce project construction emissions below the SCAQMD threshold, as shown in Table 5.2-10. As such, and consistent with SCAQMD guidance, after implementation of the mitigation measure, the project's contribution to diesel emissions would be less than significant both individually and cumulatively.

AQ Impact 5 (Cumulative Impacts)
The project's air pollutant emissions related to diesel exhaust during construction could result in a cumulative contribution to air pollution in the region. Operation of the project would not result in a significant contribution to air pollution in the region.
Mitigation Measures
Implement Mitigation Measure AQ/mm-3.1.
Impacts Following Mitigation
With implementation of the identified mitigation measure to reduce project-specific impacts, the project's contribution to cumulative impacts would be less than significant.

5.3 BIOLOGICAL RESOURCES

This section evaluates the potential for the project to impact sensitive biological resources. The analysis in this section is based on the biological resources characteristics and species potential for the project site included a review of published literature and an online database review, as well as a reconnaissance-level flora and fauna survey of the project site, conducted on March 18, 2022, and again on November 3, 2022.

5.3.1 Existing Conditions

The project site includes 13 acres of the eastern and northwestern portions of Hancock Park and broadly encompasses what is known as La Brea Tar Pits, which includes the George C. Page Museum (see Figure 3-2 in Chapter 3, Project Description). Located in a highly urbanized area, the project site is surrounded by a variety of development including commercial uses, museums, residential buildings, and schools.

The project topography is primarily level, with sloped areas adjacent to the existing museum. The current landscape is dominated by a large lawn surrounding the museum and extending to the west. Paved walkways meander through the project site, with mature trees and shrubs, primarily non-native. Oil Creek is an ephemeral or intermittent creek that flows from the northeast by the parking area off South Curson Avenue to the southwest, where it appears to dissipate on-site with no downstream connectivity. It supports a community of hydrophytic and riparian vegetation near the parking lot. Because entrance to the park grounds is free, it is well used by the public.

5.3.1.1 Vegetation

Three natural vegetation communities including California sycamore–coast live oak riparian woodlands, hardstem and California bulrush marshes (California Native Plant Society [CNPS] 2023), and oak woodlands (County of Los Angeles 2011) along with four habitat types including urban-ornamental, urban-grass lawns, barren-developed, and lacustrine (California Wildlife Habitat Relationships System 2023) were identified within the project site (Figure 5.3-1).

The California sycamore–coast live oak riparian woodlands community is associated with Oil Creek and is restricted to the northwestern portion of the project site. This community constitutes approximately 0.28 acre of coverage. Hardstem and California bulrush marshes are restricted to the margins of the Lake Pit and constitute approximately 0.18 acre of the project site. While various forms of oak woodlands are recognized by the *Manual of California Vegetation* (CNPS 2023), oak woodlands were assessed based on the Los Angeles County Oak Woodland Conservation Management Plan guidance (County of Los Angeles 2014:3), as this guidance observes a more conservative approach defining an oak woodland as consisting of "...two or more oak trees of at least five inches in diameter measured at 4.5 feet above mean natural grade, with greater than 10 percent canopy cover". The oak woodlands are restricted to the northern portion of the project site and constitute approximately 1.51 acres of coverage within the project site. California sycamore–coast live oak riparian woodlands and hardstem and California bulrush marshes are CNPS California sensitive communities with an S3 (vulnerable statewide) and S3/S4 (denoting uncertainty in the rarity of the community with an accurate vulnerability assessment ranging from vulnerable statewide to apparently secure statewide) rarity rank, respectively. The CNPS (2023) ranks coast live oak woodlands and forests as S4, apparently secure statewide.

Figure 5.3-1. Vegetation communities on the project site.

While the CNPS (2023) recognizes some semi-natural communities, those recognized semi-natural communities were not present on the project site. However, these developed areas are included in the California Department of Fish and Wildlife (CDFW) California Wildlife Habitat Relationships System as urban and barren. The two forms of urban habitat are the most ubiquitous communities in the project site, and they include urban-ornamental trees and urban-grass lawns. Urban-ornamental trees encompasses approximately 5.01 acres of the project site, and urban-grass lawns covers approximately 2.16 acres of the project site. Lacustrine, covering approximately 0.98 acre, is restricted to the Lake Pit, and barren-developed, consisting of the hardscape throughout the project site, covers approximately 4.35 acres of the project site.

Project site vegetation consists of large expanses of lawn with primarily non-native planted trees and shrubs, including pines (*Pinus* spp.), gum trees (*Eucalyptus* spp.), Brazilian peppertree (*Schinus terebinthifolius*), various species of palm tree (e.g., fan, queen), London planetrees (*Platanus x hispanica*), and other trees. Native trees are present, including coast live oak (*Quercus agrifolia*), California [western] sycamore (*Platanus racemosa*), buckeye (*Aesculus californica*), and coast redwood (*Sequoia sempervirens*). Table 5.3-1 lists plants identified within the project site during reconnaissance field survey conducted by SWCA on March 18, 2022.

Table 5.3-1. Plant Species Observed at the La Brea Project Site

Scientific Name and Taxonomic Reference	Common Name
Acacia sp.*	acacia
Acer negundo L.	boxelder
Aesculus californica (Spach) Nutt.	California buckeye
Agave americana L.*	century plant
Anemopsis californica (Nutt.) Hook. & Arn.	yerba mansa
Apiastrum angustifolium Nutt.	wild celery
Artemisia californica Less.	California sagebrush
Ceratonia siliqua L.*	carob, St. John's beard
Chorisia [*Ceiba*] *speciosa* St.-Hil.*	floss silk tree
*Cycas revoluta**	sago palm
Cyperus sp.*	flatsedge
Distichlis spicata	saltgrass
Eleocharis sp.	spikerush
Eriogonum fasciculatum (Benth.) Torr. & A. Gray	interior buckwheat
Erythrina sp.*	coral tree
Eucalyptus spp.*	gum trees
Festuca arundinacea Schreb.*	reed fescue
Frangula californica (Eschsch.) A. Gray	coffeeberry
Fraxinus sp. Marsh.	ash
Heteromeles arbutifolia (Lindl.) M. Roem.	toyon
Juglans californica S. Watson	Southern California black walnut†
Muhlenbergia rigens (Benth.) Hitchc.	deergrass
Pinus sp.*	ornamental (non-native) pines

Scientific Name and Taxonomic Reference	Common Name
Platanus x *hispanica* Mill. Ex Muenchh.	London planetree
Platanus racemosa Nutt.	California (western) sycamore
Polypogon interruptus Kunth*	ditch rabbitsfoot grass
Quercus agrifolia Nee	coast live oak
Salix lasiolepis Nutt.	arroyo willow
Salvia leucantha Cav.*	Mexican bush sage
Salvia mellifera E. Greene	black sage
Salvia spathacea Greene	hummingbird sage
Salvia cultivars*	sages
Sambucus nigra L. subsp. *caerulea* (Raf.) Bolli	blue elderberry
Schinus molle L.*	Peruvian peppertree
Scirpus sp.	bulrush
Sequoia sempervirens (D. Don) Endl.	coast redwood
Syagrus romanzoffiana (Cham.) Glassman*	queen palm
Tipuana tipu (Benth.) Kuntze*	tipa, rosewood
Washingtonia robusta H. Wendl.*	Mexican fan palm
Yucca spp.*	ornamental yucca

* Non-native species and/or cultivars

† California Native Plant Society (CNPS 2022) Rare Plant Rank 4.2 = Plants of limited distribution; fairly threatened in California. Walnut groves are of concern to CDFW/CNPS, not individual or planted (landscape) trees.

Oil Creek supports a community of hydrophytic and riparian vegetation. It is dominated by mowed grasses and non-native plants, with scattered native species. Non-native plants present include reed fescue (*Festuca arundinacea*), Mexican fan palm (*Washingtonia robusta*), wild celery (*Apium graveolens*), and nutgrass (*Cyperus* sp.). Native plants found included yerba mansa (*Anemopsis californica*), spikerush (*Eleocharis* sp.), rush (*Scirpus* sp.), and saltgrass (*Distichlis spicata*). Non-native London planetrees form the overstory in the southwestern portion. The northeastern extent is planted with California native plants between the southwest corner of the parking area and the footbridge over Oil Creek, signed as the Richard Simun Pleistocene Garden. A tree overstory primarily composed of arroyo willows (*Salix lasiolepis*) with California [western] sycamore is present with little understory. Along the border and in openings, scattered native trees and perennials include walnut (*Juglans* sp.), hummingbird sage (*Salvia spathacea*), toyon (*Heteromeles arbutifolia*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), coffeeberry (*Frangula californica*), box elder (*Acer negundo*), and sage species (*Salvia* spp.).

The Lake Pit supports sparse emergent herbaceous vegetation, as well as a narrow band of riparian vegetation along the margins. The emergent vegetation likely consists of bulrush (*Schoenoplectus* sp.). The bulrush can also be observed along the edges of the Lake Pit along with what appears to be cattails (*Typha* sp.). Exclusionary fencing and a lack of identifiable diagnostic reproductive parts made identification to species unfeasible during the reconnaissance survey.

Approximately 24 trees are located around Hancock Park to honor those killed during the September 11, 2001, terrorist attacks. There is a commemorative plaque near the northwest end of the parking lot, although the individual trees do not appear to be labeled. Depending on the final project design, the trees and plaques may be relocated and/or reconfigured within the park's 13 acres, while still maintaining recognition of the memorial.

5.3.1.2 Wildlife

The project site provides limited wildlife habitat due to the combination of high levels of human activity and the lack of surface water.

Birds were the only wildlife encountered (seen, heard, and/or flying over the site) during the field survey conducted on March 18, 2022, and all were species typical of urban areas: Anna's hummingbird (*Calypte anna*); American crow (*Corvus brachyrhynchos*); house finch (*Haemorhous mexicanus*); dark-eyed junco (*Junco hyemalis*); bushtit (*Psaltriparus minimus*); black phoebe (*Sayornis nigricans*); and yellow-rumped warbler (*Setophaga coronata*).

No amphibians, reptiles, mammals, or indication of site use by wildlife (burrows, tracks, scat, etc.) were found. Common urban wildlife expected to occur includes eastern fox squirrel (*Sciurus niger*), mice, rats, and lizards. It is assumed that the hydrocarbon content in Oil Creek is too high for wildlife use; no wildlife was seen in or near this drainage. Table 5.3-2 lists the bird species observed by SWCA at the project site (2022).

Table 5.3-2. Bird Species Observed at the La Brea Project Site

Scientific Name	Common Name
Aphelocoma californica	California scrub-jay
Buteo jamaicensis	red-tailed hawk
Calypte anna	Anna's hummingbird
*Columba livia**	rock dove
Haemorhous mexicanus	house finch
Corvus brachyrhynchos	American crow
Junco hyemalis	dark-eyed junco
Psaltriparus minimus	bushtit
*Passer domesticus**	European house sparrow
Mimus polyglottos	northern mockingbird
Sayornis nigricans	black phoebe
Setophaga coronata	yellow-rumped warbler
*Sturnus vulgaris**	European starling
Zenaida macroura	mourning dove

* Non-native species

NESTING BIRD HABITAT

Suitable habitat for nesting birds is present in many of the mature trees on the project site and in the native plant area of Oil Creek. The highest nesting potential is in areas away from human activity, in trees that have not been thinned or heavily pruned. No incidental sightings of nesting activity were noted during the reconnaissance-level survey conducted by SWCA on March 18, 2022, although a nesting bird survey was not completed at this stage of the project. The reconnaissance survey was conducted within the relatively early portion of the nesting bird season (February 1 through September 15); however, absence of nesting activity observations does not preclude future nest development within the project site.

SPECIAL-STATUS SPECIES

A query of the California Natural Diversity Database (CNDDB) for a 1-mile radius of the project site yielded three recent records (within 20 years) of special-status species: Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*); coastal California gnatcatcher (*Polioptila californica ssp. californica*); and Nevin's barberry (*Berberis nevinii*) (CDFW 2022a). The online community science database iNaturalist (2022) reports observations of adult monarch butterflies. No birds listed as sensitive by the Los Angeles Audubon Society (2009) or other sensitive wildlife or plants were observed during the field survey conducted for the project. Table 5.3-3 and Table 5.3-4 summarize these results. The sections following the table provide an assessment of the potential for the three species that were identified in the records search within the 1-mile radius of the site.

Table 5.3-3. Special-Status Plants Reported in Vicinity of the La Brea Tar Pits Project Site

Common Name *Scientific Name*	Status	Lifeform	Blooming Period	Habitat	Elevation (feet)	Potential to Occur
Nevin's barberry *Berberis nevinii*	CRPR 1B.1, CE, FE	Perennial evergreen shrub	(February) March–June	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub; sandy or gravelly.	225–2,705	**Absent.** Evergreen shrub discernible year-round deemed absent during March 2022 survey. Calflora report from 2022 and CNDDB records from 2010 are in Griffith Park (over 4 miles northeast of the project site) and noted as probably planted. This species is widely available in the landscape trade and frequently planted.

Note: Records within 1-mile radius of project site (all within U.S. Geological Survey 7.5-minute Hollywood quadrangle) and within previous 20 years (CNDDB [CDFW 2022a]; iNaturalist 2022).

Status Definitions: CRPR 1B = California Rare Plant Rank. Plants rare, threatened, or endangered in California and elsewhere; Rarity Rank 0.1 = Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat); CE = State of California listed as Endangered; FE = Federally listed as Endangered (CDFW 2022b).

Table 5.3-4. Special-Status Fauna Reported in Vicinity of the La Brea Tar Pits Project Site

Common Name *Scientific Name*	Status	Habitat	Potential to Occur
Southern California rufous-crowned sparrow *Aimophila ruficeps canescens*	WL	Resident in Southern California; confined to moderate to steep rocky slopes with a mix of low shrubs, grasses, forbs, and open ground. Highly correlated with coastal sage scrub and dry chaparral.	**Unlikely.** Potentially suitable coastal sage scrub and rocky habitat is not present. No eBird reports are in the project vicinity (all are from the Hollywood Hills north of the site). CNDDB report is from 2014, about 0.25 mile northwest of Mulholland Dam near Pilgrimage Bridge, approximately 4 miles east-northeast of project site.
Coastal California gnatcatcher *Polioptila californica* ssp. *californica*	FT, SSC	Obligate, permanent resident of coastal sage scrub below 2,500 feet in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	**Unlikely.** Suitable coastal sage scrub nesting habitat is not present on-site. Current (2022) eBird and CNDDB reports are from 2014 in Kenneth Hahn State Recreation Area (KHSRA), north end of Baldwin Hills about 3.5 miles southwest of the project site. KHSRA supports suitable coastal sage habitat dominated by California coastal sagebrush (*Artemisia californica*; Google Earth street view March, 2022, 34.012722°, −118.367963°). eBird does not track the subspecies; however, given geographic distributions, species observed at KHSRA can be assumed to be coastal California gnatcatcher.

Common Name *Scientific Name*	Status	Habitat	Potential to Occur
Monarch butterfly *Danaus plexippus*	FC – Wherever found	Overwintering roost sites are typically located in wind-protected tree groves of gum trees (*Eucalyptus* spp.), Monterey pine (*Pinus radiata*), and/or cypress trees (*Hesperocyparis* spp.) where nectar and water sources are nearby and within about 1.5 miles of the ocean. Egg laying is known to occur on obligate milkweed host plant (primarily *Asclepias* spp.).	**Absent (overwintering) – Low (foraging and egg laying).** No overwintering habitat is present on-site and site is too far inland (Western Monarch Count 2022); however, individual monarchs have been seen in the area. iNaturalist (2022) reports 31 observations of adult monarch butterflies in Hancock Park, inclusive of the project area, between 2014 and 2019, including results of the 2017 La Brea Wildlife Survey (iNaturalist 2017). iNaturalist reports seven observations of *Asclepias curassavica* (tropical milkweed) within Hancock Park including observations from 2022, which is known to host monarch larvae and provide nectar for adults.

Note: Records within 1-mile radius of project site (all within U.S. Geological Survey 7.5-minute Hollywood quadrangle) and within previous 20 years (CNDDB [CDFW 2022a]; iNaturalist 2022).

Status Definitions: FC = Federal candidate; FT = Federally listed as Threatened; SSC = Species of Special Concern (CDFW); WL = Watch List (North American Bird Conservation Initiative) (CDFW 2022c).

SOUTHERN CALIFORNIA RUFOUS-CROWNED SPARROW

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) is a CDFW Species of Special Concern. It frequents relatively steep, often rocky hillsides with grass and forb patches and is resident in Southern California coastal sage scrub and mixed chaparral. It is unlikely to occur on the project site due to lack of suitable habitat.

COASTAL CALIFORNIA GNATCATCHER

Coastal California gnatcatcher (*Polioptila californica* ssp. *californica*) is a federally threatened species and is a CDFW Species of Special Concern. It is a resident of scrub-dominated plant communities where it is strongly associated with sage scrub in its various successional stages. Suitable habitat is not present on the project site for this bird.

NEVIN'S BARBERRY

Nevin's barberry (*Berberis nevinii*) is a plant that is both state- and federally listed as endangered. Wild plants occur on steep north-facing slopes and low-grade sandy washes in chaparral, cismontane woodland, and coastal and riparian scrub communities. Because this plant is available at plant nurseries and widely planted, it can be difficult to distinguish natural from introduced plants. This species would have been observable and was not found on the project site during the site visit of March 18, 2022.

MONARCH BUTTERFLY

The monarch butterfly is a candidate species for listing under the federal Endangered Species Act (ESA), which extends to cover the species "wherever found", including overwintering congregations and individuals documented foraging for nectar and eggs and larvae documented on host plants. The CDFW lists the monarch as a Species of Greatest Conservation Need in the State Wildlife Action Plan (CDFW 2015). Of highest conservation concern are monarch overwintering aggregations, which are documented, mapped, and monitored annually.

Adult monarch females lay eggs on their obligate milkweed host plant (primarily *Asclepias* spp.), which developing monarch larvae use as a primary food source and to sequester cardenolides as defense from predators. In California, as noted by CDFW, there are two distinct groups of monarch butterflies: those engaging in long-distance migration which use the California coastal groves as overwintering habitat, and

resident monarchs that breed year-round and do not engage in migration. Resident monarchs are thought to use the abundance of non-native tropical milkweed (*Asclepias curassavica*) as an inducement for winter breeding where historically they only engaged in breeding activity in selective season conditions. Unlike native milkweed hosts plants, tropical milkweed is an evergreen species that does not die back in winter months and can provide a refuge for *Ophyrocystis elektroscirra* (Oe), a protozoan parasite with known detrimental effects on monarch vitality and reproduction (CDFW 2021).

Adult migratory monarchs form overwintering aggregations in large mature tree groves, often non-native gum (*Eucalyptus* spp.) trees as well as native Monterey and Sargent cypress (*Hesperocyparis* [*Cupressus*] *macrocarpa*; *H. sargentii*), Monterey pine (*Pinus radiata*), and, less commonly, other native trees including California [western] sycamore and coast redwood.

Suitable overwintering sites must contain several specific elements which together form the correct microclimate conditions. According to the Xerces Society for Invertebrate Conservation (2022), the majority of overwintering sites are at low elevations (less than 200–300 feet), within about 1.5 miles of the ocean, and contain specific microclimate elements such as moderate temperatures, wind protection, dappled shade, high humidity, available fresh water, and fall–winter blooming nectar sources, surrounded or partially enclosed by large tree groves or windrows.

iNaturalist records indicate that non-native tropical milkweed is likely present within the project site; however, this species was not observed during the reconnaissance-level survey. Habitats suitable for supporting foraging and breeding of resident monarchs are possibly present in low density at the project site, but habitats suitable for supporting overwintering monarchs are absent from the project site. Additionally, overwintering aggregations characteristically occur within about 1.5 miles of the coast. The project site is approximately 9 miles northeast of the coast. No monarchs were observed during the site survey.

5.3.1.3 Aquatic Resources

Two aquatic features were identified within the project site: Oil Creek and the Lake Pit (Figure 5.3-2). Oil Creek is a historic feature which, as early as 1941 (based on historical aerial imagery), conveyed flow from approximately the intersection of 6th Street and South Curson Avenue southwest to the intersection of Wilshire Boulevard and South Ogden Drive. Historical imagery shows a well-defined channel supporting possible riparian vegetation based on distribution patterns suggesting an intermittent or wetter hydrologic regime. In its current state, Oil Creek appears to receive its primary hydrologic input source from groundwater; it also receives hydrologic inputs from precipitation and irrigation system runoff. Oil Creek appears to dissipate on-site. Dense vegetation and heavy leaf litter exist in the northeastern portion of the creek; Oil Creek supports a robust community of hydrophytic vegetation. The density of hydrophytic vegetation, and hydrology indicators such as water-stained leaves, suggest that Oil Creek may support wetlands.

The Lake Pit has existed in its current or similar state since the late 1800s, following the abandonment of asphalt mining operations and the subsequent accumulation of groundwater and rainwater above asphalt. The Lake Pit supports aquatic vegetation along its margins; however, vegetation management in the form of weeding can be observed from the edge of the aquatic vegetation to the exclusionary fencing. Any potential wetlands supported by the Lake Pit would likely coincide with the limits of the aquatic vegetation.

Figure 5.3-2. Aquatic resources on the project site.

The reconnaissance surveys suggest there may be approximately 1.5 acres of regulated aquatic resources within the project site, of which 0.3 acre is associated with Oil Creek, and 1.2 acres are associated with the Lake Pit. However, a formal aquatic resources delineation was not conducted. Potential jurisdictional limits were assessed based on vegetation composition and surface hydrology only. Based on vegetation compositions, both features may support marginal wetlands, however soils were not evaluated for hydric indicators to make this determination. Oil Creek has been disturbed and manipulated over time. It is partially paved where the parking lot is located and is channelized with pavers near its terminus. It is dominated by non-native grasses in parts and planted with native riparian vegetation in other parts. The drainage is a relic of a natural stream which, in its previous, natural state, would be considered a regulated aquatic resource. However, the current regulatory status of the drainage cannot accurately be determined without a jurisdictional analysis including a determination of hydric soils. Based on the site surveys conducted to support the preparation of this analysis, it is anticipated that Oil Creek and the Lake Pit may be subject to the jurisdiction of the California Regional Water Quality Control Board, and CDFW jurisdictional limits such as the streambed of Oil Creek, the ordinary high-water mark of the Lake Pit, and their associated riparian habitat. Oil Creek may also be regulated by the U.S. Army Corps of Engineers (USACE) under the Clean Water Act (CWA).

5.3.2 Regulatory Setting

The following section provides the federal, state, and local regulations pertaining to the project as they relate to biological resources. It is noted here that there are no federal, state, or local designated conservation areas on or directly adjacent to the project site. The project site is not within an identified wildlife corridor, there are no U.S. Fish and Wildlife Service (USFWS)-designated critical habitats within a 10-mile radius, no Habitat Conservation Plans, and no CDFW Natural Community Conservation Plans in the project vicinity. Beyond the project site itself, there are no large open-space areas or parks contiguous or adjacent to the project site. The Kenneth Hahn State Recreation Area is located approximately 5 miles south of the site and Griffith Park, a City of Los Angeles park, is about 5.5 miles to the northeast. Griffith Park is the nearest area to La Brea Tar Pits that is broadly considered a conservation area, as it is designated as a County of Los Angeles Significant Ecological Area (SEA).

5.3.2.1 Federal

ENDANGERED SPECIES ACT

The U.S. Congress passed the ESA in 1973 to protect endangered species and species threatened with extinction (federally listed species). The ESA operates in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

Section 9 of the ESA prohibits the "take" of endangered or threatened wildlife species. The legal definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 United States Code 1532 [19]). "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 Code of Federal Regulations [CFR] 17.3). "Harassment" is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR 17.3). Actions that result in take can result in civil or criminal penalties.

The USFWS is authorized to issue permits under Sections 7 and 10 of the ESA. Section 7 mandates that all federal agencies consult with the USFWS for terrestrial species and/or National Marine Fisheries Service for marine species to ensure that federal agency actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species. Any anticipated adverse effects

require preparation of a biological assessment to determine potential effects of the project on listed species and critical habitat. If the project adversely affects a listed species or its habitat, the USFWS or National Marine Fisheries Service prepares a Biological Opinion. The Biological Opinion may recommend "reasonable and prudent alternatives" to the project to avoid jeopardizing or adversely modifying habitat, including "take" limits.

The ESA defines critical habitat as habitat deemed essential to the survival of a federally listed species. The ESA requires the federal government to designate "critical habitat" for any species it lists under the ESA. Under Section 7, all federal agencies must ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species, or destroy or adversely modify its designated critical habitat. These complementary requirements apply only to federal agency actions, and the latter only to specifically designated habitat. A critical habitat designation does not set up a preserve or refuge, and applies only when federal funding, permits, or projects are involved (i.e., when there is a federal nexus). Critical habitat requirements do not apply to activities on private land that do not involve a federal nexus.

Section 10 of the ESA includes provisions to authorize take that is incidental to, but not the purpose of, activities that are otherwise lawful. Under Section 10(a)(1)(B), the USFWS may issue permits (incidental take permits) for take of ESA-listed species if the take is incidental and does not jeopardize the survival and recovery of the species. To obtain an incidental take permit, an applicant must submit a habitat conservation plan outlining steps to minimize and mitigate permitted take impacts to listed species.

MIGRATORY BIRD TREATY ACT

The federal Migratory Bird Treaty Act (MBTA) prohibits any person, unless permitted by regulations, to:

> …pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatsoever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention … for the protection of migratory birds ... or any part, nest, or egg of any such bird. (16 United States Code 703)

The list of migratory birds includes nearly all bird species native to the United States. The statute was extended in 1974 to include parts of birds, as well as eggs and nests. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the MBTA and excluded all non-native species. Thus, it is illegal under the MBTA to directly kill or destroy a nest of nearly any native bird species.

CLEAN WATER ACT

The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972, when the Act with amendments became known as the "Clean Water Act".

Section 404 of the CWA requires authorization from the Secretary of the Army, acting through the USACE, for the discharge of dredged or fill material into all waters of the United States, including wetlands. Discharges of fill material generally include: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; dams and dikes; artificial islands; property protection or reclamation devices such as riprap, groins, seawalls, breakwaters, and revetments; beach nourishment; levees; fill for intake and

outfall pipes and subaqueous utility lines; fill associated with the creation of ponds; and any other work involving the discharge of fill or dredged material. A USACE permit is required whether the work is permanent or temporary. Examples of temporary discharges include dewatering of dredged material prior to final disposal, and temporary fills for access roadways, cofferdams, and storage and work areas.

Section 401 of the CWA requires every applicant for a federal permit or license for any activity which may result in a discharge to a water body to obtain State Water Quality Certification that the proposed activity would comply with state water quality standards.

Requirements of the CWA are reflected in the environmental impact analysis contained in this section, specifically in response to threshold questions b) and c).

5.3.2.2 State

CALIFORNIA ENDANGERED SPECIES ACT

The CDFW administers the California Endangered Species Act (CESA), which prohibits the "taking" of listed species except as otherwise provided in state law. Section 86 of the California Fish and Game Code (CFGC) defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Under certain circumstances, the CESA applies these take prohibitions to species petitioned for listing (state candidates). Pursuant to the requirements of the CESA, state lead agencies (as defined under CEQA Public Resources Code Section 21067) are required to consult with the CDFW to ensure that any action or project is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat. Additionally, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.
The CESA requires the CDFW to maintain a list of threatened and endangered species. The CDFW also maintains a list of candidates for listing under the CESA, and of species of special concern (or watch list species).

CALIFORNIA FISH AND FAME CODE

The CFGC is written in 13 Divisions, which establish the basis of fish, wildlife, and native plant protections and management in the state. Section 3511 includes provisions to protect Fully Protected species, such as: 1) prohibiting take or possession "at any time" of the species listed in the statute, with few exceptions; 2) stating that "no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to "take" the species; and 3) stating that no previously issued permits or licenses for take of the species "shall have any force or effect" for authorizing take or possession.
The CDFW is unable to authorize incidental take of "fully protected" species when activities are proposed in areas inhabited by those species. CFGC Sections 3503 and 3503.5 state that it is unlawful to take, possess, or destroy the nest or eggs of any bird, with occasional exceptions. In addition, Section 3513 states that it is unlawful to take or possess any migratory bird as designated in the MBTA or any part of such migratory birds except as provided by rules and regulations under provisions of the MBTA.
The CDFW also manages the California Native Plant Protection Act of 1977 (CFGC Section 1900, et seq.), which was enacted to identify, designate, and protect rare plants. In accordance with CDFW guidelines, CNPS 1B list plants are considered "rare" under the CESA and are evaluated in CEQA documents.

OTHER SECTIONS OF THE CALIFORNIA FISH AND GAME CODE

Fully Protected species may not be taken or possessed without a permit from the California Fish and Game Commission and/or CDFW. Section 5050 lists protected amphibians and reptiles, and Section 3515

prohibits take of fully protected fish species. Eggs and nests of Fully Protected birds are under Section 3511; migratory nongame birds are protected under Section 3800; and mammals are protected under Section 4700. Except for take related to scientific research, all take of Fully Protected species is prohibited.

CALIFORNIA FISH AND GAME CODE SECTION 1602

CFGC Section 1602 requires any person, state or local government agency, or public utility proposing a project that may affect a river, stream, or lake to notify the CDFW before beginning the project. If activities would result in the diversion or obstruction of the natural flow of a stream, substantially alter its bed, channel, or bank, impact riparian vegetation, or adversely affect existing fish and wildlife resources, a Streambed Alteration Agreement is required. A Streambed Alteration Agreement lists the CDFW conditions of approval relative to the proposed project and serves as an agreement between an applicant and the CDFW for a term of not more than 5 years (for standard agreements) for the performance of activities subject to this section. Implementation of the proposed project may require a Section 1602 Streambed Alteration Agreement for any impacts within the banks of drainages and extending to the outer edge of riparian vegetation (whichever is greater) if these areas are determined to be jurisdictional by CDFW.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) states that the California State Water Quality Control Board has the authority over State water rights and water quality policy and procedures. The Porter-Cologne Act establishes nine Regional Waters Quality Control Boards which regulate all discharge of waste to land through the Waste Discharge Requirement (WDR) Program. Waste discharge requirements adopted under the WDR Program protect surface water by either prohibiting discharge of a pollutant to waters of the U.S. or prescribing requirements for discharge to surface waters that are not waters of the U.S., and they protect groundwater by prescribing waste containment, treatment, and control requirements. The WDR Program is a mandated program that regulates the discharge of municipal, industrial, commercial, and other wastes to land that would affect or would have the potential to affect groundwater.

Requirements of the Porter-Cologne Act are reflected in the environmental impact analysis contained in this section, specifically in response to threshold questions b) and c).

5.3.2.3 County of Los Angeles

COUNTY OF LOS ANGELES 2035 GENERAL PLAN CONSERVATION AND NATURAL RESOURCES ELEMENT

The County's 2035 General Plan Conservation and Natural Resources Element guides the long-term conservation of natural resources and preservation of available open space areas. The Conservation and Natural Resources Element addresses the following conservation areas: open space resources; biological resources; local water resources; agricultural resources; mineral and energy resources; scenic resources; and historic, cultural, and paleontological resources. Applicable goals and policies pertaining to open space resources and biological resources are included below.

Goal C/NR 1: Open space areas that meet the diverse needs of Los Angeles County.

> ***Policy C/NR 1.1***: Implement programs and policies that enforce the responsible stewardship and preservation of dedicated open space areas.

Policy C/NR 1.2: Protect and conserve natural resources, natural areas, and available open spaces

Policy C/NR 1.5: Provide and improve access to dedicated open space and natural areas for all users that considers sensitive biological resources.

Goal C/NR 3: Permanent, sustainable preservation of genetically and physically diverse biological resources and ecological systems including: habitat linkages, forests, coastal zone, riparian habitats, streambeds, wetlands, woodlands, alpine habitat, chaparral, shrublands, and SEAs.

Policy C/NR 3.1: Conserve and enhance the ecological function of diverse natural habitats and biological resources.

Policy C/NR 3.10: Require environmentally superior mitigation for unavoidable impacts on biologically sensitive areas, and permanently preserve mitigation sites.

Goal C/NR 4: Conserved and sustainably managed woodlands.

Policy C/NR 4.1: Preserve and restore oak woodlands and other native woodlands that are conserved in perpetuity with a goal of no net loss of existing woodlands.

COUNTY OF LOS ANGELES OAK TREE ORDINANCE

The County of Los Angeles Oak Tree Ordinance protects all oak trees, whether native (indigenous) or not (Title 22 Division 8 Chapter 22.174). Under this ordinance, oak trees 8 inches or more in diameter measured at 4.5 feet above mean natural grade (i.e., diameter at breast height [dbh]), or in the case of oaks with multiple trunks, a combined diameter of 12 inches dbh or more of the two largest trunks, are protected. A permit is required to cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone. The protected zone is 15 feet from the trunk or 5 feet beyond the dripline, whichever distance is greater (Los Angeles County Planning and Zoning Code [Title 22]). Exemptions to the ordinance include cases of emergency caused by an oak tree being in a hazardous or dangerous condition, or being irretrievably damaged or destroyed through flood, fire, wind, or lightning, as determined after visual inspection by a licensed forester with the County.

There are 13 native oak trees on-site, all over 8 inches dbh, which meets the size criteria for protection under the County ordinance. Because the project is a County-led project, it is exempt from obtaining a permit under the ordinance; nevertheless, the project must be consistent with County policies and ordinances despite this exemption. If development of the project would result in encroachment or removal of oak trees, coordination with the County's Department of Regional Planning would be required prior to commencement of any work on-site. Any encroachment or removal requests must be reviewed by the County's Department of Regional Planning for consistency with County policies and ordinances relating to oak tree protection prior to commencement of any work on-site.

COUNTY OF LOS ANGELES SIGNIFICANT ECOLOGICAL AREAS

The County's SEA Program began in 1980 with the adoption of SEAs as Special Management Areas in the Los Angeles County General Plan. The objective of the SEA Program is to preserve the genetic and physical ecological diversity of Los Angeles County by designing biological resource areas capable of sustaining themselves into the future. The SEA designation is given to land that contains irreplaceable biological resources and includes undisturbed or lightly disturbed habitats that support valuable and threatened species and linkages and corridors to promote species movement.

The project site not within a County SEA. Griffith Park is the closest SEA, located approximately 5.5 miles to the northeast of the subject property.

5.3.2.4 City of Los Angeles

While the project site is located within the city of Los Angeles, it is owned by the County. Accordingly, the project is subject to the regulatory controls of the County of Los Angeles and not the City of Los Angeles. Nonetheless, the biological resource policy and regulatory documents of the City of Los Angeles that are most relevant to the project are provided herein for informational purposes.

CITY OF LOS ANGELES GENERAL PLAN CONSERVATION ELEMENT

The Conservation Element of the 2001 City of Los Angeles General Plan includes two objectives related to biological resources, below.

Section 6: Endangered Species. Objective: protect and promote the restoration, to the greatest extent practical, of sensitive plant and animal species and their habitats.

> ***Policy 1:*** continue to require evaluation, avoidance, and minimization of potential significant impacts, as well as mitigation of unavoidable significant impacts on sensitive animal and plant species and their habitats and habitat corridors relative to land development activities.
>
> ***Policy 2:*** continue to administer City-owned and managed properties so as to protect and/or enhance the survival of sensitive plant and animal species to the greatest practical extent.
>
> ***Policy 3***: continue to support legislation that encourages and facilitates protection of endangered, threatened, sensitive, and rare species and their habitats and habitat corridors.

Section 12: Habitats. Objective: preserve, protect, restore and enhance natural plant and wildlife diversity, habitats, corridors and linkages so as to enable the healthy propagation and survival of native species, especially those species that are endangered, sensitive, threatened or species of special concern.

> ***Policy 1***: continue to identify significant habitat areas, corridors, and buffers and to take measures to protect, enhance, and/or restore them.
>
> ***Policy 2***: continue to protect, restore, and/or enhance habitat areas, linkages, and corridor segments, to the greatest extent practical, within City-owned or -managed sites.
>
> ***Policy 3***: continue to work cooperatively with other agencies and entities in protecting local habitats and endangered, threatened, sensitive, and rare species.
>
> ***Policy 4:*** continue to support legislation that encourages and facilitates protection of local native plant and animal habitats.

WILSHIRE COMMUNITY PLAN

The project site is located within the Wilshire Community Plan area, which was approved by the City Council on September 19, 2001. The majority of the Wilshire Community Plan area consists of gently sloping plains and includes about 8,954 acres (about 14 square miles). The Wilshire Community Plan includes policies to protect the existing open spaces areas within the planning area. This plan does not include other specific policies related to biological resources or tree-removal activities. The plan includes community design and landscaping guidelines which provide guidance for the selection of street trees for new placement as well as requirements for planting and replacing trees in proximity to streetlights.

5.3.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse impacts related to biological resources if it would:

a) have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;

b) have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS;

c) have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

d) interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

e) conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

f) conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.3.4 Impact Assessment Methodology

The methodology used to determine the biological resources characteristics and species potential for the project site included a review of published literature and an online database review, as well as a reconnaissance-level flora and fauna survey of the project site, conducted on March 18, 2022, and again on November 3, 2022. The impact assessment below is based on the results of the literature review and site-specific surveys.

5.3.5 Environmental Impact Analysis

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

One candidate species for listing under the federal Endangered Species Act—monarch butterfly—has been recorded on the project site in iNaturalist between 2014 and 2019, including results as part of the 2017 La Brea Wildlife Survey (iNaturalist 2017). No other candidate, sensitive, or special-status species of flora or fauna are expected to occur at the project site. As such, direct and indirect impacts to other sensitive wildlife species during construction (from temporary noise, dust, construction personnel, and equipment) and project operation are not anticipated because no other special-status species are present or expected to occur at the project site.

Monarch butterflies are present in Southern California year-round and may be seen in a variety of habitats where nectar plants are present, in both urban and rural areas. The project site does not offer the required elements for overwintering of migratory western monarchs, such as preferred roost trees, wind protection, or proximity to the ocean (the site is approximately 9 miles from the ocean) and as such, the project site

does not support overwintering aggregations of monarch butterflies. Therefore, no direct adverse impacts to overwintering monarch butterflies during project construction or operation are anticipated.

While not recorded during field surveys in March and November 2022, presence of non-native tropical milkweed (*A. curassavica*), a known nectar source and host plant and potentially harmful ecological trap for both resident and migratory monarchs, is documented as likely to occur on-site.

CONSTRUCTION

The monarch butterfly is a federal candidate species and is not listed or proposed for listing at this time. Consultation with USFWS is not required for candidate species such as the monarch, but implementation of conservation efforts for these species is encouraged. If monarch butterfly eggs and larvae are present on existing milkweed and the milkweed is removed during construction, direct impacts to those individual eggs and larvae of the species could occur. Removal of milkweed would also remove habitat for the species. Therefore, project construction could result in adverse effects, either directly or through habitat modifications, on the federal candidate monarch butterfly. Impacts during project construction could be *significant.*

OPERATION

Given the project site does not support overwintering aggregations of monarch butterflies and no other candidate, sensitive, or special-status species of flora or fauna are expected to occur at the project site, operation of the project would not result in impacts, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. Impacts during project operation would be *less than significant*.

BIO Impact 1	
The project could result in in significant effects during the construction process on one species, the federal candidate monarch butterfly, either directly or through habitat modifications. Impacts during project construction could be significant. During project operation, the project would not result in significant effects, either directly or through habitat modifications, on any identified candidate, sensitive, or special-status species. Impacts during project operation would be less than significant. (CEQA Checklist Appendix G Threshold IV. a)	
Mitigation Measures	
BIO/mm-1.1	*To protect the federal candidate monarch butterfly, which is a candidate species for listing under the federal Endangered Species Act, the following measures (BIO/mm-1.1a or BIO/mm-1.1b) shall be implemented:* *a. Full avoidance of impacting any milkweed populations on-site with observable monarch eggs and larvae. After obtaining permits and prior to construction, all individual milkweed plants will be surveyed. All individual plants found with eggs or larvae will be flagged for re-survey and avoidance. Individual plants without eggs and larvae will be removed. Flagged plants will be re-surveyed and removed when no eggs or larvae are present. All tropical milkweed will be replaced with native narrowleaf milkweed (*Asclepias fascicularis*) following construction.* *OR*

BIO Impact 1	
	b. If monarch eggs and larvae are not present, any tropical milkweed populations in the project area should be replanted with native narrowleaf milkweed and other nectar-providing plants following construction activities. All tropical milkweed on the property will be assessed for the absence of monarch eggs and larvae and replaced with narrowleaf milkweed after construction.
Impacts Following Mitigation	
Implementation of BIO/mm-1.1 would reduce construction impacts to any candidate, sensitive, or special-status species to less than significant.	

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Riparian habitat that may be considered under the jurisdiction of the CDFW is present in and along Oil Creek and the Lake Pit. Riparian vegetation supported by Oil Creek can be described as California sycamore-coast live oak riparian woodlands (S3), and riparian vegetation supported by the Lake Pit can be characterized as hardstem and California bulrush marshes (S3/S4). As previously described, historical imagery shows a well-defined channel supporting possible riparian vegetation based on distribution patterns suggesting an intermittent or wetter hydrologic regime at the Oil Creek location. In its current state, Oil Creek appears to receive its primary hydrologic input source from groundwater. Oil Creek also receives hydrologic inputs from precipitation and irrigation system runoff. Dense vegetation and heavy leaf litter exist in the northeastern portion of the creek; Oil Creek supports a robust community of hydrophytic vegetation. The density of hydrophytic vegetation, and hydrology indicators such as water-stained leaves, suggest that Oil Creek may support wetlands. A determination of hydric soils would need to be made to confirm wetlands. With the information available and gathered during the site visits, it is anticipated that Oil Creek and the Lake Pit may be subject to the jurisdiction of the California Regional Water Quality Control Board and CDFW. Oil Creek may also be regulated by the USACE under the CWA. The Lake Pit supports riparian vegetation along its margins. Based on Google Earth aerial imagery (2023), these stands of riparian vegetation seem to fluctuate in size. Google Earth street view suggests that some of this vegetation around the Lake Pit may be subject to routine mowing. Fluctuation in stand size may also be subject to variation of water levels at the Lake Pit.

No other sensitive natural communities were found on the project site during the field survey or have been reported in readily available literature.

Project construction activities have the potential to disturb the riparian habitat present in and along Oil Creek and the Lake Pit through ground-disturbing activities associated with construction and renovation of the proposed pathways in and around these areas and through the implementation of the proposed features, bioswales, and other modifications proposed by the project.

During project operation, indirect impacts to riparian habitat may result from increased visitation and necessary maintenance to sustain the proposed bioswale. Increased visitation may require additional changes to the project's proposed infrastructure. Future implementation of these changes may result in impacts to riparian habitat. Maintenance of the bioswale and the associated riparian habitat may change over time depending on groundwater availability. It is assumed that the primary hydrologic input supporting the riparian habitat is groundwater, with supplemental precipitation and landscape irrigation. A decrease in groundwater availability may result in a decline of the existing riparian habitat if no

additional external sources of input are incorporated. External sources of hydrologic input such as irrigation systems may be necessary and have a potential to alter the quality of the water supporting the riparian habitat.

Therefore, the project could result in direct and indirect impacts during project construction and operation associated with the riparian wetland habitat present in and along Oil Creek and in or along the Lake Pit. Feasibility of aquatic resources avoidance will be subject to final design, including exact facility locations and construction efforts to be determined in the future. Impacts could be *significant*.

BIO Impact 2	
The project could directly and indirectly impact the riparian wetland habitat associated with Oil Creek during both construction and operation as a reconnaissance survey suggests there may be approximately 0.3 acre of regulated aquatic resources associated with Oil Creek. Impacts during construction and operation could be significant. (CEQA Checklist Appendix G Threshold IV. b)	
Mitigation Measures	
BIO/mm-2.1	*Impacts to Oil Creek may be avoidable but are subject to final project design. To protect sensitive and regulated aquatic resources associated with Oil Creek, one of the following measures (BIO/mm-2.1a or BIO/mm-2.1b) shall be implemented:* *a. Full avoidance of Oil Creek, including riparian habitats. To attain full avoidance of Oil Creek, construction and ground disturbance shall not occur within 125 feet of the centerline of Oil Creek. The limits of riparian habitat shall be flagged and construction fencing erected to clearly denote the limits of construction. No overnight staging of equipment or materials shall occur within the protected "no work" zone as delineated by the fencing. Storing, fueling, and equipment maintenance shall not occur in locations where spilled materials could potentially enter Oil Creek and its associated riparian habitat. Spill kits/absorbent clean-up materials shall be available on-site. All equipment and vehicles shall be checked and maintained daily to prevent spills of fuel, oil, and other hazardous materials. A designated staging area shall be established for vehicle/equipment parking and storage of fuel, lubricants, and solvents a minimum of 100 feet outside of the protected zone. All fueling and maintenance activities shall take place in the designated staging area.* *OR* *b. If full avoidance of Oil Creek and a designated "no work" buffer is not possible after determination of final design, the following measures shall be required:* *i. A formal aquatic resources delineation shall be implemented to determine the jurisdictional boundaries of the Oil Creek feature. The delineation shall determine the limits of potentially regulated aquatic resources, the riparian features, and an appropriate buffer for protection (the "protected zone"). The aquatic resources delineation shall identify all appropriate jurisdictional agencies and be used in securing all applicable permits prior to construction and after a project final design has been determined. At the discretion of the regulatory agencies, the requirements of the permits may supplement or exceed the requirements of this measure. If permits are required, all environmental requirements of the regulatory permits shall be implemented, and the executed permits shall be kept on-site.*

BIO Impact 2	
	ii. Within the riparian habitat and buffer, vegetation removal shall be kept to the minimum necessary to removed diseased and/or non-native vegetation and to implement the features of the Master Plan. Initial removal of vegetation within the riparian habitat shall be monitored full-time by a qualified biologist, and weekly spot-check monitoring shall continue throughout the construction of the project. Work within riparian habitat shall not be conducted during or immediately after a rain event. *iii. A restoration plan, prepared by a qualified restoration ecologist, shall be prepared and implemented. The restoration plan will include detailed success criteria, typically associated with 80% relative cover to pre-project baseline conditions with less than 10% invasive cover, to provide replacement habitat at an equal or better value than the existing Oil Creek riparian corridor, within 5 years of planting. The final plan shall be approved by the County of Los Angeles Museum of Natural History, the County Department of Regional Planning, and the permitting agencies (if any). At a minimum, restoration requirements included in the plan and implemented shall include the following:* • *Native tree replacement requirements consistent with the requirements of the Plant Pest and Disease Management Plan (BIO/mm-6.2).* • *A detailed planting scheme identifying the location and sizes of all container stock.* • *Details on planned irrigation which shall provide for successful plant establishment; survival should occur without supplemental irrigation for at least 2 years.* • *Annual monitoring, maintenance, and adaptive management measures and annual reporting requirements.* *iv. The riparian habitat and buffer specified in the aquatic resources delineation shall be flagged and construction fencing erected to clearly denote the limits of the protected zone. No overnight staging of equipment or materials shall occur within the protected zone. Storing, fueling, and equipment maintenance shall not occur in locations where spilled materials could potentially enter Oil Creek and its associated riparian habitat. Spill kits/absorbent clean-up materials shall be available on-site. All equipment and vehicles shall be checked and maintained daily to prevent spills of fuel, oil, and other hazardous materials. A designated staging area shall be established for vehicle/equipment parking and storage of fuel, lubricants, and solvents a minimum of 100 feet outside of the protected zone. All fueling and maintenance activities shall take place in the designated staging area.* *v. Mitigation requirements and permit conditions shall be conveyed to construction crews prior to construction.*
Impacts Following Mitigation	
Implementation of BIO/mm-2.1 would reduce construction and operation impacts to riparian and wetlands associated with Oil Creek to less than significant.	

BIO Impact 3	
The project could directly and indirectly impact the Lake Pit lakebed and its associated riparian habitat during both construction and operation as a reconnaissance survey suggests there may be approximately 1.2 acres of regulated aquatic resources associated with the Lake Pit. Impacts during construction and operation could be significant. (CEQA Checklist Appendix G Threshold IV. b)	
Mitigation Measures	
BIO/mm-3.1	*This mitigation measure only applies to project features implemented in and around the Lake Pit, including the pedestrian path and bridge. The following measures shall be implemented prior to the implementation of these features:* *a. A formal aquatic resources delineation shall be implemented to determine the jurisdictional boundaries of the Lake Pit features. The delineation shall determine the limits of potentially regulated aquatic resources, the riparian features, and an appropriate buffer for protection (the "protected zone"). The aquatic resources delineation shall identify all appropriate jurisdictional agencies and be used in securing all applicable permits prior to construction and after a project final design has been determined. At the discretion of the regulatory agencies, the requirements of the permits may supplement or exceed the requirements of this measure. If permits are required, all environmental requirements of the regulatory permits shall be implemented, and the executed permits shall be kept on-site.* *b. Within the riparian habitat and buffer, vegetation removal shall be kept to the minimum necessary to remove diseased and/or non-native vegetation and to implement the features of the Master Plan. Initial removal of vegetation within the riparian habitat shall be monitored full-time by a qualified biologist, and weekly spot-check monitoring shall continue throughout the construction of the project. Work within riparian habitat shall not be conducted during or immediately after a rain event.* *c. A restoration plan, prepared by a qualified restoration ecologist, shall be prepared and implemented. The restoration plan will include detailed success criteria, typically associated with 80% relative cover to pre-project baseline conditions with less than 10% invasive cover, to provide replacement habitat at an equal or better value than the existing riparian vegetation within and along the margins of the Lake Pit, within 5 years of planting. The final plan shall be approved by the County of Los Angeles Museum of Natural History, the County Department of Regional Planning, and the permitting agencies (if any). At a minimum, restoration requirements included in the plan and implemented shall include the following:* • *A detailed planting scheme identifying the location and sizes of all container stock.* • *Details on planned Irrigation which shall provide for successful plant establishment; survival should occur without supplemental irrigation for at least 2 years.* • *Five years of annual monitoring, maintenance, and adaptive management measures and annual reporting requirements.* *d. The riparian habitat and buffer specified in the aquatic resources delineation shall be flagged and construction fencing erected to clearly denote the limits of the protected zone. No overnight staging of equipment or materials shall occur within the protected zone. Storing, fueling, and equipment maintenance shall not occur in locations where spilled materials could potentially enter the Lake Pit and its associated riparian habitat. Spill kits/absorbent clean-up materials shall be available on-site. All equipment and vehicles shall be checked and maintained daily to prevent spills of fuel, oil, and other hazardous materials. A designated staging area shall be established for vehicle/equipment parking and storage of fuel, lubricants, and solvents a minimum of 100 feet outside of the protected zone. All fueling and maintenance activities shall take place in the designated staging area.*

BIO Impact 3	
	e. Mitigation requirements and permit conditions shall be conveyed to construction crews prior to construction.
Impacts Following Mitigation	
Implementation of BIO/mm-3.1 would reduce construction and operation impacts to riparian and wetlands associated with the Lake Pit to less than significant.	

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrologic interruption, or other means?

As noted above, potential jurisdictional wetland/aquatic resources may be present in and along Oil Creek and the Lake Pit. A determination of hydric soils would need to be made to confirm wetlands. With the information available and gathered during the site visits, it is anticipated that Oil Creek and the Lake Pit may be subject to the jurisdiction of the California Regional Water Quality Control Board and CDFW. Oil Creek may also be regulated by the USACE under the CWA. Indirect impacts could result from increased visitation to the park and required maintenance to the proposed bioswale. Increased visitation may require additional changes to the project's proposed infrastructure. Project construction and operation may result in impacts to wetland habitat. Therefore, impacts could be *significant*.

BIO Impact 4
The project site may contain potential jurisdictional wetland/aquatic resources in and along Oil Creek and the Lake Pit. Project construction and operation may result in impacts to wetland habitat. Impacts during construction and operation of the project could be significant. (CEQA Checklist Appendix G Threshold IV. c)
Mitigation Measures
Implement BIO/mm-2.1 and BIO/mm-3.1.
Impacts Following Mitigation
Implementation BIO/mm-2.1 and BIO/mm-3.1 would reduce construction and operation impacts associated with riparian and wetlands to less than significant.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The project site is not within an identified regional or wildlife corridor habitat linkage (South Coast Wildlands 2008). The site does not contain on-site drainage courses that would provide migratory fish movement since Oil Creek is not connected to other surface drainages. No impact would result to such resources during project construction or operation.

There is potentially suitable nesting bird habitat present on-site and within 500 feet of the project site boundaries in street trees and landscape vegetation. The nesting season is generally defined as January 1

to September 15. Construction conducted during this period could result in adverse impacts to nesting birds. Temporary impacts to nesting birds would result from the removal of existing mature trees and shrubs during project construction. Although many more trees would be added than are proposed for removal, it would take many years for newly installed trees to reach the size and structural complexity of existing trees.

During project operation, indirect impacts could result from increased visitation use to the park and required maintenance of updated park facilities during nesting bird breeding season. Indirect impacts may also include beneficial impacts from an overall increase in native trees and associated improvement of native habitat for local bird species. Additional and higher-quality habitat for wildlife would be incorporated into site design.

In conclusion, due to the presence of potentially suitable nesting bird habitat, the project could directly impact nesting birds during project construction and temporally impact nesting bird habitat during project operation. Impacts could be *significant*.

BIO Impact 5	
The project could directly impact nesting birds during project construction and temporally impact nesting bird habitat during project operation. Impacts during construction and operation of the project could be significant. (CEQA Checklist Appendix G Threshold IV. d)	
Mitigation Measures	
BIO/mm-5.1	*To avoid impacts to nesting birds, one of the following measures (BIO/mm-5.1a or BIO/mm-5.1b) shall be implemented:* a. *If possible, no vegetation trimming, pruning, removal, construction, or grading shall occur during the nesting and breeding season (January 1 through September 15).* *OR* b. *If activities associated with vegetation trimming, pruning, removal, construction, or grading are necessary during the bird nesting and breeding season (January 1 through September 15), the following measures shall be implemented:* • *A qualified biologist shall conduct surveys for active nests weekly, beginning 14 days prior to initiation of any new construction activities, with the last survey conducted no more than 3 days prior to the start of clearance/construction work. If ground-disturbing activities are delayed, additional pre-construction surveys should be conducted so that no more than 3 days have elapsed between the survey and ground-disturbing activities.* • *Active nests found within 100 feet of the construction zone shall be delineated with highly visible construction fencing or other exclusionary material that would inhibit entry by personnel or equipment into the buffer zone. The size of the buffer zone shall be at the discretion of the qualified biologist and shall be no less than 25 feet. Raptors may require a larger buffer zone, up to 300 feet. Installation of the exclusionary material shall be completed by construction personnel under the supervision of a qualified biologist prior to initiation of construction activities. The buffer zone shall remain intact and maintained while the nest is active (i.e., occupied or being constructed by at least one adult bird) and until young birds have fledged and no continued use of the nest is observed, as determined by a qualified biologist. The barrier shall be removed by construction personnel only at the direction of the biologist.*

BIO Impact 5	
BIO/mm-5.2	*New and replacement trees shall be 24-inch box specimen trees or larger to reduce temporary impacts to nesting birds.*
Impacts Following Mitigation	
Implementation of BIO/mm-5.1 would reduce construction and operation impacts to nesting birds to less than significant. Beneficial impacts would result from the addition of ground cover, shrubs, and trees native to California.	

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The County of Los Angeles Oak Tree Ordinance protects all oak trees, whether native (indigenous) or not (Title 22 Division 8 Chapter 22.174). There are 13 native oak trees on-site, and all meet the size criteria for protection under the ordinance (i.e., all 13 oak trees on-site are 8-inch dbh or larger).

During both project construction and operation, it is possible that removal, relocation, trimming, or replacement of protected oak trees may be required. However, because the project is a County-led project, it is exempt from obtaining a permit under the ordinance. If oak tree removal is required during construction or operation of the project, coordination with the County's Department of Regional Planning would be required prior to commencement of any work on-site. Any encroachment or removal requests shall be reviewed by the County's Department of Regional Planning for consistency with County policies and ordinances relating to oak tree protection prior to commencement of any work on-site. Impacts related to potential conflicts with the County of Los Angeles Oak Tree Ordinance during project construction and operation could be *significant.*

BIO Impact 6	
Removal, relocation, trimming, or replacement of the 13 protected oak trees on the project site during project construction and operation could potentially conflict with the County of Los Angeles Oak Tree Ordinance. Impacts during construction and operation of the project could be significant. (CEQA Checklist Appendix G Threshold IV. e)	
Mitigation Measures	
BIO/mm-6.1	*For oak trees within the project site that are to be retained in their current location, prior to construction, chain-link fencing shall be installed around the protected zone of the trees (5 feet beyond the dripline, the outermost extent of the tree's branches, or 15 feet from the trunk, whichever is greater). The fencing shall remain in place throughout the entire period of construction. Any excavation or grading allowed within the protected zone shall be limited to hand tools or small hand-powered equipment.* *In addition, one of the following measures (BIO/mm-6.1a or BIO/mm-6.1b) shall be implemented:* a. *If possible, removal, relocation, trimming, or replacement of the oak trees at the Tar Pits site shall be avoided.*

BIO Impact 6	
	b. *If modification (removal, relocation, trimming, or replacement) of protected oaks is required, coordination with the County of Los Angeles Department of Regional Planning shall occur prior to commencement of any work on-site. Any encroachment or removal requests must be reviewed by the County of Los Angeles Department of Regional Planning for consistency with County policies and ordinances relating to oak tree protection prior to commencement of any work on-site. Although an oak tree permit is not required, measures to mitigate for impacts to oak trees shall include the following:* • *Removed oak trees shall be mitigated by planting coast live oaks at a 2:1 ratio on the project site. Each replacement tree shall be at least a 15-gallon specimen.* • *The replacement oaks shall be monitored for a period of 5 years, with any failures resulting in a new oak being planted and initiation of a new 5-year monitoring period for the replanted tree.*
BIO/mm-6.2	*A Plant Pest and Disease Management Plan shall be prepared prior to initiation of landscape planting and developed in consultation with an International Society of Arboriculture Certified Arborist. The Plant Pest and Disease Management Plan shall define methods to ensure new plant materials (container stock) are free of insect pests and diseases prior to delivery to the project site. Implementation of the Plant Pest and Disease Management Plan shall occur through the life of the project; modification and adaptation may occur to ensure applicability and viability of the plan.*
Impacts Following Mitigation	
Implementation of BIO/mm-6.1 and BIO/mm-6.2 would reduce construction and operation impacts related to conflicts with the County of Los Angeles Oak Tree Ordinance to less than significant.	

f) Would the project conflict with the provisions of an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved Local, Regional, or State Habitat Conservation Plan?

There are no federal, state, or local designated conservation areas on or directly adjacent to the project site. The project site is not within an identified wildlife corridor, there are no USFWS-designated critical habitats within a 10-mile radius, no Habitat Conservation Plans, and no CDFW Natural Community Conservation Plans in the project vicinity. Therefore, project construction and operation would not conflict with any approved state, regional, or local habitat conservation plans, and *no impact* would occur.

BIO Impact 7
Construction and operation of the project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact would occur. (CEQA Checklist Appendix G Threshold IV. f)
Mitigation Measures
No mitigation required.

BIO Impact 7
Impacts Following Mitigation
Not applicable. No impact would occur.

5.3.6 Cumulative Impact Analysis

A cumulative impact to biological resources may occur if a project has the potential to collectively degrade the quality of the environment, substantially reduce wildlife species habitat, cause a population to drop below self-sustaining levels, thereby threatening to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal species. To consider the cumulative environment, SWCA's biological resources team examined the CEQA environmental analyses for other projects in the vicinity of the project, including those for the three geographically closest projects:

- **Los Angeles County Museum of Art Renovation:** Located directly adjacent to the project site (on parcels directly west and south across Wilshire Boulevard) at 5906 West Wilshire Boulevard. The project includes museum renovation and is under construction.
- **Wilshire Curson Project:** Located approximately 0.03 mile southeast of the project site at 5700-5780 Wilshire Boulevard, 712-752 South Curson Avenue, 5721-5773 West 8th Street, and 715-761 South Masselin Avenue. The project includes office and commercial uses and would involve both the renovation of existing buildings as well as the demolition and construction of new buildings. The project is currently under environmental review.
- **Fairfax Avenue Apartments and Restaurant:** Located approximately 0.50 mile southeast of the project site at 800-840 South Fairfax Drive. The project includes residential and restaurant uses and is currently under environmental review.

It is noted here that in the independent CEQA analyses for each of these projects, impacts to biological resources were all found to be less than significant.

The project site is not within an identified wildlife corridor, and there are no USFWS-designated critical habitats within a 10-mile radius, no Habitat Conservation Plans, and no CDFW Natural Community Conservation Plans in the project vicinity (threshold f). Therefore, the project would not result in impacts related to conflict with any approved state, regional, or local habitat conservation plans. Accordingly, the project could not contribute to cumulative impacts related to this topic and it would not be cumulatively considerable when viewed in conjunction with related development projects.

The project could result in significant construction and operation impacts to biological resource as identified in Section 5.3.5. The project could result in significant effects during the construction process on one species, the federal candidate monarch butterfly, either directly or indirectly through habitat modifications (threshold a). The project also has the potential to adversely impact riparian habitat and/or aquatic resources in and along Oil Creek and at the Lake Pit and impact potentially designated jurisdictional wetland/aquatic resources during both construction and operation (thresholds b and c). In addition, the project site does support trees which could potentially provide suitable nesting bird habitat (threshold d). The removal and/or disturbance of trees during project construction could directly impact nesting birds during project construction and temporally impact nesting bird habitat through project operation. Lastly, the project may potentially conflict with the County's oak tree removal permit during both construction and operation due to the removal and/or relocation of 13 protected oak trees on-site (threshold e).

For each identified impact, related project mitigation measure(s) have been developed to address the project's construction and operation impacts to biological resources (i.e., BIO/mm-1.1 through BIO/mm-6.2). These mitigation measures have been developed to address both impacts from temporary construction and long-term impacts from project operation. Although the CEQA analyses for the other development projects in close proximity to the project site noted above found that biological resource impacts would be less than significant, if the project were to be implemented without mitigation it may still contribute to a broader cumulative impact to the resources that the project could impact. Therefore, without mitigation, the project could contribute significantly to cumulative biological resources impacts; these contributions could be considerable and, thus, *significant*.

BIO Impact 8 (Cumulative Impacts)
During construction and operation, the project has the potential to contribute considerably to cumulative impacts to biological resources.
Mitigation Measures
The project would be required to implement Mitigation Measures BIO/mm-1.1, BIO/mm-2.1, BIO/mm-3.1, BIO/mm-5.1, BIO/mm-5.2, BIO/mm-6.1, and BIO/mm-6.2.
Impacts Following Mitigation
With implementation of the identified mitigation measures, the project's contribution to potential cumulative impacts related to biological resources would be less than significant.

5.4 CULTURAL RESOURCES – ARCHAEOLOGICAL RESOURCES

This section of the EIR addresses the potential impacts of the project on archaeological resources. Archaeological resources include sites, objects, and artifacts affiliated with Native Americans, and historical archaeological resources, which are non-Native American in origin. The analysis in this section is based on the *Archaeological and Tribal Cultural Resources Assessment for the La Brea Tar Pits Master Plan Environmental Impact Report, Los Angeles, California* prepared by SWCA Environmental Consultants (Millington and Dietler 2023). This report will remain part of the confidential administrative record because of the detail describing the specific location of the archaeological site components. This section, in combination with Section 5.5, Cultural Resources – Historical Resources, addresses the potential impacts encompassing cultural resources as described within Section V of the environmental checklist form (Appendix G) of the State CEQA Guidelines.

5.4.1 Existing Conditions

5.4.1.1 Native American Archaeological Record

The Native American archaeological record for California is generally organized into three broad temporal periods—the Paleoindian, Archaic, and Emergent periods. Numerous chronological sequences were also devised to characterize cultural changes on a smaller scale, specifically within the subregion of Southern California. The chronology used by Wallace (1955) is applicable for near-coastal and some inland settings in the Southern California coastal region and is composed of four sequential horizons: Horizon I, Early Man; Horizon II, Milling Stone; Horizon III, Intermediate; and Horizon IV, Late Prehistoric (Late Period). Wallace's horizons are presented below to provide a reference point for the primary periods and cultural traditions. Because contemporary archaeological studies increasingly use geological time periods as a means of grouping diverse regional typologies, these have been incorporated into the structure below and are further denoted by years before present (B.P.) and calendar ages (B.C. and A.D.).

A description of the lifeways of Native Americans who lived in the vicinity of the project site can be found in Section 5.14, Tribal Cultural Resources. See Section 5.5, Cultural Resources – Historical Resources for a description of the history of the project site.

TERMINAL PLEISTOCENE (BEFORE ~11,500 B.P.)

Paleoindian/Paleocoastal Tradition

Any discussion of human occupation of coastal areas during the Terminal Pleistocene must be prefaced with an understanding that sea level rise during this period of severely shifting climate inundated many kilometers of shoreline worldwide and along Southern California coastlines specifically, submerging an unknown number of archaeological sites. Therefore, any evidence that we do have of human occupation in what are now coastal settings is likely only a small fraction of what originally existed. Recent studies using offshore core samples have made important progress in reconstructing paleoshorelines and the paleoenvironment of Southern California's Terminal Pleistocene coast.

The earliest evidence for human occupation in Southern California is found on the northern Channel Islands, where multiple Terminal Pleistocene sites have been identified and dated in the past couple decades, firmly establishing the presence of early coastal-adapted people in the region. On Santa Rosa Island, human remains have been dated from the Arlington Springs site to approximately 13,000 years ago. Recent excavations and radiometric dating of multiple archaeological assemblages on San Miguel, Santa Rosa, and Santa Cruz Islands document Paleoindian technologies, subsistence strategies, and

seasonality of site occupation during the latter part of the Terminal Pleistocene (~11,700 B.P.), with similarities to the Western Stemmed Tradition found across much of western North America.

Finely crafted chipped stone crescents like those recorded on the northern Channel Islands as part of the Paleocoastal toolkit were also found in surficial contexts on San Nicolas Island, suggesting an earlier occupation for the southern Channel Islands as well. It is possible that similarly early sites were also present on the mainland California coast; however, the rate and degree of development beginning with Spanish colonization and continuing to the present has likely destroyed most early sites along the California mainland coast. Nevertheless, three fluted points representing the Clovis culture have been found in Southern California mainland coastal areas, including one in Santa Barbara County, one in Los Angeles County near Malibu, and one in El Morro Canyon, in what is now Crystal Cove State Park in Orange County. Additionally, numerous fluted projectile points of the Clovis and Folsom Traditions have been reported from inland contexts in central and southern California.

Two sites in the Ballona area, LAN-61 and LAN-63, are believed to include occupations from this time period based on diagnostic artifacts (crescents and stemmed points). However, recent data recovery excavations and analyses, including numerous radiocarbon dates, failed to provide incontrovertible evidence that people were using this area during the Paleocoastal period, although this lack of radiocarbon dates does not necessarily negate the possibility that an earlier occupation occurred and might be uncovered in the future.

EARLY HOLOCENE (~11,500 TO ~7000 B.P.)

Horizon I: Early Man

Mainland sites attributed to Horizon I generally indicate that the economy was a diverse mixture of hunting and gathering, with a major emphasis on aquatic resources in many coastal areas and a greater emphasis on large-game hunting inland. Fundamental elements of lithic tool technology described by Wallace (1955) for this period include numerous scrapers, choppers, chipped and notched crescents, and large blades and points. Wallace also describes clamshell and bone beads, along with an absence of seed-grinding implements from the type site for this period, Malaga Cove. Several sites in Orange and San Diego Counties contain components that date to between 9,000 and 10,000 years ago, and radiocarbon dates from the Goleta Slough area in Santa Barbara County indicate occupations spanning ca. 9300 to 8400 cal B.P. (ca. 7300–6400 B.C.) with a primary subsistence focus on lagoon/bay shellfish.

Horizon II: Millingstone

The Millingstone horizon corresponds to the Early Holocene when rising sea levels continued to encroach on coastlines, although the global climate was slowly stabilizing. Set during a warmer and drier climatic regime than the previous horizon, the Millingstone horizon is characterized by subsistence strategies centered on collecting plant foods and small animals, although in coastal areas where archaeological assemblages have been preserved, there is also ample evidence of marine resource use during this time as well. The importance of seed processing is apparent in the dominance of stone grinding implements in archaeological assemblages from this period, namely milling stones (metates) and hand stones (manos).

Millingstone assemblages are characterized by the extensive use of milling implements (particularly manos and metates) and mullers along with scraper planes, choppers, and core tools and a general lack of finely crafted projectile points, although leaf-shaped points believed to be darts are present. The general lack of faunal remains along with bone and shell tools at some sites dated to this period have led researchers to suggest a stronger reliance of plant food resources (i.e., seeds) with only a minor focus on hunting. Several sites have been described for this horizon throughout Southern California, including

Little Sycamore in Ventura, Porter Ranch in San Fernando, and the La Jolla shell mounds in San Diego. Los Angeles County sites with Millingstone components include Malaga Cove (Level 2, LAN-138), the Tank Site (LAN-1) in Topanga Canyon, the La Brea Tar Pits Archaeological Site (LAN-159/H), the Zuma Creek Site (LAN-174), the Sweetwater Mesa Site (LAN-267), the Shobhan Paul Site (LAN-958); and the Parker Mesa site (LAN-215). Primary sites with Millingstone components in Orange County include Bolsa Chica (ORA-83), ORA-64, and the Landing Hill Site.

MIDDLE HOLOCENE (~7000 TO 4000 B.P.)

Horizon III: Intermediate

This horizon corresponds with the Middle Holocene and early Late Holocene time periods geologically and marks the point when current shorelines were established in most parts of the world. Consequently, evidence for marine resource use appears to have increased after 5,000 to 6,000 years ago.
The Intermediate horizon is characterized by important changes in almost all aspects of culture, including settlement patterns, economic activities, mortuary practices, and technology. During this period, economic practices shifted toward a hunting and maritime subsistence strategy, along with a wider use of plant foods. An increasing variety and abundance of fish, land mammal, and sea mammal remains are found in sites from this horizon along the California coast. Related chipped stone tools suitable for hunting, including side-notched projectile points, are more abundant and diversified, and shell fishhooks became part of the toolkit during this period. Mortars and pestles became more common during this period, gradually replacing manos and metates as the dominant milling equipment and signaling a shift away from the processing and consuming of hard-shelled seed resources to the increasing importance of fleshier fruits like the acorn. Bow and arrow technology is first seen toward the end of the Intermediate periods (ca. 1500–1000 B.P.) when it appears to have spread to the Southern California coast from the north and east.

Technological markers described for this horizon consist of basket-hopper mortars, mortars and pestles, diverse and plentiful chipped stone assemblages with greater numbers and a wider variety of projectile point types, and bone and antler tools, which are present to some degree but not in the quantity seen during later phases, along with occasional use of bitumen (asphalt) and steatite. Faunal assemblages often include terrestrial mammals representing wild game, along with some marine mammal bones and often high densities of shellfish remains.

The Middle Holocene also marks a time of cultural innovation in the archaeological record of California. Significant cultural developments are seen in the increasing formation of larger settlements, the intensification of long-distance trade networks including distinct cultural spheres throughout western North America, and the elaboration of art and personal aesthetics (e.g., shell and stone pendants and increasing variety of shell bead types and styles).

There is also evidence suggesting migrations into coastal Southern California by desert peoples from the east during the Intermediate period, based on changes in mortuary practices (i.e., cremations), the presence of desert tanged projectile points, and increased numbers of stone as opposed to shell beads. This question has been discussed by several archaeologists with most suggesting an arrival date of approximately 1500 cal B.P., although some argue for a much earlier migration at around 3500 cal B.P., which coincides with the Millingstone/Intermediate period transition. Of course, it is possible, and even likely, that multiple migrations of various scales occurred over the course of hundreds, or thousands, of years.

LATE HOLOCENE (~3000 B.P. TO SPANISH COLONIZATION)

Horizon IV: Late Prehistoric

The Late Prehistoric period extended from the end of the Intermediate period (~A.D. 500) until Spanish colonization, marked by the Cabrillo expedition in A.D. 1542. This period is characterized by extensive population growth and a large increase in the number and types of sites along the Southern California coast. During this period, there was a significant increase in the population of Native peoples in Southern California accompanied by the advent of larger, more permanent villages, particularly at the mouths of large mainland coastal canyons and drainages with year-round water supplies. Large populations and, in places, high population densities are characteristic, with some coastal and near-coastal settlements containing as many as 1,500 people. Many of the larger settlements were permanent villages in which people resided year-round, although the populations of these villages may have also increased seasonally. The development of social differentiation is indicated during this period by the complexity of site layouts with numerous complex features and the highly variable nature of mortuary treatments and burial grounds.

During the Late Prehistoric period, there was an increase in the use of plant food resources in addition to an increase in terrestrial and marine mammal hunting. There was a concomitant increase in the diversity and complexity of material culture during the Late Prehistoric horizon, demonstrated by more classes of artifacts. The recovery of a greater number of small, finely flaked projectile points suggests increased use of the bow and arrow rather than the atlatl (spear thrower) and dart for hunting. Steatite cooking vessels and containers are also present in sites from this time, and there is an increased presence of composite bone gorges and circular shell fishhooks, perforated stones, arrow shaft straighteners made of steatite, a variety of bone tools, and personal ornaments such as beads made from shell, bone, and stone. Olivella shell bead styles include a variety of wall and callus beads in addition to the previous spire-lopped, and cup beads. There was also an increased use of asphaltum, or bitumen, for waterproofing basketry and caulking canoes and as an adhesive.

Technological markers of this horizon include the increased use of the bow and arrow, stemless points with concave or convex bases, steatite containers, widespread use of asphaltum as adhesive, and increased abundance and types of bone tools, as well as shell, bone, and stone ornaments. Wallace also describes notable distinctions between northern and southern groups during this period, including less pottery north of Orange County, where steatite vessels were more prevalent, and the presence of portable mortars and pestles and basket-hopper slabs in the north with bedrock mortars and milling stones being more prevalent in the San Diego area.

By A.D. 1000, fired clay smoking pipes and ceramic vessels were being used at some sites. The scarcity of pottery in coastal and near-coastal sites implies that ceramic technology was not well developed, or that occupants were trading with neighboring groups to the south and east for ceramics. The lack of widespread pottery manufacture is usually attributed to the high quality of tightly woven and watertight basketry that was caulked with bitumen (asphaltum) and functioned in the same capacity as ceramic vessels.

5.4.1.2 Existing Cultural Resources

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM RECORDS SEARCH

On February 28, 2022, SWCA received the results of a confidential search of the California Historical Resources Information System (CHRIS) records conducted by the South Central Coastal Information

Center (SCCIC) on the campus of California State University, Fullerton (SCCIC 2022). The CHRIS records search was conducted to identify previously documented cultural and potential tribal cultural resources in and within a 0.5-mile radius of the project site, and to aid in the assessment of resource sensitivity. In addition, archival research included a literature review of archaeological, ethnographic, and historical sources to identify information relevant to the project site, including sources specific to the history of Rancho La Brea and La Brea Tar Pits (Millington and Dietler 2023). The CHRIS records search identified a total of 18 cultural resources within a 0.5-mile radius. Of these cultural resources, four included archaeological components (Table 5.4-1).

Table 5.4-1. Archaeological Sites within 0.5 mile of the Project Site

Primary No.	Trinomial	Name(s) or Designations	Time Period	Resource Type	Recording Year (Affiliation: Name)	Proximity to Project Site
P-19-000159	LAN-159*	La Brea Tar Pits (Archaeological Site)	Multicomponent	Site	1949 (R.F. Heizer)	Within
P-19-001261	LAN-1261H*	Shin'en Kan Pavilion	Historic	Site	1986 (UCLA: Roy Salls)	Outside: less than 10 m west
P-19-002964	LAN-2964H	Park La Brea	Historic	Site	2002 (Greenwood & Associates: Alice Hale)	Outside: 500 m north
P-19-003045	LAN-3045H	The Grove at Farmer's Market and the Gilmore Adobe	Historic	Building, Structure, Site	2002 (Cogstone: Sara Dietler, Sherri Gust, and Sara Alarcon)	Outside: 640 m north
P-19-171007	–	Hancock Park–La Brea	Historic	Site	1982 (Westec Services: T. Jaques and N. Michali)	Within

* The components of LAN-1261H will be merged with those of LAN-159 and the former site number will be deaccessioned. The revised site trinomial is expected to henceforth be known as LAN-159/H.

As shown in Table 5.4-1, previously recorded resources that overlap the project site include two archaeological sites (LAN-159 and LAN-1261H), referenced herein as the La Brea Tar Pits Archaeological Site (LAN-159/H) and Hancock Park–La Brea (P-19-171007), which does not specifically have an archaeological component, but is referenced here because of its relevance to broader resource management considerations (Millington and Dietler 2023). See Section 5.5, Cultural Resources – Historical Resources for a detailed discussion of the historic resources inventory results.

LAN-159/H contains the material remains of Native American use between at least 10,000 to 3,200 years ago, and historical refuse from as long ago as the 1860s and through the twentieth century (Millington and Dietler 2023). In terms of the Native American component of the La Brea Tar Pits Archaeological Site, 77 Native American artifacts were recovered, in addition to the skeletal remains of a female Native American and a domesticated dog. The date range for the Native American component is based on radiocarbon dating on samples of the young female remains dated to 10,200–10,250 cal B.P., a wooden atlatl foreshaft dated to 4536–5583 cal B.P., and a domesticated dog dated to 3250–3400 cal B.P. The historical component of the site (formerly LAN-1261H) was recovered from a single feature recorded in 1986. The feature was composed of various pieces of historical refuse items with manufacturing dates that indicated a date as old as the 1860s.

The CHRIS search also identified a listing for P-19-171007, which is separate from either of the archaeological sites recorded within Hancock Park, and is associated with the designation California Historical Landmark (CHL) No. 170, known as Hancock Park–La Brea. The original designation as a CHL in the 1930s defined the resource in a general way that highlights the importance of the site to the

study of paleontology, but also recognizes the Native American archaeological components, history of Rancho La Brea, and the role of the Hancock family in developing Hancock Park and supporting the scientific research. The site was first listed in the CHRIS as P-19-171007 either just before or in conjunction with a National Register of Historic Places (NRHP) evaluation completed in the early 1980s. The NRHP eligibility determination provided clarification of the boundary, constituents, and significance based on an established set of criteria. The NRHP evaluation ultimately found the site eligible under Criterion A for the role played in the history of paleontology in North America, but also for having played a significant part in the development of science at an international level. While this determination ultimately established the significance based specifically on its paleontological history, the explicitly archaeological and broadly historical components were still considered in both the original landmark designation and in the updated recording for the NRHP evaluation. Accordingly, the resource is discussed here as a type of cultural resource for purposes of the current analysis. And in keeping with this prior association between the landmark designation and listing in the CHRIS, the designation of CHL No. 170 and the NRHP eligibility determination made for P-19-171007 will be considered in tandem for this report as they are largely referring to the same resource, the latter being an updated recording of the former. The boundary for the Hancock Park–La Brea landmark designation was originally defined as the 23-acre footprint of Hancock Park, including the space occupied by the Los Angeles County Museum of Art, which also corresponds to the boundary for P-19-171007.

SACRED LANDS FILE SEARCH

The Native American Heritage Commission (NAHC) Sacred Lands File search produced negative results, indicating that no sacred lands have previously been recorded on the property (NAHC 2022). The NAHC provided a list of Native American contacts and suggested contacting them to provide information on sacred lands that may not be listed in the Sacred Lands File. The County of Los Angeles (County) conducted informational outreach to tribes across Los Angeles County for the project, as well as formal consultation with tribes included on the County's Assembly Bill 52 consultation list which requested to proceed with consultation. The responses to this outreach and consultation confirmed the sensitivity of existing archaeological discoveries and the potential for additional Native American materials to be preserved as buried deposits within the project site. A detailed discussion of the County's Native American consultation process is included in Section 5.14, Tribal Cultural Resources.

PHASE 1 AND PHASE 2 INVESTIGATION

After completion of the initial phase of background research, an archaeological field investigation occurred that focused on three key areas within the project site. The field investigation was conducted using shovel test pits and manual auger units—designated STP and AUG—that were placed at 10-meter intervals within sample testing areas. The locations were determined based on the following four criteria:

1) the location of new project components that would have the greatest degree of associated ground disturbance—i.e., the new museum facility and parking lot;
2) current open space that avoids obstructions from current developments, including artificial fill associated with the extant museum building;
3) areas of highest Native American and historical archaeological sensitivity as determined from preliminary background research; and
4) avoiding paleontologically sensitivity or protected areas, including any surface asphalt seeps.

During the field investigation, artifacts, fossilized bone, and some environmental samples were collected. The collected materials were stored during fieldwork and later analyzed in the laboratory at the George C. Page Museum (Page Museum) and will remain in the Natural History Museums of Los Angeles

County collections. Based on Phase 1 and Phase 2 investigations at the site, there is potential for previously undocumented cultural resources to be located within the project site (Millington and Dietler 2023).

5.4.2 Regulatory Setting

The following section describes the regulations that are most relevant to the archaeological resources that may be affected by the project. Additional regulations that are relevant, but less directly so, are described in related sections of this EIR, including Section 5.5, Cultural Resources – Historical Resources, and Section 5.14, Tribal Cultural Resources.

5.4.2.1 Federal

There are no federal regulations related to cultural resources applicable to the project.

5.4.2.2 State

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA requires a lead agency to analyze whether historic and/or archaeological resources may be adversely affected by a proposed project. Under CEQA, a "project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment" (Public Resources Code [PRC] Section 21084.1). Answering this question is a two-part process: first, the determination must be made whether the proposed project involves cultural resources. Second, if cultural resources are present, the proposed project must be analyzed for a potential "substantial adverse change in the significance" of any resources.

According to State CEQA Guidelines, 14 California Code of Regulations (CCR) 15064.5, for the purposes of CEQA, historical resources are:

- A resource listed in, or formally determined eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (CRHR) (PRC Section 5024.1, 14 CCR 4850 et seq.).
- A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historic resources survey meeting the requirements of PRC Section 5024.1(g).
- Any object, building, structure, site, area, place, record, or manuscript that the lead agency determines to be eligible for national, state, or local landmark listing; generally, a resource shall be considered by the lead agency to be historically significant (and therefore a historical resource under CEQA) if the resource meets the criteria for the CRHR (as defined in PRC Section 5024.1, 14 CCR 4852).

Resources nominated for the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity (as defined above) do not meet NRHP criteria may still be eligible for the CRHR.

According to CEQA, the fact that a resource is not listed in or determined eligible for the CRHR or is not included in a local register or survey shall not preclude the lead agency from determining that the resource may be a historical resource (PRC Section 5024.1). Pursuant to CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource may have a significant effect on the environment (State CEQA Guidelines, 14 CCR 15064.5[b]).

State CEQA Guidelines specify that a "substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (State CEQA Guidelines, 14 CCR 15064.5). Material impairment occurs when a project alters in an adverse manner or demolishes "those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion" or eligibility for the NRHP, CRHR, or local register. In addition, pursuant to State CEQA Guidelines, 14 CCR 15126.2, the "direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."

Archaeological resources under CEQA may be significant either as a historical resource or as a unique archaeological resource. PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

Created in 1992 and implemented in 1998, the CRHR is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Sections 21083.2 and 21084.1). Certain properties, including those listed in or formally determined eligible for the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys, or designated by local landmarks programs, may be nominated for the CRHR. According to PRC Section 5024.1(c), a resource—either an individual property or a contributing element of a historic district—may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

- **Criterion 1:** It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- **Criterion 2:** It is associated with the lives of persons important in our past.
- **Criterion 3:** It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- **Criterion 4:** It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated for the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity do not meet NRHP criteria may still be eligible for the CRHR. While all sites are evaluated according to all four of the CRHR criteria, the eligibility for archaeological resources is typically considered under Criterion 4. Most

prehistoric archaeological sites are lacking identifiable or important association with specific persons or events of regional or national history (Criteria 1 and 2), or lack the formal and structural attributes necessary to qualify as eligible under Criterion 3.

An archaeological site may be considered significant if it displays one or more of the following attributes: chronologically diagnostic, functionally diagnostic, or exotic artifacts; datable materials; definable activity areas; multiple components; faunal or floral remains; archaeological or architectural features; notable complexity, size, integrity, time span, or depth; or stratified deposits. Determining the period(s) of occupation at a site provides a context for the types of activities undertaken and may well supply a link with other sites and cultural processes in the region. Further, well-defined temporal parameters can help illuminate processes of culture change and continuity in relation to natural environmental factors and interactions with other cultural groups. Finally, chronological controls might provide a link to regionally important research questions and topics of more general theoretical relevance. As a result, the ability to determine the temporal parameters of a site's occupation is critical for a finding of eligibility under Criterion 4 (information potential). A site that cannot be dated is unlikely to possess the quality of significance required for CRHR eligibility or be considered a unique archaeological resource. The content of an archaeological site provides information regarding its cultural affiliations, temporal periods of use, functionality, and other aspects of its occupation history. The range and variability of artifacts present in the site can allow for reconstruction of changes in ethnic affiliation, diet, social structure, economics, technology, industrial change, and other aspects of culture.

CALIFORNIA HISTORICAL LANDMARKS

CHLs are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. The specific standards now in use were first applied in the designation of Landmark No. 770. CHLs numbered 770 and above are automatically listed in the CRHR. To be designated as a CHL, a resource must meet at least one of three criteria, have the approval of the property owner(s), be recommended by the State Historical Resources Commission, and be officially designated by the Director of California State Parks. The three criteria are:

- The first, last, only, or most significant of its type in the state or within a large geographic region (northern, central, or southern California).
- Associated with an individual or group having a profound influence on the history of California.
- A prototype of, or an outstanding example of, a period, style, architectural movement, or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

CALIFORNIA POINTS OF HISTORICAL INTEREST

If a site is primarily of local interest, it may meet the criteria for the California Point of Historical Interest (CPHI) program. CPHIs are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. CPHIs designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historical resource may be designated as both a landmark and a point. If a point is subsequently granted status as a landmark, the point designation will be retired.

TREATMENT OF HUMAN REMAINS

The disposition of burials falls first under the general prohibition on disturbing or removing human remains under California Health and Safety Code Section 7050.5. More specifically, remains suspected to be Native American are treated under the State CEQA Guidelines at 14 CCR 15064.5. PRC Section 5097.98 illustrates the process to be followed if human remains are discovered. If human remains are discovered during excavation activities, the following procedure shall be observed:

- Stop immediately and contact the County Coroner:
  1104 North Mission Road
  Los Angeles, California 90033
  323-343-0512 (8 a.m. to 5 p.m. Monday through Friday) or
  323-343-0714 (after hours, Saturday, Sunday, and holidays)
- If the remains are determined to be of Native American descent, the Coroner has 24 hours to notify the NAHC.
- The NAHC will immediately notify the person it believes to be the most likely descendant (MLD) of the deceased Native American.
- The MLD has 48 hours to make recommendations to the owner, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave goods.

If the owner does not accept the MLD's recommendations, the owner or the MLD may request mediation by the NAHC.

5.4.2.3 County of Los Angeles

COUNTY OF LOS ANGELES 2035 GENERAL PLAN

The County of Los Angeles 2035 General Plan (2035 General Plan) has provisions and guidelines relating to the protection of archaeological and historical resources. These guidelines require that a literature search for valid archaeological surveys and resources be conducted and, if this search indicates a high possibility for a resource to be impacted, that a qualified archaeologist determine the value of possible finds and make recommendations to their preservation or deposition. These guidelines all require that, if a determination to salvage the site has been made, adequate salvage of the site be allowed, prior to grading (County of Los Angeles 2015).

The County's 2035 General Plan establishes the following six policies applicable to the project:

> ***Policy C/NR 14.1*****:** Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
>
> ***Policy C/NR 14.2*****:** Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.
>
> ***Policy C/NR 14.3*****:** Support the preservation and rehabilitation of historic buildings.
>
> ***Policy C/NR 14.4*****:** Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).
>
> ***Policy C/NR 14.5*****:** Promote public awareness of historic, cultural, and paleontological resources.
>
> ***Policy C/NR 14.6*****:** Ensure that proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

The County of Los Angeles (the County) recognized the potentially adverse impact that the County's 2035 General Plan may have on archaeological resources. This has resulted in deference to historical resources, with the plan's emphasis on rehabilitation that is more likely to preserve historic resources in areas that are being revitalized. However, the plan also acknowledges the negative effects that are possible as structures are replaced or modernized, or as new structures are constructed on vacant lots within historically significant neighborhoods (County of Los Angeles 2015).

5.4.2.4 City of Los Angeles

While the project site is located within the city of Los Angeles, it is owned by the County of Los Angeles. Accordingly, the project is subject to the regulatory controls of the County of Los Angeles and not the City of Los Angeles. Nonetheless, the following City of Los Angeles (City) guidance related to archaeological resources are provided for informational purposes.

CITY OF LOS ANGELES GENERAL PLAN CONSERVATION ELEMENT

The City of Los Angeles General Plan (City General Plan), originally adopted in 1974, is a comprehensive long-term document that provides principles, policies, and objectives to guide future development and to meet the existing and future needs of the City. A number of these principles, policies, and objectives serve to mitigate environmental effects. The City's General Plan includes the seven state-mandated elements, including the Conservation Element, which specifically addresses cultural, historical, archaeological, and paleontological resources. Section 3 of the Conservation Element recognizes the City's responsibility for identifying and protecting its archaeological and paleontological resources, and Section 5 recognizes the City's cultural and historical heritage (City of Los Angeles 2001). In these sections, the Conservation Element establishes objectives to protect important archaeological and paleontological resources, as well as its cultural and historical sites and resources for historical, cultural, research, and community educational purposes. It establishes corresponding policies to continue to protect these resources potentially affected by proposed land development, demolition, or property modification activities, including the following:

- **Archaeological and Paleontological Objective:** Protect the city's archaeological and paleontological resources for historical, cultural, research, and/or educational purposes.
- **Archaeological and Paleontological Policy:** Continue to identify and protect significant archaeological and paleontological sites and/or resources known to exist or that are identified during land development, demolition, or property modification activities.
- **Cultural and Historical Objective:** Protect important cultural and historical sites and resources for historical, cultural, research, and community educational purposes.
- **Cultural and Historical Policy:** Continue to protect historic and cultural sites and/or resources potentially affected by proposed land development, demolition, or property modification activities.

SURVEYLA

SurveyLA is a citywide historic resource survey conducted for Los Angeles that is managed and implemented by the City of Los Angeles Office of Historic Resources. Since its launch in 2007, SurveyLA staff, volunteers, and consultant teams have developed multiple-property documentation-driven historic context statements for themes and property types throughout Los Angeles. These contexts define associated themes, property types, eligibility standards, character-defining features, and integrity considerations to be used when evaluating properties. The findings are organized geographically by community planning areas and the results published online at HistoricPlacesLA.org.

The project site is within the Wilshire Community Planning Area (Architectural Resources Group [ARG] 2015a), and La Brea Tar Pits were designated as a historic district in ARG's inventory (ARG 2015b:957–959).

5.4.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse impacts related to archaeological resources if it would:

a) Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines Section 15064.5.

b) Disturb any human remains, including those interred outside of dedicated cemeteries.

5.4.4 Impact Assessment Methodology

When a project will impact an archaeological site, the Lead Agency must first determine whether the site is a historical resource. A substantial adverse change in the significance of a historical resource would occur if the project results in the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. The significance of a historical resource is materially impaired when a project:

- demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and justify its inclusion in, or eligibility for inclusion in, the CRHR;
- demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to PRC Section 5020.1(k) or its identification in a historical resources survey meeting the requirements of PRC Section 5024.1(g), unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and justify its eligibility for inclusion in the CRHR as determined by a Lead Agency for the purposes of CEQA.

Based on background review of the project site, one previously recorded resource overlaps the project site: the La Brea Tar Pits Archaeological Site (LAN-159/H). LAN-159/H contains the material remains of Native American use from at least 10,000 to 3,200 years ago, and historical refuse from as long ago as the 1860s and through the twentieth century. It is recommended that LAN-159/H is eligible for the CRHR under Criterion 4 because it possesses sufficient archaeological data with the potential to contribute important information to history and it retains integrity. The Native American component of the site also appears to meet the definition of a unique archaeological resource (Millington and Dietler 2023). In total, 77 Native American artifacts have been recovered from LAN-159/H, as well as skeletal remains of a female Native American and a domesticated dog. The historical component of LAN-159/H consists of more than 1,000 pieces of refuse comprising a variety of mostly fragmented materials such as glass, metal, wood, and ceramic. Background review and fieldwork efforts are described in Section 5.4.1.2, Existing Cultural Resources, above.

Hancock Park–La Brea was designated as CHL No. 170 in the 1930s, but before a specific set of criteria for landmark status had been established. The CHL listing was incorporated into the CHRIS as P-19-171007 and the site record was updated in the 1980s as part of an evaluation for the NRHP. For the

role played in the history of paleontology, P-19-171007 was determined eligible for the NRHP under Criterion A. Under PRC Section 5024.1(d), resources eligible for the NRHP are automatically included in the CRHR, making P-19-171007 eligible for the CRHR under Criterion 1. Based on the prior determinations, P-19-171007/CHL No. 170 meets the definition of a historical resource under CEQA. Despite the alterations to the physical setting within the resource boundary, the Tar Pits grounds remain the focus of active research and education through the work at the Page Museum. The significance of the site is retained as the location where paleontological discoveries were made that influenced the development of paleontology in North America. The historical significance continues to be conveyed through the outdoor exhibits, curation of the existing collection, and publicly displayed interpretive materials.

5.4.5 Environmental Impact Analysis

a) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to state CEQA Guidelines Section 15064.5?

The project site contains LAN-159/H, which is CRHR-eligible under Criterion 4 because it possesses sufficient archaeological data with the potential to contribute important information to history and it retains integrity. In addition to previously recorded resources within the project area, Phase 1 and Phase 2 investigations at the site determined that there is potential for previously undocumented cultural resources to be located within the project area (Millington and Dietler 2023).

The site also contains CHL No. 170 and P-19-171007, an NRHP/CRHR-eligible site recognized for the historical importance of the fossil discoveries to the practice of paleontology in North America. Substantial aspects of the proposed project are aimed at furthering and enhancing what has been recognized in the CHL listing and NRHP determination. This includes the status of La Brea Tar Pits as the locality for significant Pleistocene fossils that remain preserved, are currently being recovered, curated, analyzed, and presented in professional and public settings. And it includes Hancock Park as the historical location of fossil excavations that had a significant influence on the field of paleontology and our understanding of the Pleistocene Epoch.

CONSTRUCTION

The construction of a new museum and outdoor facilities, renovation of the existing Page Museum and exhibits, and other components of the project would enhance these very aspects of the park, both through its design and by providing additional facilities to conduct these activities. By maintaining open space for recreational uses in the areas adjacent to those dedicated to fossil excavation and analysis, these elements of the site's significance will continue to be conveyed to the public. Therefore, the project would not result in a substantial change in the significance of CHL No. 170 and P-19-171007.

The project would result in renovation and upgrades throughout the Tar Pits complex, including the 13-acre portion of Hancock Park and the Page Museum. At the time of preparation of this report, final engineering, design, and grading plans for the project had not been finalized. Because the project design is at a preliminary stage, the level of detail needed to determine the precise depth and extent of ground disturbance is not known. However, the level of design that has occurred to-date allows for a general characterization of the overall ground disturbance and excavation that would be necessary for the project. For impact assessment purposes, the design team for the project, working with the Los Angeles County Museum of Natural History Foundation and the County, estimates that, at most, the project would require excavations 6 to 10 feet below ground, potentially involving 53,000 cubic yards of cut/export and 37,000 cubic yards of imported fill.

Proposed ground-disturbing activities would have the potential to disturb LAN-159/H as well as unknown associated archaeological components of the site that may be present within the proposed area of disturbance. Based on the above analysis, the project's construction impacts could be *significant*.

OPERATION

Operation of the project would not result in any ground-disturbing activities such as grading or excavation outside of the existing research sites; therefore, there is no potential to encounter, alter, or disturb archaeological resources. No impact would occur during project operation.

CR-ARCH Impact 1
During project construction, the project could cause a substantial adverse change in the significance of an unknown archaeological resource pursuant to State CEQA Guidelines Section 15064.5. Construction impacts could be significant. Project operation would not cause a substantial adverse change in the significance of an unknown archaeological resource pursuant to State CEQA Guidelines Section 15064.5. No operational impacts would occur. (CEQA Checklist Appendix G Threshold v. b)
Mitigation Measures
CR-ARCH/mm-1.1 Retain a Qualified Archaeologist. *a. Prior to initiating any ground-disturbing activities, a Qualified Archaeologist shall be retained. A Qualified Archaeologist is defined as one who meets the Secretary of the Interior's (SOI) Standards for professional archeology and those defined for a Principal Investigator by the Society for California Archaeology (SCA). The qualifications shall be presented as part of a resume for at least one primary point of contact who will act in capacity as the Qualified Archaeologist but also other key staff who may serve in this role. The resume shall demonstrate their SOI and SCA qualifications and shall be subject to approval by the County.* *b. Ground-disturbing activities shall include excavating, digging, trenching, plowing, drilling, tunneling, quarrying, grading, leveling, removing peat, clearing, driving posts, augering, backfilling, blasting, stripping topsoil or a similar activity at the project site. The Qualified Archaeologist shall carry out and ensure proper implementation of the mitigation measures and regulatory compliance related to archaeological resources and, where appropriate, tribal cultural resources during the project. The Qualified Archaeologist shall be responsible for establishing a meeting schedule with Page Museum curators and collections managers during implementation of the project to address any outstanding questions or concerns that arise during mitigation efforts to ensure effective communication and coordination.* *c. No more than 21 days before ground-disturbing activities for the project commence, the Qualified Archaeologist shall submit a letter confirming that they have been retained consistent with the terms of the CR-ARCH/mm-1.1 and attach the professional resumes for all staff who may be acting in the capacity of the Qualified Archaeologist.*

CR-ARCH Impact 1	
CR-ARCH/mm-1.2	*Prepare an Archaeological and Tribal Cultural Resources Management Plan (AR-TCR Management Plan).* *a. Prior to commencing ground-disturbing activities, an AR-TCR Management Plan shall be prepared by the Qualified Archaeologist and submitted to the Page Museum curators and the NHMLAC Curator of Anthropology, who shall review and approve the AR-TCR Management Plan on behalf of the County. The AR-TCR Management Plan shall be prepared in conformance with Public Resources Code Section 5024.1, Title 14 California Code of Regulations, Section 15064.5 of the CEQA Guidelines, and PRC Sections 21083.2 and 21084.1.* *b. The AR-TCR Management Plan shall include but not be limited to the following elements:* *i. Historical context statement, research design, the specific types of archaeological sites likely to be encountered.* *ii. Construction worker training program (described in CR-ARCH/mm-1.3).* *iii. Monitoring protocol for ground-disturbing activities that includes a framework for assessing the geoarchaeological setting to determine whether sediments capable of preserving archaeological remains are present in substantial conformance with the Archaeological and Tribal Cultural Resources Assessment and include a protocol for identifying the conditions under which additional or reduced levels of monitoring (e.g., spot-checking) may be appropriate. The duration and timing of the monitoring shall be determined based on the rate of excavation, geoarchaeological assessment, and, if present, the quantity, type, and spatial distribution of archaeological resources identified.* *iv. Limited program of archaeological presence/absence testing within naturally deposited asphaltic or non-asphaltic alluvial sediments before they are mechanically excavated. In particular, the area of the new museum, promenade, and parking lot expansion shall be further investigated. These investigations shall be conducted via a combination of archaeological units, hand tools, and mechanical trenching. The methods used to conduct the limited archaeological testing shall be coordinated with contractors to ensure that sufficient time is afforded to evaluate the significance any identified resources, and if they are found to be significant, time to develop and implement a treatment plan appropriate to the type of resource. The timing of any such efforts shall be conducted in localized areas so that delays to project earthwork activities are minimized while allowing archaeological materials to be identified in a manner that retains the scientific integrity of the discovery.* *v. An approach to evaluate newly identified site components, if applicable, as contributors to the significance of LAN-159/H as a "historical resource" pursuant to CEQA Guidelines Section 15064.5(a) or a "unique archaeological resource" pursuant to PRC 21083.2(g). If any archaeological resources are identified and are found not to be significant or do not retain integrity, then they shall be recorded to a level sufficient to document the contents and condition.* *vi. Potential treatment plans to be implemented in the event a newly discovered archaeological resource is determined by the Qualified Archaeologist to contribute to the significance of the site as a historical resource based on California Register of Historical Resources criteria or a unique archaeological resource in substantial conformance with the Archaeological and Tribal Cultural Resources Assessment. The AR-TCR Management Plan shall require that if the treatment plans outlined therein are found to be infeasible or other alternatives are proposed, the Qualified Archaeologist shall coordinate with the project proponent and the County*

CR-ARCH Impact 1
to amend the AR-TCR Management Plan with a formal treatment plan that would reduce impacts to the resource(s). The treatment plans stated in the AR-TCR Management Plan or prepared after the discovery of a historical resource, shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment and if it is determined avoidance is not feasible, treatment may include but not be limited to any of the following depending on the type of resource and the significance evaluation: • *Native American archaeological site components. Data recovery shall be conducted (i.e., excavation, laboratory processing and analysis) to remove the resource(s) and reduce potential impacts to less than significant where significance is determined under CRHR Criterion 4 or as a unique archaeological resources and integrity is retained. Additional treatment measures to mitigate potentially significant impacts to the component as a tribal cultural resource, which is to be carried out in consultation with the Tribal Consultants and after considering the status of the discovery as a tribal cultural resource.* • *Historical archaeological site components. If a historical archaeological component of the site is present and found to retain integrity, data recovery shall be conducted (i.e., excavation, laboratory processing and analysis) to remove the resource(s) and reduce potential impacts to less than significant.* *vii. Discovery and processing protocol for inadvertent discoveries of archaeological resources that are encountered when an Archaeological Monitor is not present.* *viii. A process by which recovered materials will be prepared for curation at the Page Museum or the Natural History Museum at the Los Angeles Exposition Park, as directed by Page Museum curators and collections managers, and in consultation with Tribal Consultants. The curation shall ensure their long-term preservation and allow access to interested scholars and shall be done at the expense of the County and/or the Foundation. If the materials are Native American in origin or any item of cultural patrimony, the manner of their handling and long-term curation may require additional consultation with the appropriate Native American community that shall be determined as part of a tribal consultation process to be conducted by the County who shall be responsible for the disposition of these materials.* *ix. The AR-TCR Management Plan shall summarize the requirements for tribal coordination during in the event of an inadvertent discovery of Native American archaeological resources, including the applicable regulatory compliance measures or conditions of approval for the inadvertent discovery of archaeological resources to be carried out in concert.*
CR-ARCH/mm-1.3 Conduct an archaeological awareness training. a. *The Qualified Archaeologist or a designee working under their direction shall provide training to on-site project personnel who are responsible for overseeing ground-disturbing activities (i.e., a foreman or site supervisor) and machine operators. The initial training shall be conducted prior to the start of ground-disturbing activities in the project site. The training shall brief the crews on the regulatory compliance requirements and applicable mitigation measures that must be adhered to during ground-disturbing activities for the protection of archaeological resources. As an element of the worker training, the Qualified Archaeologist or their designee shall*

CR-ARCH Impact 1
advise the construction crews on proper procedures to follow if an unanticipated archaeological resource is discovered during construction, including the authority of Archaeological Monitor(s) to temporarily halt or redirect work away from such a discovery. Workers shall be shown examples of the types of archaeological resources that would require notification of the archaeologist, if encountered. The workers shall be provided with contact information for the Qualified Archaeologist and their designee(s) as part of a brief handout summarizing the critical components of the training. Once the ground-disturbing activities have commenced, the need for additional or supplemental worker trainings shall be determined by the Qualified Archaeologist based upon consultation with project personnel. b. *Within five days of completing each training, a list of those in attendance shall be provided by the Qualified Archaeologist to a point of contact designated by the Museum of Natural History.*
CR-ARCH/mm-1.4 Monitoring for Archaeological Resources. *a. At least one Archaeological Monitor working under the direction of the Qualified Archaeologist shall be present during ground-disturbing activities to implement the AR-TCR Management Plan. The Archaeological Monitor shall have the authority to temporarily halt or redirect construction activities when an archaeological resource, suspected resource, or archaeologically sensitive sediments are encountered, as determined by the Qualified Archaeologist in consultation with the Page Museum curators. The presence/absence testing protocol shall be implemented within the asphaltic alluvial sediments that have elevated archaeological sensitivity as stipulated in the AR-TCR Management Plan and conducted in concert with Tribal Monitors and applicable tribal cultural measure measures. The Qualified Archaeologist and Archaeological Monitor shall document the results of the presence/absence testing and allow ground-disturbing activities to proceed in the sediments with archaeological sensitivity once the archaeological and tribal monitors have confirmed the absence of resources. The Archaeological Monitor shall continue to monitor the ground-disturbing activities with the depths assessed by the presence/absence testing. Once the Archaeological Monitor identifies sediments or depths of excavation that are not capable of containing or are unlikely to contain archaeological resources, a corresponding reduction of monitoring coverage would be appropriate, and may be recommended by the Qualified Archaeologist. The Archaeological Monitor shall complete a daily written log documenting construction activities and observations, which shall be included in the final report. The number of Archaeological Monitors shall be determined by the County, based on the scale of ground-disturbing activities and a reasonable degree of effort required to implement the mitigation measures.* *b. In the event that potentially significant archaeological resources are exposed during construction, work in the immediate vicinity of the find (within 8 meters [25 feet]) shall stop until the Qualified Archaeologist can evaluate the significance of the find, with input from the tribal monitor if the discovery is affiliated with Native Americans and is also being assessed as tribal cultural resources. Construction activities may continue in other areas in coordination with the Qualified Archaeologist and, if applicable, tribal monitors.* *c. At the conclusion of all ground-disturbing activities the Qualified Archaeologist shall prepare a technical report documenting the methods and results of all work completed under the AR-TCR Management Plan, including, if any, treatment of archaeological materials, results of artifact processing, analysis, and research, and evaluation of the resource(s) for the California Register of Historical Resources. The format and content of the report shall follow the California Office of Historic Preservation's Archaeological Resource Management Reports (ARMR): Recommended Contents and Format. Any archaeological resources identified shall be documented on appropriate California Department of Parks and Recreation 523-Series Forms. The report shall be prepared under the supervision of a Qualified*

CR-ARCH Impact 1	
	Archaeologist and submitted to curators of the Page Museum for initial review (on behalf of the Museum of Natural History, as the County departmental unit), and final copies shall be submitted to the County. The report shall be completed with 12 months of completion of the monitoring, unless other arrangements are required, as documented in writing and approved by the County, given the nature of the discovery, in which case a revised date can be determined through consultation with the Museum of Natural History. The final draft of the report shall be submitted to the South Central Coastal Information Center and the Tribal Consultants.
Impacts Following Mitigation	
Upon implementation of Mitigation Measures CR-ARCH/mm-1.1 through CR-ARCH/mm-1.4 to address inadvertent discovery of unknown archaeological resources, construction impacts would be reduced to less than significant. No operational impacts would occur.	

CR-ARCH/mm-1.2b would require preparing an Archaeological Resource-Tribal Cultural Resource Management Plan (AR-TCR Management Plan) that provides a framework and protocol by which additional measures for archaeological and tribal cultural resources would be implemented, as well as a procedure to follow if a resource is determined to satisfy significance criteria. The measure specifies the essential elements required for the AR-TCR Management Plan so that the monitoring of ground-disturbing activities would be conducted in a manner consistent with industry best practices and professional archaeological standards, adjusted to address the specific nature of the archaeological site, which is composed of a patchily distributed components that have varying degrees of sensitivity correlating with different types of sediments. Specifically, CR-ARCH/mm-1.2b includes stipulations requiring a proactive identification process be integrated into the monitoring effort, in addition to the close inspection of ground-disturbing activities while they are occurring.

It is not practical to prepare the AR-TCR Management Plan at this early stage in the project planning effort. Grading plans and construction drawings have not been prepared, and the specific phases of the project implementation have not been determined. Preparing the AR-TCR Management Plan using more advanced project designs and based on an anticipated schedule for the types of construction activities would allow the AR-TCR Management Plan to better account for this information in the document and ensure proper implementation. However, the project plans and design as proposed and the analysis of a known archaeological and tribal cultural resource, supported by substantial evidence, are sufficiently detailed to identify anticipated project impacts and to allow for the specific performance criteria to be identified for the AR-TCR Management Plan, the implementation of which would occur at a later date.

Grading plans and construction drawings have not been prepared and the specific phases of the project implementation have not been determined. Preparing the Archaeological Resource-Tribal Cultural Resource (AR-TCR) Management Plan using more advanced project designs and based on an anticipated schedule for the types of construction activities would allow the AR-TCR Management Plan to better account for this information in the document and ensure proper implementation. However, the project plans and design as proposed and the analysis of a known archaeological and tribal cultural resource, supported by substantial evidence, are sufficiently detailed to allow for the specific performance criteria to be identified for the AR-TCR Management Plan, the implementation of which would occur at a later time.

According to State CEQA Guidelines 15126.4(b)(3), preservation in place (i.e., avoidance) is the preferred manner of treatment of a significant archaeological site. If a previously unrecorded archaeological component of LAN-159/H is identified during ground-disturbing activities for the project and is found to contribute to the significance of the site, it is possible that under some circumstances

preservation in place would not be a feasible form of mitigation under any of the examples listed in State CEQA Guidelines, and alternative treatment options would be required to avoid or reduce potentially significant impacts. If avoidance is not feasible, treatment may include archaeological data recovery (i.e., excavation, laboratory processing, and analysis) to obtain important information and thereby reduce potential impacts to less than significant.

b) Would the project disturb any human remains, including those interred outside of formal cemeteries?

CONSTRUCTION

The project site contains LAN-159/H, which includes but is not limited to the partial skeletal remains of a female Native American dated to approximately 10,000 B.P. As previously described, the project is anticipated to require ground disturbance over the 13-acre site, including approximately 53,000 cubic yards of cut/export and 37,000 cubic yards of imported fill with excavations 6 to 10 feet below ground. Because human remains were found in one location, there is a possibility that additional remains may exist elsewhere on the project site. Proposed ground-disturbing activities would have the potential to disturb additional human remains associated with LAN-159/H, if present. Therefore, impacts could be *significant*.

OPERATION

Operation of the project would not result in ground-disturbing activities such as grading or excavation outside of the existing research sites; therefore, there is no potential to disturb any human remains, including those interred outside of formal cemeteries. No impact would occur during project operation.

CR-ARCH Impact 2
Construction of the project could disturb previously unidentified human remains if present within the project site. Construction impacts could be significant. Operation of the project would not disturb any human remains, including those interred outside of formal cemeteries. No operational impacts would occur. (CEQA Checklist Appendix G Threshold v. c)
Mitigation Measures
Implementation of Mitigation Measures CR-ARCH/mm-1.1 through CR-ARCH/mm-1.4 is required.
Impacts Following Mitigation
Based on required compliance with California Health and Safety Code Section 7050.5 and the PRC and implementation of Mitigation Measures CR-ARCH/mm-1.1 through CR-ARCH/mm-1.4 during project construction, impacts would be reduced to less than significant with mitigation. No operational impacts would occur.

5.4.6 Cumulative Impact Analysis

For the purposes of this EIR analysis, the geographic context for cumulative impacts to archaeological resources is defined as the northwestern Los Angeles Basin—approximately the area west of the Los Angeles River, south of the Santa Monica Mountains, east of the Pacific coastline, and north of the Palos Verde Peninsula. The archaeological record reflects a complex relationship between human behavior,

diverse environmental conditions, and the complexities of preservation, all of which have changed over the course of human history in California. While the present-day street grid and contemporary administrative and cadastral boundaries, such as the limits of incorporated cities and counties, are appropriate spatial units for analyzing the archaeological record after Spanish colonization, they are inadequate when it comes to the Native American archaeological record. By comparison, physiographic regions, like the Los Angeles Basin, characterize areas with similar environmental features: topography, hydrological patterns, distribution of vegetation communities, areas of sediment deposition, and erosion. Because these environmental features have exerted a strong influence on human land-use patterns—where human activities were more or less likely to occur—and by extension, where the physical products of those activities are more or less likely to be preserved as part of the archaeological record, they provide a more useful and meaningful way to assess the whole of the archaeological record.

For the analysis of cumulative impacts, the northwestern Los Angeles Basin provides an area large enough to contain a representative sample of Native American archaeological sites, the traditional Gabrielino territory, and relevant historical and contemporary administrative boundaries, while being small enough to account for the cumulative impacts from projects on a more local scale. Notably, the northwestern Los Angeles Basin contains a complex of sites recorded along Ballona Creek and around the Ballona wetlands, Kuruvungna Village Springs, and an important archaeological site recorded at Union Station. The northwestern Los Angeles Basin covers less than 20 percent of the entire Gabrielino traditional territory, and to a lesser extent the overlapping portions of the Tataviam traditional territory, but the northwestern Los Angeles Basin contains several important settlements and placenames, including Guaspet, Yaanga, and, as mentioned, Kuruvungna. Also, the entire historical boundary of Rancho La Brea and a substantial portion of the incorporated boundary of the City of Los Angeles are contained within the northwestern Los Angeles Basin, both of which are influential in terms of defining the geographic areas specific to historical archaeological resources. For these reasons, the northwestern Los Angeles Basin, a physiographic subregion, provides a reasonable basis on which to consider potential cumulative impacts.

Archaeological resources are nonrenewable, irreplaceable, and inherently important to the public, including Native American descendants, and their destruction prevents further study of past lifeways and history. Projects that could be developed in the northwestern Los Angeles Basin include the development projects listed in Chapter 4, Environmental Setting, as well as additional development projects beyond the geographical limit of the cumulative project listing in Chapter 4. The continued development of projects in the northwestern Los Angeles Basin, particularly those for land development and transportation, would have the potential to result in a cumulative impact associated with the loss of archaeological resources. Given the potential for archaeological resources within the northwestern Los Angeles Basin and the number of construction activities that involve disturbance of archaeologically sensitive areas, cumulative impacts to archaeological resources, including the disturbance of human remains, could occur through physical demolition, destruction, relocation, or alteration of a resource such that the significance of the historical resource would be materially impaired.

Prior to the implementation of the mitigation measures outlined previously in this section, because the project has the potential to contribute to the loss of archaeological resources that could combine with impacts from past, present, and reasonably foreseeable projects, the project's contribution toward cumulative effects on archaeological resources could be *significant* if these mitigation measures were not required to address the potential for direct impacts and the potential for project contributions to cumulative impacts.

As provided in the impacts analysis in Section 5.4.5, a series of mitigation measures have been developed to address the project's potential for impacts to archaeological resources. These mitigation measures have been developed to not only address direct impacts of project implementation, but also to address the project's contribution to cumulative archaeological resource impacts. Implementation of Mitigation

Measures CR-ARCH/mm-1.1 through CR-ARCH/mm-1.4 provide for retention of a qualified archaeologist, cultural resources sensitivity training, development of a cultural resources monitoring and mitigation plan, archaeological monitoring, and treatment of unanticipated discoveries, which would ensure that significant archaeological impacts, both direct and contributions to cumulative impacts, would be reduced to less than significant with mitigation. Taken together, implementation of these mitigation measures would ensure that the project would have less than significant impacts related to archaeological resources, including the disturbance of human remains, and would address the project's potential for significant contributions to potential cumulative archaeological impacts in the northwestern Los Angeles Basin.

CR-ARCH Impact 3 (Cumulative Impacts)
Prior to the consideration of proposed mitigation measures, construction of the project could result in significant contributions to cumulative impacts related to the disturbance and destruction of archaeological resources pursuant to State CEQA Guidelines Section 15064.5, and human remains. Cumulative impacts could be significant.
Mitigation Measures
Implement Mitigation Measures CR-ARCH/mm-1.1 through CR-ARCH/mm-1.4. These measures put forward a process that ensures any new archaeological resources or new components of existing historical resources would be identified, inventoried, and evaluated as contributors to the historical significance of the resource, and treated appropriately if found to be a contributing element, which incorporates input from culturally and geographically affiliated California Native American tribes.
Impacts Following Mitigation
With implementation of Mitigation Measures CR-ARCH/mm-1.1 through CR-ARCH/mm-1.4, the project's contribution to cumulative impacts related to disturbance and destruction of archaeological resources would be reduced to less than significant.

5.5 CULTURAL RESOURCES – HISTORICAL RESOURCES

This section of the EIR discusses and evaluates the potential impacts of the project on cultural historical resources. Historical resources can include buildings, structures, objects, sites, historic districts, and cultural landscapes. This section, in combination with Section 5.4, Cultural Resources – Archaeological Resources, addresses the potential impacts encompassing cultural resources as described within Section V of the environmental checklist form (Appendix G) of the State CEQA Guidelines. The analysis in this section is based on *Historic Resources Technical Report, La Brea Tar Pits Master Plan, Los Angeles, California* (SWCA 2023; herein called the Historic Resources Technical Report and included as Appendix D to this EIR).

5.5.1 Existing Conditions

5.5.1.1 Historical Context

The project site includes 13 acres of the eastern and northwestern portions of Hancock Park and broadly encompasses what is known as La Brea Tar Pits, which includes the George C. Page Museum (Page Museum). LACMA's portion of the 23-acre Hancock Park has been almost entirely developed. In contrast, the property known as La Brea Tar Pits is generally a park-like setting.

Since the discovery of fossils and subsequent donation of the 23-acre parcel to the County of Los Angeles (County), Hancock Park has been reserved and preserved for use as an open space and for ongoing excavations, curation, and education for nearly a century. This section provides a summary of the full historic context and construction chronology for the property and surrounding site. The full thematic historic context section, construction chronology, and associated figures and maps are provided in the Historic Resources Technical Report in Appendix D.

RANCHO LA BREA, EARLY SETTLEMENT

Following Mexican Independence, the area around the tar pits was provisionally granted in 1828 as Rancho La Brea to Antonio Jose Rocha, a Portuguese immigrant who was a prominent early settler in the area. The land grant, which covered portions of Mid-Wilshire, Hollywood, and West Hollywood, was given with the condition that the public could continue to extract *brea* (asphaltic) material from the tar pits as needed. In 1849, Major Henry Hancock came to California as part of the California Gold Rush, initially settling in San Francisco before relocating south to Los Angeles. Hancock and his wife Ida acquired the Rancho La Brea lands in the 1850s. They primarily used the ranch for raising livestock, but also excavated asphaltum and shipped material from the tar pits throughout California. Excavations on the property ultimately created the large asphaltum lakes that characterized the property over the following decades.

Following Major Hancock's death in 1883, in the early 1900s, Ida Hancock leased a portion of Rancho La Brea to the Salt Lake Oil Company, which quickly struck oil and spurred a significant boom in well development and oil production. In a short period, the Rancho La Brea lands surrounding the ranch house and tar pits would become a vast oil field, characterized by a landscape of derricks.

While fossil excavations would not begin until the early 1900s, the existence of fossils in La Brea Tar Pits had been observed as early as 1875. Early twentieth-century oil exploration, however, brought to light the extent and significance of the site's paleontological resources. In light of the scientific value and importance of the site, the long-term use and character of the large parcel now encompassing Hancock Park diverged significantly from the surrounding, densely developed neighborhood. By the early

twentieth century, Rancho La Brea had already been recognized as home to one of the most important collections of late Pleistocene asphaltic fossils in the world.

As word spread of the concentration of fossils at Rancho La Brea and requests to excavate poured in, the Hancock family reduced the number of institutions allowed to dig on the property. Priority was granted (exclusively) to local institutions, primarily the Los Angeles County Museum of History, Science, and Art (the predecessor to the Natural History Museum),[1] which was given a 2-year concession to excavate. During the County dig, the team excavated over 100 pits, of which 30 included noteworthy deposits. From these deposits, the team extracted hundreds of thousands of fossilized prehistoric animal bones, which were catalogued and transported to the museum. At the time, this find was considered the largest collection of Pleistocene fossils in the world, representing thousands of animals.

Although the fossils uncovered by the Los Angeles County Museum of History, Science, and Art dig were too plentiful for a single exhibition, the museum constructed a special exhibition space called "La Brea Hall," where some of the most iconic and complete skeletons were displayed. In addition to the exhibits in La Brea Hall, Hancock Park and La Brea Tar Pits became an extremely popular tourist destination; by 1940, the park attracted an estimated 500 visitors each Sunday (Kegley 1940).

HANCOCK PARK

The project site falls within the larger 23-acre Hancock Park, which has remained intact as a relatively undeveloped open space, public park, and cultural institution in the Mid-Wilshire neighborhood for nearly a century.[2] The complex is characterized by a mixture of recreational space, walkways, hardscaping, mature trees and landscaping, the La Brea Lake Pit, seeps, and excavation pits, and museums/exhibition spaces both on-site and in the surrounding vicinity.

In 1915, in light of the site's scientific importance, G. Allan Hancock (son and heir of Henry and Ida Hancock) and the County of Los Angeles began discussing a potential donation of the tar pits and 32 acres of the adjacent property for a park and museum, which would preserve the space in perpetuity for scientific investigations and public enjoyment and education. Negotiations on this donation unfolded over a number of years, until December 1923, when the terms were finalized. The land was officially transferred to the County in 1924 (*Los Angeles Times* 1923).

Through the pre-World War II period, a number of master planning initiatives brought new facilities, dig pits and associated support structures, landscaping, hardscaping, and circulation corridors to Hancock Park. These were both theoretical, in the form of master planning efforts, and actual, with new construction and upgrades. Following the end of World War II, efforts to bring a unified master plan to Hancock Park were renewed. In 1946, the County commissioned architect and landscape planner Harry Sims Bent to develop a new master plan, which was complete by 1948. Construction of the first phase of the 1948 plan was initiated the following year. Subsequent work took place over the next 3 years, including the completion of the Observation Pit museum, a Mid-Century Modern–style pavilion that enclosed Pit 101 and allowed visitors to descend to a viewing platform.

In 1956, the County celebrated the 50-year anniversary of the initial excavations of La Brea Tar Pits with a ceremony at Hancock Park. To mark half a century of scientific exploration, which by 1956 had yielded more than 500,000 fossil bones of prehistoric animals, the celebration included Supervisor John Anson

[1] When referred to as the "Natural History Museum" this descriptor refers to the physical place located at 900 Exposition Boulevard, Los Angeles, California 90007, rather than the County governmental department of the Museum of Natural History, as defined in Chapter 6.92 of the Los Angeles County Code.

[2] Not to be confused with the Los Angeles residential neighborhood of Hancock Park, which is located east of the project site.

Ford, Dr. Hildegarde Howard, chief curator of science at the Los Angeles County Museum, and Dr. Jean Delacour, Los Angeles County Museum of History, Science, and Art director.

At the same time, though La Brea Tar Pits and the park remained scientifically relevant and remarkably popular with the public, plans for a permanent museum still had not come to fruition. In 1958, the County returned to the question of Hancock Park and its next phases of development. In 1960, the County commissioned renowned Modernist architect William L. Pereira to develop a master plan for Hancock Park, the scope of which would include the development of the new fine arts museum complex, a new paleontological museum, and associated landscape plans and improvements throughout the property (*Hollywood Citizen News* 1961a; *Los Angeles Times* 1960).

The 1961 Pereira plan primarily focused on the construction of the new Los Angeles County Museum of Art (LACMA) facilities. The proposed paleontological museum had no funding allocated for its construction (*Hollywood Citizen News* 1961b, 1961c). By the late 1960s, following the completion and fanfare of LACMA, the plans for a paleontological museum at Hancock Park again went dormant. However, the Natural History Museum began exploring other options for activating areas of the park adjacent to the new LACMA campus and increasing the interpretive component. In 1967, a new development plan was prepared, and the County moved ahead with commissioning 52 new statues for the park, which included the mammoth sculptures within the Lake Pit, which have since become iconic features (*Los Angeles Times* 1968).

In the mid-1960s, renewed interest in the tar pits led to its designation as a National Natural Landmark and to the expansion of scientific excavations on the property (Holliday 1972). In the early 1970s, George C. Page, a successful industrialist and benefactor of the Natural History Museum, donated several million dollars in support of a paleontological museum. The resulting George C. Page Museum (Page Museum) opened to the public in the spring of 1977. Along with the construction of the Page Museum and its distinctive pyramid-like site, the landscape around the tar pits was reconfigured. New pathways and circulation pathways were constructed around the square plan of the building, hugging the west and south berms.

Through the 1980s, La Brea Tar Pits and the Page Museum were one of the principal attractions along Miracle Mile, in the emerging district known as Museum Row. While the destination remained popular with tourists, school groups, and locals alike, Hancock Park was viewed as outdated, and the County began exploring new plans for the park to create a more attractive space for contemporary audiences (Hanna/Olin, Ltd. 1994).

In its current form, Hancock Park reflects master planning initiatives and campaigns from various periods in the park's history. While much of the landscape reflects more recent campaigns (as noted above), the park's character and use as an urban open space protected and reserved for scientific exploration, curation, education, and public use, have remained intact for more than a century. The sparsely developed, 23-acre parcel, still framed with mature trees and landscaping, remains intact, reflecting the original agreement between the Hancock family and the County. Although the landscaping, facilities, and topography have been altered through the years, Hancock Park reflects a development history that is unique in Los Angeles: from the early years of oil exploration and fossil discovery, to the gradual establishment of cultural and curatorial/educational institutions to tell its story from the Pleistocene era, through post-World War II expansion, and recent upgrades and master planning efforts.

5.5.1.2 Evaluation Results

This section provides an overview of previously identified historic resources and of the results of a field survey of properties within the CEQA area of potential effects (APE). For purposes of this study, the

CEQA APE encompasses the project site and all directly adjacent or facing parcels. Associated maps and descriptions of properties within the CEQA APE are provided in the Historic Resources Technical Report in Appendix D.

PREVIOUSLY IDENTIFIED HISTORIC RESOURCES

Within the CEQA APE, 10 properties have been previously identified as historical resources pursuant to CEQA (Table 5.51). Current California Historical Resource (CHR) status codes are provided for each. All 10 resources were identified through the City of Los Angeles citywide survey undertaking, SurveyLA; corresponding SurveyLA reports are cited throughout this section (see Architectural Resources Group, Inc. 2015a).

Table 5.5-1. Previously Identified Historic Resources within CEQA APE

Address(es) (Assessor's Parcel Number)	Property/Building Name (Inside or Outside Project Footprint)	Built Date	CHR Status Code* (Source)
5801 Wilshire Boulevard (5508-016-902) (5905 Wilshire Boulevard in parcel data)	La Brea Tar Pits Historic District (inside project footprint)	Various	3S (SurveyLA)
5801 Wilshire Boulevard (5508-016-902) (5905 Wilshire Boulevard in parcel data)	George C. Page Museum (inside project footprint)	1977	3S (SurveyLA)
5801 Wilshire Boulevard (5508-016-902) (5905 Wilshire Boulevard in parcel data)	Hancock Park, Observation Pit (inside project footprint)	1952	3S (SurveyLA)
5905 Wilshire Boulevard (5508-016-902)	Pavilion for Japanese Art (outside project footprint)	1982–1988	3S (SurveyLA)
3rd Street (north), Hauser Boulevard (east), 6th Street (south), Fairfax Avenue (west)†	Park La Brea Garden Apartments Historic District (outside project footprint)	1943 and 1951	3S (SurveyLA)
5757 W. Wilshire Boulevard (5508-015-009)	Prudential Square (outside project footprint)	1948	3S (SurveyLA)
5814 W. Wilshire Boulevard (5089-008-031) (5816 & 5818 W. Wilshire Boulevard)	Craft and Folk Art Museum (outside project footprint)	1930	3CS (SurveyLA)
5820 W. Wilshire Boulevard (5089-010-002)	Hancock Park Building (outside project footprint)	1958	3CS (SurveyLA)
5828 W. Wilshire Boulevard (5089-010-001) (710 S. Stanley Avenue, 5826 W. Wilshire Boulevard)	CMAY Gallery (formerly Arthur Murray Dance Studio (outside project footprint)	1941	3S (SurveyLA)
5850 W. Wilshire Boulevard (5089-011-002) (5856 & 5858 W. Wilshire Boulevard)	Office building (outside project footprint)	1951	3CS (SurveyLA)

* 3S = Appears eligible for NRHP as an individual property through survey evaluation. 3CS = Appears eligible for California Register of Historical Resources (CRHR) as an individual property through survey evaluation.

† There are multiple assessor parcel numbers associated with the Park La Brea Garden Apartments Historic District and they are not listed here separately.

EVALUATION OF PROPERTIES WITHIN CEQA APE

Field surveys and research were conducted to field check previous findings and to identify and research of-age, previously unevaluated properties within the CEQA APE. Table 5.52 summarizes the results of these efforts and the following sections provide summarized information regarding the findings for properties that qualify as historical resources pursuant to CEQA (i.e., properties designated or eligible for designation at the federal, state, or local level). Character-defining features for the historical resources within the project footprint are included. The Historic Resources Technical Report (see Appendix D) provides the full evaluations for both eligible and ineligible properties.

Table 5.5-2. Field Survey Results

#	Address(es) (Assessor's Parcel Number)	Property/Building Name (Inside or Outside Project Footprint)	Built Date	Historical Resource? (CHR Status)*
1	5801 Wilshire Boulevard (5508-016-902) (5905 Wilshire Boulevard in parcel data)	La Brea Tar Pits Historic District (inside project footprint)	Various	Yes | 3CS
2	5801 Wilshire Boulevard (5508-016-902) (5905 Wilshire Boulevard in parcel data)	George C. Page Museum (inside project footprint)	1977	Yes | 3S; 3CB
3	5801 Wilshire Boulevard (5508-016-902) (5905 Wilshire Boulevard in parcel data)	Observation Pit (inside project footprint)	1952	Yes | 3S; 3CB
4	5905 Wilshire Boulevard (5508-016-902) Eastern portion of LACMA, same address, separate parcel	Pavilion for Japanese Art (outside project footprint)	1982–1988	Yes | 3S
5	555 S. Ogden Drive (5509-004-013) (1943) 5900 Lindenhurst Avenue (5509-004-010) (1943) 530 Alandele Avenue (5509-004-007) (1943) 501 S. Fuller Avenue (5509-004-006) (1943) 5721 W. 6th Street (5509-004-004) (1943)	Park La Brea Garden Apartment Historic District (outside project footprint) District bounded by 3rd Street (north), Hauser Boulevard (east), 6th Street (south), Fairfax Avenue (west).	1943 and 1951	Yes | 3S
6	600 S. Curson Avenue (5508-015-006)	"Museum Terrace" Apartments (outside project footprint)	1986	No | 6Z (1)
7	640 S. Curson Avenue (5508-015-008)	"One Museum Square" Apartments (outside project footprint)	2021	No | 6Z (1)
8	5757 W. Wilshire Boulevard (5508-015-009)	Prudential Square (outside project footprint)	1948	Yes | 3S
9	5800 W. Wilshire Boulevard (5089-010-005)	Office building (outside project footprint)	1958	No | 6Z (2)
10	5814 W. Wilshire Boulevard (5089-010-003)	Craft and Folk Art Museum (outside project footprint)	1930	Yes | 3CS
11	5820 W. Wilshire Boulevard (5089-010-002)	Hancock Park Building (outside project footprint)	1958	Yes | 3CS
12	5828 W. Wilshire Boulevard (5089-010-001) (710 S. Stanley Avenue, 5826 W. Wilshire Boulevard)	CMAY Gallery (formerly Arthur Murray Dance Studio; outside project footprint)	1947 (LA Co Tax Assessor)	Yes | 3S
13	5850 W. Wilshire Boulevard (5089-011-002) (5856 and 5858 W. Wilshire Boulevard)	Office building (outside project footprint)	1951	Yes | 3CS
14	APN 5089-011-154	Vacant land	N/A	N/A
15	5900 Wilshire Boulevard (5086-021-038) Parcel extends to S. Ogden Drive; includes the following addresses: 5950 W. Wilshire Boulevard; 714–716 and 717–719 S. Genesee Avenue; and 5904–5950 W. Wilshire Boulevard	Mutual Benefit Life Plaza (outside project footprint)	1969–1971	Yes | 3CS
16	5905 Wilshire Boulevard (5508-017-009); western segment of LACMA, same address as eastern segment, different APN	Los Angeles County Museum of Art (outside project footprint)	Various	No (new museum under construction)

* CHR Status Codes:

3S = Appears eligible for NRHP as an individual property through survey evaluation

3CB = Appears eligible for California Register of Historical Resources (CRHR) both individually and as a contributor to a CRHR-eligible district through survey evaluation

3CS = Appears eligible for CRHR as an individual property through survey evaluation

6Z (1) = Less than 50 years old and not of exceptional significance

6Z (2) = More than 50 years old but lacks historical integrity

LA BREA TAR PITS HISTORIC DISTRICT | 5801 WILSHIRE BOULEVARD
CHR STATUS CODE: 3CS

Based on research and site visits completed for this study, the La Brea Tar Pits Historic District is eligible for landmark designation at the state, county, and city levels. The district meets Criteria 1/1/1 as a unique, significant collection of resources and related cultural institutions and facilities specifically designed to recover, curate, and display those resources to the public, in an example of cultural/institutional development in Los Angeles extending back nearly a century.

The La Brea Tar Pits Historic District consists of related cultural/paleontological resources, site/landscape features, and institutional facilities reflecting the story of over 100 years of scientific excavation, study, public education, and exhibition of one of the world's most significant concentrations of Pleistocene-age fossils.

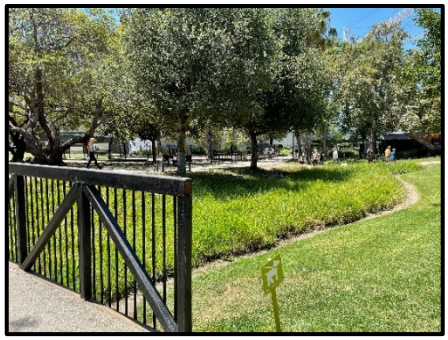
Located on Wilshire Boulevard's Miracle Mile, the historic district is bounded by Wilshire Boulevard, Curson Avenue, 6th Street, and the adjacent Los Angeles County Museum of Art complex and Japanese Pavilion. Excluding these two museums, the historic district boundaries correspond to those of Hancock Park. While Hancock Park itself, in terms of its topography, circulation corridors, and landscaping, has changed over time, the extant contributing elements of this cultural landscape are intact and convey the historic district's significance.

In 2014/2015, the Tar Pits site was found eligible as a historic district for the NRHP, California Register of Historical Resources (CRHR), and for local listing through SurveyLA. The property was found to be eligible for the NRHP and CRHR, as well as designation as a Los Angeles Historic-Cultural Monument (HCM) under Criterion A, 1, and A, respectively, with significance under two contexts. The reasons for significance for each were described in the following manner: the district was found to be a historical resource as an "excellent and extremely rare example of an intact archaeological and paleontological district in a densely developed urban area," and for its "association with the development of county-owned cultural institutions along Miracle Mile in Los Angeles" (Architectural Resources Group, Inc. 2015b:958).

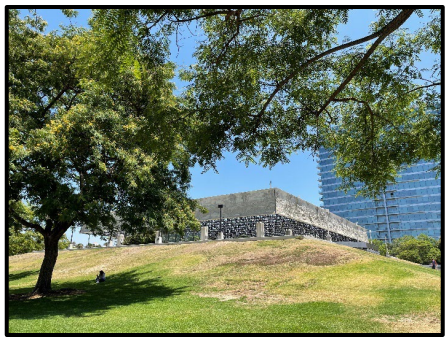
Table 5.5-3 provides an overview of the character-defining features in the La Brea Tar Pits Historic District. The Historic Resources Technical Report (see Appendix D) provides more detail on the character-defining features, including a visual overview of each character-defining feature.

Despite alterations to Hancock Park overall, the rarity and significance of the site's paleontological resources and the buildings constructed to facilitate their active study and exhibition reflect a history of institutional and cultural development in Los Angeles (if not the United States) that is unique.

Table 5.5-3. Character-Defining Features and Components, La Brea Tar Pits Historic District

Photograph	Character-Defining / Contributing Feature	Era / Date of Construction
	Lake Pit	Early twentieth century
	Excavation pits	Resources dating to prehistoric era; facilities through present day
	Oil Creek	Topographic feature
	Oversized parcel with significant amount of open space	ca. 1910s through present day; by the 1920s, the site's contrast with surrounding areas, which were being subdivided and developed, had become obvious. This contrast intensified with commercial development on Wilshire Boulevard and became pronounced with the completion of Metropolitan Life's Park La Brea complex.

Photograph	Character-Defining / Contributing Feature	Era / Date of Construction
	Perimeter trees and other mature trees within the park	ca. 1920s through 1977
	Southeast corner entrance from Wilshire Boulevard	ca. 1920s
	Remnant stone walls (Pits 9 and 13); these walls are assumed to date to the 1930s addition of stone walls encircling pit sites throughout the northwestern quadrant of the park	1930s
	Observation Pit	1952

Photograph	Character-Defining / Contributing Feature	Era / Date of Construction
	Statuary depicting prehistoric animals	Various
	G. Allan Hancock memorial, placed in 1963 (east of Japanese Pavilion, north of Lake Pit)	1963
	Page Museum	1977
	Page Museum topography, including berm	1977

Photograph	Character-Defining / Contributing Feature	Era / Date of Construction
	Circulation corridors and pathways (i.e., diagonal entry path, path adjacent to the Lake Pit, and pathways in north-central portion of the park flanked with mature trees)	1920s through 1970s
	Overall spatial relationships between buildings, structures, open space, park/recreational areas, resources, and natural features	Various

PAGE MUSEUM, LA BREA TAR PITS | 5801 WILSHIRE BOULEVARD
CHR STATUS CODE: 3S, 3CB

In 2015, the 1977 Page Museum was identified as eligible for the NRHP and CRHR and for designation as a local HCM as part of SurveyLA. The building was documented as an "excellent example of Late Modern institutional architecture, designed by local architecture firm Thornton and Fagan" (Architectural Resources Group 2015c:164). The building is noted for having exceptional architectural significance and was determined eligible for the NRHP under Criterion C and using Criteria Consideration G ("Properties that Have Achieved Significance within the Past 50 Years"). The survey also found the Page Museum eligible for the CRHR and as a local HCM under Criterion 3/3, respectively. The building has not changed significantly since it was documented and evaluated as part of the 2015 survey. In addition, the property appears eligible under County Criterion 3.

The primary character-defining features of the Page Museum include (but are not necessarily limited to):

- "Burial mound" berm/ pyramidal massing of the building and site
- Expansive adjacent lawn on the west
- Prominent fiberglass frieze with bas relief Pleistocene scenes and pronounced overhangs
- Structural space frame that supports the frieze and seems to float above podium level
- High degree of indoor-outdoor integration
- Open-air configuration at the podium level, with fiberglass frieze opening onto the central atrium
- Open, central atrium space with landscaping
- Symmetrical design composition, of the building and its site

- Sloped berms with turf plantings integrated into the exterior wall of the museum's ground floor
- Descending entrance on south, flanked by stairways leading to upper podium at the second floor
- Laboratory space open to public view (interior)

OBSERVATION PIT, LA BREA TAR PITS | 5801 WILSHIRE BOULEVARD CHR STATUS CODE: 3S, 3CB

In 2015, the Observation Pit was documented in SurveyLA as an "excellent example of Mid-Century Modern institutional architecture, designed by notable local architect Harry Sims Bent" (Architectural Resources Group, Inc. 2015c:163). The 1952 building was determined eligible for the NRHP and CRHR, and for local HCM designation under Criterion C/3/3, respectively. The building has not changed significantly since it was documented and evaluated as part of the 2015 survey; this study carries forward the finding of NRHP, CRHR, and local HCM eligibility for the Observation Pit. In addition, the property appears eligible under County Criterion 3.

Pavilion for Japanese Art, LACMA | 5905 Wilshire Boulevard | CHR Status Code: 3S

In 2015, the Pavilion for Japanese Art, built in 1988, was identified as a historical resource eligible for the NRHP and CRHR and for designation as a local HCM as part of SurveyLA. The building was found eligible as an "[e]xcellent example of an Organic style institutional building, designed by notable architect Bruce Goff and completed by notable architect Bart Prince" (Architectural Resources Group, Inc. 2015c:164). The building has not changed significantly since it was evaluated in 2015; this study carries forward the finding of NRHP, CRHR, and local HCM eligibility for the Pavilion for Japanese Art. In addition, the property appears eligible under County Criterion 3. The building is therefore considered to be a historical resource for purposes of CEQA.

Park La Brea Garden Apartment Historic District | CHR Status Code: 3S

In 2015, as part of SurveyLA, Park La Brea Garden Apartment Historic District was identified as a historical resource eligible for the NRHP, CRHR, and as a local Historic Preservation Overlay Zone (HPOZ) under Criteria C/3/3 as "an excellent example of a 1940s–1950s garden apartment complex in the area, unique in Los Angeles for its inclusion of high-rise as well as low-rise multi-family residential buildings" (Architectural Resources Group, Inc. 2015b:986). The buildings within the CEQA APE have not changed significantly since they were documented as part of the 2015 survey; this study carries forward the finding of NRHP, CRHR, and local HPOZ eligibility for the Park La Brea Garden Apartment Historic District. Both the district as a whole and each contributing building within the CEQA APE are considered to be historical resources for purposes of CEQA.

Prudential Square | 5757 W. Wilshire Boulevard | CHR Status Code: 3S

In 2015, SurveyLA identified this historical resource as eligible for the NRHP and CRHR and for designation as a local HCM. The 1948 office complex known as Prudential Square was designed by Wurdeman and Becket. Listed in Los Angeles County Tax Assessor data as 5757 W. Wilshire Boulevard, the Prudential Square complex spans the addresses of 5711–5779 West Wilshire Boulevard. This building complex has not changed significantly since it was evaluated as part of the 2015 survey; this study carries forward the finding of NRHP, CRHR, and local HCM eligibility for Prudential Square. The building is therefore considered to be a historical resource for purposes of CEQA.

Craft and Folk Art Museum | 5814 W. Wilshire Boulevard | CHR Status Code: 3CS

In 2015, Survey LA identified the Craft and Folk Art Museum, built in 1930, as a historical resource eligible for the CRHR and as an HCM. Listed in Los Angeles County Tax Assessor data as 5814 W. Wilshire Boulevard, the Craft and Folk Art Museum spans the addresses of 5814–5818 West Wilshire Boulevard. This building has not changed significantly since it was documented and evaluated as part of the 2015 survey; this study carries forward the finding of CRHR and local HCM eligibility for the Craft and Folk Art Museum. The property is therefore considered to be a historical resource for purposes of CEQA.

Hancock Park Building | 5820 W. Wilshire Boulevard | CHR Status Code: 3CS

In 2015, SurveyLA identified the Hancock Park office building as a historical resource eligible for the CRHR and for designation as a local HCM. This building has not changed significantly since it was documented and evaluated as part of the 2015 survey; this study carries forward the finding of CRHR and local HCM eligibility for the Hancock Park Building. The property is therefore considered to be a historical resource for purposes of CEQA.

CMAY Gallery (formerly Arthur Murray Dance Studio) | 5828 W. Wilshire Boulevard | CHR Status Code: 3S

In 2015, SurveyLA identified 5828 W. Wilshire Boulevard as a historical resource eligible for the NRHP and CRHR and as an HCM. The property also occupies the addresses of 710 South Stanley Avenue and 5826 West Wilshire Boulevard. This building has not changed significantly since it was documented and evaluated as part of the 2015 survey; this study carries forward the finding of NRHP, CRHR, and local HCM eligibility for the CMAY Gallery. The property is therefore considered to be a historical resource for purposes of CEQA.

5850 W. Wilshire Boulevard | CHR Status Code: 3CS

In 2015, SurveyLA identified the building at 5850 W. Wilshire Boulevard as a historical resource eligible for the CRHR and as an HCM. This building has not changed significantly since it was documented and evaluated as part of the 2015 survey; this study carries forward the finding of CRHR and local HCM eligibility for 5850 W. Wilshire Boulevard. The property is therefore considered to be a historical resource for purposes of CEQA.

Mutual Benefit Life Plaza | 5900 Wilshire Boulevard | CHR Status Code: 3CS

Designed in 1969–1971 by master architects William Pereira and Gin D. Wong, the Mutual Benefit Life Plaza was found eligible for the CRHR and as an HCM in 2015 by SurveyLA under the context of Architecture and Engineering, 1850–1980, subcontext of L.A. Modernism, 1919–1980, theme of Post-War Modernism, 1946–1976, Corporate International, 1946–1976. The property was found to meet CRHR Criterion 3 and local Criterion 3 as an "[e]xcellent example of a Corporate International-style commercial building on Wilshire's Miracle Mile, designed by notable local architects William Pereira and Gin D. Wong" (Architectural Resources Group, Inc. 2015c:230). The property was found ineligible for the NRHP due to alterations. This building has not changed significantly since it was evaluated as part of the 2015 survey; this study carries forward the finding of CRHR and local HCM eligibility for Mutual Benefit Life Plaza. The property is therefore considered to be a historical resource for purposes of CEQA.

5.5.2 Regulatory Setting

The following section describes the regulations that are most relevant to the historical resources that may be affected by the project. Additional regulations that are relevant, but less directly so, are described in related sections of this EIR, including Section 5.4, Cultural Resources – Archaeological Resources, and Section 5.14, Tribal Cultural Resources.

5.5.2.1 Federal

NATIONAL HISTORIC PRESERVATION ACT OF 1966

Enacted in 1966 and amended in 2000, the National Historic Preservation Act (NHPA) instituted a multifaceted program, administered by the U.S. Secretary of the Interior, to encourage sound preservation policies of the nation's cultural resources at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the National Register of Historic Places, established the position of State Historic Preservation Officer and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the goals of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation.

NATIONAL REGISTER OF HISTORIC PLACES

The NRHP was established by the NHPA of 1966 as "an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment" (36 Code of Federal Regulations [CFR] 60.2). The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

- Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history;
- Criterion B: It is associated with the lives of persons who are significant in our past;
- Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; and/or
- Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting these criteria, a property must retain historic integrity, which is defined in National Register Bulletin 15 as the "ability of a property to convey its significance" (National Park Service [NPS] 1990:44). In order to assess integrity, the National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity.

To retain integrity, a property must possess several, if not all, of these seven qualities, which are defined in the following manner in National Register Bulletin 15:

1. Location – the place where the historic property was constructed or the place where the historic event occurred

2. Design – the combination of elements that create the form, plan, space, structure, and style of a property
3. Setting – the physical environment of a historic property
4. Materials – the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property
5. Workmanship – the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory
6. Feeling – a property's expression of the aesthetic or historic sense of a particular period of time
7. Association – the direct link between an important historic event or person and a historic property.

For the purposes of this study's indirect impact analysis, the aspects of setting and feeling are of particular relevant for this discussion; areas of particular relevance are highlighted below. The National Park Service defines the quality of setting in the following way:

> Setting is the physical environment of a historic property. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the character of the place in which the property played its historical role. It involves how, not just where, the property is situated and its relationship to surrounding features and open space.
>
> Setting often reflects the basic physical conditions under which a property was built and the functions it was intended to serve. In addition, the way in which a property is positioned in its environment can reflect the designer's concept of nature and aesthetic preferences.
>
> The physical features that constitute the setting of a historic property can be either natural or manmade, including such elements as: Topographic features (a gorge or the crest of a hill); vegetation; simple manmade features (paths or fences); and relationships between buildings and other features or open space.
>
> These features are their relationships should be examined not only within the exact boundaries of the property, but also between the property and its surroundings. This is particularly important for districts. (NPS 1990:45)

The National Park Service defines the quality of feeling in the following way:

> Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character. (NPS 1990:45)

NATIONAL NATURAL LANDMARKS PROGRAM

Authorized by the Historic Sites, Buildings and Antiquities Act, the National Natural Landmarks program is administrated by the National Park Service for resources located on federal, state, or local lands. As codified in 36 CFR 62, the National Natural Landmarks program seeks to encourage the identification, study, designation, recognition, and preservation of nationally significant ecological and geological resources that reflect the nation's natural heritage (including paleontological/fossil-based resources).

5.5.2.2 State

The policies of the NHPA are implemented at the state level by the California Office of Historic Preservation, a division of the California Department of Parks and Recreation. The Office of Historic Preservation is also tasked with carrying out the duties described in the California Public Resources Code (PRC) and maintaining the California Historical Resources Information System (CHRIS) and CRHR. The state-level regulatory framework also includes CEQA, which requires the identification and mitigation of substantial adverse impacts that may affect the significance of eligible historical resources.

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

Created in 1992 and implemented in 1998, the CRHR is, according to PRC Sections 21083.2 and 21084.1, "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change." Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys, or designated by local landmarks programs, may be nominated for inclusion in the CRHR.

According to PRC Section 5024.1(c), a resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

Criterion 1: It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

Criterion 2: It is associated with the lives of persons important in our past;

Criterion 3: It embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values;

Criterion 4: It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity does not meet NRHP criteria may still be eligible for listing in the CRHR.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA requires a Lead Agency to analyze whether historical resources may be adversely impacted by a project. Under CEQA, a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. Evaluating such potential effects is a two-part process: first, the determination must be made as to whether the project involves historical resources. Second, if historical resources are present, the project must be analyzed for a potential substantial adverse change in the significance of the resource.

According to State CEQA Guidelines Section 15064.5, for the purposes of CEQA, a historical resource is:

1. A resource listed in, or formally determined eligible for listing in, the California Register of Historical Resources (PRC 5024.1, Title 14 CCR, Section 4850 et seq);

2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in a historical resources survey meeting the requirements of Section 5024.1(g) of the PRC; or
3. Any building, structure, object, site, or district that the lead agency determines eligible for national, state, or local landmark listing; generally, a resource shall be considered by the lead agency to be historically significant (and therefore a historical resource under CEQA) if the resource meets the criteria for listing on the California Register (as defined in PRC Section 5024.1, Title 14 CCR, Section 4852).

According to State CEQA Guidelines Section 15064.5 and PRC Section 5024.1, the fact that a resource is not listed or determined eligible for listing in the CRHR or is not included in a local register or survey shall not preclude the Lead Agency from determining that the resource may be a historical resource. According to State CEQA Guidelines Section 15064.5(b), a project with an effect that may cause a substantial adverse change in the significance of a historical resource may have a significant effect on the environment.

Substantial Adverse Change to Historical Resources

State CEQA Guidelines Section 15064.5 specifies that "substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired." Material impairment occurs when a project alters in an adverse manner or demolishes "those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion" or eligibility for inclusion in the NRHP, CRHR, or local register. In addition, pursuant to State CEQA Guidelines Section 15126.2, the "direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."

State CEQA Guidelines Section 15064(d) further defines direct and indirect impacts in the following manner:

1. A direct physical change in the environment is a physical change in the environment which is caused by and immediately related to the project.
2. An indirect physical change in the environment is a physical change in the environment, which is not immediately related to the project, but which is caused indirectly by the project. If a direct physical change in the environment in turn causes another change in the environment, then the other change is an indirect physical change in the environment.
3. An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project.

Secretary of the Interior's Standards for the Treatment of Historic Properties

In accordance with State CEQA Guidelines and Title 14, Division 6, Chapter 3 of the California Code of Regulations (CCR) Section 15126.4(b)(1), a project that has been determined to conform with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (*Secretary's Standards*) is generally considered a project that will not cause a significant adverse impact to historical resources. The *Secretary's Standards* and associated Guidelines are not prescriptive but are "intended to promote responsible preservation practices" (Weeks and Grimmer 2001:3). The standards offer recommendations for maintaining, repairing, and replacing historic features, as well as for designing additions.

As developed by the National Park Service, the *Secretary's Standards* consist of four related treatment approaches: preservation, rehabilitation, restoration, and reconstruction. It is anticipated that rehabilitation would be the appropriate approach for the project. Rehabilitation, which is the most flexible treatment approach of the four, is defined as the process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features that convey its historical, cultural, or architectural values.

The 10 *Secretary's Standards for Rehabilitation* are:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

In 2017, the National Park Service issued an update to the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings* (Grimmer 2017). The updated document includes additional, project-specific detail on how to comply with and implement the *Secretary's Standards*.

Table 5.5-4 summarizes the recommendations for historic building sites that are of particular relevance to the project. Table 5.5-5 summarizes the recommendations for significant settings of historic districts and neighborhoods.

Table 5.5-4. *Standards for Rehabilitation*, Recommended Treatments for Historic Building Sites

Recommended	Not Recommended
Identifying, retaining, and preserving features of the building site that are important in defining its overall historic character. Site features may include 1) walls, fences, or steps; circulation systems, such as walks, paths or roads; 2) vegetation, such as trees, shrubs, grass, orchards, hedges, windbreaks, or gardens; 3) landforms, such as hills, terracing, or berms; 4) furnishings and fixtures, such as light posts or benches; 5) decorative elements, such as sculpture, statuary, or monuments; 6) water features, including fountains, streams, pools, lakes, or irrigation ditches; and 7) subsurface archaeological resources, other cultural or religious features, or burial grounds which are also important to the site.	Removing or substantially changing buildings and their features or site features which are important in defining the overall historic character of the property so that, as a result, the character is diminished.
Retaining the historic relationship between buildings and the landscape	Removing or relocating buildings or landscape features, thereby destroying the historic relationship between buildings and the landscape. Removing or relocating buildings on a site or in a complex of related historic structures (such as a mill complex or farm), thereby diminishing the historic character of the site or complex. Moving buildings onto the site, thereby creating an inaccurate historic appearance. Changing the grade level of the site if it diminishes its historic character. For example, lowering the grade adjacent to a building to maximize use of a basement, which would change the historic appearance of the building and its relation to the site.
Protecting and maintaining buildings and site features by providing proper drainage to ensure that water does not erode foundation walls, drain toward the building, or damage or erode the landscape	Failing to ensure that site drainage is adequate so that buildings and site features are damaged or destroyed; or, alternatively, changing the site grading so that water does not drain properly
Minimizing disturbance of the terrain around buildings or elsewhere on the site, thereby reducing the possibility of destroying or damaging important landscape features, archaeological resources, other cultural or religious features, or burial grounds	Using heavy machinery or equipment in areas where it may disturb or damage important landscape features, archaeological resources, other cultural or religious features, or burial grounds
Protecting buildings and landscape features when working on the site	Failing to protect building and landscape features during work on the site or failing to repair damaged or deteriorated site features
Designing new onsite features…when required by a new use, so that they are as unobtrusive as possible, retain the historic relationship between the building or buildings and the landscape, and are compatible with the historic character of the property Designing new exterior additions to historic buildings or adjacent new construction that are compatible with the historic character of the site and preserve the historic relationship between the building or buildings and the landscape	Introducing new construction on the building site which is visually incompatible in terms of size, scale, design, material, or color, which destroys historic relationships on the site

Table 5.5-5. *Standards for Rehabilitation*, Recommended Treatments for Setting (Districts)

Recommended	Not Recommended
Identifying, retaining, and preserving building and landscape features that are important in defining the overall historic character of the setting. Such features can include 1) circulation systems, such as roads and streets; 2) furnishing and fixtures, such as light posts or benches; 3) vegetation, gardens, and yards; 4) adjacent open space, such as fields, parks, commons, or woodlands; and 5) important views or visual relationships.	Removing or substantially changing those building and landscape features in the setting which are important in defining the historic character so that, as a result, the character is diminished.
Retaining the historic relationship between buildings and landscape features in the setting. For example, preserving the relationship between a town common or urban plaza and the adjacent houses, municipal buildings, roads, and landscape and streetscape features.	Altering the relationship between the buildings and landscape features in the setting by widening existing streets, changing landscape materials, or locating new streets or parking areas where they may negatively impact the historic character of the setting. Removing or relocating buildings or landscape features, thereby destroying the historic relationship between buildings and the landscape in the setting.
Protecting buildings and landscape features when undertaking work in the setting	Failure to protect buildings and landscape features during work in the setting
Evaluating the overall condition of materials and features to determine whether more than protection and maintenance, such as repairs to materials and features in the setting, will be necessary	Failing to undertake adequate measures to ensure the protection of materials and features in the setting.
Repairing features in the setting by reinforcing the historic materials. Repairs may include the replacement in kind or with a compatible substitute material of those extensively deteriorated or missing parts of setting features when there are surviving prototypes, such as fencing, paving materials, trees, and hedgerows. Repairs should be physically and visually compatible.	Failing to repair and reinforce damaged or deteriorated historic materials and features in the setting. Removing material that could be repaired or using improper repair techniques. Replacing an entire feature of the building or landscape in the setting when repair of materials and limited replacement of deteriorated or missing components are feasible
Designing new exterior additions to historic buildings or adjacent new construction that are compatible with the historic character of the setting that preserve the historic relationship between the buildings and the landscape.	Introducing new construction into historic districts which is visually incompatible or that destroys historic relationships within the setting, or which damages or destroys important landscape features
Removing non-significant buildings, additions, or landscape features which detract from the historic character of the setting	Removing a historic building, a building feature, or landscape feature which is important in defining the historic character of the setting.

5.5.2.3 County of Los Angeles

HISTORIC PRESERVATION ORDINANCE

In September 2015, the County Board of Supervisors adopted a Historic Preservation Ordinance (HPO) and Mills Act Program for all unincorporated territories of the county. As codified in Chapter 22.124, the HPO established the County Register of Landmarks and Historic Districts, along with the following designation criteria in unincorporated communities of the county:

A. A structure, site, object, tree, landscape, or natural land feature may be designated as a landmark if it is 50 years of age or older and satisfies one or more of the following criteria:

   1. It is associated with events that have made a significant contribution to the broad patterns of the history of the nation, State, County, or community in which it is located;

   2. It is associated with the lives of persons who are significant in the history of the nation, State, County, or community in which it is located;

3. It embodies the distinctive characteristics of a type, architectural style, period, or method of construction, or represents the work of an architect, designer, engineer, or builder whose work is of significance to the nation, State, County, or community in which it is located; or possesses artistic values of significance to the nation, State, County, or community in which it is located;
4. It has yielded, or may be likely to yield, significant and important information regarding the prehistory or history of the nation, State, County, or community in which it is located;
5. It is listed, or has been formally determined eligible by the United States National Park Service for listing, in the National Register of Historic Places, or is listed, or has been formally determined eligible by the State Historical Resources Commission for listing, on the California Register of Historical Resources;
6. If it is a tree, it is one of the largest or oldest trees of the species located in the County; or
7. If it is a tree, landscape, or other natural land feature, it has historical significance due to an association with an historic event, person, site, street, or structure, or because it is a defining or significant outstanding feature of a neighborhood.

B. Property less than 50 years of age may be designated as a landmark if it meets one or more of the criteria set forth in subsection A of this Section, and exhibits exceptional importance.

C. The interior space of a property, or other space held open to the general public, including but not limited to a lobby, may be designated as a landmark or included in the landmark designation of a property if the space qualifies for designation as a landmark under subsections A or B of this Section.

D. Historic districts. A geographic area, including a noncontiguous grouping of related properties, may be designated as an historic district if all of the following requirements are met:

1. More than 50 percent of owners in the proposed district consent to the designation;
2. The proposed district satisfies one or more of the criteria set forth in subsections A.1 through A.5, inclusive, of this Section; and
3. The proposed district exhibits either a concentration of historic, scenic, or sites containing common character-defining features, which contribute to each other and are unified aesthetically by plan, physical development, or architectural quality; or significant geographical patterns, associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of parks or community planning.

According to HPO Section 22.124.080, landmarks and historic districts may be nominated for designation through resolution by the Board of Supervisors or the Landmarks Commission.

5.5.2.4 City of Los Angeles

While the project site is located within the city of Los Angeles, it is owned by the County of Los Angeles. Accordingly, the project is not subject to City of Los Angeles (City) regulatory controls. Nonetheless, City regulatory and planning documents that are most relevant to the project as they relate to historic resources are provided herein for informational purposes.

LOS ANGELES HISTORIC-CULTURAL MONUMENTS

Local landmarks in the city are known as Historic-Cultural Monuments and are managed under direction from the City of Los Angeles Planning Department, Office of Historic Resources. In accordance with

Section 22.171.7, an HCM "is any site (including significant trees or other plant life located thereon), building, or structure of particular historical or cultural significance to the City of Los Angeles" that meets at least one of the following criteria:

1. Is identified with important events of national, state, or local history, or exemplifies significant contributions to the broad cultural, economic or social history of the nation, state, city or community;
2. Is associated with the lives of historic personages important to national, state, city, or local history; or
3. Embodies the distinctive characteristics of a style, type, period, or method of construction; or represents a notable work of a master designer, builder, or architect whose individual genius influenced his or her age.

In Los Angeles, the Cultural Heritage Commission may recommend approval or disapproval of applications for designation; this recommendation is made to the City Council, which may adopt a designation by majority vote.

5.5.3 Thresholds of Significance

The following threshold of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse impacts related to cultural historical resources if it would:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

5.5.4 Impact Assessment Methodology

The following section presents an overview of the methodology used in this report. To consider potential direct and indirect impacts to historical resources, the CEQA APE consists of parcels within and directly adjacent to the project footprint.

To characterize all properties within the CEQA APE, SWCA conducted primary- and secondary-source research in a wide variety of collections. A phase of literature review of previous studies was completed, and data gaps were identified to guide research efforts. Research focused on a variety of materials relating to the history and development of the project site and its role in the history of institutional/cultural development in Los Angeles. Materials consulted included historical maps, photographs, and newspapers; aerial and ground-based photographs; publications and journal articles; and other materials. Sources included a wide variety of archives and collections. For the purposes of this investigation, the results of Los Angeles's citywide historical resources survey undertaking, SurveyLA, for the Wilshire Community Plan Area were used for all properties falling within the CEQA APE, unless a preponderance of evidence suggested that alternative conclusions were more appropriate.

To accurately assess the project and its conceptual components, SWCA met with the County of Los Angeles Museum of Natural History Foundation and the Design Team to review project drawings, architectural plans and conceptual sketches, and site design concepts. Field surveys took place in February 2022 and July 2022. Properties within the CEQA APE were inspected and photographed. Digital photography and field notes allowed for a thorough depiction of the subject properties and their existing conditions.

Subject properties were assigned the appropriate CHR status code. The principal elements of the project were studied for potential direct and indirect impacts to historical resources pursuant to CEQA.

5.5.5 Environmental Impact Analysis

a) Would the project cause a substantial adverse change in the significance of a Historical Resource Pursuant to Section 15064.5 of the State CEQA Guidelines?

Under the State CEQA Guidelines 15064.5, a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. Substantial adverse change in the significance of a historical resource is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. The significance of a historical resource is materially impaired when a project demolishes or materially alters those physical characteristics that convey the significance of the resource and justify its inclusion (or eligibility for inclusion) in the NRHP, CRHR, or local register. In general, a project that follows the *Secretary's Standards* (Weeks and Grimmer 2001) and associated Guidelines shall be considered as mitigated to below the level of significance.

CONSTRUCTION

This section addresses the potential for the project to result in significant adverse impacts to identified historical resources as a result of project construction. Impacts are discussed in terms of changes to character-defining and contributing features of historic resources that could result during project construction.

13-acre La Brea Project Site

This section addresses the potential direct significant adverse impacts to identified historical resources within the 13-acre project site. The Historic Resources Technical Report (see Appendix D) identified three historical resources within the project footprint: La Brea Tar Pits Historic District, the Page Museum, and Hancock Park Observation Pit.

Table 5.5-6 summarizes the primary character-defining features of the district, along with those conceptual project components most relevant in terms of potential impacts, and the aspects of integrity most likely to be impacted by project implementation.

La Brea Tar Pits Historic District

The La Brea Tar Pits Historic District consists of numerous related contributors and character-defining features embodying the district's significance. This includes archaeological and paleontological resources (considered in separate reports); related buildings and structures; landscaping and hardscaping features; and site-plan configuration and spatial relationships characterizing the property. Taken together, these elements reflect a shared story of nearly 100 years of purposeful preservation of the Hancock Park land and its resources, scientific excavation and curation, and design and construction of facilities for public education and exhibits.

In addition, master planning efforts for Hancock Park, which included a long-term plan for an on-site museum, stopped and started over the years. As a result, the district and its components display an eclectic character, developed in phases.

The project envisions a comprehensive, unified master plan/design for La Brea Tar Pits, which has been a long-term goal for Hancock Park. The proposed master plan is intended to strengthen and encourage continued scientific research at the site; enhance the visitor's experience through a continuous, thematic circulation route, the addition of more shade structures, and expanded, enhanced facilities; and an aesthetic upgrade for facilities, landscaping and hardscaping, and the park. Overall, the master plan would more explicitly integrate and brand Hancock Park and La Brea Tar Pits for pedestrians approaching or passing on Wilshire Boulevard and on 6th Street, with proposed new gateways, signage, and fencing.

As a reimagining of the Tar Pits complex, the project introduces a series of new features, buildings, structures, circulation corridors, and other elements that would fill-in and divide the components of the historic district, shifting the setting and feeling of the historic district and removing some of its character-defining features. The project remains conceptual in nature; however, as presently envisioned, the project elements that would impact contributing components and character-defining features of the historic district are described below.

Page Museum Renovations, New Public Promenade, and New Museum Building

The renovations to the Page Museum, the development of the new public promenade and the new museum building would have the most immediate, direct impact to the historic district (as well as the Page Museum and its character-defining features and site, discussed specifically below). These changes focus on the principal built-environment resource and a focal point of the historic district, the Page Museum. Among the primary character-defining features of the Page Museum are its orthogonal site, which includes not just the museum but the raised berm surrounding and defining it on each side; the expansive lawn adjacent to the west, which contributes to the visual primacy and prominence of the Page Museum; and the relative absence of numerous other built-environment features around it.

The project would eliminate the berms on the west and north elevations. Furthermore, a sizable portion of the northwest corner of the museum would be demolished and replaced to accommodate a connection point to the new museum building and the covered, curved arcade and promenade. Berms along the west and north would be built-up to create a curved public promenade; the new museum building would also be constructed behind the Page Museum. The new site design and construction would envelop and extend the Page Museum and its site along the west and north elevations.

In this way, the primacy of the Page Museum within the existing site design would be diminished; at present, the museum is a stand-alone focal point of the Tar Pits complex. As envisioned, the project would incorporate the Page Museum into a connected three-part complex, with a pathway replacing the character-defining berms on the west and north. The new museum building would also compete with the Page Museum to the point of making it appear to be a supplemental annex to the larger new facility.

Wilshire Gateway Entry Plaza and Lake Pit

The project would replace the diagonal pathway leading into the park in the southeast corner (a character-defining feature) with a curved pathway and entry plaza. A pedestrian bridge and pathway would lead over the Lake Pit, which would replace the main entrance/walkway to the park and visually divide the Lake Pit. The visibility of the lake and statues from Wilshire Boulevard, in particular westbound, would potentially be diminished, thus affecting the visual role La Brea Tar Pits play in the surrounding environment. In addition, because the design process is ongoing, physical impacts to the lake itself from the bridge's structural elements could occur. When considered in tandem with other master plan elements affecting character-defining features, this project component would impact the aspects of "setting" and "feeling" of the historic district and would contribute to the overall loss of integrity.

Enhanced Central Green

The project element of the enhanced central green would affect the lawn west of the Page Museum, which is considered a character-defining feature of the historic district. The lawn would be retained, but the size would be reduced. At present, the lawn provides an open space and unimpeded view to the Page Museum. In the project, the lawn would be enveloped in the new, curved pedestrian path. When considered in tandem with other master plan elements affecting character-defining features, this project component would impact the aspects of "setting" and "feeling" of the historic district and would contribute to the overall loss of integrity.

Revamped Pit 91

The proposed redesign of Pit 91 would not affect identified character-defining features or contributing elements of the La Brea Tar Pits Historic District such that, on its own, it would cause or contribute to a significant adverse impact to the La Brea Tar Pits Historic District. This project element would retain the contributing feature (tar pits) and replace temporary construction and buildings with a permanent exhibition area. The extended chain fencing would be removed. The project would construct viewing areas around each of the tar pits, with improved pit protection zones and fencing, seating, and interpretive signage. The project would remove and replace noncontributing temporary storage and research buildings adjacent to Project 23.

New Pedestrian Path

The new pedestrian path would create a unified circulation corridor throughout the park and would shift the main entrance/approach. Affected character-defining features include the diagonal entrance/walkway at the corner of Wilshire Boulevard and Curson Avenue (as noted above), historic trees along the north; and the overall configuration of park features connected by meandering paths. Contributing pathways include the southeast entry diagonal path, the path along the north side of the Lake Pit, and the tree-shaded paths west of the parking area. When considered in tandem with other master plan elements affecting character-defining features, this project component would impact the aspects of "setting" and "feeling" of the historic district and would contribute to the overall loss of integrity.

6th Street Entry Gateway and Support Building

The 6th Street Entry Gateway and Support Building would not affect identified character-defining features or contributing elements of the La Brea Tar Pits Historic District such that a distinct, direct or indirect impact to the La Brea Tar Pits Historic District would be expected.

Conclusion, Impacts to the La Brea Tar Pits Historic District

Implementation of the project would result in a comprehensive redesign of Hancock Park, which would erode and interrupt the eclectic but cohesive character-defining features of this historic district such that it would no longer convey the reasons for its significance as a CRHR- and locally eligible historic district. The loss of eligibility of the resource represents material impairment and an impact to the environment. Each one of the project elements on its own would not affect the district's eligibility to the extent that it would be materially impaired (except for alterations to the Page Museum, addressed above and below in Table 5.5-6). In conclusion, for the eligible La Brea Tar Pits Historic District, full build-out of the project, with the variety of design updates, upgrades, and new construction planned for the site, would be a *significant impact* to the district.

Table 5.5-6. Potential Impacts on Character-Defining Features, La Brea Tar Pits Historic District

Primary Character-Defining Feature	Is Feature Retained?	Relevant and/or Adjacent Conceptual Project Component/s	Aspects of Integrity Potentially Impacted by Project Element Implementation	*Secretary's Standards for Rehabilitation* in Potential Noncompliance with Conceptual Project Element
Oversized, sparsely developed parcel, with large swaths of open park space	Yes	▪ **New Museum Building** and **New Public Promenade** would reduce open park space with additional construction ▪ The site's oversized parcel and some open space/recreational areas would be retained though diminished	Setting; Feeling	Rehabilitation Standard No. 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. Rehabilitation Standard No. 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.
Lake Pit	Yes	▪ **Wilshire Gateway Entry Plaza and Lake Pit** and **New Pedestrian Path** would change the configuration of the corner entrance to the park ▪ The Lake Pit, which is one of the key contributing resources to the historic district, would be preserved ▪ A pathway and bridge would lead over the Lake Pit	Setting	Rehabilitation Standard No. 2: The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided. Rehabilitation Standard No. 4: Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
Mature trees framing Hancock Park, with concentrations along the north and east	Partially	▪ **Landscaping plan** would remove a number of the historic trees appearing to date to the 1920s establishment of Hancock Park	Design; Setting; Feeling	Rehabilitation Standard No. 2: The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided. Rehabilitation Standard No. 4: Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
Page Museum and its site, with pyramidal massing, square plan, and sharply raised berms; visual prominence of Page Museum (see Table 5.5-7 for potential impacts to individually eligible Page Museum)	Partially	▪ **Page Museum Renovations, New Museum Building, and New Public Promenade** would change these character-defining features ▪ West and north berms would be removed/built up to accommodate promenade ▪ Pyramidal massing would be mostly replaced ▪ Open-air roof, podium, and central atrium would be covered ▪ Visual primacy of the Page Museum would be diminished	Design; Materials; Workmanship; Setting; Feeling	Rehabilitation Standard No. 2: The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided. Rehabilitation Standard No. 3: Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken. Rehabilitation Standard No. 5: Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved. Rehabilitation Standard No. 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. Rehabilitation Standard No. 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired
Observation Pit	Yes	▪ Circulation corridors and landscaping adjacent to the Observation Pit have been altered over time ▪ The closest project element, a portion of the **New Pedestrian Path,** would resemble the land use patterns, hardscaping, and circulation corridors already adjacent to this historic resource	Some changes to adjacent Setting (but minimal given level of recent alteration in landscaping in the northwest quadrant of Hancock Park)	Complies with *Secretary's Standards*
Corner entrance with diagonal entry path at Wilshire Boulevard	Partially	▪ **Wilshire Gateway Entry Plaza and Lake Pit** would shift the corner entrance to a new entry point farther west on Wilshire Boulevard ▪ This project element would remove the character-defining diagonal entry and pathway	Design; Setting; Feeling	Rehabilitation Standard No. 2: The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided. Rehabilitation Standard No. 3: Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken. Rehabilitation Standard No. 5: Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved. Rehabilitation Standard No. 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. Rehabilitation Standard No. 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired

Primary Character-Defining Feature	Is Feature Retained?	Relevant and/or Adjacent Conceptual Project Component/s	Aspects of Integrity Potentially Impacted by Project Element Implementation	*Secretary's Standards for Rehabilitation* in Potential Noncompliance with Conceptual Project Element
Circulation corridors/pathways, including east-west pathways leading from parking lot and north-south pathway northwest from Central Green	Partially	▪ **Enhanced Central Green, New Museum Building, New Pedestrian Path** would alter/replace some of the character of character-defining circulation corridors and pathways of the historic district ▪ Pathways and circulation corridors dating to the period of significance, which reflect the district's development over time, would be replaced with a unified system and series of designed pathways and landscaping; new construction would interrupt or remove these extant features	Setting; Feeling	Rehabilitation Standard No. 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. Rehabilitation Standard No. 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.
Remnants of 1930s stone walls in northwestern portion of site	Unknown; it is possible that implementation of the Master Plan could remove this feature.	▪ Landscaping plan and/or facilities upgrades to tar pits and seep sites could impact this feature and other extant remnants of stone walls	Design; Materials; Setting; Feeling	Unknown at this time because the project is conceptual in nature and the Master Plan does not provide specific information on whether the remnants of 1930s stone walls would be retained or removed. The potential exists for impacts to adjacent historical resources through construction staging, construction activities, and implementation of project landscaping. Construction staging activities should be carefully designed to plan for and avoid any adjacent historical resources (including but not limited to details regarding off-site staging, parking, equipment and material storage, movement, and use).
Significant paleontological resources on the site, including various dig and studies sites	Yes	▪ **Revamped Pit 91** would remove temporary facilities that are not considered character-defining ▪ The significant resources would be preserved ▪ Temporary facilities would be replaced and upgraded	None; the improved facilities would enhance visibility of these significant paleontological resources	While the conceptual project complies with the *Secretary's Standards*, the potential exists for impacts to adjacent historical resources through construction staging and construction activities. Construction staging activities should be carefully designed to plan for and avoid any adjacent historical resources (including but not limited to details regarding off-site staging, parking, equipment and material storage, movement, and use).

Page Museum, La Brea Tar Pits

As previously noted, the Page Museum is a historical resource pursuant to CEQA (eligible for the NRHP, CRHR, and as a local HCM). Related to this resource, the design plans for the project currently contain elements that do not comply with the *Secretary's Standards*. Not all projects that depart from the *Secretary's Standards* cause significant adverse impacts; however, the remodel of the Page Museum, in addition to including seismic and systems upgrades necessary for the building's long-term viability, also includes major alterations to key character-defining features. Table 5.5-7 provides an overview of the affected character-defining features for each conceptual project component, as applicable and to the extent that project-level detail is available.

These alterations include:

a) Elimination of the sharply raised berms on the west and north elevations of the museum site

b) Eliminating the indoor-outdoor integration provided by the open roof, podium, and central atrium, by adding a roof structure and photovoltaic panels and enclosing the open space at the podium with fenestration

c) Adding windows beneath the Pleistocene-era frieze, which will diminish the museum's high degree of indoor-outdoor integration and the visual prominence of the frieze as one of the key character-defining features of the museum

d) Shifting the principal entrance to the new museum building; the principal, descending entrance ramp to the Page Museum would be retained physically but converted in use to serve as an outdoor classroom space; the main entrance to the museum would shift to the annex to the west

e) Demolition of a portion of the museum's northwest corner

f) A site redesign in which the Page Museum, which is presently a prominent, stand-alone feature, would be incorporated as one component of an integrated, connected three-part complex, including built-up berms on the west and north, a public promenade, and new museum building; new construction does not include visual, physical distinctions and separations between the old and the new

g) Construction of the new museum building, which, though on par with or slightly higher than the Page Museum, would visually compete with the Page Museum

Taken together, these planned alterations to the Page Museum would compromise its historic integrity to the point that the historical resource would no longer convey the reasons for its significance. Therefore, the project would cause an impact to the environment through material impairment of a historical resource, the Page Museum, which would be *significant*.

Table 5.5-7. Potential Impacts to Character-Defining Features, Page Museum Renovations

Primary Character-Defining Feature	Is Feature Retained?	Conceptual Project Plans	Aspects of Integrity Potentially Impacted by Project Element	*Secretary's Standards for Rehabilitation* in Potential Noncompliance with Conceptual Project Element
Oversized one-story mass/height	Yes	▪ The height of the building would be retained ▪ Seismic upgrades would be achieved through addition of shear-wall supports that would be concealed from view	N/A	Could comply with *Secretary's Standards* (if seismic upgrades are, as described, hidden and any significant historic fabric that is disturbed by the construction is repaired and re-installed or replaced in-kind).
Prominent fiberglass frieze with bas relief Pleistocene scenes and pronounced roof overhangs	Partially	▪ The roof frieze would be retained ▪ Windows would be installed beneath the frieze, sealing the open space presently characterizing the podium	Design; Workmanship, Materials; Feeling	Rehabilitation Standard No. 2: The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided. Rehabilitation Standard No. 5: Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved. Rehabilitation Standard No. 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. Rehabilitation Standard No. 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.
Fishbowl-like laboratory space in museum interior	Yes	▪ The fishbowl-like laboratory would be retained	While conceptual in nature, this project element would not be expected to result in significant adverse impacts if all project components are designed to comply with the *Secretary's Standards*	Could comply with *Secretary's Standards* (if character-defining features of the laboratory space are retained and/or replaced in-kind).
Burial mound-like site with sharply raised berms with turf plantings on each side, pyramidal massing, and a square plan	Partially	▪ Berms on the west and north would be removed and built up to accommodate New Public Promenade ▪ Site's pyramidal massing would be replaced ▪ Topography and character of west and north berms would be changed to accommodate promenade connecting Page Museum with new building, via curved arcade	Design; Setting; Feeling	Rehabilitation Standard No. 2: The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided. Rehabilitation Standard No. 5: Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved. Rehabilitation Standard No. 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. Rehabilitation Standard No. 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.
Symmetrical design composition, building and site	Partially	▪ Symmetrical design composition of the Page Museum itself would be largely retained ▪ Symmetrical design composition of the site would not be retained ▪ Page Museum site would be changed and incorporated into/extended by the curved New Public Promenade and new museum building	Design; Setting; Feeling	Rehabilitation Standard No. 2: The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided. Rehabilitation Standard No. 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. Rehabilitation Standard No. 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.
Descending entrance progression on south elevation into the center of the building, flanked by mirror stairways leading to the upper podium at the second-floor	Partially	▪ The Page Museum's primary entrance would shift to serve as an outdoor classroom ▪ The entrance would remain operational ▪ New ADA-accessible ramps would flank the outdoor classroom space ▪ A cantilevered shade structure is proposed for the Page Museum entrance, which is presently open-air	Design; Materials; Feeling	Rehabilitation Standard No. 2: The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided. Rehabilitation Standard No. 5: Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved. Rehabilitation Standard No. 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. Rehabilitation Standard No. 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Primary Character-Defining Feature	Is Feature Retained?	Conceptual Project Plans	Aspects of Integrity Potentially Impacted by Project Element	*Secretary's Standards for Rehabilitation* in Potential Noncompliance with Conceptual Project Element
Indoor-outdoor integration; open-air roof; open configuration at the podium level overlooking atrium	No	▪ Indoor-outdoor integration of the Page Museum itself would be severely diminished ▪ Open-air configuration of the roof and podium would be covered/sealed ▪ Open-air roof would be covered, with proposed materials to include photovoltaic panels ▪ Windows would be installed at the podium level, closing the open-air design	Design; Materials; Workmanship; Feeling	Rehabilitation Standard No. 2: The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided. Rehabilitation Standard No. 5: Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved. Rehabilitation Standard No. 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. Rehabilitation Standard No. 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.
Open central atrium with landscaping	No	▪ The open, central atrium with landscaping would be removed and replaced	Design; Materials; Workmanship; Feeling	Rehabilitation Standard No. 2: The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided. Rehabilitation Standard No. 5: Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved. Rehabilitation Standard No. 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. Rehabilitation Standard No. 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.
Visual primacy as principal built-environment feature of historic district	No	▪ New construction on-site, including the new museum building and New Public Promenade along with changes to the Enhanced Central Green would diminish the Page Museum's visual primacy at the La Brea Tar Pits Historic District	Design; Setting; Feeling	Rehabilitation Standard No. 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. Rehabilitation Standard No. 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Observation Pit

The project does not include changes to the Observation Pit. In addition, the site and surroundings have already been updated and altered over time, and the closest project element, a portion of the new pedestrian path, would resemble the land use patterns, hardscaping, and circulation corridors already adjacent to this historical resource. Therefore, impacts to the Observation Pit would be *less than significant*.

Properties Adjacent to the Project Site

The following sections address the potential for the project to impact the historic integrity and compatibility of the adjacent historic resources. While potential direct impacts would not result to these properties, it is important to consider whether the project would cause significant indirect impacts to these resources as a result of the introduction of project elements in the proximity of these resources.

Pavilion for Japanese Art

The surrounding land uses, which currently consist of landscaping, pathways, and the elements of the Tar Pits complex, would be retained, albeit with a new design configuration. In terms of new construction, the new museum building planned for the park's northwestern quadrant would be located at a significant distance from the Pavilion for Japanese Art; the scale/mass and design of the new museum building, though largely conceptual at present, would not be expected to overwhelm or otherwise significantly impact the setting and feeling of the Pavilion for Japanese Art to the point that it would no longer convey the reasons for its significance. The closest project element to the Pavilion for Japanese Art would be the new pedestrian path; at present, this area of the park already includes various walkways and landscaping. In addition, the Pavilion for Japanese Art is closest to/oriented toward the new LACMA facility, which represents a more significantly altered change in setting than the master plan for La Brea Tar Pits.
In summary, the master plan elements adjacent to the resource would be compatible in terms of use, character, mass/scale, and design, and indirect impacts to the Pavilion for Japanese Art from project implementation would be *less than significant*.

Park La Brea Garden Apartment Historic District

This large historic district forms the northern border of the CEQA APE for this project analysis.
The contributors to the district are located across a wide expanse of West 6th Street and screened by the mature trees and landscaping of Hancock Park. Master plan elements facing the Park La Brea Garden Apartment Historic District would be compatible in terms of land use, character, mass/scale, and design. In addition, the new museum building, which would be across 6th Street, is sited at enough of a distance and exhibiting a modest mass/scale that it would not be expected to result in material impairment to the historic resource such that it would no longer convey the reasons for its significance. In summary, impacts to the Park La Brea Garden Apartment Historic District would be *less than significant*.

Prudential Square (5757 W. Wilshire Boulevard)

This 1948 office complex, designed by Wurdeman and Becket, occupies the CEQA APE's southeast corner. Surrounding land uses would be retained, as La Brea Tar Pits would remain a public park with hardscaping/pathways, landscaping and open space, interspersed with institutional facilities and tar pits/excavation sites, albeit with a new design configuration and additions. The closest project element to Prudential Square would be the Wilshire Gateway Entry Plaza & Lake Pit. This element would renovate the existing entrance to La Brea Tar Pits at Wilshire Boulevard and South Curson Avenue. A large, shaded canopy would stretch down Wilshire Boulevard and curve around to South Curson Avenue to

create a new welcome pavilion and shaded entry plaza. These changes to the corner entrance to the park retain the existing land uses and are compatible in terms of character, mass/scale, and design when seen from the perspective of this facing historic resource. In summary, impacts to the Prudential Square from project implementation would be *less than significant*.

Craft and Folk Art Museum (5814 W. Wilshire Boulevard)

Constructed in 1930, the Craft and Folk Art Museum is an American Colonial Revival/French Revival style building located south of the project site, across Wilshire Boulevard. The facing, extant land uses would be retained, as La Brea Tar Pits would remain a public park with hardscaping/pathways, landscaping, and open space, interspersed with institutional facilities and tar pits/excavation sites, albeit with a new design configuration and additions. The closest project element to the Craft and Folk Art Museum would be the Wilshire Gateway Entry Plaza and Lake Pit. This project element would renovate the existing entrance to La Brea Tar Pits at Wilshire Boulevard and South Curson Avenue. A large, shaded canopy would stretch down Wilshire Boulevard and curve around to South Curson Avenue to create a new welcome pavilion and shaded entry plaza. In addition, from this vantage point of Wilshire Boulevard, the new pedestrian path would add a curved walkway over the Lake Pit that would be visible from across Wilshire Boulevard. However, these changes retain the existing land uses and are compatible in terms of character, mass/scale, and design when seen from the perspective of this adjacent historic resource. In summary, impacts to the Craft and Folk Art Museum from project implementation would be *less than significant*.

Hancock Park Building (5820 W. Wilshire Boulevard)

Located south of the project site across Wilshire Boulevard, the Hancock Park Building was designed in 1958 in the International/Mid-Century Modern style by architects Jack H. MacDonald and Cejay Parsons. The building is located south of the project site, across Wilshire Boulevard. The facing, extant land uses would be retained, as La Brea Tar Pits would remain a public park with hardscaping/pathways, landscaping, and open space, interspersed with institutional facilities and tar pits/excavation sites, albeit with a new design configuration and additions. The closest project element to the Hancock Park Building would be the Wilshire Gateway Entry Plaza and Lake Pit. This project element would renovate the existing entrance to La Brea Tar Pits at Wilshire Boulevard and South Curson Avenue. A large, shaded canopy would stretch down Wilshire Boulevard and curve around to South Curson Avenue to create a new welcome pavilion and shaded entry plaza. In addition, from this vantage point of Wilshire Boulevard, the new pedestrian path would add a curved walkway over the Lake Pit that would be visible from across Wilshire Boulevard. However, these changes retain the existing land uses and are compatible in terms of character, mass/scale, and design when seen from the perspective of this adjacent historic resource. In summary, impacts to the Hancock Park Building from project implementation would be *less than significant*.

CMAY Gallery (formerly Arthur Murray Dance Studio) (5828 W. Wilshire Boulevard)

Located south of the project site across Wilshire Boulevard, CMAY Gallery (formerly the Arthur Murray Dance Studio) was designed in 1947 by notable local architect Stiles O. Clements in the Late Moderne style. The building is located south of the project site, across Wilshire Boulevard. The facing, extant land uses would be retained, as La Brea Tar Pits would remain a public park with hardscaping and pathways, landscaping, and open space, interspersed with institutional facilities and tar pits/excavation sites, albeit with a new design configuration and additions. The closest project element to the CMAY Gallery would be the Wilshire Gateway Entry Plaza and Lake Pit. This project element would renovate the existing entrance to La Brea Tar Pits at Wilshire Boulevard and South Curson Avenue. A large, shaded canopy

would stretch down Wilshire Boulevard and curve around to South Curson Avenue to create a new welcome pavilion and shaded entry plaza. In addition, from this vantage point of Wilshire Boulevard, the new pedestrian path would add a curved walkway over the Lake Pit that would be visible from across Wilshire Boulevard. However, these changes retain the existing land uses and are compatible in terms of character, mass/scale, and design when seen from the perspective of this adjacent historic resource. In summary, impacts to the CMAY Gallery from project implementation would be *less than significant*.

Office Building (5850 W. Wilshire Boulevard)

Located south of the project site across Wilshire Boulevard, 5850 West Wilshire Boulevard was designed in 1951 in the International Style by well-known local architect Stiles O. Clements. The building is located south of the project site, across Wilshire Boulevard. The facing, extant land uses would be retained, as La Brea Tar Pits would remain a public park with hardscaping/pathways, landscaping, and open space, interspersed with institutional facilities and tar pits/excavation sites, albeit with a new design configuration and additions. The closest project element to 5850 West Wilshire Boulevard would be the Wilshire Gateway Entry Plaza and Lake Pit. This project element would renovate the existing entrance to La Brea Tar Pits at Wilshire Boulevard and South Curson Avenue. A large, shaded canopy would stretch down Wilshire Boulevard and curve around to South Curson Avenue to create a new welcome pavilion and shaded entry plaza. In addition, from this vantage point of Wilshire Boulevard, the new pedestrian path would add a curved walkway over the Lake Pit that would be visible from across Wilshire Boulevard. However, these changes retain the existing land uses and are compatible in terms of character, mass/scale, and design when seen from the perspective of this adjacent historic resource. In summary, impacts to 5850 West Wilshire Boulevard from project implementation would be *less than significant*.

Mutual Benefit Life Plaza (5900 Wilshire Boulevard)

Located southwest from the project site across Wilshire Boulevard, the Mutual Benefit Life Plaza was designed in 1969–1971 by notable local architects William Pereira and Gin D. Wong. The building complex is located southwest of the project site, across Wilshire Boulevard. The facing, extant land uses would be retained, as La Brea Tar Pits would remain a public park with hardscaping/pathways, landscaping, and open space, interspersed with institutional facilities and tar pits/excavation sites, albeit with a new design configuration and additions. Although not directly adjacent, the closest project element to 5850 West Wilshire Boulevard would be the Wilshire Gateway Entry Plaza and Lake Pit. In addition, from this vantage point southwest of the project site, the new pedestrian path would add a curved walkway over the Lake Pit that would be partially visible from across Wilshire Boulevard to the southwest. However, these changes retain the existing land uses and are compatible in terms of character, mass/scale, and design when seen from the perspective of this adjacent historic resource. In summary, impacts to the Mutual Benefit Life Plaza from project implementation would be *less than significant*.

In summary, no significant adverse indirect impacts of adjacent historical resources would occur with implementation of the project. This finding, as described above, is based on the overall compatibility of master plan elements in terms of land use, general character, mass/scale, and design and that indirect effect would not result in material impairment of adjacent historical resources. The potential for impacts to adjacent historical resources would be *less than significant*.

Conclusion, Construction Impacts

Construction of the project would result in a substantial adverse change in the significance of two identified historical resources: the La Brea Tar Pits Historic District and the Page Museum. The proposed alterations to the Page Museum would compromise its historic integrity to the point that the historical resource would no longer convey the reasons for its significance. In addition, project implementation

would result in a comprehensive redesign of Hancock Park, which would erode and interrupt the eclectic but cohesive character-defining features of this historic district such that it would no longer convey the reasons for its significance as a CRHR- and locally eligible historic district. The loss of eligibility of the resource represents material impairment and an impact to the environment. Therefore, the project would result in a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 and impacts would be *potentially significant*.

OPERATION

After construction of the project, no alterations to the project site or features within the La Brea Tar Pits Historic District would be associated with the Master Plan. Thus, the Master Plan would not result in any operational effects which would compromise the historic integrity of the site, the Page Museum, or the project surroundings. Therefore, *no impact* to historical resources would occur during project operation.

CR-HIST Impact 1	
As a result of project construction, the project would cause a substantial adverse change in the significance of a Historical Resource pursuant to Section 15064.5 of the State CEQA Guidelines. Specifically, the project would cause a substantial adverse change in the significance of two identified historical resources: the La Brea Tar Pits Historic District and the George C. Page Museum. This impact would be significant. *Project operation would not cause a substantial adverse change in the significance of historic resources pursuant to State CEQA Guidelines Section 15064.5. No operational impacts would occur.* *(CEQA Checklist Appendix G Threshold V. a)*	
Mitigation Measures	
CR-HIST/mm-1.1	*Impacts to the La Brea Tar Pits Historic District and Page Museum resulting from project implementation shall be reduced through the ongoing input to the Design Team from a qualified Historic Architect, as the project design progresses. The Historic Architect shall satisfy the Secretary of the Interior's Professional Qualifications Standards for Historic Architecture as defined by the National Park Service and in accordance with 36 CFR 61 and possess a minimum of ten (10) years of project-level experience in designing, developing, and reviewing architectural plans for conformance with the Secretary's Standards.* *The Historic Architect shall work with the Design Team to identify options for new construction, upgrades, stabilization, repairs, and rehabilitation activities that will facilitate compliance with the Secretary's Standards. This historic preservation input to the Design Team shall begin in the earliest phases of schematic design phase possible and extend throughout the development of 50% Construction Drawings.* *For new construction, the Historic Architect shall work with the Design Team to identify options and opportunities for: (1) ensuring compatibility of scale and character for new construction, site and landscape features, and circulation corridors, (2) ensuring that new construction, in materials, finishes, design, scale, and appearance, is compatible but differentiated from historic contributors and character-defining features; and (3) ensuring that new construction is designed and sited in such a way that it reinforces and strengthens, as much as feasible, character-defining site plan features, landscaping, and circulation corridors.* *For modernization and upgrade projects, the Historic Architect shall work with the Design Team to identify project options that facilitate compliance with the Secretary's Standards.*

CR-HIST Impact 1	
	The Historic Architect shall review proposed materials, finishes, window treatments/configuration, and other details to ensure compliance with the Secretary's Standards. The Historic Architect shall provide specifications for architectural features or materials requiring restoration or removal, maintaining and protecting relevant features in place, or on-site storage. Specifications shall include detailed drawings or instructions where historic features may be impacted. *The Historic Architect shall document the input provided to the Design Team in Memoranda for the Record at the Schematic and 50% Construction Documents phases. A Draft Memorandum for the Record shall be provided to interested parties including the Los Angeles Conservancy and the Los Angeles County Historic Preservation Commission for review and comment.* *The Historic Architect shall participate in pre-construction and construction monitoring activities, as appropriate, to facilitate conformance with the Secretary's Standards and/or lessening of material impairment to historical resources.*
CR-HIST/mm-1.2	*An Inventory and Treatment Plan shall be prepared by a qualified historic preservation professional and implemented for the La Brea Tar Pits Historic District. Once complete, the Draft Inventory and Treatment Plan shall be provided to interested parties such as the Los Angeles Conservancy and County of Los Angeles Historic Preservation Commission for review and comment. The Inventory and Treatment Plan shall be finalized prior to the commencement of construction activities.* *Specific requirements for the Inventory and Treatment Plan are provided below:* • *A qualified historic preservation professional shall be retained to prepare the Inventory and Treatment Plan. The historic preservation professional shall satisfy the Secretary of the Interior's Professional Qualifications Standards for History and/or Architectural History as defined by the National Park Service and in accordance with 36 CFR 61 and possess a minimum of ten (10) years of project-level experience in CEQA review of historic resources and reviewing architectural plans for conformance with the Secretary's Standards. A landscape architect or landscape specialist with a minimum of five (5) demonstrated years of experience working with historic landscapes shall contribute to preparation of the Inventory and Treatment Plan to identify historic landscaping and trees that fall within the period of significance for the historic district (up to 1977).* • *The Inventory and Treatment Plan shall adhere to best professional practices promulgated by the National Park Service and State Office of Historic Preservation.* • *The Inventory and Treatment Plan shall supplement the historic resources survey completed and documented in the Historic Resources Technical Report for the La Brea Tar Pits Master Plan by documenting the character-defining features and existing conditions of those "contributing" (i.e., historically significant) components of the historical resource. The inventory shall include site plan features, commemorative plaques and statues, artwork and sculptures, and other extant contributors to the historic district.* • *The study shall include recommendations for annual maintenance activities, treatment and repair priorities, and maximum retention of remaining district contributors. All recommendations shall be designed to maximize retention of remaining contributors to the historic district and minimize the loss of character-defining features.* *The Final Inventory and Treatment Plan shall be used for the ongoing stewardship of the property following construction.*

CR-HIST Impact 1	
CR-HIST/mm-1.3	*A Historic American Buildings Survey (HABS)-like Documentation Package shall be prepared to document the contributing features of the La Brea Tar Pits Historic District and Page Museum prior to the authorization of demolition or construction activities. The HABS-like Documentation Package shall adhere to best professional practices promulgated by the National Park Service and shall be provided to interested parties such as the Los Angeles Conservancy and County of Los Angeles Historic Preservation Commission for review and comment. Documentation shall be in accordance with the applicable standards described in the Secretary of the Interior's Standards for Architectural and Engineering Documentation.* *Prior to the commencement of construction activities, a historian or architectural historian who meets the Secretary of the Interior's Professional Qualifications Standards in History and/or Architectural History shall be retained to prepare HABS-like documentation for the La Brea Tar Pits Historic District and Page Museum.* *Required contents for the HABS-like package include the following:* • *Photographs: Photographic documentation will focus on the Page Museum and, within the historic district, those contributing elements (built, landscape, hardscape, paleontological, and natural features) slated for demolition, alterations, or adjacent new construction. Photographs shall include detail shots of contributing features and components slated for demolition, with overview and context photographs for the adjacent setting. Photographs shall be taken using a professional-quality single lens reflex (SLR) digital camera with a minimum resolution of 10 megapixels. Digital photographs will be provided in electronic format.* • *Descriptive and Historic Narrative: The historian or architectural historian will prepare descriptive and historic narrative of the historical resources/features slated for demolition. Physical descriptions will detail each contributing component, with accompanying photographs, and information on how the resource fits within the broader historic district during its period of significance. The historic narrative shall draw upon previously prepared studies, including the Historical Resources Technical Report prepared for the La Brea Tar Pits Master Plan, as well as the La Brea Tar Pits Inventory and Treatment Plan prepared under Mitigation Measure CR-HIST/mm-1.2. The narrative shall also include a methodology section specifying the name of researcher, date of research, and sources/archives visited, as well as a bibliography. Within the written history, statements shall be footnoted as to their sources, where appropriate.* *Upon finalization of the HABS-like Documentation Package, a hard copy and digital copy shall be prepared and offered to the Natural History Museum Seaver Center for Western History Research, University of Southern California Special Collections, and the Los Angeles Public Library.*
CR-HIST/mm-1.4	*A Retrospective Exhibit and Interpretive Program shall be prepared and implemented. The Retrospective Exhibit and Interpretive Project shall be prepared by a qualified historic preservation professional who meets the Secretary of the Interior's Professional Qualifications Standards in History and/or Architectural History. The exhibit materials shall be drawn from previous studies including but not limited to the Inventory and Treatment Plan described in Mitigation Measure CR-HIST/mm-1.2 and the HABS-like documentation package described in Mitigation Measure CR- HIST/mm-1.3, as well as other supplemental research materials as needed.* *The retrospective exhibit and interpretive program shall focus on the history of the site, the people involved in the early ownership, development, and scientific discoveries and excavations, and the events leading to its donation to the County of Los Angeles, as well as on the site's development through the end of the period of significance for the La Brea Tar Pits Historic District, 1977.*

CR-HIST Impact 1	
	The retrospective exhibit and interpretive program may include but not be limited to exhibit materials and interpretive panels, both exterior (e.g., as a series of panels in the park), interior (e.g., as a permanent exhibit in the Page Museum or new museum building), and online (on the museum website). The exhibit and interpretive program shall be designed for maximum public accessibility. *The plan for the interpretive and commemorative program shall be detailed in an Interpretive Program Plan Memorandum to be prepared with the guidance of a qualified historic preservation professional. The retrospective exhibit and interpretive program shall be completed within three (3) years of commencement of initial construction activities. The Draft Interpretive Program Plan Memorandum shall be reviewed by interested parties such as the Los Angeles Conservancy and County of Los Angeles Historic Preservation Commission for comment.*
CR-HIST/mm-1.5	*A pre-construction protection plan for historical resources shall be prepared prior to any major alteration or construction activities that may potentially damage historic resources or contributing features of the La Brea Tar Pits Historic District or Page Museum. A qualified Historic Architect shall be retained to develop a Preservation Protection Plan that identifies potential risks to historical resources within or adjacent to the immediate project footprint. The Historic Architect shall satisfy the Secretary of the Interior's Professional Qualifications Standards for Historic Architecture as defined by the National Park Service and in accordance with 36 CFR 61 and possess a minimum of ten (10) years of project-level experience in reviewing architectural plans for conformance with the Secretary's Standards.* *The Preservation Protection Plan may include, but not be limited to, the following components:* • *Inclusion/mapping of the historical resource/contributing feature on any architectural drawings, site plans, and/or construction documents.* • *Site walk with Design Team and construction team representative to review staging areas for construction and construction sequence and activities, to identify areas of concern and to provide input for proactive avoidance of unforeseen impacts.* • *Procedures and timing for the placement and removal of temporary protection features, such as fencing and other barriers, around the historical resource/contributing feature.* • *Monitoring of the installation and removal of temporary protection features by the Historic Architect, or designee.* • *Post-construction survey to document the condition of the historic resource after project completion.* • *Preparation of a technical memorandum documenting the pre-construction and post-construction conditions of the historic resource and compliance with protective measures outlined in the Preservation Protection Plan.* *The Preservation Protection Plan shall be submitted in draft form to interested parties including the Los Angeles Conservancy and the Los Angeles County Historic Preservation Commission for review and comment.*
Impacts Following Mitigation	
Upon implementation of Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5 to address the substantial adverse change in the significance of a historical resource, construction impacts would remain significant and unavoidable. No operational impacts would occur.	

5.5.6 Cumulative Impact Analysis

Cumulative impacts to historical resources may occur if the project and related projects cumulatively affect historical resources in the immediate vicinity, contribute to changes within the same historic district, or involve resources that are examples of the same property type or significant within the same context as the one within the project site. Although impacts to historical resources, if any, tend to be site specific, a significant cumulative impact associated with the project and related projects would occur if the combined impact of the project and related projects would materially and adversely alter those physical characteristics that convey the historic significance of a historical resource and that justify its listing, or eligibility for listing, as a historical resource.

Chapter 4, Environmental Setting, provides a list past, present, or reasonably foreseeable future development projects that are anticipated to occur in the vicinity of the project site. These projects include a mix of residential, commercial, and mixed-use developments. The cumulative geographic scope considered for historical resources is the same CEQA APE used in the analysis above, defined as parcels within and directly adjacent to the project footprint. Two projects included in the cumulative development scenario identified in Chapter 4 are within the CEQA APE, including the following:

- **LACMA Renovation**: Located directly adjacent to the project site (on parcels directly west and south across Wilshire Boulevard) at 5906 West Wilshire Boulevard. The project includes museum renovation and is under construction. Construction activities are estimated to be completed at the end of 2024.
- **Wilshire Curson Project**: Located approximately 0.03 miles southeast of the project site at 5700 -5780 Wilshire Boulevard; 712-752 South Curson Avenue; 5721-5773 West 8th Street; and 715-761 South Masselin Avenue. The project includes office and commercial uses and would involve both the renovation of existing buildings as well as the demolition and construction of new buildings. The project is currently under environmental review and anticipated construction timeframes are not available as of the publication date for this EIR.

As discussed in CR-HIST Impact 1, the project was evaluated for its potential to result in direct impacts to the historical resources within the project site as well as indirect impacts to adjacent properties with historic resources. While the project would not result in impacts to adjacent properties with historic resources, the project would directly result in significant and unavoidable impacts to the La Brea Tar Pits Historic District and the Page Museum, rendering both resources no longer eligible for significance. When considered in combination with the impacts of these projects in the cumulative scenario, the project would contribute incrementally to significant impacts on historical resources. Further, the project's contribution to these cumulative impacts would be considerable and significant.

Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5 would avoid, minimize, rectify, reduce, or compensate for the significance of the impacts to the degree feasible. However, they would not mitigate impacts below the level of significance. Therefore, no feasible mitigation exists that would reduce the project's contribution to less than cumulative considerable.

CR-HIST Impact 2 (Cumulative)
Construction of the project would result in substantial adverse changes to the significance of a Historical Resource pursuant to Section 15064.5 of the State CEQA Guidelines, which would be considerable impacts contributing to cumulative historical resources impacts. Specifically, the project would cause a substantial adverse change in the significance of two identified historical resources: the La Brea Tar Pits Historic District and the George C. Page Museum. These direct construction impacts would also be significant. No operational impacts to historical resources would occur; therefore, contributions to cumulative impact would similarly not occur during the project's operational period.
Mitigation Measures
Implement Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5.
Impacts Following Mitigation
With implementation of Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5, the project's construction impacts to historical resource impacts would remain significant and unavoidable. As well, the project's contribution to cumulative impacts related to historical resources would remain significant and unavoidable. No operational impacts to historical resources would occur.

5.6 GEOLOGY AND SOILS

This section describes the geologic and seismic setting of the project site, including risks associated with existing environmental conditions, including fault rupture, ground shaking, soil liquefaction, soil expansion, and/or landslides. The project's potential impacts regarding these topics are based on analysis provided in the *Geology and Soil Discipline Report, La Brea Tar Pits Museum Master Plan Project* (Geology and Soil Discipline Report), prepared by Shannon and Wilson, dated January 27, 2023 (Appendix E).

This section also evaluates the potential for the project to impact paleontological resources or unique geologic features. Information related to the existing conditions and analysis for paleontological resources is based on the *Paleontological Resources Technical Report, La Brea Tar Pits Master Plan, Los Angeles, California* (Paleontological Resources Technical Report), prepared by SWCA Environmental Consultants (SWCA), dated January 25, 2023 (Appendix F).

5.6.1 Existing Conditions

5.6.1.1 Regional Faulting and Seismicity

FAULTING

There are numerous faults in Southern California including active, potentially active, and inactive faults. Based on criteria established by the California Geological Survey (CGS), active faults are those that have shown evidence of surface displacement within the past 11,000 years (i.e., Holocene-age). Potentially active faults are those that have shown evidence of surface displacement within the last 1.6 million years (i.e., Quaternary-age). Inactive faults are those that have not shown evidence of surface displacement within the last 1.6 million years. The Alquist-Priolo Earthquake Fault Zoning Act defines "active" and "potentially active" faults using the same aging criteria as those used by the CGS, as described above. However, according to the Alquist-Priolo Earthquake Fault Zoning Act, only those faults which have direct evidence of movement within the last 11,000 years are required to be zoned. The CGS considers fault movement within this period to be a characteristic of faults that have a relatively high potential for ground rupture in the future.

The Los Angeles Basin and the Southern California region are located within a complex zone of faults, fault systems, folds, and other geologic features. Since the project site is located within a seismically active area, it is expected to experience the effects of future earthquakes on active faults. Figures included in the Geology and Soil Discipline Report (see Appendix E) illustrate active and potentially active faults mapped in the vicinity of the project site. There are no known active or potentially active faults mapped within the project site or immediately adjacent to the project site. In addition, the project site is not located within an Alquist-Priolo Earthquake Fault Zone. The closest active faults to the project site include the following: Elysian Park Fault - Lower Thrust located approximately 1.7 miles southeast; Newport-Inglewood-Rose Canyon Fault Zone located approximately 1.7 miles southwest; Santa Monica Fault located approximately 2.4 miles west; and the Hollywood Fault located approximately 2.6 miles north. The closest potentially active faults to the project site include the Overland Avenue Fault located approximately 4.2 miles southwest of the project site and the Charnock Fault located approximately 6 miles from the project site. Refer to Appendix E for a detailed discussion of these nearby active faults.

SEISMICITY

Several earthquakes of moderate to large magnitude (greater than 5.0) have occurred in Southern California area within the last 90 years. Table 5.6-1 provides a list of some of these earthquakes

(with magnitudes greater than 5.7) within approximately 150 miles of the project site. As shown, recent historic earthquakes in the greater Los Angeles region include the 1933 Long Beach Earthquake (Moment Magnitude Scale [Mw] 6.4), the 1971 San Fernando Earthquake (Mw 6.5), the 1987 Whittier Narrows Earthquake (Mw 5.9), the 1991 Sierra Madre Earthquake (Mw 5.8), and the 1994 Northridge Earthquake (Mw 6.7).

Table 5.6-1. Major Historic Earthquakes in Southern California

Earthquake	Date of Earthquake	Moment Magnitude Scale (M_w)	Distance to Epicenter (miles)	Direction to Epicenter
Long Beach	March 10, 1933	6.4	38	SE
Kern County	July 21, 1952	7.5	75	N-NW
Borrego Mountain	April 9, 1968	6.5	143	SE
San Fernando	February 9, 1971	6.5	24	N
Whittier Narrows	October 1, 1987	5.9	16	E
Superstition Hills	November 24, 1987	6.6	162	SE
Sierra Madre	June 28, 1991	5.8	24	NE
Joshua Tree	April 22, 1992	6.1	117	E
Big Bear	June 28, 1992	6.4	88	E
Landers	June 28, 1992	7.3	110	E
Northridge	January 17, 1994	6.7	15	NW
Hector Mine	October 16, 1999	7.1	125	NE
Ridgecrest Sequence	July 4–5, 2019	6.4, 7.1	123, 125	NE

Source: Shannon and Wilson (2023). Information provided by the Southern California Earthquake Data Center (SCEDC). Distances to epicenter values were determined based on the latitude and longitude values presented by SCEDC.

5.6.1.2 Regional Geology

The project site is located in the coastal Los Angeles Basin at the northern edge of the Peninsular Ranges Geomorphic Province and adjacent to the southern edge of the Transverse Ranges Geomorphic Province. The basin includes the low-lying area between the San Gabriel Mountains and the Pacific Ocean shoreline. Nearby hills and mountain ranges bordering the basin include the prominent Santa Monica Mountains to the north, the Hollywood Hills to the northeast, the Elysian and Repetto Hills to the east, the Peninsular Ranges to the southeast, and the Baldwin Hills to the south. Further discussion of regional geology can be found in the Paleontological Resources Technical Report (see Appendix F).

5.6.1.3 Project Site Geology

The project site occupies the westerly extent of the La Brea Plain. The La Brea Plain is a broad, slightly elevated, and dissected surface underlain by coalescing Quaternary age (recent to 2.6 million years ago) alluvial fan and floodplain deposits. These alluvial sediments were deposited on the underlying Tertiary-age (2.6 to 66 million years ago) shallow marine sedimentary bedrock formations. Faulting and folding of the bedrock over millions of years has formed structural traps for petroleum deposits. Several oil and gas fields were developed within this portion of the Los Angeles Basin, including the Salt Lake and South Salt Lake fields.

At the project site, crude oil and gas leaking from the petroleum deposits of the Salt Lake Field have migrated toward the ground surface through fractures and faults in the bedrock, permeating into the overlying alluvium. Upon reaching shallower depths, the lighter petroleum components are altered by evaporation and biologic processes resulting in a more viscous remnant tar (or asphalt) deposit.

LOCAL GEOLOGY AND GEOLOGIC UNITS

Regional geologic maps indicate the project site is underlain by alluvial deposits, as shown in figures included in the Geology and Soil Discipline Report (see Appendix E). Specifically, the geologic map depicts the project site being underlain by slightly elevated and dissected, older alluvium and alluvial fan sediments (mapped as Qae). Geotechnical explorations near the project site indicate much of the alluvial deposits are covered by a layer of artificial fill, extending to depths of approximately 1 to 8 feet below ground surface. The fill is of variable composition, consisting of silty clay, sandy clay, clayey silt, and silty sand.

The project site is underlain by units described as late-Pleistocene to Holocene (recent to about 11,000 years old) in age. The Pleistocene-age (about 11,000 to 1.8 million years) alluvial deposits consist of stiff to very stiff clays with some dense silt and silty sand layers. These relatively fine-grained materials overlie thicker deposits of dense to very dense sand. The fine-grained alluvial deposits belong to the Lakewood Formation, while the deeper sand beds correspond to the San Pedro Formation. The youngest surficial deposits observed in this area are Holocene sediments of modern alluvial fans, stream channels (e.g., Los Angeles and San Gabriel Rivers), and their floodplains. These debris-flow, sheetflood, and fluvial deposits consist of boulder, cobble, and pebble gravel lenses and sheets, interbedded with sand, silt, and clay derived from the surrounding highlands.

As noted previously, natural hydrocarbons are present in the alluvium due to the upward migration of crude oil leaking from oil deposits within the underlying bedrock. The crude oil has been altered near the ground surface to viscous tar, and the more permeable sand deposits are permeated with tar.

The Lakewood and San Pedro Formations are directly underlain by Tertiary-age sedimentary bedrock of the Fernando Formation. The bedrock consists primarily of well stratified, locally folded, interbedded claystone, siltstone, and sandstone.

GROUNDWATER

The project site is located within the Central Groundwater Basin of the Los Angeles Coastal Plain. The principal freshwater-bearing sediments of the Central Basin include the Holocene-age alluvial deposits, and the Pleistocene-age Lakewood and San Pedro Formations at depth. According to the Seismic Hazard Zone Report for the Hollywood 7.5-minute quadrangle, the project site lies within the 10-foot water level contour of the historically high groundwater levels. This indicates that the historical high groundwater depth is at or shallower than 10 feet below ground surface. Previous subsurface explorations conducted at the project site encountered groundwater levels at depths less than 10 feet below ground surface. Groundwater depth is anticipated to fluctuate in response to rainfall, seasonal variations, and other factors, and is anticipated to vary throughout the site.

TAR SANDS AND SEEPS

Tar sands and seeps are present at various locations within and around the project site. These tar seeps occur randomly and are likely the result of methane and hydrogen sulfide gas pressure at depth mobilizing groundwater and tar to the surface. Based on previous subsurface explorations at and in the immediate vicinity of the project site, tar sands were encountered at depths varying from approximately 6 feet to 30 feet below ground surface, correlating to elevations ranging from 137 feet to 180 feet above mean sea

level. Soils excavated within the top 10 feet and above the groundwater level at the project site are not anticipated to contain significant natural oil or tar. Soils from excavations that extend below the groundwater level could contain natural oil and/or tar.

OIL FIELD AND ADJACENT OIL WELLS

The project site is located within the limits of the Salt Lake Oil Field. According to maps prepared by the State of California Department of Conservation, Geologic Energy Management Division (CalGEM), there are several oil and gas wells located within the vicinity of the project site (within a 1-mile radius), the nearest including the Mars Oil Co. Masselin 1 to the south and three Chevron Salt Lake oil wells to the north and east of the project site. According to CalGEM records, these wells are plugged and abandoned. The CalGEM maps, dating back to the 1900s, do not show abandoned or active oil wells within the footprint of the project site and the likelihood of encountering an abandoned oil well is low (CalGEM 2023; Shannon and Wilson 2023).

METHANE AND HYDROGEN SULFIDE GAS

The project site is located within an area delineated by the City of Los Angeles as a Methane Zone or a zone of known shallow methane and hydrogen sulfide gas accumulation with high potential for seepage of methane gas. Crude oil and methane gas leak out from the petroleum deposits and migrate through fractures and faults located within the bedrock until encountering the alluvial soils, where they permeate into the alluvium and continues to travel upward to the ground surface. Many of the light petroleum components are lost to evaporation and biogenic processes, resulting in viscous tar seeping out of the ground surface. Impacts related to methane and hydrogen sulfide gas are discussed in Section 5.8, Hazards and Hazardous Materials, and the project-specific Methane Study is included as Appendix G.

5.6.1.4 Paleontological Resources

Paleontological resources are the evidence of once-living organisms preserved in the rock record. They include both the fossilized remains of ancient plants and animals and the traces thereof (e.g., trackways, imprints, burrows, etc.). In general, fossils are considered to be older than recorded human history or greater than 5,000 years old and are typically preserved in sedimentary rocks. Although rare, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks under certain conditions.

Paleontological potential is defined as the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological potential is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey or study. A geologic unit known to contain significant fossils is considered sensitive to adverse impacts if there is a high probability that earth-moving or ground-disturbing activities in that rock unit would either disturb or destroy fossil remains, directly or indirectly.

The project site is considered the most recognized paleontological locality in the world due to its unique geologic conditions linked to the origin and development of petroleum reservoirs within the Los Angeles Basin. As discussed in detail in the Paleontological Resources Technical Report (see Appendix F), the paleoecological and paleoenvironmental conditions as well as the unique geologic setting during the late Pleistocene and Holocene within Rancho La Brea[1] have contributed to the high level of fossil

[1] The project site is located within the former Rancho La Brea, a 4,439-acre Mexican land grant given to Antonio Jose Rocha and Nemisio Dominguez in 1828. Rancho La Brea consisted of approximately 4,500 acres of land in current-day Wilshire Miracle Mile, Hollywood, and parts of West Hollywood.

preservation at the project site, which has historically yielded millions of significant fossils (SWCA 2023). A detailed history of the paleontology of the project site as well as in depth records of previous excavations at the project site are provided in the Paleontological Resources Technical Report (see Appendix F). The following discussion focuses on the most recent excavations and paleontological discoveries in the vicinity of the project site and provides an overview of more recent local geological mapping and geotechnical investigations within the project site and its immediate vicinity.

PALEONTOLOGICAL RESOURCES IDENTIFIED WITHIN THE PROJECT SITE AND VICINITY

Recent Excavations

Several recent construction projects within or immediately adjacent to the project site have yielded numerous significant paleontological resources from the same deposits as those that could potentially be encountered during implementation of the project. Figure 5.6-1 illustrates the fossil collection localities within the greater area of Hancock Park, including the project site. As indicated in the Paleontological Resources Technical Report (see Appendix F), recent projects from within or immediately adjacent to Hancock Park include the Los Angeles County Museum of Art (LACMA) Transportation Project, the Academy Museum of Motion Pictures Project, the New LACMA Building for the Permanent Collection Project, and the One Museum Square Project. From the LACMA Transportation Project, numerous paleontological resources were discovered during monitoring of ground disturbances. In fact, 16 deposits of asphalt (or asphalt-rich sediments) containing abundant fossilized remains were extracted in 23 "landscaping/tree box" crates, as well as several isolated macrofossils (for example, one isolate yielded a nearly complete adult Columbian mammoth nicknamed "Zed") and 327 buckets of matrix containing microfossils (SWCA 2023).

The crated deposits—referred to as "Project 23" by the George C. Page Museum (Page Museum)—are still being processed on the grounds of Hancock Park, with estimates of the number of fossils contained within ranging from 1 million to 3 million (ArchaeoPaleo Resource Management, Inc. 2014). Similar discoveries have been made during ground-disturbing activities at the Academy Museum of Motion Pictures and the New LACMA Building projects, each of which uncovered numerous significant fossil discoveries that were crated in a similar fashion, with each crate possibly containing hundreds to thousands of fossils remaining to be processed. Table 5.6-2 provides a sample of completed local paleontological resources discovered during monitoring for development projects in the vicinity of the project site.

Table 5.6-2. Sample of Completed Local Paleontological Resources Monitoring Projects

Project Name	Year	Distance/Direction from Proposed Project	Monitoring Results
The Grove at Farmers Market	2001	1,000 meters (0.62 mile) north	Pleistocene gopher and plants; blue-green sandy silt
Farmers Market Renovation (also known as The Grove at Farmers Market Phases 2 and 3)	2001–2004	1,000 meters (0.62 mile) north	Pleistocene macrofauna, such as mammoth, horse, and indeterminant mammal; microfauna and flora; streambed soils, some asphalt deposit stringers
Park La Brea Community Center	2004	650 meters (0.40 mile) northeast	No fossils, caliche soils

Project Name	Year	Distance/Direction from Proposed Project	Monitoring Results
Palazzo West/Palazzo at Park La Brea	1999–2003	700 meters (0.43 mile) north	Pleistocene macrofauna, such as horse, mammoth, bison, sloth; other vertebrates, such as frog, bird, rabbit, snake, skunk, various rodents; microfauna, such as clam, gastropod; plants; streambed sandstone, siltstone, claystone, some asphaltic deposit stringers
Palazzo East/Palazzo at Park La Brea	1999–2003	1,100 meters (0.68 mile) northeast	Pleistocene macrofauna, such as horse, sloth, camel, bison, and proboscidean/elephant; microfauna, such as ostracod; plants; fluvial alluvium composed of sandstone, siltstone, and claystone
The Villas at Park La Brea	1999–2003	1,100 meters (0.68 mile) east-northeast	No fossils observed; silty clay, caliche
Median Improvements, Wilshire Boulevard from Fairfax Avenue to La Brea Avenue	1996	80 meters (263 feet) south	No fossils observed; deposits too young to contain fossils
Hancock Park Renovation	1989–2003	*Adjacent, east and north	Pleistocene macrofauna, such as mammoths; microfauna and flora; streambed soils and asphaltic deposits
Hancock Park Replacement Pipeline Discharge System	2012	245 meters (0.15 mile) east	Indeterminant mammal, large bird, small bird, microfossils; asphaltic deposits
Luxe@375 (apartment construction with subterranean parking)	2012	2,200 meters (1.37 miles) northwest	Pleistocene indeterminant bony fish, toad, frog, pond turtle, rattlesnake, indeterminant reptile, indeterminant bird, various rodents, camel, horse, rabbit, mastodon, ground sloth, bivalve, gastropod, plant (i.e., charcoal)
LACMA Transformation Project	2006–2008	Adjacent, west	“Project 23”. During construction, 16 asphaltic deposits, recovered in 23 trapezoidal/prismatic “tree boxes” holding 383 cubic meters of material contain an array of Pleistocene fossils, including terrestrial macrofauna, such as bison, dire wolf, mammoth, sloth, lynx, saber-toothed cat, horse, bird, turtle; microfossils; and plants resulting in thousands of fossil specimens. Additionally, individual or isolated specimens were jacketed or collected, including a Columbian mammoth.
Academy Museum of Motion Pictures	2019–2020	Adjacent, west	Numerous macrofauna, including saber-toothed cat, dire wolf, bison, ground sloth; and microfauna; plants; fluvial deposits with some asphaltic deposits
New LACMA Building Project	2016–2017	Adjacent, west and southwest	Gastropods and bivalves from depths of 41 to 65 feet below ground surface; fine-grained sand and silty clay, saturated with asphalt
One Museum Square Project	2018–2019	Adjacent, east	Approximately 20,000 fossil specimens of birds and small mammals

Sources: AECOM (2016a, 2017); ArchaeoPaleo Resource Management, Inc. (2014); Environmental Science Associates (2020)
* “Adjacent” refers to projects that are within Hancock Park or along its boundary but not within the La Brea Tar Pits Master Plan area.

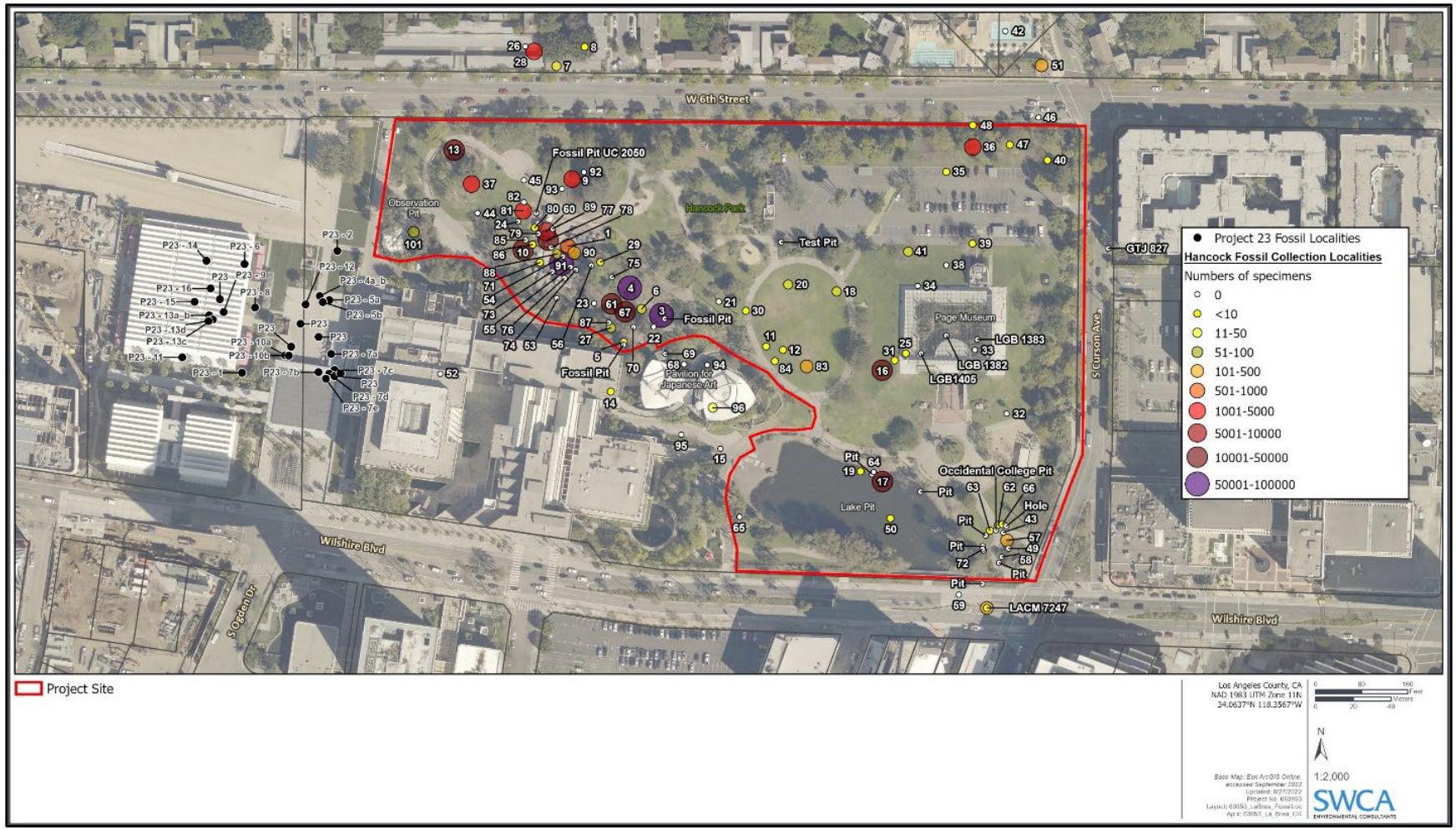


Figure 5.6-1. Fossil collection localities within Hancock Park.

Museum Records Search

Table 5.6-3 summarizes the results from a museum records search that was requested and conducted in early 2022. The search was led by the Natural History Museum of Los Angeles County (Natural History Museum) and was completed on February 5, 2022. The records search highlights several known fossil localities within the project site and its vicinity. See the Paleontological Resources Technical Report (Appendix F) for additional information regarding the records search.

Table 5.6-3. Museum of Natural History Fossil Localities within and near the Project Site

Locality Number	Approximate Distance from the Project Site	Formation	Taxa	Approximate Depth Below the Ground Surface
LACM VP 7298	Within Hancock Park	Variably asphaltic silts and silty clays	Approximately 10,000 botanical, invertebrate, and vertebrate specimens	Unrecorded (approximately 25 feet below ground surface based on elevation of Hancock Park)
LACM VP 6909	Within Hancock Park	Asphaltic sands	Vertebrate, invertebrate, and plant fossils	0–20 feet
Project 23 (16 separate fossil deposits)	Within Hancock Park	Pleistocene fluvial deposits and asphaltic sands	Over 1 million fossil specimens including one nearly complete mammoth	Starting at 10 feet
LACM VP 7297	0.01 mile (53 feet/ 16 meters)	Asphaltic sand grading to asphaltic clay	Approximately 250,000 botanical, invertebrate, and vertebrate specimens	Unrecorded (approximately 2 to 10 feet below ground surface based on elevation of Hancock Park)
LACM VP 7247	0.02 mile (106 feet/ 32 meters)	Asphalt impregnated silt with lenses of asphaltic sand	Dire wolf (*Canis dirus*); horse (*Equus*)	2 feet
LACM VP 4204	0.07 mile (370 feet/ 113 meters)	Pleistocene asphaltic older alluvium	Antelope (*Antilocapra*)	Unrecorded
LACM VP 6345	0.10 mile (528 feet/ 161 meters)	Asphaltic sands	Bird (Aves); horse (*Equus* cf. *E. occidentalis*)	Unrecorded
LACM VP 5481	0.13 mile (686 feet/ 209 meters)	Asphalt-impregnated Palos Verdes Sand	Mammoth (*Mammuthus*); tapir (*Tapirus*); horse (*Equus*); camelid (*Camelops*, cf. *Hemiauchenia*); bison (*Bison*)	27–28 feet
LACM VP 1724	0.20 mile (1,056 feet/ 322 meters)	Pleistocene asphaltic sands	Pond turtle (*Clemmys marmorata*); bird (Aves); racoon (Procyonidae); saber-toothed cat (*Smilodon fatalis*); dire wolf (*Canis dirus*), coyote (*Canis latrans*), pronghorn antelope (*Capromeryx minor*); bison (*Bison*)	8 feet

Source: Natural History Museum (2022)

Fossil localities within the project site include fossil locality LACM VP 7298 that produced approximately 10,000 plant, invertebrate, and vertebrate specimens. Additional vertebrate, invertebrate, and plant fossils have been discovered at locality LACM VP 6909 at the surface down to 20 feet below ground surface (bgs) within the project site. Numerous other fossil localities, including Project 23 described above, have been discovered and curated from within the project site.

Outside of the project site, the closest fossil locality is LACM VP 7297, which is located 16 meters (53 feet) southwest of the project site and has yielded approximately 250,000 vertebrate, invertebrate, and botanical specimens from asphaltic sand and clay. Fossil locality LACM VP 7247 was recorded 32 meters (106 feet) away from the project site and yielded an extinct dire wolf and horse from a depth of approximately 2 feet bgs. The presence of Pleistocene fossil taxa at 2 feet bgs suggests that fossils could be present just below the surface throughout most of Hancock Park. Additionally, an antelope fossil was discovered 113 meters (370 feet) from the project site within Pleistocene asphaltic older alluvium at locality LACM VP 4204. Other fossil localities approximately 322 meters (0.2 mile) or less from the project site, such as LACM VP 6345, LACM VP 5481, and LACM VP 1724, have yielded Pleistocene taxa "typical" of asphaltic alluvial sand deposits within La Brea Tar Pits, including fossil turtle, bird, racoon, saber-toothed cat, dire wolf, coyote, mammoth, horse, tapir, camel, antelope, and bison.

Although not included in the Natural History Museum's records search results, fossil locality LACM VP 8090, recorded during construction of the One Museum Square Project located approximately 100 meters (330 feet) away from the Page Museum on the east side of Curson Avenue, yielded approximately 20,000 small mammal and bird fossils that are currently being processed at the Page Museum (personal communication, Dr. Regan Dunn [2022]).

GEOLOGIC MAPPING AND GEOTECHNICAL INVESTIGATIONS

The geologic setting is another key to understanding the potential for important paleontological resources at the project site (see Sections 5.6.1.2 and 5.6.1.3 for broad-scale geological setting). Local geologic mapping and previous geotechnical investigations of Hancock Park and the surrounding area provide the geological framework that informs the paleontological setting of the project site, although the fossil deposits follow asphalt pits and are not confined to one particular geologic unit. Geologic mapping by Dibblee and Ehrenspeck (1991) and Yerkes and Graham (1997) indicate that the surface of the project site is mapped as late Pleistocene older alluvium (Qao) (for the purposes of the paleontological resources assessment, SWCA uses Yerkes and Graham [1997]; however, this geologic unit is also referred to as the Lakewood Formation by some geologists, as noted in the Geology and Soil Discipline Report [see Appendix E]). Previous geotechnical investigations of the site summarized in the Geology and Soil Discipline Report (see Appendix E) indicate that the surface of the project site is capped by a thin layer of artificial fill that overlies the "native" older alluvium. The presence of artificial fill and/or previously disturbed sediments is evident along the 15-foot-high soil slopes surrounding the base of the Page Museum but extends across the site in the subsurface. Additionally, regional and local subsurface geological data suggest that the early Pleistocene San Pedro Sand and the early Pleistocene to Pliocene Fernando Formation are also present at depth within Hancock Park, despite not being exposed at the surface in the immediately vicinity. Therefore, artificial fill, older alluvium, San Pedro Sand, and Fernando Formation are considered in this analysis and are described in geochronological order (youngest to oldest) below. Table 5.6-4 summarizes the paleontological potential of the geologic units that are underlying the project site, and each is discussed in detail in the following subsections.

Table 5.6-4. Geologic Units and Paleontological Potential Underlying the Project Site

Geologic Unit Name	Age	Paleontological Potential
Artificial fill and reworked sediments	Late Pleistocene and Holocene	High
Older alluvium (Qao) (i.e., Lakewood Formation)	Late Pleistocene	High
San Pedro Sand	Early Pleistocene	High
Fernando Formation	Early Pleistocene to Pliocene	High

Unmapped Recent Artificial Fill and Reworked Sediments

Based on previous site development, unmapped recent artificial fill and reworked (i.e., previously disturbed) sediments are present at the surface of the project site from 1- to 3-foot depth or 1- to 8-foot depth, likely partially replacing the uppermost "native" sediments of older alluvium (AECOM 2017; Shannon and Wilson 2023). The presence of artificial fill and reworked sediments across the entirety of the site to varying depths was confirmed during the archaeological testing conducted by SWCA within Hancock Park (Millington and Dietler 2023).

The artificial fill material consists of silty clay, sandy clay, clayey silt, and silty sand (Shannon and Wilson 2023). In general, fill sediments typically consist of reworked and recompacted sediments originating from within a project site during its construction, or they consist of imported sediments delivered from other regions that are delivered and recompacted at a project site. Artificial fill or previously disturbed sediments may contain fossils, but any such fossil from these deposits has been removed from its original stratigraphic, taphonomic, or paleoenvironmental context (provenance), making it scientifically invalid in most instances. Here, artificial fill sediments, at least in part, consist of reworked and compacted sediments originating from Hancock Park, which explains the presence of some fossil fragments recovered from the sediment stratum capping the project site.

It is also important to note that early paleontological investigations prioritized salvage or collection of large fossil specimens or extinct fauna, with little regard for the small-sized fossil fragments or smaller taxa (e.g., rodents, plants, insects, etc.). Asphalt or asphalt-rich sediments containing small fossils may have been discarded or ignored by early investigators and later reworked as fill at the site. Although considered scientifically less valuable or scientifically nonsignificant in *most* circumstances (Society of Vertebrate Paleontology [SVP] 2010), fossils from artificial fill and reworked sediments originating from within Hancock Park may still provide scientifically important information due to level of fossil preservation that allows radiocarbon dating of specimens from the site to help elucidate the changing environment during the late Pleistocene and Holocene of Southern California. Therefore, recent artificial fill and reworked sediments originating from Hancock Park have a high potential to produce significant paleontological resources and are immediately underlain by "native" geologic units that also have a high potential for scientifically significant fossils.

Older Alluvium (Qao)

Yerkes and Graham (1997) map late Pleistocene older alluvium (Qao) (also referred to as the Lakewood Formation) at the surface of the project site; however, the uppermost strata of older alluvium likely have been partially replaced by artificial fill/reworked sediments to 1- to 3-foot depth or 1- to 8-foot depth within Hancock Park. Older alluvium consists of slightly to moderately consolidated to moderately to well consolidated (stiff to very stiff) clays with some dense silt and silty sand deposits (Campbell et al. 2014; Dibblee and Ehrenspeck 1991; Shannon and Wilson 2023; Yerkes and Graham 1997). These deposits have subsequently been uplifted and variably dissected at the surface (Campbell et al. 2014; Dibblee and Ehrenspeck 1991; Yerkes and Graham 1997). The thickness of older alluvium varies across the Los Angeles Basin (Woodring et al. 1946; Yerkes et al. 1965). For example, deposits of sands, clay, gravel, and angular rubble are approximately 40 to 190 feet thick (only a subset of that thickness is classified as older alluvium) within the Salt Lake Oil Field immediately north of and adjacent to Hancock Park (Stock and Harris 2007); however, most asphalt or asphalt-saturated alluvial sediments that have yielded Rancholabrean fossils are from 13 to 20 feet bgs (Shannon and Wilson 2023), but possibly range from near the surface to approximately 40 feet bgs (AECOM 2016b).

Since the onset of geologic investigations into the petroleum reservoirs within the Los Angeles Basin, geologists have reviewed the structural deformation of the Pleistocene strata overlying the Miocene and Pliocene marine rocks containing petroleum. Given the northwest-southeast trend of fossiliferous sites

within Hancock Park, the asphalt springs may originate from a subsurface fault along West 6th Street (Stock and Harris 2007). Early Pleistocene strata are deeply eroded and sloped, suggesting the same tectonic forces that caused considerable folding and faulting of the deeper Miocene and Pliocene marine rocks within the subsurface of the Los Angeles Basin were still active during the early Pleistocene, as evidenced by similar deformed marine and nonmarine deposits from the early Pleistocene. Horizontal beds of late Pleistocene older alluvium unconformably overlie the deformed beds of early Pleistocene (i.e., San Pedro Sand) and older strata (Stock and Harris 2007). The stratigraphic succession and orientation of the Pleistocene sediments may be relevant for understanding the paleoenvironmental and tectonic changes that occurred between the early and late Pleistocene that resulted in the development of asphalt pools at the surface, trapping or miring organisms, and the subsequent burial of organic remains by alluvial or fluvial processes (i.e., alluvial fans and stream channels of the Los Angeles and San Gabriel Rivers) at the surface during the late Pleistocene and early Holocene. Despite the near horizontal stratigraphy of older alluvium, geotechnical investigations indicate that asphalt is present within the older alluvium, seeping to the surface via fissures, fractures, and chimneys crosscutting the stratigraphy and concentrating in sandy layers (AECOM 2016b; Shannon and Wilson 2023).

In general, equivocal non-asphaltic older alluvial deposits within Southern California have yielded similar taxa from sporadic fossil localities; however, the level of fossil preservation of both micro-fossils and macro-fossils is far less at these localities (Jefferson 1991a, 1991b; McDonald and Jefferson 2008; Miller 1971; Reynolds and Reynolds 1991; Springer et al. 2009), demonstrating the unique state of preservation at the project site. Therefore, late Pleistocene older alluvium has a high potential for producing significant paleontological resources.

San Pedro Sand

Although the early Pleistocene San Pedro Sand is not mapped at the surface within the project site, it is noted in geotechnical investigations as underlying the late Pleistocene older alluvium at depth ranges of approximately 17 to 50 feet bgs within Hancock Park (AECOM 2016b). However, other geotechnical investigations summarized by Shannon and Wilson (2023) indicate that the San Pedro Sand may extend to depths of 65 to 94 feet bgs, indicating variation in the thickness of the older alluvium and San Pedro Sand overlying "bedrock" Fernando Formation (see below). Previous and recent geotechnical investigations indicate that some asphalt is present within the matrix of the San Pedro Sand to varying degrees (AECOM 2016b; Shannon and Wilson 2023).

During early investigations, Pleistocene-aged marine deposits in the San Pedro area were broken up into two distinct horizons, the Upper and Lower San Pedro Series, distinguished by a prominent unconformity (Arnold and Arnold 1902). The Lower San Pedro Series consists largely of gray sandstone, and Arnold and Arnold (1902) noted that these sands were deposited in a nearshore environment. The Lower San Pedro Series has been the main focus of research and is currently referred to as the San Pedro Sand (Woodring et al. 1946). The Upper San Pedro Series, consisting of a bed of lime-hardened gravel overlain by a thick layer of fine-grained sand (Arnold and Arnold 1902), is now known as the "Palos Verdes Sand" in the Palos Verdes/San Pedro geographic areas (Woodring et al. 1946), and throughout the Los Angeles Basin, it may be equivalated to late Pleistocene older alluvium, as discussed above.

The abundance of fossil specimens known from the San Pedro Sand is one of the major reasons for the importance of this unit. Fossils recovered from the San Pedro Sand include: foraminifera, bryozoans, bivalves, gastropods, scaphopods, polyplacophorans, crabs, sea urchins, sharks, rays, bony fish, turtle, cormorants, ducks, sea eagles, quail, gulls, geese, whales, bison, camels, horses, saber-toothed cats, ground sloths, elephants, and rodents (Fitch 1967; Howard 1948; Jordan and Hannibal 1923; Miller 1930; Oldroyd 1924; Woodring et al. 1946). Therefore, early Pleistocene San Pedro Sand has a high potential for producing significant paleontological resources, even without the subsequent asphalt deposits.

Fernando Formation

Although not mapped at the surface within the project site or its immediate vicinity, early Pleistocene to Pliocene Fernando Formation is mapped at the surface near downtown Los Angeles (Campbell et al. 2014; Dibblee and Ehrenspeck 1991) and is present at depth throughout the Los Angeles Basin. Previous geotechnical investigations summarized by AECOM (2016b) and Shannon and Wilson (2023) indicate that the Fernando Formation is present in the subsurface at depths as shallow as 65 feet bgs and may extend to depths of 120 feet bgs. The Fernando Formation consists of light olive brown and light yellowish brown to dark yellowish brown, clayey siltstone, fine- to medium-grained sandstone, and pebbly conglomerate of marine origin, which is massive, highly weathered, and oxidized and becoming darker in color, more massive, unoxidized, and more lithified with depth (Campbell et al. 2014; Dibblee and Ehrenspeck 1991; Lamar 1970; Shannon and Wilson 2023). The Fernando Formation has yielded marine and nonmarine fossils and is generally regarded as having the potential to yield fossils. It is also a significant petroleum reservoir for the Los Angeles Basin, with petroleum seeping through fractures to the surface. Fossil localities from surface exposures from this unit have yielded foraminifera, sponges, corals, brachiopods, bryozoans, scaphopods, gastropods, bivalves, cephalopods, fiddler crabs, sea urchins, sharks, bony fish, birds, unidentifiable mammals, and plants (Clarke et al. 1980; Groves 1992; Huddleston and Takeuchi 2006; Morris 1976; Paleobiology Database 2022; Schoellhamer et al. 1981; University of California Museum of Paleontology 2022; Woodring 1938). Therefore, the early Pleistocene and Pliocene Fernando Formation has a high potential to yield significant paleontological resources.

5.6.2 Regulatory Setting

5.6.2.1 Federal

There are no specific federal regulations addressing geology and soils issues relevant to the project.

5.6.2.2 State

ALQUIST-PRIOLO EARTHQUAKE FAULT ZONING ACT

The Alquist-Priolo Geologic Hazard Zones Act was passed by the State of California in 1972 to address the hazard and damage caused by surface fault rupture during an earthquake. The Act was renamed the Alquist-Priolo Earthquake Fault Zoning Act, effective January 1, 1994 (Alquist-Priolo Act). The Alquist-Priolo Act has since been revised 12 times; most recently a version became available in 2018 (CGS 2018). The Alquist-Priolo Act requires the State Geologist to establish "earthquake fault zones" along known active faults (faults that have moved in the last ~11,000 years) in the state. The intent of the act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. This Act groups faults into categories of active, potentially active, and inactive. Historic- and Holocene-age faults are considered active, Late Quaternary- and Quaternary-age faults are considered potentially active, and pre-Quaternary-age faults are considered inactive. Cities and counties with earthquake fault zones are required to regulate development projects within these zones. As previously noted, the project site is not within a Alquist-Priolo Earthquake Fault Zone.

SEISMIC HAZARDS MAPPING ACT

The Seismic Hazards Mapping Act of 1990 (Public Resources Code [PRC] Chapter 7.8, Sections 2690–2699.6) directs the CGS to delineate seismic hazard zones. The purpose of the act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating

seismic hazards. Cities, Counties, and state agencies are directed to use seismic hazard zone maps developed by the CGS in their land use planning and permitting processes. The act requires that site-specific geotechnical investigations be performed prior to permitting most urban development projects within seismic hazard zones. Pursuant to the Seismic Hazards Mapping Act, a site-specific geotechnical investigation (see Appendix E) was prepared for the project.

CALIFORNIA BUILDING CODE

The State of California adopted the 2019 California Building Code (CBC), Volumes 1 and 2, which went into effect on January 1, 2020. Based in part on the 2018 International Building Code (IBC), the 2019 CBC makes up Part 2 of Title 24 of the California Code of Regulations. In Chapter 16 of Volume 2, the code contains provisions for structural design, including soil lateral loads (Section 1610) and earthquake loads (Section 1613). Provisions for soils and foundations include the following: Geotechnical explorations (Section 1803); Excavation, grading and fill (Section 1804); and Foundations (Sections 1808-1810). Appendix J of the CBC applies to grading.

PUBLIC RESOURCES CODE SECTION 5097.5

Requirements for paleontological resource management are included in PRC Division 5, Chapter 1.7, Section 5097.5, which 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.

These statutes prohibit the removal, without permission, of any paleontological site or feature from land under the jurisdiction of the State or any City, County, district, authority, or public corporation, or any agency thereof. Consequently, local agencies are required to comply with PRC Section 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others. PRC Section 5097.5 also establishes the removal of paleontological resources as a misdemeanor and requires reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, and district) land.

5.6.2.3 County of Los Angeles

COUNTY OF LOS ANGELES 2035 GENERAL PLAN SAFETY AND CONSERVATION AND NATURAL RESOURCES ELEMENTS

The County of Los Angeles General Plan Safety Element guides the long-term management of geotechnical issues and geotechnical hazards, including seismic hazards, hillside hazards such as mud and debris flows, landslides, hillside erosion, and human-induced slope instability. The following Safety Element goals and policies may be applicable to the proposed project.

Goal S 1. An effective regulatory system that prevents or minimize personal injury, loss of life and property damage due to seismic and geotechnical hazards.

> ***Policy S 1.1.*** Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.

Policy S 1.2. Prohibit the construction of most structures for human occupancy adjacent to active faults until a comprehensive fault study that addresses the potential for fault rupture has been completed.

Policy S 1.3. Require developments to mitigate geotechnical hazards, such as soil instability and landsliding, in Hillside Management Areas through sitting and development standards.

Policy S 1.4. Support the retrofitting of unreinforced masonry structures to help reduce the risk of structural and human loss due to seismic hazards.

The Conservation and Natural Resources Element of the *Los Angeles County General Plan 2035* (General Plan) (County of Los Angeles 2015) recognizes paleontological resources in Section VIII: Historic, Cultural, and Paleontological Resources, and aims to promote public awareness of their value and foster their public enjoyment. Therefore, the General Plan contains one goal (C/NR 14) aimed at the protection of historic, cultural, and paleontological resources, with the following four policies pertinent to paleontological resources:

Goal C/NR14. Protect historic, cultural, and paleontological resources.

Policy C/NR 14.1. Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.

Policy C/NR 14.2. Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.

Policy C/NR 14.5. Promote public awareness of historic, cultural, and paleontological resources.

Policy C/NR 14.6. Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

COUNTY OF LOS ANGELES BUILDING CODE

The County adopted portions of the 2019 CBC and 2018 IBC together with a series of County amendments as the 2020 County of Los Angeles Building Code (CLABC), Volumes 1 and 2. The 2020 amendments were published on January 1, 2020. Together, the provisions in Volumes 1 and 2 of the CLABC address issues related to the following: site grading; cut and fill slope design; soil expansion; geotechnical studies before and during construction; slope stability; allowable bearing pressures and settlement below footings; effects of adjacent slopes on foundations; retaining and basement walls; and shoring of adjacent properties. Appendix J of the CLABC addresses grading and excavation requirements.

The County of Los Angeles (County) Department of Public Works Building and Safety (Building and Safety) is responsible for implementing the provisions of the CLABC and grading standards. Building and Safety has jurisdiction over projects to be approved by the County where grading is required, to ensure project design follows County regulations, to ensure the safety of the workers during construction, and to ensure the safety of the public once construction is complete.

As outlined in the Geology and Soil Discipline Report, the following sections of the CLABC would be required for the project.

The project would be designed and constructed in accordance with the 2020 CLABC, which calls for consideration of seismic loading factors. Required earthquake loading considerations are outlined in Section 1613. Per Section 1613, every structure or portion of a structure shall be designed to resist the

effects of earthquake motions in accordance with the CLABC and the American Society of Civil Engineers (ASCE) 7, which provides standards for design loads and associated criteria, as applicable.

Per Section 1803 of the CLABC, a project-specific geotechnical investigation and geologic hazard report (i.e., geotechnical design report) is required to be prepared to address final design of the project, incorporating recommendations to mitigate the hazards identified herein. The report would be required to meet 2020 CLABC requirements and the most current guidelines developed by the County of Los Angeles Department of Public Works Geotechnical and Materials Engineering Division. Specifically, the report would be required to:

- Confirm seismic ground-motion parameters
- Further develop the soil profile at the site
- Confirm groundwater conditions at the site are as anticipated
- Evaluate soil strength and adequacy of load-bearing soils
- Evaluate total and differential settlement potential
- Recommend structural fill material properties and testing
- Provide recommendations and design criteria for deep foundation systems
- Provide special design and construction criteria for shallow foundations and flatwork founded on expansive soils.

Earthwork activities, such as excavation, grading, and fill placement, would be required to follow the 2020 CLABC standards outlined in Section 1804 and Appendix J, or more current standards if they are adopted prior to the final geotechnical design. The final geotechnical design would provide design and construction requirements for earthwork activities.

5.6.2.4 City of Los Angeles

While the project site is located within the city of Los Angeles, it is owned by the County of Los Angeles. Accordingly, the project is not subject to the regulatory controls of the City of Los Angeles (City). Nonetheless, City regulatory and planning documents that are most relevant to the project as they relate to geology and soils are provided herein for informational purposes.

CITY OF LOS ANGELES GENERAL PLAN SAFETY AND CONSERVATION ELEMENTS

The City's General Plan Safety Element addresses public safety risks due to natural disasters, including seismic events and geologic conditions and sets forth guidance for emergency response during such disasters. The Safety Element also provides maps of designated areas within Los Angeles that are considered susceptible to earthquake-induced hazards, such as fault rupture and liquefaction.

The City's General Plan Conservation Element identifies paleontological resources in Section 3: "Archaeological and Paleontological," which includes an objective and policy (see below) for the protection of paleontological resources.

Objective. protect the city's archaeological and paleontological resources for historical, cultural, research and/or educational purposes.

Policy. continue to identify and protect significant archaeological and paleontological sites and/or resources known to exist or that are identified during land development, demolition or property modification activities.

CITY OF LOS ANGELES BUILDING CODE

Earthwork activities, including grading, are governed by the Los Angeles Building Code, which is contained in the City of Los Angeles Municipal Code (LAMC), Chapter IX, Article 1. Specifically, Section 91.7006.7 includes requirements regarding import and export of material; Section 91.7010 includes regulations, pertaining to excavations; Section 91.7011 includes requirements for fill materials; Section 91.7013 includes regulations pertaining to erosion control and drainage devices; Section 91.1803 includes specific requirements addressing seismic design, grading, foundation design, geologic investigations and reports, soil and rock testing, and groundwater. The Los Angeles Building Code incorporates the California Building Code, with City amendments. The City Department of Building and Safety is responsible for implementing the provisions of the Los Angeles Building Code.

5.6.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse impacts related to geology and soils if it would:

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 based on other substantial evidence of as 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.

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

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.

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.

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

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

5.6.4 Impact Assessment Methodology

The evaluation of potential project impacts related to geology and soils is based on analysis provided in the Geology and Soil Discipline Report prepared for the project (Shannon and Wilson 2023 [see Appendix E]). The Geology and Soil Discipline Report describes the geologic conditions of the project site based on a general site reconnaissance, extensive review of previous subsurface explorations and laboratory testing performed in the project site vicinity and provides a geotechnical analysis of these data

to determine potential impacts that could occur as a result of project implementation. The geology and soils impact analysis includes consideration of potential seismic or geotechnical hazards discussed within the Safety Element of the County General Plan.

The evaluation of potential project impacts related to paleontological resources is based on the Paleontological Resources Technical Report (see Appendix F). The Paleontological Resources Technical Report uses methodology in conformance with industry standards as developed by the Society of Vertebrate Paleontology (SVP) to assess potential impacts as a result of project implementation. This analysis included a review of existing data pertinent to paleontological resources within Hancock Park, including a review of asphalt pit and fossil locality data from multiple sources including published scientific literature; online fossil locality database results; previous paleontological resources assessments; museum records search results from the Natural History Museum; regional and local geologic maps; and subsurface geotechnical/borehole data. Upon evaluation of the existing data, the potential for direct and indirect impacts to significant paleontological resources due to project implementation was determined based on the paleontological sensitivity of the project site and surrounding vicinity, and anticipated depths of grading as it relates to the potential for uncovering paleontological resources.

5.6.5 Environmental Impact Analysis

a) Would the project 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.***
- ***ii. Strong seismic ground shaking?***
- ***iii. Seismic-related ground failure, including liquefaction?***
- ***iv. Landslides?***

The project site is located within the seismically active Southern California area and is expected to experience the effects of future earthquakes on active faults. Potential project impacts related to seismic hazards including surface fault rupture, strong seismic ground motion, seismically induced settlement due to liquefaction, and landslides are discussed below.

Given that seismic activity and associated hazards could occur during both construction and operation of the project, the impact analyses below are intended to be inclusive of both construction and operation impacts unless otherwise noted.

SURFACE FAULT RUPTURE

Based on the "Earthquake Zones of Required Investigation" map for the Hollywood quadrangle, the project site does not lie within an Alquist-Priolo Earthquake Fault Zone. The nearest Alquist-Priolo Earthquake Fault Zones are the Newport-Inglewood-Rose Canyon Fault Zone, located approximately 1.6 miles southwest of the site, and the Hollywood Fault Zone, located approximately 2.2 miles north-northwest of the site.

The trace of the Sixth Street Fault is projected through the southern to southwestern portion of the project site. The Sixth Street Fault is a near-vertical fault, with north side movement up relative to the south side.

The near-surface location of the fault is not well defined, nor is the fault listed as active or potentially active by the CGS. Therefore, it is not included in the Alquist-Priolo Earthquake Fault Zone maps.

Given that the project site is not located within a designated Alquist-Priolo Earthquake Fault Zone and the project would adhere to the CLABC, impacts related to surface fault rupture during project construction and operation would be *less than significant*.

SEISMIC GROUND SHAKING

The project site is located within the seismically active region of Southern California and could potentially be subject to strong seismic ground shaking if a moderate to strong earthquake were to occur on a local or regional fault. The intensity of earthquake motion and seismic hazards that may impact the project site depends on the characteristics of the generating fault, distance to the earthquake fault, earthquake magnitude, earthquake duration, and site-specific geologic conditions. Likely sources for strong ground motion are known active faults or potentially active faults. Ground motions may be amplified or attenuated at the site depending on the level of ground shaking in the underlying bedrock, underlying soil type, depth to bedrock, and other factors. While the project does not include mining operations, exceptionally deep excavations, or boring of large areas creating unstable seismic conditions, the project site is located within a seismically active region. As such, potentially significant impacts related to seismic ground shaking at the project site are anticipated and are considered to be part of the baseline environmental conditions at the project site but are not unique to the project or the project site.

The project would be designed and constructed in accordance with the 2020 CLABC, which calls for consideration of seismic loading factors. Specifically, Section 1613 provides discussion toward earthquake loads and toward development of seismic ground motion design values. Per Section 1613, structures "shall be designed and constructed to resist the effects of earthquake motions in accordance with Chapters 11, 12, 13, 15, 17 and 18 of ASCE 7, as applicable. The seismic design category for a structure is permitted to be determined in accordance with Section 1613 or ASCE 7." ASCE 7 refers to "Minimum Design Loads and Associated Criteria for Buildings and Other Structures", prepared by the American Society of Civil Engineers and the Structural Engineering Institute. Adherence to the code will address the potential hazards associated with strong seismic ground shaking. In addition, the Geology and Soil Discipline Report provides recommended ground motion design parameters in accordance with the 2019 CBC for the project. Further, the recommendations of the Geology and Soil Discipline Report (Appendix E) would be incorporated into the project design. Therefore, impacts related to seismic ground shaking during project construction and operation would be *less than significant*.

LIQUEFACTION

Soil liquefaction is a phenomenon in which pore pressure in loose, saturated, granular soil increases during ground shaking to a level near the initial effective stress, resulting in a reduction of shear strength of the soil (i.e., quicksand-like conditions). The loss in shear strength may generate ground settlement, lateral spreading (ground movement on gentle slopes), bearing-capacity failure, and/or landslides. Liquefaction potential is greatest where loose granular soil (sand and non-plastic silt) is present below groundwater and is more likely to affect structures when it occurs at depths shallower than 50 feet. Liquefaction potential decreases as the fines (clay and silt content of soil) increases, and the liquefaction potential increases as ground shaking increases.

The seismic hazard zone map for the Hollywood quadrangle includes liquefaction hazard zones for the quadrangle. The site is not mapped within a liquefaction hazard zone. The geologic materials underlying the project site generally consist of stiff cohesive (fine-grained) soil underlain by dense to very dense tar sand. Based on the stiff and dense nature of the on-site subsurface materials, the potential for liquefaction

is considered to be low. Therefore, impacts related to liquefaction during project construction and operation are *less than significant*.

LANDSLIDES

Hazards associated with slope stability include landslides and mudflows. The project site and surrounding area are relatively level. Therefore, the potential for the site or the area surrounding the site to experience slope stability hazards, including landslides and mudflows, is negligible. Therefore, *no impact* would occur during project construction and operation related to landslides.

GEO Impact 1
The project would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving surface fault rupture, seismic ground shaking, or seismic-related ground failure including liquefaction. Impacts associated with these issues would be less than significant during project construction and operation. The project would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving landslides during either project construction or operation. No impact would occur during project construction and operation related to landslides. (CEQA Checklist Appendix G Threshold VII. a)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts associated with surface fault rupture, seismic ground shaking, and seismic-related ground failure including liquefaction would be less than significant during project construction and operation. No impact would occur during project construction and operation related to landslides.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Erosion is the process in which soil or earth material is worn away and removed from its original location by natural forces such as moving water or wind. Erosion or the loss of topsoil can potentially lead to unstable soil conditions, especially for hillside development or development containing or adjacent to slopes.

CONSTRUCTION

Grading, excavation, and other earth-moving activities would result in disrupting the ground surface and could potentially result in erosion and loss of topsoil during construction. Grading and earthwork would be required to be implemented in accordance with the 2020 CLABC (specifically Section 1804 and Appendix J, or more current standards if they are adopted prior to the final geotechnical design), which includes guidelines for site grading to promote positive drainage flow. For grading performed in the "rainy season" (defined by the CLABC as the months of October to April), provisions will need to be made to control erosions. A Stormwater Pollution Prevention Plan would be required to be prepared prior to the start of construction in accordance with County regulations and would be required to be implemented during construction. No further measures beyond the implementation of existing regulations are required to address these potential impacts. Therefore, construction impacts related to soil erosion or loss of topsoil would be *less than significant*.

OPERATION

Based on the project site conditions, site topography, and the proposed improvements, the project is not anticipated to result in significant impacts associated with erosion, sedimentation, or loss of topsoil during project operation. Operation impacts related to soil erosion or loss of topsoil would be *less than significant*.

GEO Impact 2
Through compliance with existing regulations, the project would not result in substantial soil erosion or the loss of topsoil during project construction or operation. Impacts would be less than significant during project construction and operation. (CEQA Checklist Appendix G Threshold VII. b)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts would be less than significant.

c) Would the project 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 previously discussed, geologic instability at the project site resulting from project activities as they relate to landslides, liquefaction, and lateral spreading is not anticipated due to both the relatively minimal change in elevation throughout and adjacent to the project site, as well as the stiff and dense nature of the on-site subsurface materials. *No impact* would occur during either project construction or operation related to landslides, liquefaction, and lateral spreading.

However, implementation of the project would occur on soils susceptible to subsidence and/or compressible and collapsible soils. These issues are discussed further below.

SUBSIDENCE

Subsidence of the ground surface within the project site could be caused by the removal of groundwater and/or petroleum from subsurface sources. As previously discussed, the project site is located in the southern part of the Salt Lake Oil Field and is subject to naturally occurring tar (petroleum) seeps. Based on research conducted in support of the Geology and Soil Discipline Report, there is no existing documentation indicating subsidence has occurred due to removal of petroleum at the project site. Similarly, no evidence of subsidence from groundwater pumping at the project site has been documented. Therefore, potentially damaging subsidence from extraction of groundwater and/or petroleum during construction or operation of the structures is unlikely. However, due to the possibility of tar seeps occurring throughout the project site, impacts related to subsidence during project construction and operation could be *significant*.

COMPRESSIBLE AND COLLAPSIBLE SOILS

Compressible soils are soils which undergo consolidation when subject to a new load, such as a structure load or fill placement. Collapsible soils are soils which significantly decrease in volume when they are wetted and experience an increase in moisture content, regardless of whether a new load is placed on them. Compressible or collapsible soils can lead to excessive settlement distress for structural improvements.

Artificial fill that was not engineered and the near-surface alluvial deposits may be weak and compressible and/or collapsible, particularly with the addition of water. The existing artificial fill present within the project site may not be suitable to support foundations, slabs on grade, paving, or new compacted fills. Furthermore, the surficial alluvial deposits may not be suitable for supporting building loads. Using the existing artificial fill or upper alluvial soils for load support during project construction could result in potential significant impact for the proposed structures once built, as it could lead to structural distress due to total or differential settlement during operation of the project. Impacts related to compressible and collapsible soils during project construction and operation could be *significant*.

GEO Impact 3	
The project could cause geologic instability at the project site related to subsidence as well as compressible and collapsible soils during project construction and operation. Impacts during construction and operation could be significant. (CEQA Checklist Appendix G Threshold VII. c)	
Mitigation Measures	
GEO/mm-3.1	*To prevent subsidence of the ground surface within the project site, temporary dewatering shall be required during construction for excavations which extend below the existing groundwater level (i.e., greater than 10 feet below ground surface), anticipated for deepest excavations associated with the proposed Page Museum one-story addition, as excavations will be required for construction of the proposed mat foundation and associated new utility placement. Dewatering activities shall be conducted as follows:* a. *Dewatering shall be performed prior to excavation. Temporary dewatering shall be performed during the construction stage, prior to beginning any excavation which will extend beneath the groundwater. The Construction Contractor shall decide the proper timeline which will permit a dry environment for the excavation work and prevent water seepage into the excavation.* b. *The design of a temporary dewatering system shall be performed by an experienced, qualified dewatering contractor. Prior to proceeding with the actual design of the dewatering system, a test installation shall be constructed to verify the design's effectiveness.* c. *The dewatering system shall be designed to lower the site groundwater sufficiently to permit a dry environment and to prevent water seepage from the temporary perimeter cut slopes. The design shall balance the soil conditions with well spacing and well depth. Recommendations for well design provided in the project's Geology and Soil Discipline Report shall be incorporated into the final design of the dewatering system, including:* • *Installation of relatively closely spaced wells around the excavation perimeter, referred to as well points* • *Wells shall include perforated casing with annular space filled with suitable filter material* • *Well points shall extend past the depth of proposed excavation*

GEO Impact 3	
	• *Elements of current dewatering system within the Lake Pit shall be incorporated, including collection piping, sump pumps, a sand-oil separator device, and a micro-filter device. In addition, separator and filter devices shall be considered for temporary dewatering pumps to help maintain the system's efficiency and increase the amount of time prior to the pumps being plugged up with tar.* d. *Groundwater shall be pumped from the tar sands and is anticipated to contain a relatively high percentage of tar. The tar shall be removed, and the groundwater treated in accordance with all applicable regulatory requirements prior to disposal.*
GEO/mm-3.2	*To ensure proper design and stability of structures to be constructed on existing artificial fill or upper alluvial soils, the excavation and replacement of existing compressible materials within the areas of the proposed improvements shall be required. Excavation and replacement shall consist of complete removal of artificial fill and/or compressible surficial alluvial soil beneath the areas of the proposed improvements and replacement with compacted structural fill, with an anticipated artificial fill depth ranging between 1 and 8 feet below ground surface based on review of existing explorations performed within or adjacent to the project site. This value will be confirmed after completion of subsurface explorations during the final geotechnical design to further characterize the subsurface conditions underlying the improvement areas (i.e., compressibility of the soft layers and the depth to firm material). Due to the anticipated soil contamination, on-site soils are not anticipated to be suitable for reuse as fill material and shall be exported for proper remediation and disposal in accordance with all applicable regulatory requirements. The final engineering design of the structures included in the project shall be reviewed and approved by the Los Angeles County Department of Public Works, Building and Safety Division.*
Impacts Following Mitigation	
With implementation of Mitigation Measures GEO/mm-3.1 and GEO/mm-3.2, impacts would be less than significant.	

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Expansive soil occurs when clay particles of certain mineralogy interact with water, causing a volume change. Clay soil may swell with increasing moisture content and contract when dried. This phenomenon generally decreases in magnitude with increasing confining pressure at depth. These volume changes may damage spread footings, grade beams, floor slabs, pavement, and other shallow improvements.

As stated in the Geology and Soil Discipline Report, the upper clay soils within the existing artificial fill and alluvium are subject to expansion and shrinkage resulting from changes in the moisture content. Review of existing data available for the project site confirmed the presence of moderately to highly expansive soil on-site, posing a potential significant impact to lightly loaded foundation elements and flatwork (e.g., sidewalks, driveways). Therefore, impacts related to expansive soils during project construction and operation could be *significant*.

GEO Impact 4
The project site is located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating a potentially significant risk to life and/or property during project construction and operation. Impacts could be significant. (CEQA Checklist Appendix G Threshold VII. d)

GEO Impact 4	
Mitigation Measures	
GEO/mm-4.1	*To address impacts related to expansive soils within the project site, additional expansion testing shall be required as part of the final geotechnical design for the project. Based on the outcome of the additional expansion testing, one or more of the following options shall be implemented to address expansive soils:* a. *Over-excavation: Over-excavation and replacement of the expansive material with a soil having low or non-expansive potential, with the upper 2 feet of expansive soil (where encountered at the site) being removed and replaced with non-expansive fill.* *OR* b. *Soil Treatment: Chemical treatment, such as lime treatment. This generally involves mixing a certain percentage of the chemical into the subgrade soil, compacting the mixed soil-chemical material, and then allowing the material curing time prior to continuing construction. The percentage of the chemical addition and the associated engineering properties of the improved soil will need to be determined through geotechnical laboratory testing. If chosen, the final geotechnical design shall provide design and construction recommendations related for this option.* *OR* c. *Structural Design: The structural design option would involve increasing the bearing pressure on the soil and/or extending the foundation or flatwork depth. However, while increasing the bearing pressure reduces the potential impact from expansive soil, it does increase the potential impact associated with excessive settlement. If this option is elected, settlement evaluation shall be performed as part of the final geotechnical design and based on the proposed loading conditions. Loading conditions shall be limited to a maximum differential of 1 inch over a 20-foot span within the structure.* *The final design solution will be determined by the project engineer consistent with the above measures. The final engineering design of the structures included in the project shall be reviewed and approved by the Los Angeles County Department of Public Works, Building and Safety Division.*
Impacts Following Mitigation	
With implementation of Mitigation Measure GEO/mm-4.1, impacts related to expansive soils during project construction and operation would be less than significant.	

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The project site is served by existing sewage infrastructure. The project's wastewater demand would be accommodated via connections to the existing wastewater infrastructure system, and the project would not require the use of septic tanks or alternative wastewater disposal systems during project construction or operation. Therefore, the project would not result in impacts related to the ability of soils to support septic tanks or alternative wastewater disposal systems. *No impact* would occur during project construction or operation.

GEO Impact 5
The project would not include the use of septic tanks or alternative wastewater disposal systems during either project construction or operation. No impact would occur. (CEQA Checklist Appendix G Threshold VII. e)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. No impacts would occur related to septic tanks or alternative wastewater disposal systems as none of these systems would be used for the project.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The analysis provided in the Paleontological Resources Technical Report (see Appendix F) indicates the project site has historically yielded millions of significant fossils and the entirety of Hancock Park, including the project site, contains a veneer of artificial fill overlying older alluvium that is subsequently underlain by the San Pedro Sand and Fernando Formation at greater depths, each having high paleontological sensitivity and high potential for producing significant paleontological resources (SWCA 2023). Specifically, recent artificial fill and reworked sediments originating from within the project site have a high potential to produce significant paleontological resources. Additionally, asphalt deposits seeping from the underlying geologic units to the surface through the artificial fill may contain fossils, albeit to lesser degrees than the underlying older alluvium. The thickness of fill and disturbed sediments likely varies across the site but may extend as deep as 8 feet bgs in some areas, or as shallow as 3 feet bgs in others. Generally, older alluvium, San Pedro Sand, and Fernando Formation have high paleontological potential throughout their extents within the Los Angeles Basin, and within the project site. Artificial fill or previously disturbed sediments also have a high paleontological potential. Regardless of the site's stratigraphy, asphalt pools, seeps, and chimneys have yielded a substantial proportion of the fossils recovered from Hancock Park, particularly in the uppermost 40 feet of sediments.

CONSTRUCTION

Given the high paleontological sensitivity of the project site, paleontological resources may be impacted by construction or implementation of the project regardless of depth of grading and/or excavation activities, since all ground-disturbing activities associated with the construction of the project have the potential to impact asphalt seeps containing aggregates of fossils. Any fossils encountered during ground-disturbing activities could be at risk for damage or destruction from such activities depending on the nature of the fossil encountered. Therefore, impacts related to paleontological resources during project construction could be *significant*.

OPERATION

Operation of the project would not result in any ground-disturbing activities such as grading or excavation outside of the existing research sites; therefore, project operation would not directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature. *No impact* would occur during project operation.

GEO Impact 6	
Given the high paleontological sensitivity of the project site, ground-disturbing activities associated with project construction could damage paleontological resources that may be present below the surface. Construction impacts could be significant. Operation of the project would not directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature. No operational impacts would occur. (CEQA Checklist Appendix G Threshold VII. f)	
Mitigation Measures	
GEO/mm-6.1	***Retain a Qualified Professional Paleontologist (Project Paleontologist):*** *Prior to the start of construction and/or ground-disturbing activities, the Los Angeles County Museum of Natural History Foundation, at the direction of the County, shall retain a Qualified Professional Paleontologist (Project Paleontologist) who meets or exceeds the professional standards defined by the SVP (2010), and who has specific experience overseeing mitigation projects in Pleistocene deposits of the Los Angeles Basin. The SVP (2010:10) defines a qualified professional paleontologist as: "a practicing scientist who is recognized in the paleontological community as a professional and can demonstrate familiarity and proficiency with paleontology in a stratigraphic context." The Project Paleontologist shall have a graduate degree in paleontology or geology, and/or a publication record in peer reviewed journals; have demonstrated competence in field techniques, preparation, identification, curation, and reporting; have at least 2 full years of professional experience as assistant to a qualified professional paleontologist with administration and project management experience (supported by a list of projects and referral contacts); have proficiency in recognizing fossils in the field and in determining their significance; have expertise in local geology, stratigraphy, and biostratigraphy; and have experience collecting vertebrate fossils in the field (SVP 2010). The Project Paleontologist and Page Museum curators and collections managers shall meet weekly during scheduled ground-disturbing activities associated with the construction of the project to address any outstanding questions or concerns that arise during mitigation efforts to ensure effective communication and coordination. The Project Paleontologist shall oversee all regulatory compliance measures, shall oversee mitigation protocols related to paleontological resources, and shall be a point of contact for the Page Museum curators and County officials. A professional resume or curriculum vitae of the Project Paleontologist shall be submitted to the County for approval prior to the start of ground-disturbing activities.*
GEO/mm-6.2	***Prepare a Paleontological Resources Management Plan:*** *After finalization of the engineering, design, and grading plans for the project and prior to the start of preconstruction ground-disturbing activities, a Paleontological Resources Management Plan (PRMP) shall be prepared by the Project Paleontologist and submitted to the Page Museum curators, who shall review and approve the final PRMP on behalf of the County and Natural History Museum. The PRMP shall define the processes and procedures for paleontological monitoring and fossil excavation based on the nature of ground-disturbing activities required for project. The PRMP shall:* *a. Incorporate the results of the Paleontological Resources Technical Report (SWCA 2023), the final geotechnical investigation, and the final engineering/grading plans for the project.* *b. Require all construction personnel to attend a Worker Environmental Awareness Program (WEAP) training to be presented by the Project Paleontologist, or their designee.* *c. Define the processes and procedures for coordinating and communicating with responsible parties and stakeholders (including but not limited to the contractors, consultants, County officials, and the Page Museum curators and collections managers), when construction activities would be halted due to discovery and subsequent salvage efforts during ground-disturbing activities, and when regularly scheduled meetings between the Project Paleontologist and the Page Museum curators and collections managers would be required.*

GEO Impact 6	
	d. Outline a procedure whereby mechanical excavation is conducted to remove any non-fossil-bearing sediments or soils subject to environmental soil remediation, such that adequate time is afforded to identify fossil localities and to conduct scientific salvage operations to a feasible extent (see Millington and Dietler 2023); the timing of scientific fossil salvage operations during initial grading should be given special considerations in the PRMP such that delays to earthwork activities are minimized while allowing paleontological material to be salvaged at an acceptable level that retains the scientific integrity of the discoveries. *e. Require full-time paleontological monitoring by qualified paleontological monitors who meet the standards of the SVP (2010) and shall be supervised by the Project Paleontologist; qualified paleontological monitors shall have the authority to temporarily halt construction activities to record and salvage fossil discoveries as they are unearthed to allow for potentially significant fossils to be collected with their scientific integrity intact to the extent feasible and practical.* *f. Discuss unanticipated fossil discovery and communication protocols if paleontological resources are discovered by non-paleontology staff working on the project in instances where paleontological monitors are documenting or recording paleontological resources discovered elsewhere within the project site.* *g. Discuss feasible monitoring procedures for each of the different ground-disturbing activities, including but not limited to active observation or inspection of sediments during active ground disturbances, whether they be trenching, grading, excavating, drilling, or some other activity that disturbs sediments; inspection of sedimentary spoils spiles or cuttings, as well as backfill originating from Hancock Park that may contain asphaltum or fossil material; and/or matrix screening of spoils for small or microfossils as needed.* *h. Define fossil salvaging procedures, including but not limited to outlining the treebox method for asphaltum bearing large accumulations of fossils, salvaging of isolated fossils, matrix screening in the field for microfossils, and chain-of-custody procedures for transferring the fossil discoveries to the Page Museum curators or collection managers as they are exhumed from the project site. Because of the unique conditions of La Brea Tar Pits and the chemical considerations of working with asphaltum fossil deposits, any paleontological resource discoveries shall remain on-site with the Page Museum. The paleontological monitor shall record pertinent geologic data and collect appropriate sediment samples from any fossil localities.* *i. Require the Project Paleontologist to prepare a report of the findings of the monitoring efforts within 90 days after construction is completed.*
GEO/mm-6.3	***Conduct Worker Training.*** *The Project Paleontologist shall develop and present a WEAP training to educate the construction crew on the legal requirements for preserving fossil resources, as well as the procedures to follow in the event of an unanticipated fossil discovery. This training program shall be given to the crew before ground-disturbing work commences and shall include handouts to be given to new workers as needed.*
GEO/mm-6.4	***Monitor for Paleontological Resources:*** *Full-time monitoring shall be required during all ground-disturbing activities (including artificial fill or previously disturbed sediments), regardless of depth. Additionally, special considerations shall be given to the project design elements and geotechnical and soils remediation or hazard reduction recommendations, including but not limited to the paleontological screening of tar sands prior to disposal or treatment. Procedures and protocols for paleontological monitoring and fossil salvage shall be outlined in the PRMP. Monitoring shall:* *a. Be conducted by a qualified paleontological monitor who meets the standards of the SVP (2010) and shall be supervised by the Project Paleontologist, who shall coordinate with the Page Museum curators and collections managers and County officials. The Project Paleontologist may periodically inspect construction activities to recommend adjusting the level of monitoring in response to subsurface conditions; however, modifications, such as increasing, reducing, or ceasing of paleontological*

GEO Impact 6	
	monitoring, or any changes of the implementation of the PRMP, should be approved by Page Museum curators and the Natural History Museum. *b. Include inspection of exposed sedimentary units during active excavations, grading, tar sand removal, and any other ground-disturbing activity that has the potential to impact sediments capable of preserving significant fossils. The Page Museum curators (or their representatives) and the paleontological monitor shall have authority to temporarily divert activity away from exposed fossils to evaluate the significance of the find and, shall the fossils be determined significant or likely significant, professionally and efficiently recover the fossil specimens and collect associated data while minimizing delays. Data collection procedures may require the support of construction contractors to carefully and efficiently collect field data and extract the fossils to allow construction to continue.* *c. Require grading and earthwork contractors to follow the guidance of Page Museum staff or the Project Paleontologist regarding the collection and/or extraction of paleontological resources. The paleontological monitor shall record pertinent geologic data and collect appropriate sediment samples from any fossil localities. Recovered fossils shall be directly retained by the Page Museum for later analysis, laboratory preparation, and eventual curation if deemed significant or important by the Page Museum curators or collection managers.*
GEO/mm-6.5	***Prepare a Paleontological Resources Monitoring Report:*** *Upon conclusion of ground-disturbing activities, the Project Paleontologist overseeing the implementation of the PRMP, including paleontological monitoring and fossil salvaging, shall prepare a final monitoring report that documents the paleontological monitoring efforts for the project and describes any paleontological resources discoveries observed and/or recorded during the life of the project. The final monitoring report and any associated data pertinent to the salvaged fossil specimen(s) shall be submitted to the Natural History Museum of Los Angeles County within 90 days after construction is completed. If the project is developed in phases, the final report is only necessary at the completion of the last phase to be constructed. At the discretion of the County, if there are unanticipated gaps in the phases of construction or other reasons why the County would prefer phased final reports, multiple final reports could be prepared.*
Impacts Following Mitigation	
With implementation of Mitigation Measures GEO/mm-6.1 through GEO/mm-6.5, construction impacts would be less than significant. No operational impacts would occur.	

5.6.6 Cumulative Impact Analysis

Due to the site-specific nature of geological conditions (i.e., soils, geological features, subsurface features, seismic features, etc.), geological impacts are typically assessed on a project-by-project basis, rather than on a cumulative basis. Nonetheless, cumulative growth in the surrounding area as discussed in Chapter 4, Environmental Setting, and other future development projects would be subject to established guidelines and regulations pertaining to building design and seismic safety, including those set forth in the CBC and the City of Los Angeles Building Code, which applies to the properties adjacent to and surrounding the project site, as well as site-specific geotechnical evaluations that would identify potential effects related to the underlying geologic and soil conditions for a particular related project site.

With the adherence to the applicable regulations of 2020 CLABC (and future updates to the building code, when they occur) as discussed above and any site-specific recommendations set forth in a site-specific final geotechnical design evaluation, and the requirement that projects in the surrounding city of Los Angeles adhere to the City of Los Angeles Building Code, the project and related projects would not result in significant impacts related to geological and soil conditions. As such, the project's contribution to geotechnical or soils-related hazards would not be cumulatively considerable.

However, in specific consideration of paleontological resources, future and nearby development projects with the potential for substantial excavation would be subject to environmental review, but each of these development projects in the area could result in incremental impacts to paleontological resources that, when viewed together, could be considered cumulatively considerable.

As addressed in the direct impact analysis, the project has the potential to disturb geological units that are conducive to retaining paleontological resources. If not mitigated, the potential for the loss, alteration, and destruction of the paleontological resources at the project site would be considered significant contributions to cumulative paleontological resource impacts. Therefore, the project could result in *significant* contributions to cumulative paleontological impacts.

Because of the potential for significant impacts on paleontological resources resulting from the project, Mitigation Measures GEO/mm-6.1 through GEO/mm 6.5 are required. These measures include retention of a qualified paleontologist, paleontological resources sensitivity training, paleontological resources monitoring, and treatment and curation of discoveries, if encountered. Implementation of these measures would reduce the potential for adverse effects on fossil resources individually and cumulatively, and would preserve and maximize the potential of these resources to contribute to the body of scientific knowledge.

GEO Impact 7 (Cumulative)
The project would not result in significant contributions to cumulatively considerable impacts related to geotechnical or soils-related hazards; however, the project could result in significant contributions to cumulatively considerable impacts related to paleontological resources.
Mitigation Measures
Implement Mitigation Measures GEO/mm-6.1 through GEO/mm-6.5.
Impacts Following Mitigation
With implementation of Mitigation Measures GEO/mm-6.1 through GEO/mm-6.5, the project's contribution to cumulative impacts related to paleontological resources would be reduced to less than significant. No other geotechnical, geologic, or soil-related contributions to cumulative impacts would occur.

5.7 GREENHOUSE GAS EMISSIONS

This section of the EIR describes the affected environment and regulatory setting for greenhouse gases (GHGs) and global climate change. It also describes the GHG and global climate change impacts that would result from implementation of the project along with mitigation measures that would reduce these impacts. This section is based on the following document (Appendix C): *Air Quality and Greenhouse Gas Technical Report for the La Brea Tar Pits Master Plan* (SWCA 2022).

5.7.1 Existing Conditions

Global climate change refers to the changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and storms. Global warming, a related concept, is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. There is a general scientific consensus that global climate change is occurring, caused in whole or in part by increased emissions of GHGs that keep the Earth's surface warm by trapping heat in the Earth's atmosphere, in much the same way as glass traps heat in a greenhouse. The Earth's climate is changing because human activities, primarily the combustion of fossil fuels, are altering the chemical composition of the atmosphere through the buildup of GHGs. GHGs are released by the combustion of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect. While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy.

Regarding the adverse effects of global warming, as reported by the Southern California Association of Governments (SCAG): "Global warming poses a serious threat to the economic well-being, public health and natural environment in Southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea levels, damage to marine and other ecosystems, and an increase in the incidences of infectious diseases" (SCAG 2007:116). Over the past few decades, energy intensity of the national and state economy has been declining due to the shift to a more service-oriented economy. California ranked fifth lowest among the States in carbon dioxide (CO_2) emissions from fossil fuel consumption per unit of gross state product. However, in terms of total CO_2 emissions, "California is second only to Texas in the nation and is the 16th largest source of climate change emissions in the world, exceeding most nations. The SCAG region, with close to half of the state's population and economic activities, is a major contributor to the global warming problem" (SCAG 2007:117).

5.7.1.1 Overview of Greenhouse Gases

GHGs include CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Carbon dioxide is the most abundant GHG. Other GHGs are less abundant but have higher global warming potential than CO_2. Thus, emissions of other GHGs are frequently expressed in the equivalent mass of CO_2, denoted as CO_2e. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. The primary GHGs attributed to global climate change are described below.

CARBON DIOXIDE (CO_2)

In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals, and plants, volcanic outgassing, decomposition of organic matter, and evaporation from the oceans. Anthropogenic sources of CO_2 include the combustion of fossil

fuels and wood, waste incineration, mineral production, and deforestation. Anthropogenic sources of CO_2 amount to over 30 billion tons per year, globally (Friedlingstein et al. 2022). Natural sources release substantially larger amounts of CO_2. Nevertheless, natural removal processes, such as photosynthesis by land and ocean-dwelling plant species, cannot keep pace with this extra input of human-made CO_2, and, consequently, the gas is building up in the atmosphere.

METHANE (CH_4)

Methane is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of CH_4 in California.

NITROUS OXIDE (N_2O)

Nitrous oxide is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. Nitrous oxide is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion produce N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California.

HYDROFLUOROCARBONS, PERFLUOROCARBONS, SULFUR HEXAFLUORIDE

Hydrofluorocarbons (HFCs) are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol, an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion. Perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6) are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no primary aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of PFCs.

The magnitude of the impact on global warming differs among the GHGs. The effect each GHG has on climate change is measured as a combination of the volume of its emissions, and its global warming potential (GWP). GWP is one type of simplified index based upon radiative properties used to estimate the potential future impacts of emissions of different gases upon the climate system, expressed as a function of how much warming would be caused by the same mass of CO_2. Thus, GHG emissions are typically measured in terms of pounds or tons of CO_2 equivalents (CO_2e). GWP is based on a number of factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO_2, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of CO_2. The larger the GWP, the more that a given gas warms the Earth compared to CO_2 over that time period. HFCs, PFCs, and SF_6 have a greater GWP than CO_2. In other words, these other GHGs have a greater contribution to global warming than CO_2 on a per-mass basis. However, CO_2 has the greatest impact on global warming because of the relatively large quantities of CO_2 emitted into the atmosphere. A summary of the atmospheric lifetime and GWP of selected gases is presented in Table 5.7-1. As shown in Table 5.7-1, GWPs range from 1 to 23,500. The IPCC has released three assessment reports (AR4, AR5, and AR6) with updated GWPs; however, the California Air Resources Board (CARB) reports the statewide GHG inventory using the AR4 GWPs, which is consistent with

international reporting standards. By applying the GWP ratios, project-related equivalent mass of CO_2 (denoted as CO_2e emissions) can be shown in metric tons per year.

Table 5.7-1. Global Warming Potentials

Greenhouse Gas	GWP Values for 100-year Time Horizon		
	AR4*	AR5	AR6
Carbon dioxide (CO_2)	1	1	1
Methane (CH_4)	25	28	Fossil origin – 29.8 Non-fossil origin – 27.2
Nitrous oxide (N_2O)	298	265	273
Select hydrofluorocarbons (HFCs)	124–14,800	4–12,400	–
Sulfur hexafluoride (SF_6)	22,800	23,500	–

Sources: IPCC (2007, 2013, 2022).

* For consistency with the U.S. Environmental Protection Agency and its inventory of greenhouse gas reporting (2022), we have represented values from AR4 of the IPCC report in this report.

5.7.1.2 Greenhouse Gas Emissions Inventories

UNITED STATES GHG EMISSIONS

Per the EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2020* (EPA 2022), total U.S. GHG emissions have decreased by 6.6% from 1990 to 2020; 2005 emissions were 15.8% above 1990 levels. The largest source of GHG emissions from human activities in the United States is from burning of fossil fuels for electricity, heat, and transportation. The latest national GHG emissions are for calendar year 2020, in which total gross U.S. GHG emissions were reported at 5,981.4 million metric tons carbon dioxide equivalent (MMT CO_2e). Emissions decreased from 2019 to 2020 by 543.4 MMT CO_2e and net emissions (including sinks) were 5,222.4 MMT CO_2e.

STATEWIDE GHG EMISSIONS

According to California's 2000–2019 GHG emissions inventory, California emitted 409.3 MMT CO_2e in 2019 (CARB 2021). The sources of GHG emissions in California include transportation, industrial uses, electric power production from both in-state and out-of-state sources, commercial and residential uses, agriculture, high global-warming potential substances, and recycling and waste. The California GHG emission source categories (as defined in CARB's 2008 Scoping Plan) and their relative contributions in 2019 are presented in Table 5.7-2. Total GHG emissions in 2019 were approximately 22.9 MMT CO_2e less than 2016 emissions. Based on data presented, the 2016 statewide GHG inventory fell below 1990 levels, consistent with Assembly Bill (AB) 32 (CARB 2018). The declining trend in GHG emissions, coupled with programs that will continue to provide additional GHG reductions going forward, demonstrates that California will continue to reduce emissions below the 2020 target of 431 metric tons CO_2e ($MTCO_2e$) (CARB 2022a).

Table 5.7-2. California Greenhouse Gas Inventory

		Year				
Parameter	**Unit***	**2015**	**2016**	**2017**	**2018**	**2019**
Transportation	MMT CO_2e	166.2	169.8	171.2	169.6	166.1
	Percentage	38.5%	40.4%	41.2%	40.7%	40.6%
Electric power	MMT CO_2e	84.8	68.6	62.1	63.1	58.8
	Percentage	19.6%	16.3%	14.9%	15.2%	14.4%
Industrial	MMT CO_2e	90.3	89	88.8	89.2	88.2
	Percentage	20.9%	21.2%	21.4%	21.4%	21.5%
Commercial and residential	MMT CO_2e	38.8	40.6	41.3	41.4	43.8
	Percentage	9.0%	9.7%	9.9%	9.9%	10.7%
Agriculture	MMT CO_2e	33.5	33.3	32.5	32.7	31.8
	Percentage	7.8%	7.9%	7.8%	7.9%	7.8%
High global warming potential (GWP)	MMT CO_2e	18.6	19.2	20	20.4	20.6
	Percentage	4.3%	4.6%	4.8%	4.9%	5.0%
Total Net Emissions	MMT CO_2e	**432.2**	**420.5**	**415.9**	**416.4**	**409.3**

Source: California GHG Inventory for 2000–2019 (CARB 2021)

* MMT CO_2e = million metric tons carbon dioxide equivalent

COUNTY OF LOS ANGELES EMISSIONS

In 2015, emissions generated by community activities occurring in the county amounted to 5.5 MMT CO_2e. The transportation and stationary energy sectors were the largest contributors to the inventory. The transportation sector accounts for approximately 2.8 MMT CO_2e (51%) of total GHG emissions, while the stationary energy sector accounts for approximately 1.9 MMT CO_2e (35%) of total GHG emissions. The transportation sector includes emissions from on-road passenger vehicles, trucks, and railways. The stationary energy sector includes emissions from residential, commercial, and institutional uses; industrial buildings; and stationary equipment. The remaining emissions sources include waste and wastewater (8%), refrigerants and other industrial products (5%), and other land-related activities including forestry and agriculture (1%).

To capture the latest emissions profile and emissions trends in Los Angeles County since 2015, the County prepared an updated inventory for the year 2018, given the availability in that year of the most recent complete data set of emissions-generating activity. Both the 2015 and the updated 2018 inventory are discussed in detail in the *Revised Draft 2045 Los Angeles County Climate Action Plan* (County of Los Angeles 2023a). The 2018 inventory relies on the same protocol and data sources that were used in the 2015 GHG emissions inventory. In 2018, communitywide emissions totaled 5.2 MMT CO_2e.
The transportation sector was the greatest contributor, accounting for 52% of emissions and 2.7 MMT CO_2e. The stationary energy sector was the second greatest contributor at 33% and 1.7 MMT CO_2e. Total GHG emissions decreased approximately 7% between 2015 and 2018. The stationary energy sector saw the greatest decrease (11%), followed by the industrial processes and product use sector (6%) and the transportation sector (5%). Emissions from stationary energy decreased primarily because of the increasing level of renewable energy supplied by Southern California Edison into the electricity grid and because certain power-generating facilities decreased their fossil fuel combustion in the intervening years. Emissions from transportation decreased primarily because of vehicle turnover to more fuel-efficient vehicles.

5.7.2 Regulatory Setting

5.7.2.1 Federal

The Supreme Court of the United States (SCOTUS) ruled in Massachusetts v. Environmental Protection Agency, 127 S.Ct. 1438 (2007), that CO_2 and other GHGs are pollutants under the federal Clean Air Act (CAA), which the EPA must regulate if it determines they pose an endangerment to public health or welfare. SCOTUS did not mandate that the EPA enact regulations to reduce GHG emissions. Instead, SCOTUS found that the EPA could avoid taking action if it found that GHGs do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHGs contribute to climate change.

On April 17, 2009, the EPA issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the *Federal Register* under Docket ID No. EPA-HQ-OAR-2009~0171. The EPA stated that high atmospheric levels of GHGs "are the unambiguous result of human emissions and are very likely the cause of the observed increase in average temperatures and other climatic changes." The EPA further found that "atmospheric concentrations of GHGs endanger public health and welfare within the meaning of Section 202 of the Clean Air Act." The findings were signed by the EPA Administrator on December 7, 2009. The final findings were published in the *Federal Register* on December 15, 2009. The final rule was effective on January 14, 2010. While these findings alone do not impose any requirements on industry or other entities, this action is a prerequisite to regulatory actions by the EPA, including, but not limited to, GHG emissions standards for light-duty vehicles.

On July 20, 2011, the EPA published its final rule deferring GHG permitting requirements for CO_2 emissions from biomass-fired and other biogenic sources until July 21, 2014. Environmental groups challenged the deferral. In September 2011, EPA released the *Accounting Framework for Biogenic CO_2 Emissions from Stationary Sources*, which analyses accounting methodologies and suggests implementation strategies to address biogenic CO_2 emitted from stationary sources.

On April 4, 2012, the EPA published a proposed rule to establish, for the first time, a new source performance standard for GHG emissions. Under the proposed rule, new fossil fuel–fired generating units larger than 25 megawatts are required to limit emissions to 1,000 pounds of CO_2 per megawatt-hour on an average annual basis, subject to certain exceptions.

On April 17, 2022, the EPA issued emission rules for oil production and natural gas production and processing operations, which are required by the CAA under Title 40 of the Code of Federal Regulations (CFR) Parts 60 and 63. The final rules include the first federal air standards for natural gas wells that are hydraulically fractured, along with requirements for several other sources of pollution in the oil and gas industry that currently are not regulated at the federal level.

5.7.2.2 State

ENERGY INDEPENDENCE AND SECURITY ACT

The Energy Independence and Security Act of 2007 facilitates the reduction of national GHG emissions by requiring the following:

- increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;

- prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- requiring approximately 25% greater efficiency for lightbulbs by phasing out incandescent lightbulbs between 2012 and 2014; requiring approximately 200% greater efficiency with lightbulbs, or similar energy savings, by 2020; and
- while superseded by the EPA and National Highway Traffic Safety Administration, 1) establishing miles-per-gallon targets for cars and light trucks, and 2) directing the National Highway Traffic Safety Administration to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of the Energy Independence and Security Act address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

EXECUTIVE ORDER S-3-05, EXECUTIVE ORDER B-30-15, AND EXECUTIVE ORDER B-55-18

In 2005, the governor issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets, as well as a process to ensure the targets are met. The order directed the Secretary of the California Environmental Protection Agency (CalEPA) to report every 2 years on the State's progress toward meeting the governor's GHG emission reduction targets. The statewide GHG targets established by EO S-3-05 are as follows:

- By 2010, reduce to 2000 emission levels,
- By 2020, reduce to 1990 emission levels, and
- By 2050, reduce to 80 percent below 1990 levels.

EO B-30-15, issued by Governor Brown in April 2015, established an additional statewide policy goal to reduce GHG emissions 40% below their 1990 levels by 2030. Reducing GHG emissions by 40% below 1990 levels in 2030 and by 80% below 1990 levels by 2050 (consistent with EO S-3-05) aligns with scientifically established levels needed in the United States to limit global warming below 2 degrees Celsius.

The State Legislature adopted equivalent 2020 and 2030 statewide targets in the California Global Warming Solutions Act of 2006 (also known as AB 32) and Senate Bill (SB) 32, respectively, both of which are discussed below. However, the legislature has not yet adopted a target for the 2050 horizon year. As a result of EO S-3-05, the California Action Team (CAT), led by the Secretary of CalEPA, was formed. The CAT is made of representatives from a number of state agencies and was formed to implement global warming emission reduction programs and to report on the progress made toward meeting statewide targets established under the EO. The CAT reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in the EO.

The CAT stated that "smart" land use is an umbrella term for strategies that integrate transportation and land use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. "Intelligent transportation systems" is the application of advanced technology systems and management

strategies to improve operational efficiency of transportation systems and the movement of people, goods, and service.

EO B-55-18, issued by Governor Brown in September 2018, establishes a new statewide goal to achieve caron neutrality as soon as possible, but no later than 2045, and achieve and maintain net negative emissions thereafter. Based on this executive order, CARB would work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal, as well as ensuring future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

ASSEMBLY BILL 32 — CALIFORNIA GLOBAL WARMING SOLUTION ACT

The California Global Warming Solutions Act of 2006 (also known as AB 32) commits the State to achieving the following:

- By 2010, reduce to 2000 GHG emission levels, and
- By 2020, reduce to 1990 levels.

To achieve these goals, which are consistent with the California CAT GHG targets for 2010 and 2020, AB 32 mandates that the CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources consistent with the CAT strategies, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. In order to achieve the reductions, AB 32 requires CARB to adopt rules and regulations in an open, public process that achieves the maximum technologically feasible and cost-effective GHG reductions.

SB 32, signed September 8, 2016, updates AB 32 to include an emissions reduction goal for the year 2030. Specifically, SB 32 requires CARB to ensure that statewide GHG emissions are reduced to 40% below the 1990 level by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

CLIMATE CHANGE SCOPING PLAN

In 2008, CARB approved a Climate Change Scoping Plan, as required by AB 32. Subsequently, CARB approved updates of the Climate Change Scoping Plan in 2014 (First Update) and 2017 (2017 Update), with the 2017 Update considering SB 32 (adopted in 2016) in addition to AB 32 (CARB 2014, 2017). The First Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals (to the level of 427 MMT CO_2e) defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use. In May 2022, a draft 2022 Scoping Plan Update was circulated for review, with an errata issued by CARB September 21, 2022, to correct several typographical errors. This draft 2022 Scoping Plan Update assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan Update, which will likely be adopted by the end of 2022, focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

ASSEMBLY BILL 197

AB 197, signed September 8, 2016, is a bill linked to SB 32 that prioritizes efforts to reduce GHG emissions in low-income and minority communities. AB 197 requires the CARB to make available, and update at least annually on its website, the emissions of GHGs, criteria pollutants, and toxic air contaminants for each facility that reports to CARB and air districts. In addition, AB 197 adds two members of the legislature to the CARB board as ex officio, non-voting members, and also creates the Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the legislature concerning the State's programs, policies, and investments related to climate change.

CAP-AND-TRADE PROGRAM

The 2008 Climate Change Scoping Plan identified a cap-and-trade program as one of the strategies for California to reduce GHG emissions. The cap-and-trade program is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85% of California's GHG emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The cap-and-trade rules came into effect on January 1, 2013, and apply to large electric power plants and large industrial plants. In 2015, fuel distributors, including distributors of heating and transportation fuels, also became subject to the cap-and-trade rules. At that stage, the program will encompass around 360 businesses throughout California and nearly 85% of the state's total GHG emissions. Covered entities subject to the cap-and-trade program are sources that emit more than 25,000 $MTCO_2e$ per year. Triggering of the 25,000 $MTCO_2e$ per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule).

Under the cap-and-trade regulation, companies must hold enough emission allowances to cover their emissions and are free to buy and sell allowances on the open market. California held its first two auctions of GHG allowances on November 14, 2012, and February 19, 2013. The State has continued conducting tightly controlled auctions for GHG allowances every quarter, and released the four quarterly dates for 2023 in December 2022 (CARB 2022b). California's GHG cap-and-trade system is projected to reduce GHG emissions to 1990 levels by the year 2020 and would achieve an approximate 80% reduction from 1990 levels by 2050.

CALIFORNIA RENEWABLES PORTFOLIO STANDARD

The California Renewable Portfolio Standard (RPS) program (SB 1078; 2002) requires that 20% of the available energy supplies come from renewable energy sources by 2017. In 2006, SB 1078 accelerated the 20% mandate to 2010. These mandates apply directly to investor-owned utilities. On April 12, 2011, Governor Brown signed into law SB 2X, which modified the California RPS program to require that both public- and investor-owned utilities in California receive at least 33% of their electricity from renewable sources by the year 2020. SB 2X also requires regulated sellers of electricity to meet an interim milestone of procuring 25% of their energy supply from certified renewable sources by 2016. These levels of reduction are consistent with the Los Angeles Department of Water and Power's (LADWP's) commitment to achieve 35% renewables by 2020. LADWP indicated that 35.2% of its electricity came from renewable resources in year 2021 (LADWP 2021). Therefore, under SB 2X, LADWP currently meets its RPS requirement. Nearly all residents and businesses in unincorporated Los Angeles County receive 50% of their energy from renewable sources as part of the County's commitment to reducing GHG emissions (County of Los Angeles 2021). At its December 7, 2021, meeting, the Los Angeles County Board of Supervisors approved a measure that changed the default energy offering in unincorporated homes to 100% renewable, and most of the renewable energy will be produced in California. This is consistent with one of the targets set by the OurCounty Sustainability Plan (County of

Los Angeles 2019), which calls for eliminating all fossil fuels in the county by 2050, supporting policies and programs to reduce air and climate pollution, and preparing communities for the damaging impacts of climate change.

SENATE BILL 350

SB 350, signed October 7, 2015, is the clean Energy and Pollution Reduction Act of 2015. The objectives of SB 350 are 1) to increase the procurement of electricity from renewable sources from 33% to 50% by the end of 2030; and 2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.

SENATE BILL 100

SB 100, signed September 10, 2018, is the 100 Percent Clean Energy Act of 2018. SB 100 updates the goals of California's RPS and SB 350, as discussed above, to the following: achieve a 50% renewable resources target by December 31, 2026, and achieve a 60% target by December 31, 2030. SB 100 also requires that eligible renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers and 100% procured to serve all state agencies by December 31, 2045.

SENATE BILL 1368

SB 1368, signed September 29, 2006, is a companion bill to AB 32, which requires the California Public Utilities Commission and the California Energy Commission (CEC) to establish GHG emission performance standards for the generation of electricity. These standards also generally apply to power that is generated outside of California and imported into the state. SB 1368 provides a mechanism for reducing the emissions electricity providers, thereby assisting CARB to meet its mandate under AB 32. On January 25, 2007, the California Public Utilities Commission adopted an interim GHG emissions performance standard, which is a facility-based emission standard requiring that all new long-term commitments for baseload generation to serve California customers be with power plants that have GHG emissions no greater than a combined-cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per megawatt-hour. Furthermore, on May 23, 2007, the CEC adopted regulations that establish and implement an identical emissions performance standard of 1,100 pounds of CO_2 per megawatt-hour.

ASSEMBLY BILL 1493 (PAVLEY REGULATIONS)

AB 1493, passed in 2002, requires the development and adoption of regulations to achieve the maximum feasible reduction in GHG emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the state. CARB originally approved regulations to reduce GHGs from passenger vehicles in September 2004, which took effect in 2009. On September 24, 2009, CARB adopted amendments to these regulations that reduce GHG emissions from new passenger vehicles from 2009 through 2016. Although setting emission standards on automobiles is solely the responsibility of the EPA, the federal CAA allows California to set state-specific emission standards on automobiles, and the State first obtains a waiver from the EPA. The EPA granted California that waiver until July 1, 2009. The comparison between the AB 1493 standards and the federal Corporate Average Fuel Economy standards was completed by CARB, and the analysis determined the California emission standards were 16% more stringent through the 2016 model year and 18% more stringent for the 2020 model year. CARB is also committed to further strengthening these standards beginning with 2020 model year vehicles, to obtain a 45% GHG reduction in comparison to 2009 model years.

In March 2020, the EPA issued the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule which would roll back fuel economy standards and revoke California's waiver. Under this rule, the EPA would amend certain average fuel economy and GHG standards for passenger cars covering model years 2021 through 2026. In September 2019, the EPA withdrew the waiver it had previously provided in California for the State's GHG and Zero Emission Vehicle (ZEV) programs under Section 209 of the Clean Air Act. The withdrawal of the waiver was effective on November 26, 2019. In response, several States including California have a lawsuit challenging the withdrawal of the EPA waiver. These actions continue to be challenged in court. On January 20, 2021, President Biden issued an executive order directing all executive departments and agencies to take action, as appropriate, to address federal regulations and other actions taken during the last 4 years that conflict with the administration's climate and environmental justice goals, which include the SAFE Vehicles Rule.

EXECUTIVE ORDER S-01-07 (CALIFORNIA LOW CARBON FUEL STANDARD)

EO S-01-07, the Low Carbon Fuel Standard (LCFS) (issued January 18, 2007), requires a reduction of at least 10% in the carbon intensity of California transportation fuels by 2020. Regulatory proceedings and implementation of the LCFS was directed to CARB. CARB released a draft version of the LCFS in October 2008. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the LCFS became effective on the same day.

The 2017 update has identified LCFS as a regulatory measure to reduce GHG emission to meet the 2030 emissions target. In calculating statewide emissions and targets, the 2017 update has assumed the LCFS be extended to an 18% reduction in carbon intensity beyond 2020. On September 27, 2018, CARB approved a rulemaking package that amended the LCFS to relax the 2020 carbon intensity reduction from 10% to 7.5%, and to require a carbon intensity reduction of 20% by 2030.

ADVANCED CLEAN CAR REGULATIONS

In 2012, CARB approved the Advanced Clean Cars program, a new emissions control program for model years 2015 through 2025. The components of the advance clean car standards include the Low-Emission Vehicle regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero Emission Vehicle regulation, which requires manufacturers to produce an increasing number of pure ZEVs, with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years period. In March 2017, CARB voted unanimously to continue with the vehicle GHG emission standards and the ZEV programs for cars and light trucks sold in California through 2025.

SENATE BILL 375

This bill requires CARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a Sustainable Communities Strategy (SCS) that integrates transportation, land use, and housing policies to plan how it will achieve the emissions target for its region. If the SCS is unable to achieve the regional GHG emissions reductions targets, then the MPO is required to prepare an alternative planning strategy that shows how the GHG emissions reduction target can be achieved through alternative development patterns, infrastructure, and/or transportation measures.

As required under SB 375, CARB is required to update regional GHG emission targets every 8 years, with the last update formally adopted March 2018. As part of the 2018 update, CARB adopted a passenger vehicle–related GHG reduction target of 19% by 2035 for the SCAG region, which is more stringent than the previous reduction target of 13% by 2035.

CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS (TITLE 24, PART 6)

California's Energy Efficiency Standards for Residential and Nonresidential Buildings, codified in Title 24, Part 6 of the California Code of Regulations (CCR) and commonly referred to as "Title 24", were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

On May 9, 2018, the CEC adopted the 2019 Title 24 Standards, which went into effect on January 1, 2020. The 2019 standards continue to improve upon the previous (2016) Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings. The 2019 Title 24 Standards ensure that builders use the most energy-efficient and energy-conserving technologies and construction practices. Nonresidential buildings are projected to use approximately 30% less energy, due mainly to lighting upgrades. Compliance with Title 24 is enforced through the building permit process.

CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN CODE)

The California Green Building Standards Code—Part 11, Title 24, CCR—known as CALGreen, is the first-in-the-nation mandatory green building standards code. In 2007, the California Building Standards Commission developed green building standards in an effort to meet the goals of California's landmark initiative AB 32, which established a comprehensive program of cost-effective GHG reductions to 1990 levels by 2020.

The California Building Standards Commission has the authority to propose CALGreen standards for nonresidential structures that include new buildings or portions of new buildings, additions and alterations, and all occupancies where no other state agency has the authority to adopt green building standards applicable to those occupancies.

SENATE BILL 97

SB 97 was enacted in 2007, and required the Governor's Office of Planning and Research to develop, and the California Natural Resources Agency to adopt, amendments to the State CEQA Guidelines addressing the analysis and mitigation of GHG emissions. Those State CEQA Guidelines amendments clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects and must reach a conclusion regarding the significance of those emissions.
- When a project's GHG emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions.
- Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change.
- Lead agencies may significantly streamline the analysis of GHGs on a project level by using a programmatic GHG emissions reduction plan meeting certain criteria.
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including using efficient transportation alternatives.

As part of the administrative rulemaking process, the California Natural Resources Agency developed a Final Statement of Reasons explaining the legal and factual bases, intent, and purpose of the State CEQA Guidelines amendments. The amendments to the State CEQA Guidelines implementing SB 97 became

effective on March 18, 2010. SB 97 applies to any EIR, Negative Declaration, Mitigated Negative Declaration, or other document required by CEQA, which has not been finalized.

5.7.2.3 Regional

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

The South Coast Air Quality Management District (SCAQMD) adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform, carbon tetrachloride, and halons by December 1995;
- Phase out the large-quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds. Within its October 2008 document, SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit more than 3,000 $MTCO_2e$ per year. Under this proposal, commercial/residential projects that emit less than 3,000 $MTCO_2e$ per year would be assumed to have a less-than-significant impact on climate change. On December 5, 2008, the SCAQMD governing board adopted the staff proposal for an interim GHG significance threshold of 10,000 $MTCO_2e$ per year for stationary source/industrial projects where SCAQMD is the Lead Agency. However, SCAQMD has yet to adopt a GHG significance threshold for land use development projects such as commercial/residential projects; the proposed commercial/residential thresholds were never formally adopted.

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development, and the environment. SCAG coordinates with various air quality and transportation stakeholders in Southern California to ensure compliance with the federal and state air quality requirements, including applicable federal, state, and air district laws and regulations. As the federally designated MPO for the six-county Southern California region, SCAG is required by law to ensure that transportation activities conform to, and are supportive of, the goals of regional and state air quality plans to attain the National Ambient Air Quality Standards. In addition, SCAG is a co-producer, with SCAQMD, of the transportation strategy and transportation control measure sections of the 2016 Air Quality Management Plan (AQMP). The development of the 2016 AQMP relies on population and transportation growth projections contained in SCAG's 2016-2040 RTP/SCS.

On September 3, 2020, SCAG's Regional Council adopted an updated RTP/SCS known as the 2020-2045 RTP/SCS, or Connect SoCal. As with the 2016-2040 RTP/SCS, the purpose of the 2020-2045 RTP/SCS is to meet the mobility needs of the six-county SCAG region over the subject planning period through a

roadmap identifying sensible ways to expand transportation options, improve air quality, and bolster Southern California long-term economic viability. On October 30, 2020, the CARB accepted SCAG's determination that the SCS met the applicable state GHG emissions targets. The goals and policies of the 2020-2045 RTP/SCS are similar to, and consistent with, those of the 2016-2040 RTP/SCS. In addition, CARB's new target requiring a 19% reduction in per-capita GHG emissions has been included in the 2020-2045 RTP/SCS, to fulfill SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

5.7.2.4 County of Los Angeles

This section provides a summary of the most relevant County plans and policies. An analysis of the project's consistency with the plans and policies in this section is provided in Section 5.7.5 under threshold (b).

COUNTY OF LOS ANGELES GENERAL PLAN

The County Board of Supervisors adopted the County General Plan on October 6, 2015. The adopted County General Plan represents a compromise comprehensive update intended to reflect changing demographics, growth, and infrastructure conditions in the county. The County General Plan contains an Air Quality Element that addresses air quality and related issues. Included in the Air Quality Element are goals encouraging mixed-use development, the use of "green building" principles, energy and water efficiency, reducing vehicle miles traveled and vehicle trips, and promoting alternative modes of transportation.

The Air Quality Element of the County General Plan establishes the following goals that are relevant to the project:

Goal AQ3: Implementation of plans and programs to address the impact of climate change.

> ***Policy AQ 3.2***: Reduce energy consumption of County operations by 20% by 2015.
>
> ***Policy AQ 3.3***: Reduce water consumption of County operations.
>
> ***Policy AQ 3.5***: Encourage energy conservation in new development and municipal operations.
>
> ***Policy AQ 3.6***: Support rooftop solar facilities on new and existing buildings.

OURCOUNTY – LOS ANGELES COUNTYWIDE SUSTAINABILITY PLAN

OurCounty is a regional sustainability plan for the County of Los Angeles and was adopted by the Board of Supervisors on Tuesday, August 6, 2019. It outlines what local governments and stakeholders can do to enhance the well-being of every community in the county while reducing damage to the natural environment and adapting to the changing climate, particularly focusing on those communities that have been disproportionately burdened by environmental pollution. This plan envisions streets and parks that are accessible, safe, and welcoming to everyone; air, water, and soil that are clean and healthy; affordable housing that enables all residents to thrive in place; and a just economy that runs on renewable energy instead of fossil fuels. OurCounty is organized around 12 goals for a sustainable Los Angeles County, discussed below.

Goal 1. *Resilient and healthy community environments where residents thrive in place.* The County will protect low-income communities and communities of color from pollution, reduce health and economic inequities, and support more resilient and inclusive communities.

Goal 2. *Buildings and infrastructure that support human health and resilience.* The buildings and infrastructure of both yesterday and tomorrow will use more efficient technologies and practices that reduce resource use, improve health, and increase resilience.

Goal 3. *Equitable and sustainable land use and development without displacement.* With policy tools such as anti-displacement measures, existing community members can remain in and strengthen their neighborhoods and networks while accepting new residents through more compact, mixed-use development.

Goal 4. *A prosperous LA County that provides opportunities for all residents and businesses and supports the transition to a green economy.* We will support the growth of green economy sectors through our procurement practices, land use authority, and various economic and workforce development incentives.

Goal 5. *Thriving ecosystems, habitats, and biodiversity.* The region's ecosystems, habitats, and biodiversity are under stress from urbanization and climate change. Careful planning will ensure that our ecosystems, including urban habitats, thrive even as our region becomes increasingly urbanized.

Goal 6. *Accessible parks, beaches, recreational waters, public lands, and public spaces that create opportunities for respite, recreation, ecological discovery, and cultural activities.* The County will help make parks and public lands more accessible and inclusive and will manage them carefully so that all residents may enjoy their benefits.

Goal 7. *A fossil fuel-free LA County.* By supporting an efficient transition to a zero emission energy and transportation system, the County will be a leader in taking action to address the climate crisis.

Goal 8. *A convenient, safe, clean, and affordable transportation system that enhances mobility while reducing car dependency.* By developing programs that focus on reducing the number of miles people travel in private vehicles, the County will help people choose alternatives to single-occupancy vehicles. These programs will expand residents' mobility, including those residents whose limited automobile access translates to stifled economic opportunity.

Goal 9. *Sustainable production and consumption of resources.* The County will effectively manage our waste, water, energy, and material resources by improving our ability to promote integrative and collaborative solutions at the local and regional scale.

Goal 10. *A sustainable and just food system that enhances access to affordable, local, and healthy food.* The County of Los Angeles will leverage its capital assets, public services, and regulatory authority to improve access to healthy food within County boundaries while optimizing its purchasing power and business services to make food production more sustainable.

Goal 11. *Inclusive, transparent, and accountable governance that facilitates participation in sustainability efforts, especially by disempowered communities.* The County will act to create a more inclusive and accountable governance structure, in order to build stronger communities and better-informed policy and programs.

Goal 12. *A commitment to realize OurCounty sustainability goals through creative, equitable, and coordinated funding and partnerships.* The County will seek to strengthen partnerships, establish new funding techniques, and leverage its own purchasing power to advance the goals of OurCounty.

5.7.2.5 City of Los Angeles

Although the project site is located within the city of Los Angeles, the site is owned by the County of Los Angeles. Accordingly, the project is subject to the regulatory controls of the County of Los Angeles and not the City of Los Angeles. Nonetheless, consideration of the city-level regulatory framework fulfills the intended purpose of CEQA as disclosing all relevant information associated with the project. An analysis of the project's consistency with the plans and policies in this section is provided in Section 5.7.5 under threshold (b).

CITY OF LOS ANGELES GENERAL PLAN

The Air Quality Element of the City General Plan was adopted on November 24, 1992, and sets forth the goals, objectives, and policies which guide the City of Los Angeles (City) in the implementation of its air quality improvement programs and strategies. The Air Quality Element acknowledges the interrelationships among transportation and land use planning in meeting the City's mobility and air quality goals. The Air Quality Element of the City General Plan establishes six goals:

Goal 1: Good air quality in an environment of continued population growth and healthy economic structure.

> ***Objective 1.1:*** It is the objective of the City of Los Angeles to reduce air pollutants consistent with the Regional Air Quality Management Plan (AQMP), increase traffic mobility, and sustain economic growth citywide.
>
> ***Objective 1.3:*** It is the objective of the City of Los Angeles to reduce particulate air pollutants emanating from unpaved areas. parking lots, and construction sites.
>
> > ***Policy 1.3.1:*** Minimize particulate emissions from construction sites.
> >
> > ***Policy 1.3.2:*** Minimize particulate emissions from unpaved roads and parking lots associated with vehicular traffic.

Goal 2: Less reliance on single-occupant vehicles with fewer commute and non-work trips.

> ***Objective 2.1:*** It is the objective of the City of Los Angeles to reduce work trips as a step toward attaining trip reduction objectives necessary to achieve regional air quality goals.
>
> > ***Policy 2.1.1:*** Utilize compressed work weeks and flextime, telecommuting, carpooling, vanpooling, public transit, and improve walking/bicycling–related facilities in order to reduce Vehicle Trips and/or Vehicle Miles Traveled (VMT) as an employer and encourage the private sector to do the same to reduce work trips and traffic congestion.
> >
> > ***Policy 2.2.2:*** Encourage multi-occupant vehicle travel and discourage single-occupant vehicle travel by instituting parking management practices.

Goal 4: Minimal impact of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.

> ***Objective 4.1:*** It is the objective of the City of Los Angeles to include regional attainment of ambient air quality standards as a primary consideration in land use planning.

Policy 4.1.1: Coordinate with all appropriate regional agencies in the implementation of strategies for the integration of land use, transportation, and air quality policies.

Objective 4.2: It is the objective of the City of Los Angeles to reduce vehicle trips and vehicle miles traveled associated with land use patterns.

Policy 4.2.3: Ensure that new development is compatible with pedestrians, bicycles, transit, and alternative fuel vehicles.

Policy 4.2.5: Emphasize trip reduction, alternative transit and congestion management measures for discretionary projects.

Goal 5: Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels, and the implementation of conservative measures including passive measures such as site orientation and tree planting.

Objective 5.1: It is the objective of the City of Los Angeles to increase energy efficiency of City facilities and private developments.

Policy 5.1.2: Effect a reduction in energy consumption and shift to nonpolluting sources of energy in its buildings and operations.

Policy 5.1.4: Reduce energy consumption and associated air emissions by encouraging waste reduction and recycling.

Objective 5.3: It is the objective of the City of Los Angeles to reduce the use of polluting fuels in stationary sources.

Policy 5.3.1: Support the development and use of equipment powered by electric or low-emitting fuels.

In accordance with CEQA requirements, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation. The City uses SCAQMD's CEQA Air Quality Handbook (1993) and SCAQMD's supplemental online guidance/information (2023) for the environmental review of plans and development proposals within its jurisdiction.

CITY OF LOS ANGELES GREEN LA ACTION PLAN

The City of Los Angeles began addressing the issue of global climate change by publishing *Green LA, An Action Plan to Lead the Nation in Fighting Global Warming* ("LA Green Plan") in 2007. This document outlined the goals and actions the City has established to reduce the generation and emission of GHGs from both public and private activities. According to the LA Green Plan, the City is committed to the goal of reducing CO_2 emissions to 35% below 1990 levels by the year 2030. To achieve this, the City has been implementing the following:

- Increase the generation of renewable energy;
- Improve energy conservation and efficiency; and
- Change transportation and land use patterns to reduce dependence on automobiles.

CITY OF LOS ANGELES GREEN NEW DEAL/SUSTAINABLE CITY PLAN

Rather than an adopted plan, the City of Los Angeles Green New Deal/Sustainable City Plan (Sustainable City pLAn) is a mayoral initiative released in 2015 that includes both short-term and long-term aspirations through the year 2035 in various topic areas, including: water, solar power, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, and air quality, among others.

In 2019, the first 4-year update to the 2015 Sustainable City pLAn was released. While not a plan intended solely to reduce GHG emissions. this updated document, known as the City's Green New Deal, expands upon the City's vision for a sustainable future and provides accelerated targets and new goals, including climate mitigation. The Green New Deal has established targets such as 100% renewable energy by 2045, installation of 10,000 publicly available electric vehicle chargers by 2022 and 28,000 by 2028, diversion of 100% of waste by 2050, and recycling 100% of wastewater by 2035.

5.7.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse impacts related to greenhouse gas emissions if it would:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Neither the State of California, County of Los Angeles, nor the SCAQMD has adopted applicable emission-based thresholds of significance for GHG emissions under CEQA. However, SCAQMD guidance provides that construction emissions should be amortized over the operational life of the project, which is assumed to be 30 years (SCAQMD 2008).

5.7.4 Impact Assessment Methodology

For the project, Los Angeles County, as the Lead Agency, has selected a 3,000 $MTCO_2e$ per year quantitative threshold to evaluate significance for GHG emissions. This is the interim GHG screening-level significance threshold. SCAQMD recommended this interim GHG screening-level threshold for projects that are in residential and commercial sectors[1] (SCAQMD 2008). It is important to note that the GHG threshold of 3,000 $MTCO_2e$ per year is based on an interim threshold developed in 2008 to address the State's year 2020 and 2050 GHG reduction goals established under AB 32, which does not address the State's more recent GHG-reduction target of achieving carbon neutrality by 2045, per Executive Order B-55-18 (2018).

To achieve carbon neutrality by 2045, it is recommended that future development include measures to support building decarbonization, including the replacement of natural gas service with other alternatives, such as use of electrically powered equipment (CARB 2022c; CEC 2021). Based on recent GHG

[1] While the La Brea Tar Pits Master Plan contemplates development that is not considered residential or commercial, the construction and operational attributes of the project (e.g., energy demand, water demand, offroad and stationary sources) are like that of development in the residential and commercial sectors. GHG emissions of residential, commercial, and museum facilities are similar in they are focused on mobile sources, energy sources, and off-road and stationary sources. Also, approaches to reducing GHGs will be similar for all these land use types and will center around efficiency improvements of the buildings, efficiency improvements of equipment, and switching to energy sources with lower GHG emissions.

threshold updates and supportive documentation prepared by the Bay Area Air Quality Management District and Sacramento Metropolitan Air Quality Management District, it is recommended that future development prohibit the installation of natural gas infrastructure and the use of natural gas–fired appliances, to the maximum extent possible, and incorporate electric-vehicle charging stations beyond what is required by current building standards in order to contribute its "fair share" of what would be required for the State to achieve its carbon neutrality goal (Bay Area Air Quality Management District 2022; Sacramento Metropolitan Air Quality Management District 2020). As a result, in addition to the GHG threshold of 3,000 $MTCO_2e$ per year noted above, project-generated GHG emissions would also be considered to have a potentially significant impact if the project would not prohibit the installation of natural gas–fired appliances and equipment, to the maximum extent possible, or prohibit the installation of electric-vehicle charging stations beyond what is required by current building standards. For this reason, the analysis of the project uses the SCAQMD interim screening-level threshold of 3,000 $MTCO_2e$ per year and also provides for an assurance that the project would prohibit the installation of natural gas infrastructure and use of natural gas–fired appliances and incorporate electric-vehicle charging stations beyond what is required by current building standards to contribute its "fair share" of what would be required for the State to achieve its carbon neutrality goal.

As an additional significance criterion, consistency with the applicable plans and policies to reduce GHG emissions—including the emissions reduction policies, strategies, and measures discussed within CARB's Climate Change Scoping Plan, SCAG's 2020-2045 RTP/SCS, and the County of Los Angeles General Plan—is also evaluated.

5.7.5 Environmental Impact Analysis

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

CONSTRUCTION

Construction of the project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, on-road vendor trucks, and worker vehicles. The SCAQMD *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* (2008:3-9) recommends that, "construction emissions be amortized over a 30year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies." Therefore, the total construction GHG emissions were calculated, amortized over 30 years, and added to the total operational emissions.

The California Emission Estimator Model (CalEEMod) was used to calculate the GHG emissions that would occur during proposed construction activities, which are anticipated to last a total of approximately 4 years. Project construction would consist of different activities undertaken in phases, through to the operation of the project. Typical construction equipment would be used during all phases of project construction, would be stored within the staging area, and would potentially include excavators, bulldozers, backhoes, dump trucks, water trucks, jackhammers, sandblasters, rollers, pavers, generators, scrapers, forklifts, delivery trucks, paving equipment, cranes, and air compressors. There is no blasting anticipated during construction. Table 7 of the Air Quality and Greenhouse Gas Technical Report (Appendix C) (SWCA 2022) shows the project's anticipated construction schedule, presents an estimate of the maximum number of pieces of equipment for each construction phase, and conservatively assumes equipment would be operating 8 hours per day, 6 days per week for the duration of the construction phase. Table 5.7-3 shows construction emissions for the project from on-site and off-site emission sources.

As shown in Table 5.7-3, the estimated total GHG emissions during construction would be approximately 3,962 $MTCO_2e$ over the construction period. Estimated project-generated construction emissions amortized over 30 years would be approximately 132 $MTCO_2e$ per year. As with project-generated construction criteria air pollutant emissions, GHG emissions generated during construction of the project would only occur when construction is active, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions. Due to the potential persistence of GHGs in the environment, impacts are based on the estimated annual operational project-generated GHG emissions, as well as the construction GHG emissions which have been amortized over the estimated life of the project. Based on the project's estimated total GHG emissions during construction, impacts associated with project construction would be *less than significant*.

Table 5.7-3. Estimated Annual Greenhouse Gas Emissions during Project Construction

	CO_2	CH_4	N_2O	CO_2e
Construction Year	**Metric Tons per Year**			
2024	1,492	0.06	0.05	1,513
2025	889	0.04	0.04	902
2026	895	0.04	0.04	908
2027	632	0.02	0.02	639
Total	**3,908**	**0.16**	**0.15**	**3,962**
		Amortized construction emissions		***132.07***

Source: SWCA (2022).

Note: Appendix C provides the modeling inputs.

OPERATION

Operation of the project would generate GHG emissions through motor vehicle trips to and from the project site, landscape maintenance equipment operation, energy use (natural gas and generation of electricity consumed by the project), natural gas–fueled emergency generator maintenance and testing, solid waste disposal, off-road and stationary equipment, and generation of electricity associated with water supply, treatment, distribution, and wastewater treatment. The estimated motor vehicle trip assumptions were derived from the Transportation Assessment prepared by Kittelson and Associates (see Appendix J). Other inputs for modeling purposes used a combination of feedback from County staff and modeling defaults. CalEEMod was used to calculate the annual operational GHG emissions, and the results are shown in Table 5.7-4.

Table 5.7-4. Estimated Annual Greenhouse Gas Emissions during Project Operation

	CO_2	CH_4	N_2O	CO_2e
Operations Type	**Metric Tons per Year**			
Mobile	1,314	0.07	0.06	1,335
Area Sources (e.g., architectural coatings, landscaping equipment)	2.15	< 0.005	< 0.005	2.16
Energy	940	0.08	< 0.005	943
Water	8.12	0.11	< 0.005	11.6
Waste	8.76	0.88	0.00	30.6
Refrigeration	0	0	0.00	0.07

Operations Type	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Off-road	8.99	< 0.005	< 0.005	9.02
Stationary	19.4	< 0.005	< 0.005	19.5
Total	**2,301**	**1.13**	**0.07**	**2,351**
		Amortized construction emissions		*132.07*
		Total operational + amortized construction GHGs		***2,483.07***

Source: SWCA (2022)

Note: These emissions reflect operational year 2028. Appendix C provides the modeling inputs.

As shown in Table 5.7-4, estimated annual project-generated GHG emissions would be approximately 2,351 $MTCO_2e$ per year because of project operations only. After summing the amortized project construction emissions, total GHGs generated by the project would be approximately 2,483 $MTCO_2e$ per year, which is less than the SCAQMD interim screening-level threshold of 3,000 $MTCO_2e$ per year.

As noted above, it is also important to assure that the project provides a "fair share" contribution to achieve the State's carbon neutrality goal. Given the project plans have not been fully developed, it is not yet determined whether the project includes the installation of natural gas infrastructure and/or the use of natural gas–fired appliances. Further, while a commitment to electric vehicle charging stations has been made, the number of charging stations that would be installed is not known. For these reasons, impacts related to GHG emissions during operation of the project could be *significant*.

GHG Impact 1	
During project construction, the project would not generate greenhouse gas emissions, either directly or indirectly, that would result in a significant impact on the environment. Project construction impacts would be less than significant. During project operation, the project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Project operation impacts could be significant. (CEQA Checklist Appendix G Threshold VIII. a)	
Mitigation Measures	
GHG/mm-1.1.	*The modifications to the George C. Page Museum and the development of the new museum shall not include the installation of natural gas infrastructure. Future operation of the new facilities shall not use natural gas–fired appliances. In addition, the project shall provide more electric vehicle charging stations than the mandatory requirements in the Los Angeles County Code, Title 31, Green Building Standards, electric vehicle charging space and charging station calculations (Code Section 5.106.5.3.3).*
Impacts Following Mitigation	
Implementation of GHG/mm-1.1 would reduce operation impacts related to GHG emissions to less than significant.	

b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Relevant plans and policies to reduce GHG emissions include the emissions reduction policies, strategies, and measures discussed within CARB's Climate Change Scoping Plan, SCAG's 2020-2045 RTP/SCS,

and the County of Los Angeles General Plan. The project's consistency with the identified plans for reducing GHG emissions considers the project holistically. This approach is consistent with these plans and policies, which also consider the project holistically (i.e., the plans and policies generally do not segregate impacts by construction and operation). The project's consistency analysis is described below.

CARB'S CLIMATE CHANGE SCOPING PLAN

The Climate Change Scoping Plan outlines a framework that relies on a broad array of GHG reduction actions, including direct regulations, alternative compliance mechanisms, incentives, voluntary actions, and market-based mechanisms, such as the cap-and-trade program. The Climate Change Scoping Plan builds off of a wide array of regulatory requirements that have been promulgated to reduce statewide GHG emissions, particularly from energy demand and mobile sources. While these regulatory requirements are not targeted at specific land use development projects, they would indirectly reduce a development project's GHG emissions. A discussion of these regulatory requirements that would reduce the project's GHG emissions is provided below.

California Renewable Portfolio Standard Program and SB 100 and SB 350

While this action does not directly apply to individual projects, the project complies with the RPS program inasmuch as its electricity is provided by LADWP, which, in compliance with the RPS program, is required to obtain 33% renewable power by 2020, and has committed to achieving 50% renewable power by 2025. Furthermore, per the updated requirements of SB 100 (2018), LADWP would be required to procure eligible renewable electricity for 44% of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, and should plan to achieve 100% eligible renewable energy resources and zero carbon resources by December 31, 2045. Thus, the project would be supplied with electricity via renewable sources at increasing rates over time, reducing the project's electricity-related GHG emissions. As required under SB 350, doubling of the energy efficiency savings from end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under CCR Title 24, Part 6 and utility-sponsored programs such as rebates for high-efficiency appliances; heating, ventilation, and air conditioning (HVAC) systems; and insulation. The project would comply with Title 24 Standards.

Senate Bill 1368/Assembly Bill 398, CCR Title 20, Cap-and-Trade Program

The State's cap-and-trade program reduces GHG emissions from major sources (deemed "covered entities") by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve emission reduction targets. While the cap-and-trade program does not directly apply to individual projects, the project would benefit from the program since the project's electricity usage and mobile source emissions would be covered by the cap-and-trade program since LADWP and California fuel suppliers are covered entities, resulting in an indirect reduction of GHG emissions from the project's energy consumption and mobile source emissions.

Title 24 Building Energy Efficiency Standards, and the CALGreen Code

The project would meet or exceed the energy standards in the Title 24 Building Energy Efficiency Standards, the CALGreen Code, and County of Los Angeles Green Building Standards Code (County of Los Angeles 2023b) and would implement project design features, including solar photovoltaic panels on the roof of the project building to reduce the amount of electricity drawn from City utilities. Additionally, the project would provide sustainability features, such as rainwater collection leading to bioswales; a sloped green roof; rooftop solar photovoltaic panels; HVAC systems that would be sized and designed in compliance with the CALGreen Code and County of Los Angeles Green Building Standards Code to

maximize energy efficiency caused by heat loss and heat gain; new and existing tree canopies to protect building walls from sun exposure and provide shade for the ground area; and the use of drought-tolerant landscaping to reduce water demand and avoid the use of pesticides. All these features would reduce the project's outdoor and indoor water demand, which would reduce the project's GHG emissions associated with water conveyance and wastewater treatment. As stated previously, the 2008 Climate Change Scoping Plan notes that water use requires significant amounts of energy, comprising approximately one-fifth of statewide electricity.

Assembly Bill 1493 (Pavley Regulations)

The State's Pavley Regulations apply to new passenger vehicles from model year 2012 through 2016 (Phase I) and model years 2017 through 2025 (Phase II). While this action does not apply to individual projects, future employees and visitors to the project site would purchase new vehicles in compliance with this regulation. Mobile source emissions generated by future visitors and employees would be reduced with implementation of AB 1493. However, it is noted that the vehicle emissions standards beyond model year 2020 may not occur if the federal SAFE Vehicles Rule and the One National Program on Federal\Preemption of State Fuel Economy Standards are upheld by the Advanced Clean Cars program. The Advanced Clean Cars program includes low-emission vehicle regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the ZEV regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel-cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years. While this action does not directly apply to individual projects, the standards would apply to all vehicles purchased or used by visitors and employees to the project. The project would designate electric vehicle charging stations and alternative transportation parking consistent with the County of Los Angeles Green Building Standards Code. Therefore, the project would support compliance with this regulation.

Advanced Clean Truck Regulation

The Advanced Clean Truck Regulation has two components, a manufacturer sales requirement and a reporting requirement. The manufacturer component of the regulation requires manufacturers that certify Class 2b-8 chassis or complete vehicles with combustion engines would be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b-3 truck sales, 75% of Class 4-8 straight truck sales, and 40% of truck tractor sales. The reporting component of the regulation requires large employers, including retailers, manufacturers, brokers, and others, to report information about shipments and shuttle services. Fleet owners (with 50 or more trucks) would be required to report on their existing fleet operations. This information would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs. This would be applicable to occasional delivery trucks to the project.

Low Carbon Fuel Standard (EO S-01-07)

This regulation establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 7.5% by 2020, and a 20% reduction in carbon intensity from a 2010 baseline by 2030. While this action does not directly apply to individual projects, future employees and visitors to the project would use transportation fuels in compliance with this regulation. GHG emissions related to project-related vehicular travel would benefit from this regulation and mobile source emissions generated by future employees and visitors to the project would be reduced with implementation of the LCFS.

Senate Bill 375

SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the State's MPOs, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. While this action does not directly apply to individual projects, the project would not conflict with the SCAG 2020-2045 RTP/SCS goals and objectives under SB 375 to implement "smart growth." The project would not conflict with the SCAG 2020-2045 RTP/SCS. The project would support a reduction in vehicle miles traveled (VMT) given its location at an urban infill location with nearby access to public transportation within 0.25 mile of the project. In addition, the project site is well served by public transit. Specifically, the Los Angeles County Metropolitan Transportation Authority (Metro) 20 and 720 bus lines on Wilshire Boulevard and the Metro 217, 218, and 780 bus lines on Fairfax Avenue all stop within half a block of the project site. In addition, Metro is currently constructing an extension of the Metro system D Line (Purple). This Metro project will construct three new heavy-rail subway stations along Wilshire Boulevard, which will serve the project site. The new stations will be located at Wilshire Boulevard/ La Brea Avenue, Wilshire Boulevard/Fairfax Avenue, and Wilshire Boulevard/La Cienega Boulevard. They are slated to open for service in 2024.

California Integrated Waste Management Act of 1989 and Assembly Bill 341

The Integrated Waste Management Act mandated that State agencies develop and implement an integrated waste management plan which outlines the steps to be taken to divert at least 50% of their solid waste from disposal facilities. AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a statewide goal for 75% disposal reduction by the year 2020. In addition, the City has developed and is in the process of implementing the Solid Waste Integrated Resources Plan, also referred to as the Zero Waste Plan, the goal of which is to lead the City toward being a "zero waste" city by 2030. While this action does not directly apply to individual projects, the project would benefit from the Integrated Waste Management Act and the Solid Waste Integrated Resources Plan inasmuch as it would be served by a solid waste collection and recycling service that would include mixed-waste processing, and that yields waste diversion results comparable to source separation and consistent with citywide recycling targets. According to the City of Los Angeles Zero Waste Progress Report (March 2013), the City achieved a landfill diversion rate of approximately 76% by year 2012.

As demonstrated above, the project would not conflict with the future anticipated statewide GHG reduction goals. CARB has outlined a number of potential strategies for achieving the 2030 statewide reduction target of 40% below 1990 levels, as mandated by SB 32. These potential strategies include using renewable resources for half of the State's electricity by 2030, increasing the fuel economy of vehicles and the number of zero-emission or hybrid vehicles, reducing the rate of growth in VMT, supporting other alternative transportation options, and use of high-efficiency appliances, water heaters, and HVAC systems. The project would benefit from statewide and utility-provider efforts toward increasing the portion of electricity provided from renewable resources. The utility provider for the project, LADWP, provided 35% of 2021 electricity purchases from renewable sources and is required to provide 50% by 2025, 60% by 2030, and 100% by 2045.

Post-2030 Analysis

The 2017 and 2022 Scoping Plan also outline strategies to reduce GHG emissions to achieve the 2030 target from sectors that are not directly controlled or influenced by the project, but nonetheless contribute to project-related GHG emissions. For instance, the project itself is not subject to the cap-and-trade regulation; however, project-related emissions would decline pursuant to the regulation as utility providers and transportation fuel producers are subject to renewable energy standards, cap-and-trade,

and the LCFS. While CARB is in the process of expanding the regulatory framework to meet the 2030 reduction target based on the existing laws and strategies in the 2022 Scoping Plan, the project would support or not impede implementation of these potential GHG reduction strategies identified by CARB for all the reasons summarized above.

A report was published on the California PATHWAYS model that determined that "meeting the state's 2030 climate goals requires scaling up and using technologies already in the market such as energy efficiency and renewables, while pursing aggressive market transformation of new technologies that have not yet been utilized at scale in California (for example, zero-emission vehicles and electric heat pumps)" (CEC 2018:3). Priority GHG reduction strategies include energy efficiency in buildings, renewable energy, and smart growth through increased use of public transit, walking, biking, telepresence, and denser, mixed-use community design. The project would not conflict with these strategies, given it would incorporate renewable energy measures, including solar photovoltaic panels to reduce the amount of electricity drawn from City utilities, and energy efficient measures, including water demand reduction measures, minimizing energy use to support efforts by its utility provider, LADWP, to obtain renewable energy pursuant to State mandates. Furthermore, the project would support the priority market transformation strategy of zero-emission light-duty vehicles by providing for the installation of the conduit and panel capacity to accommodate future electric vehicle charging stations. Therefore, the project would not conflict with the findings relevant to the project from the updated California PATHWAYS model report (CEC 2018).

With statewide efforts underway to facilitate the State's achievement of those goals, it is reasonable to expect the project's GHG emissions to decline from their early operational years, as the regulatory initiatives identified by CARB in the 2022 Scoping Plan are implemented, and other technological innovations occur. Stated differently, the project's emissions at buildout likely represent the maximum emissions for the project, as anticipated regulatory developments and technology advances are expected to reduce emissions associated with the project, such as emissions related to electricity use and vehicle use.

Even though the 2022 Scoping Plan and supporting documentation do not provide an exact regulatory and technological roadmap to achieve 2050 goals, they demonstrate that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the study or not currently feasible at the time the 2022 Scoping Plan was adopted could enable the State to meet the 2050 targets. For example, the 2022 Scoping Plan states some policies are not feasible at this time, such as Net Zero Carbon Buildings, but that this type of policy would be necessary to meet the 2050 target.

Based on the above, the project would not conflict with CARB's Climate Change Scoping Plan nor the State's GHG reduction targets for 2030 and 2050, and there would be an anticipated decline in project emissions once fully constructed and operational.

SCAG'S 2020-2045 RTP/SCS

The 2020-2045 RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review. While the project does not propose residential uses, new employees would be introduced by the project. According to the 2020-2045 RTP/SCS, the employment forecast for the City of Los Angeles Subregion in 2021 is approximately 1,897,883 employees. In 2028, the projected first operation year of the project, the City of Los Angeles Subregion is anticipated to have 1,937,552 employees. As such, the project's estimated 42 employees would constitute a very small

percentage of the city's employment growth forecasted between 2021 and 2028. Accordingly, the project's generation of employees would not conflict with employment generation projections contained in the 2020-2045 RTP/SCS.

The project site is well served by public transit. Specifically, the Metro 20 and 720 bus lines on Wilshire Boulevard and the Metro 217, 218, and 780 bus lines on Fairfax Avenue all stop within half a block of the project site. In addition, Metro is currently constructing an extension of the Metro system D Line (Purple), which will include construction of three new heavy-rail subway stations along Wilshire Boulevard, which will serve the project site. The new stations will be located at Wilshire Boulevard/ La Brea Avenue, Wilshire Boulevard/Fairfax Avenue, and Wilshire Boulevard/La Cienega Boulevard. They are slated to open for service in 2024. By locating the project's land uses within an area that has existing high-quality public transit (with access to existing regional bus and rail service) and employment opportunities within walking distance, and by including features that support and encourage pedestrian activity and other non-vehicular transportation in the Los Angeles area, the project would support the reduction of vehicle trips and VMT and resulting air pollution and GHG emissions.

In addition, the project was reviewed to determine potential inconsistencies with GHG reduction targets forecasted in the SCAG RTP/SCS. The project was analyzed using a total VMT threshold (as opposed to an efficiency-based impact threshold). Additional detail on this analysis is included in the Transportation Assessment prepared by Kittelson and Associates (see Appendix J). The project site functions as a regional attraction and the proposed project would result in a net increase in regional VMT. Since the project would result in a net increase in VMT, further evaluation was necessary to determine whether this project would be inconsistent with the VMT and GHG reduction goals of the SCAG RTP/SCS.

It was determined that, without mitigation measures, the project may be inconsistent with SCAG's goals related to improving mobility and accessibility, ensuring safety, maximizing transportation productivity, encouraging active transportation, and improving air quality. The project does not include transportation improvements to encourage and improve active transportation and public transit outside of on-site access and circulation improvements.

In conclusion, the project may conflict with the following relevant RTP/SCS goals:

- Improve mobility, accessibility, reliability, and travel safety for people and goods
- Enhance the preservation, security, and resilience of the regional transportation system
- Increase person and goods movement and travel choices within the transportation system
- Reduce greenhouse gas emissions and improve air quality
- Leverage new transportation technologies and data-driven solutions that result in more efficient travel

COUNTY OF LOS ANGELES GENERAL PLAN

The project would meet the County of Los Angeles's General Plan goals to address the impact of GHGs and climate change. The project would implement project design features, including solar photovoltaic panels on the roof of the project building to reduce energy consumption and encourage energy conservation. Additionally, HVAC systems that would be sized and designed in compliance with the CALGreen Code and the County of Los Angeles Green Building Standards Code to maximize energy efficiency caused by heat loss and heat gain; new and existing tree canopies would protect building walls from sun exposure and provide shade for the ground area. The project would provide sustainability features, such as rainwater collection leading to bioswales; a sloped green roof; and the use of drought-tolerant landscaping to reduce water consumption. All of these features would reduce the project's energy

consumption, reduce water consumption, and encourage energy conservation. Therefore, the project would not conflict with the goals of the County of Los Angeles General Plan.

OURCOUNTY – LOS ANGELES COUNTYWIDE SUSTAINABILITY PLAN

The project would be consistent with the OurCounty regional sustainability plan, which consists of 12 goals. The project would implement project design features, including solar photovoltaic panels on the roof of the project building to reduce energy consumption and encourage energy conservation. Additionally, HVAC systems would be sized and designed in compliance with the CALGreen standards and the County of Los Angeles Green Building Standards Code to maximize energy efficiency caused by heat loss and heat gain. New and existing tree canopies would protect building walls from sun exposure and provide shade for the ground area. The project would also provide sustainability features, such as rainwater collection leading to bioswales, a sloped green roof, and the use of drought-tolerant landscaping to reduce water consumption. All these features would use efficient technologies and practices that reduce resource use, improve health, and increase resilience and would effectively manage waste, water, energy, and material resources consistent with the goals of OurCounty. For these reasons, the project would not conflict with the goals of OurCounty.

CITY OF LOS ANGELES GENERAL PLAN

The project would meet the City of Los Angeles's General Plan goals, objectives, and policies to address the air quality improvement programs and strategies (City of Los Angeles 1992). Consistent with the six goals of the City of Los Angeles General Plan, the project would reduce particulate air pollutants emanating from unpaved areas, parking lots, and construction sites by complying with the SCAQMD Rule 403 required fugitive dust control measures. The project would also provide visitors with the ability to access nearby public transit and opportunities for walking and biking, which would facilitate minimization of VMT and related vehicular GHG emissions, and would not conflict with the goals to reduce VMT. Bicycle parking and connections to walking and biking paths would also be provided. The project would implement project design features to reduce energy consumption and encourage energy conservation. Features of the project would reduce the project's energy consumption, reduce water consumption, and encourage energy conservation, supporting the City General Plan goals for a reduction in energy consumption, a shift to nonpolluting sources of energy in its buildings and operations, and reducing energy consumption and associated air emissions by encouraging waste reduction and recycling. For these reasons, the project would not conflict with the City of Los Angeles General Plan.

CITY OF LOS ANGELES GREEN LA ACTION PLAN

The project would be consistent with the City of Los Angeles Green LA Action Plan by including project design features, including solar photovoltaic panels on the roof of the project building, to reduce energy consumption and encourage energy conservation (City of Los Angeles 2007). Additionally, HVAC systems would be sized and designed in compliance with the CALGreen standards and the County of Los Angeles Green Building Standards Code to maximize energy efficiency caused by heat loss and heat gain. New and existing tree canopies would protect building walls from sun exposure and provide shade for the ground area. Similarly, the features described under the previous consistency analyses would also further the implementation of the City of Los Angeles Green LA Action Plan goals.

CITY OF LOS ANGELES GREEN NEW DEAL/SUSTAINABLE CITY PLAN

The City's Green New Deal includes both short-term and long-term aspirations through the year 2050 in various topic areas, including water, solar power, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, and air quality, among

others (Garcetti 2019). While not a plan adopted solely to reduce GHG emissions, within the City's Green New Deal, climate mitigation is one of eight explicit benefits that help define its strategies and goals. Although the Green New Deal mainly targets GHG emissions related to City-owned buildings and operations, certain reductions associated with the project would promote the Green New Deal's goals. Such measures include increasing renewable energy usage, reduction of per-capita water usage, promotion of walking and biking, promotion of educational and recreational uses close to transit, and various recycling and trash diversion goals.

Although the City's Green New Deal is not an adopted plan or directly applicable to private development projects, the project would not conflict with these aspirations as it is an infill development consisting of educational and recreational uses on a project in proximity to transit. In addition, the project would comply with Title 24 Standards and would implement measures to reduce overall energy usage compared to baseline conditions. Furthermore, the project would also result in GHG reductions beyond those specified by the City and would minimize its GHG emissions by implementing project design features that reduce electricity and water consumption. The project would be serviced by providers who comply with the City of Los Angeles Solid Waste Management Policy Plan (Los Angeles Sanitation and Environment 2015) and the Exclusive Franchise System Ordinance (Ordinance No. 182,986) to further the aspirations included in the Green New Deal with regard to energy-efficient buildings, waste, and landfills. The project would also provide bicycle parking and connections to walking and biking paths to further reduce VMT and decrease GHG emissions.

Therefore, as the project's GHG emissions would be generated in connection with a development located within the city and designed to be consistent with the applicable City plan goals and actions for reducing GHG emissions, the project would not conflict with these City plans adopted for the purpose of reducing GHG emissions, and the project's GHG emissions would result in less-than-significant impacts.

CONCLUSION

Through the analysis above, it was determined that the project may be inconsistent with regional plans related to mobility and GHG reductions, specifically in relation to SCAG's 2020-2045 RTP/SCS. It was determined that without mitigation measures, the project may be inconsistent with SCAG's goals related to improving mobility and accessibility, transportation productivity, and encouraging active transportation. The project does not include transportation improvements to encourage and improve active transportation and public transit outside of on-site access and circulation improvements. However the project does include design features that would reduce the project's energy consumption, reduce water consumption, and encourage energy conservation, as well as provide visitors with public transportation incentives, with the ability to access nearby public transit and opportunities for walking and biking, all of which are consistent with the County of Los Angeles General Plan, OurCounty, City of Los Angeles General Plan, City of Los Angeles Green LA Action Plan, and the City's Green New Deal. Thus, the project could result in a *significant impact* related to consistency with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

GHG Impact 2
The project could result in a significant impact related to consistency with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases, specifically the potential conflict with the SCAG 2020-2045 RTP/SCS in relation to improving mobility and accessibility, transportation productivity, and encouraging active transportation. Impacts could be significant. (CEQA Checklist Appendix G Threshold VIII. b)

GHG Impact 2
Mitigation Measures
Implement Mitigation Measures TRA/mm-1.1.
Impacts Following Mitigation
With implementation of TRA/mm-1.1, impacts related to the project's consistency with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions would be less than significant.

5.7.6 Cumulative Impact Analysis

The geographic scope considered in the cumulative impact analysis for GHG emissions is global. Adverse environmental impacts of cumulative GHG emissions, including sea level rise, increased average temperatures, more drought years, and more large forest fires, are already occurring. As a result, cumulative impacts related to GHG emissions are significant.

The analysis of a project's GHG emissions is inherently a cumulative impact analysis because impacts of climate change are experienced on a global scale regardless of the location of GHG emission sources. The GHG emissions from an individual development project are not typically going to have a noticeable impact on the global climate, but individual projects contribute to the significant cumulative problem of global warming and climate change. As the California Supreme Court has indicated, "an individual project's emissions will most likely not have any appreciable impact on the global problem by themselves, but they will contribute to the significant cumulative impact caused by greenhouse gas emissions from other sources around the globe. The question therefore becomes whether the project's incremental addition of greenhouse gases is 'cumulatively considerable' in light of the global problem" (Cleveland National Forest Foundation v. San Diego Association of Governments 2017:14).

Consistent with the inherent consideration of GHG emissions as a cumulative contribution to a global environmental condition, the analysis presented above in Section 5.7.5 considers the potential for the project to contribute considerably to the cumulative impact of global climate change.

The analysis provided in the previous sections demonstrates that the project includes many design features that support the reduction of GHG emissions, including features that would reduce the project's energy consumption, reduce water consumption, and encourage energy conservation, as well as provide visitors with public transportation incentives, the ability to access nearby public transit, and opportunities for walking and biking. However, it has also been determined that, without additional measures, the project may be inconsistent with SCAG's goals related to improving mobility and accessibility, transportation productivity, and encouraging active transportation. This is because the project does not include transportation improvements to encourage and improve active transportation and public transit outside of on-site access and circulation improvements. Also, since detailed design plans have not been developed for the project at this stage, it is also not known whether natural gas use would be included in the final design. As a fossil fuel, natural gas production and use are significant contributors to GHG emissions. For the building sector to achieve carbon neutrality, natural gas usage will need to be phased out and replaced with electricity usage, and electrical generation will need to shift to 100% carbon-free sources. Thus, without mitigation, the project could cause a *significant* contribution to the cumulative impact of GHG emissions and global climate change.

GHG Impact 3 (Cumulative)
The project could result in a significant contribution to the cumulative impact of GHG emissions and global climate change.
Mitigation Measures
Implement Mitigation Measures GHG/mm-1.1 and TRA/mm-1.1.
Impacts Following Mitigation
With implementation of the identified mitigation measures to reduce project-specific impacts, impacts would be less than significant.

5.8 HAZARDS AND HAZARDOUS MATERIALS

This section describes the hazards and hazardous materials and potential health and safety issues associated with the project. The presence of project site-specific health, safety, and hazardous material status is evaluated, and an analysis of the potential impacts associated with the project is presented. This section also includes feasible mitigation measures, where applicable, to reduce significant impacts associated with hazardous materials and health and safety risks. The analysis in this section is based on a desktop environmental database search prepared by SWCA, the *La Brea Tar Pits Master Plan Preliminary Civil Engineering Narrative* prepared by KPFF Consulting Engineers (KPFF) dated March 4, 2021, and *Methane Survey Report for the La Brea Tar Pits Site Master Plan* prepared by Leighton Consulting, Inc., dated January 12, 2023 (Appendix G).

5.8.1 Existing Conditions

5.8.1.1 Existing and Past Uses of the Project Site

The project site consists of 13 acres of the eastern and northwestern portions of Hancock Park and broadly encompasses La Brea Tar Pits, with facilities including the 1977 George C. Page Museum (Page Museum); 1952 Observation Pit; various tar pit excavation sites and features, primarily with temporary construction serving as support facilities; a concession and public restroom building; a multipurpose lawn and recreational areas; hardscaping/landscaping features throughout the park; and a surface parking lot. The larger 23-acre Hancock Park, established in the 1920s, has remained intact as a relatively undeveloped open space, public park, and cultural institution in the Mid-Wilshire neighborhood for nearly a century. Dating back to the early 1900s, prior to the dedication of the project site to its current use, the project site was used for oil mining for the production of asphalt materials.

The project site currently supports a variety of museum and research-related activities, including the excavation and processing of fossils, requiring the use and storage of hazardous materials typically associated with museums. According to the Safety Data Sheets provided by the Los Angeles County Museum of Natural History Foundation (Foundation), these include compressed gases (i.e., ethers, carbon dioxide, nitrogen, butylene oxide, methoxyphenol), biodiesel fuels, acetone, vapor degreasing solvents, various paints, resins, and cleaning supplies (Foundation 2022). At the project site, health and safety responsibilities are managed by a Safety and Risk Management professional, a position funded by the Foundation. The Safety and Risk Management position is responsible for managing the use of hazardous materials at the project site in compliance with regulatory standards and reporting requirements.

5.8.1.2 Recorded Hazardous Materials Sites

Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to compile and annually update lists of hazardous waste sites and land designated as hazardous waste sites throughout the state. The Government Code Section 65962.5 list is not one document but rather a series of data resources lists from responsible organizations including the California Department of Toxic Substance Control (DTSC), the California Department of Health Services, the State Water Resources Control Board (SWRCB), and the California Integrated Waste Management Board (CalEPA 2023). The DTSC EnviroStor is the data management system that tracks cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known contamination. The DTSC EnviroStor also lists hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code. The SWRCB GeoTracker database is the data management system that identifies hazardous materials sites that impact, or have the potential to impact, groundwater quality in the state including leaking underground storage tank (LUST) sites, solid waste disposal sites with waste

constituents above hazardous waste levels, active cease and desist orders, and cleanup and abatement orders that concern the discharge of wastes that are hazardous materials.

Based on a desktop query of the databases above, the project site was not included on any of the identified Government Code Section 65962.5 lists identified above (DTSC 2022; SWRCB 2022). Of note, there is a LUST cleanup site at Museum Square (5757 Wilshire Boulevard), which is approximately 300 feet southeast of the project site. The potential contaminant of concern was diesel; however, the case was closed as of May 21, 1996. As such, there are no active Government Code Section 65962.5 hazardous materials sites located within the project site or within a 1,000-foot radius of the project site (DTSC 2022; SWRCB 2022).

A search of the environmental records was conducted by Environmental Data Resources, Inc. (EDR) on July 21, 2022, to determine whether hazardous waste or hazardous material management, handling, treatment, or disposal activities have occurred on or near the project site (EDR 2022). Review of the EDR database report and supplemental records from state and federal regulatory databases found the following:

- The project site is identified by the California Environmental Reporting System (CERS) as a generator of hazardous waste and as a chemical storage facility. Numerous administrative violations are noted but none that would indicate potential leaks, spills, or contamination.
- The project site (under the name George C. Page Museum) is identified as a Resource Conservation and Recovery Act (RCRA) large-quantity generator and transporter of hazardous waste. No violations are noted and there are no indications of potential leaks, spills, or contamination. The RCRA database contains information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA, and a listing as a RCRA site is not an indication of leaks, spills, or contamination.
- The project site (under the name George C. Page Museum) is identified in the California Hazardous Material Incident Reporting System. In 1999, oil from an oil/water separator at the museum entered the Ballona Creek storm drain system. Cleanup was completed by the Los Angeles County Fire Department. The type of oil is not reported. Because of the amount of time that has passed, and because it likely immediately washed away in the storm drain system, this spill is not expected to affect the project site.
- The southwest-adjoining Los Angeles County Museum of Art is identified in several listings:
    - It is identified as a RCRA small-quantity generator of hazardous waste. No violations are noted and there are no indications of potential leaks, spills, or contamination.
    - The facility is identified by CERS as a chemical storage facility. The listing notes several administrative violations but none that would indicate potential leaks, spills, or contamination.
- The Wilshire Courtyard property, adjoining the southeast of the project site at 5750 Wilshire Boulevard, is identified in the CERS tanks program as a UST site. No violations are noted in these listings and there are no indications of potential leaks, spills, or contamination. No further details are provided. This location is also identified by CERS as a facility that stores chemicals. Numerous administrative violations are noted but none that would indicate potential leaks, spills, or contamination.
- Pearls Cleaners, also at 5750 Wilshire Boulevard (adjoining the project site), is identified as having been a dry-cleaning plant from 1991 to 2005. This listing also identifies Attila Photo/One Hour Lab at this address in 1991. Historically, dry cleaners have had a high frequency of spills and discharges. The primary contaminants from dry cleaners are the chlorinated solvents perchloroethylene (PCE), trichloroethylene (TCE), and vinyl chloride (VC). These contaminants

are volatile, mobile, and resistant to degradation. The concern for properties near historical dry cleaners is vapor intrusion—the movement of contaminant vapors through the soil, utility corridors, or other pathways, which can then permeate foundations and concentrate in enclosed indoor areas. Old photography labs are also commonly identified as sources of contamination.

- AT&T California - H4A02, adjoining the south of the project site at 5820 Wilshire Boulevard, is identified by CERS as a facility that stores chemicals. No violations are noted and there are no indications of potential leaks, spills, or contamination.
- Several listings are identified at 5757 Wilshire Boulevard, located 240 feet east the project site:
    - Museum Square discovered a diesel fuel leak from a UST in 1995. Because the case was closed in 1996 after assessment and abatement actions, this facility is not expected to affect the project site.
    - Downey Center, Inc., is identified as having been a convenience store and automotive repair shop (Rancho Santa Fe Auto Center, LP) from 1999 to 2008.
    - Splendid Cleaners is identified as having been a dry-cleaning plant from 1993 to 2002. As discussed above, dry cleaners are often a concern.
- Wardrobe Cleaners, located 540 feet northwest of the project site at 540 South Ogden Drive, is identified as having been a dry-cleaning plant from 2008 to 2012. As discussed above, dry cleaners are often a concern.
- Mobile Cleaners, located 560 feet southwest of the project site at 5900 Wilshire Boulevard, is identified as having been a dry cleaner from 1994 to 1999. As discussed above, dry cleaners are often a concern.
- Al-Sal Oil (old Unocal), located 500 feet west of the project site at 6050 West 6th Street, is listed as a LUST site. A gasoline LUST was identified in 1994. Because the case was closed in 1995, this facility is not expected to affect the project site.
- MAS Auto Service, located 0.4 mile northwest of the project site at 371 South Fairfax Avenue, is listed as a LUST site. The case is open and remediation is ongoing. A gasoline leak was reported at this location in 1991, and the site was the subject of several enforcement actions between 1999 and 2021. Because of its distance, this facility is not expected to affect the project site.
- The Grove at Farmers Market, located 0.45 mile north of the project site at 6301 West 3rd Street, is identified as a state Cleanup Program Site – Spills, Leaks, Investigations and Cleanups (CPS-SLIC site). Because of its distance, and because remediation is complete, this facility is not expected to affect the project site.
- Shinwa Corporation, located 0.44 mile southwest of the project site at 938 Orange Grove Avenue, is identified as a CPS-SLIC site. Because of its distance, and because it achieved no further action status, this facility is not expected to affect the project site.

5.8.1.3 Methane Gas

The project site is located within a designated methane zone mapped by the City of Los Angeles (2022). Areas underlain by methane are extensive in Southern California; these areas are typically characterized by subsurface methane gas produced from naturally occurring petroleum fields. Methane is a naturally occurring gas associated with the decomposition of organic materials. In high concentrations of between 50,000 and 150,000 parts per million by volume (ppmv) in the presence of oxygen, methane can be an explosion hazard. In Los Angeles County, the typical trigger concentration in which methane gas protection systems are required to be installed is 5,000 ppmv. Based on results of a subsurface investigation conducted for the project by Leighton Consulting, Inc., on October 18 and October 19,

2022, elevated methane concentrations of up to 50,000 ppmv were identified in the soils at the project site.

5.8.1.4 Tar Seeps

The project site is subject to natural tar seeps resulting from release of oil and methane gas pressure through fissures in the substrate. Oil or tar then migrates to the surface throughout the project site. It has been observed that the pressure from tar and gas has caused the entire Central Green lawn to heave over time, resulting in grades that are higher than originally designed and constructed (KPFF 2021). The most recent documented locations of the tar seeps within the project site show the largest concentration of tar seeps within the current parking lot, with others occurring near walkways around the Central Green and the Lake Pit (Figure 5.8-1). It is important to note that tar seeps can develop throughout the entire project site and may not be limited to the locations shown in Figure 5.8-1.

Historically, various strategies have been employed to manage breakouts of tar at the surface of the ground. Prior environmental investigations revealed that concrete curbs and fences had been constructed around a tar seep to allow tar to continue to vent in that location while protecting the public (KPFF 2021). Some of the existing "tar pits" may have initially been examples of these protective measures. There are also three locations within the surface parking lot where several parking spaces have been replaced with a chain-link barrier around an obvious tar seep, as well as similar barriers in the surrounding lawn areas. Additional approaches to address the issue have involved a series of open-bottom manholes constructed around apparent tar seeps. Several of these manholes or vaults exist throughout the project site and are intended to collect and concentrate tar below grade. Vacuum trucks (also known as "pumper trucks") then periodically pump out the water and tar that collects within the manhole and empty the contents into the Lake Pit. This activity is performed by a contractor licensed to handle and transport these materials to ensure that any tar material pumped from the manholes that could be considered hazardous does not come in contact with the public or employees at the project site. In addition, water collected during this process is treated via an underground clarifying system located west of the Lake Pit that filters out fine oil particulates and settleable constituents through a two-step reverse clarifier sequence and is then discharged into the sewer system per an existing agreement between the Foundation and Los Angeles Sanitation and Environment (LASAN) (Foundation 2023). Another strategy the staff at La Brea Tar Pits have implemented is putting up cones or other barriers (e.g., chain-link fencing) around aboveground tar seeps to limit access to these areas. Implementation of these strategies has adequately and safety managed tar seeps at the site to-date (Foundation 2023).

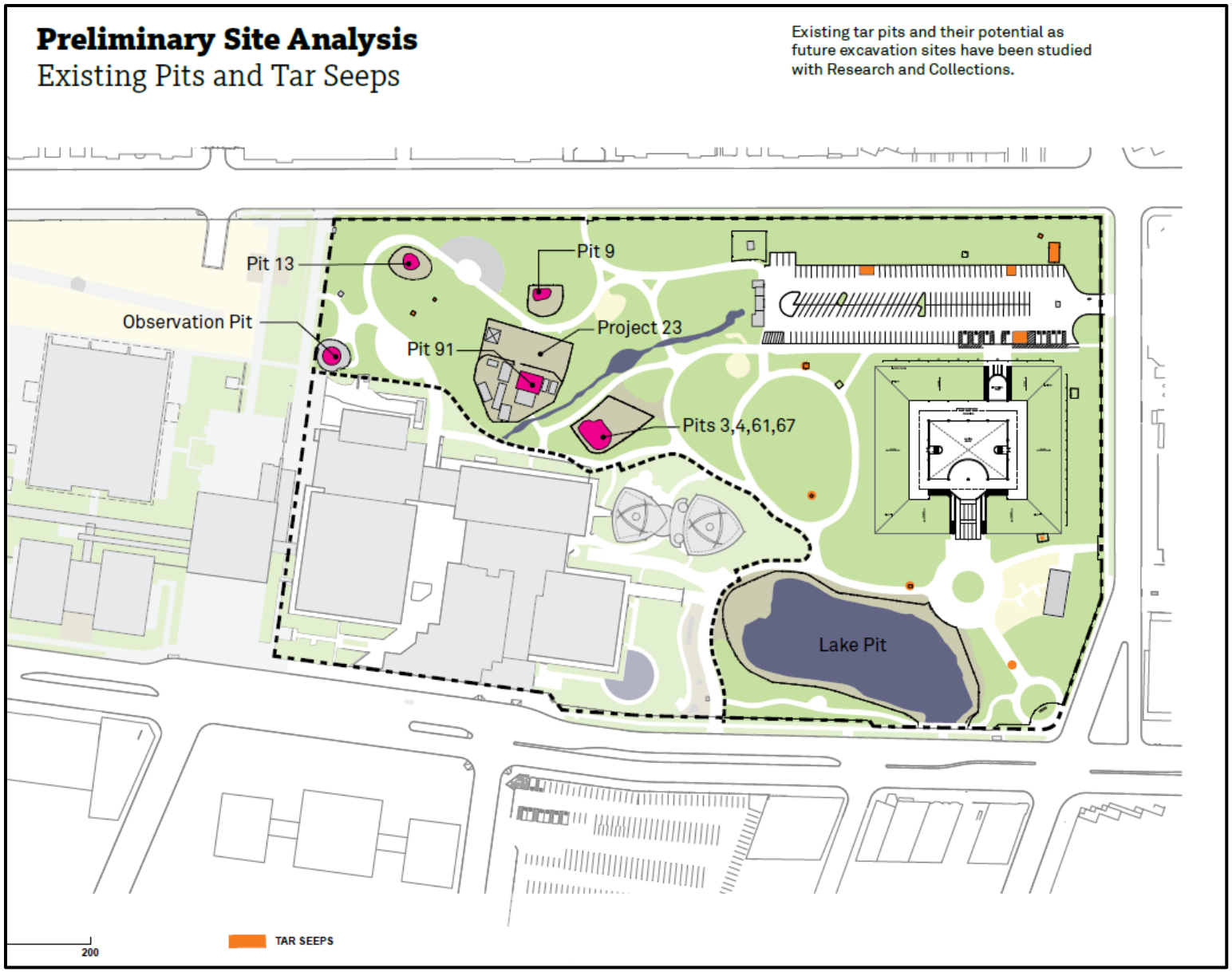


Figure 5.8-1. Tar seeps within the project site.

5.8.1.5 Schools

Table 5.8-1 provides a list of existing school facilities in close proximity (less than 1 mile) to the project site. The nearest school to the project site is Fusion Academy Miracle Mile, a private learning institution for middle and high school–aged students.

Table 5.8-1. Existing Schools in the Project Vicinity

School	Address	Distance and Direction from the Project site
Fusion Academy Miracle Mile	5757 Wilshire Boulevard	0.12 mile east
Hancock Park Elementary School	408 Fairfax Avenue	0.45 mile northwest
Westside Jewish Community Preschool	5870 West Olympic Boulevard	0.46 mile south
Shalhevet High School	910 S. Fairfax Avenue	0.50 mile southwest
Yachaywasi Spanish Immersion Preschool	934 Hauser Boulevard	0.52 mile southeast
Cathedral Chapel Middle School	755 S. Cochran Avenue	0.56 mile southeast
Le Petit Bebe Day Care	6268 Del Valle Drive	0.70 mile southwest
Language Garden Preschool	1067 South Fairfax Avenue	0.86 miles southwest
Le Petit Gan International Preschool	1071 South Fairfax Avenue	0.86 miles southwest
Ohr Eliyahu Academy also known as Yeshiva Aharon Yaakov Ohr Eliyahu (Preschool)	241 South Detroit Street	0.96 mile northeast

5.8.1.6 Airports

The project site is not located within 2 miles of a public airport or public use airport. The nearest airport to the project site is Santa Monica Airport, which is located approximately 6 miles southwest of the project site.

5.8.1.7 Emergency Response Plans

The Los Angeles County Operational Area Emergency Response Plan (Emergency Response Plan) maintained by the Los County Office of Emergency Management describes the planned response of the County Operational Area to emergencies associated with natural and human-made disasters and technological incidents. This plan also provides an overview of operational concepts, identifies components of the County's Emergency Management Organization, and describes responsibilities of the federal, state, and local agencies for protecting life and property. The Office of Emergency Management leads and coordinates disaster plans and disaster preparedness exercises for all areas of Los Angeles County including cities. In addition, the Los Angeles County Community Emergency Response Team, composed of local residents trained in emergency response and coordinated by the Los Angeles County Fire Department, is deployed as needed during emergencies.

Local emergency preparedness plans and emergency response operations have also been prepared by the City of Los Angeles (City). The City's Emergency Operation Plan, adopted in November 2018, addresses the City's response from small- to large-scale emergency situations associated with natural disasters or human-caused emergencies. It describes the methods for carrying out emergency operations, the process for rendering mutual aid, the emergency services of governmental departments and agencies, how resources are mobilized, how the public will be informed, and the process to ensure continuity of government during an emergency or disaster.

As part of the Emergency Response Plan, the City has identified Disaster Routes for the Los Angeles County Operational Area. Disaster Routes are freeway, highway, or arterial routes pre-identified for use during times of crisis. These routes are used to bring in emergency personnel, equipment, and supplies to impacted areas in order to save lives, protect property, and minimize impact to the environment. During a disaster, these routes have priority for clearing, repairing, and restoration over all other roads. According to the Los Angeles County Department of Public Works (County Public Works) Disaster Route maps, the project site is within Area H, Los Angeles Central. There are no streets immediately adjacent to the project site that are designated Disaster Routes (County Public Works 2022). The nearest designated Disaster Routes to the project site include Beverly Boulevard approximately 1 mile to the north, Olympic Boulevard approximately 0.4 mile to the south, La Brea Avenue approximately 0.6 mile to the east, and North La Cienega Boulevard approximately 1.2 miles to the west.

5.8.2 Regulatory Setting

5.8.2.1 Federal

RESOURCE CONSERVATION AND RECOVERY ACT OF 1976

The Resource Conservation and Recovery Act of 1976 establishes the framework for a national system of solid waste control. RCRA is a program administered by the U.S. Environmental Protection Agency (EPA) for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. Among other things, the use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act (EPA 2022a).

TOXIC SUBSTANCES CONTROL ACT OF 1976

The Toxic Substances Control Act (TSCA) of 1976 authorizes the EPA to require reporting, recordkeeping, testing requirements, and restrictions related to chemical substances and/or mixtures. Food, drugs, cosmetics, and pesticides are generally excluded from the TSCA. The EPA focuses on six primary substances under the TSCA: polychlorinated biphenyls (PCBs), asbestos, radon, lead, formaldehyde, and mercury. TSCA requirements most often affect the regulation of PCBs, asbestos, and lead in federal facilities. For example, under the TSCA, asbestos regulations require that only properly trained and certified persons perform asbestos abatement activities in public or commercial buildings (EPA 2022b).

HAZARDOUS MATERIAL TRANSPORTATION UNIFORM SAFETY ACT OF 1990

The Hazardous Material Transportation Uniform Safety Act was amended in 1990 to clarify conflicting state, local, and federal regulations. The amendment requires the Secretary of Transportation to issue regulations for the safe transport of hazardous material in domestic and foreign commerce. The Secretary also retains the authority to designate hazardous materials as hazardous when they pose an uncontrolled threat to health, safety, or property. The Act also includes provisions to encourage uniformity among different state and local highway routing regulations, to develop criteria for issuance of federal permits to motor carriers of hazardous materials, and to regulate the transport of radioactive materials.

FEDERAL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION – PROCESS SAFETY MANAGEMENT STANDARD

The federal Occupational Safety and Health Administration (OSHA) issued the Process Safety Management of Highly Hazardous Chemicals standard (29 Code of Federal Regulations [CFR] 1910.119 and 1926.64) to identify requirements for the management of hazards during the use of hazardous chemicals for general industry and construction activities. This standard includes requirements for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals. Requirements of this standard include providing employees with information about hazardous chemicals, training employees on the operation of equipment that use hazardous materials, and employer requirements to perform a process hazard analysis.

ASBESTOS HAZARD EMERGENCY RESPONSE ACT OF 1986

The Asbestos Hazard Emergency Response Act (AHERA) of 1986 requires the EPA to evaluate the extent of danger to human health posed by asbestos in public and commercial buildings and the means to respond to any identified danger. AHERA establishes regulations for inspections, abatement activity, appropriate response actions, implementation of response actions, operations and maintenance programs, periodic surveillance of asbestos, transport and disposal, and management plans required for schools. AHERA also creates accreditation programs for inspectors, management plan developers, and abatement contractors.

CLEAN AIR ACT

Regulations under the Clean Air Act are designed to prevent accidental releases of hazardous materials. The regulations require facilities that store minimum quantities (called threshold quantities) or greater of listed regulated substances to develop a risk management plan including hazard assessments and response programs, to prevent and respond to accidental releases of listed chemicals.

5.8.2.2 State

GOVERNMENT CODE SECTION 65962.5

Government Code Section 65962.5 requires the CalEPA to compile and annually update lists of hazardous waste sites and land designated as hazardous waste sites throughout the state. The Government Code Section 65962.5 list is not one document but rather a series of data resources lists from responsible organizations including the DTSC, the California Department of Health Services, the SWRCB, and the California Integrated Waste Management Board (CalEPA 2023). Before lead agencies accept applications for any development project as complete, the applicant must consult these lists to determine if the subject site is included on the Cortese List. The project site is not included on a Government Code Section 65962.5 list (DTSC 2022; SWRCB 2022).

HAZARDOUS WASTE CONTROL LAW

California Health and Safety Code (HSC) Division 20, Chapter 6.5 codifies the Hazardous Waste Control law, which states that generators of hazardous waste must employ technology and management practices for the safe handling, treatment, recycling, and destruction of their hazardous wastes prior to disposal. The law also creates the Hazardous Waste Management Council, which is responsible for making recommendations for a system that ensures financial liability for persons injured or otherwise affected by hazardous wastes that are treated or disposed of within their community. It is the overall intent of this law to grant those powers necessary to secure and maintain interim and final authorization for the state

hazardous waste program in accordance with the requirements of Section 3006 of Public Law 94-580, RCRA (42 United States Code 6926), and to implement such program in lieu of the federal program. The Hazardous Waste Control Law empowers DTSC to administer the State's hazardous waste program and implement the federal program in California.

ENVIRONMENTAL HEALTH STANDARDS FOR THE MANAGEMENT OF HAZARDOUS WASTE

Title 22, Division 4.5 of the California Code of Regulations (CCR) codifies regulations in place for the management of hazardous waste, implemented by and affecting the DTSC. The DTSC is a department of the CalEPA, which is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California HSC.

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22 of the CCR as follows:

> *A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.* (22 CCR Section 66261.10)

Title 22 of the CCR identifies several regulations pertaining to the management of hazardous materials, and the following may be applicable to construction and/or operation of the project:

- 22 CCR 66261.20 classifies hazardous waste as a substance that is ignitable, corrosive, reactive, or toxic.
- 22 CCR 66262.11 provides a method of determination for hazardous materials to ensure generators properly handle, store, transport, and/or dispose of hazardous materials accordingly.
- 22 CCR 66262.30–66262.35 requires proper packaging, labeling, marking, placarding, and accumulation timing of hazardous materials that are to be transported.
- 22 CCR 66262.70 states that waste pesticide, including pesticide containers or inner liners from pesticide containers, that meets the definition of hazardous waste, generated as part of a commercial farming operation, is not required to be managed in compliance with the standards in this chapter.
- 22 CCR 66263.30–66262.32 requires that in the event of a discharge of hazardous waste during transportation, the transporter shall take immediate action to protect human and environmental health, shall clean up spilled hazardous waste discharge, and properly report the incident.
- 22 CCR 66268 identifies land disposal restrictions for hazardous wastes, treatment standards for wastes, prohibitions on storage and land disposals, and potential incineration requirements.

CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

Under California Division of Occupational Safety and Health Administration (Cal/OSHA) Title 8, subchapter 2, employers must disclose potential workplace hazards and develop site-specific health and

safety plans for workers and the workplace. In addition, workers that may potentially be exposed to hazardous materials in their workplace must be notified of exposure so that they are aware of workplace hazards.

CALIFORNIA VEHICLE CODE LICENSE TO TRANSPORT HAZARDOUS MATERIALS SECTION 32000.5 ET SEQ.

The California Department of Transportation (Caltrans) regulates hazardous materials transportation on all interstate roads. Within California, the state agencies with primary responsibility for enforcing federal and state regulations and for responding to transportation emergencies are the California Highway Patrol and Caltrans. Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications for vehicles transporting hazardous materials.

LEAD-BASED PAINT REGULATIONS

Lead-based paint is defined as any paint, varnish, stain, or other applied coating that has 1 milligram per square centimeter (mg/cm^2) (5,000 micrograms per gram [µg/g] or 0.5% by weight) or more of lead. The U.S. Consumer Product Safety Commission (16 CFR 1303) banned paint containing more than 0.06% lead for residential use in 1978. Buildings built before 1978 are much more likely to have lead-based paint. The Page Museum was built in 1977.

The demolition of buildings containing lead-based paint is subject to a comprehensive set of California regulatory requirements that are designed to assure the safe handling and disposal of these materials. Cal/OSHA has established limits of exposure to lead contained in dusts and fumes, which provides for exposure limits, exposure monitoring, and respiratory protection, and mandates good working practices by workers exposed to lead, particularly since demolition workers are at greatest risk of adverse exposure. Lead-contaminated debris and other wastes must also be managed and disposed of in accordance with applicable provisions of the California HSC.

CALIFORNIA WATER CODE

The California Water Code authorizes the SWRCB to implement provisions of the Clean Water Act, including the authority to regulate waste disposal and require cleanup of discharges of hazardous materials and other pollutants. In regards to construction dewatering discharge analysis and treatment, groundwater may be encountered during deeper excavation. While the exact depth of construction and the finish grade of the new museum building has not been established, this analysis assumes that the depth of excavation would be approximately 6 to 10 feet below ground surface. While the final elevation of the foundation for the new museum building is not known at this time, it may be below the existing ground surface in order to provide a smooth connection to the existing Page Museum.

Under the California Water Code, discharge of any such groundwater to surface waters, or any point sources hydrologically connected to surface waters, such as storm drains, is prohibited unless conducted in compliance with a Waste Discharge Requirement (WDR) permit. In addition to the California Water Code, these permits implement and are in compliance with the federal Clean Water Act's National Pollutant Discharge Elimination System (NPDES) program. In accordance with these legal requirements, dewatering, treatment, and disposal of groundwater encountered during construction activities would be conducted in accordance with the Los Angeles Regional Water Quality Control Board's (LARWQCB's) Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties, pursuant to adopted Order No. R4-2013-0095, or any other appropriate WDR permit identified by the LARWQCB. Compliance with an appropriate WDR permit would include monitoring, treatment if appropriate, and

proper disposal of any encountered groundwater in accordance with applicable water quality standards. If, for example, extracted groundwater contains total petroleum hydrocarbons or other petroleum breakdown compounds in concentrations exceeding water quality standards, compliance with legal requirements would mandate treatment to meet published state water quality standards prior to discharge into a storm drain system.

5.8.2.3 County of Los Angeles

COUNTY OF LOS ANGELES CERTIFIED UNIFIED PROGRAM AGENCY

The primary local agency with responsibility for implementing federal and state laws and regulations pertaining to hazardous materials management is the Los Angeles County Health Department, Environmental Health Division. The Los Angeles County Health Department is the Certified Unified Program Agency (CUPA) for the County of Los Angeles. A CUPA is a local agency that has been certified by CalEPA to implement the six state environmental programs within the local agency's jurisdiction. This program was established under the amendments to the California HSC made by Senate Bill 1082 in 1994. The six consolidated programs are:

- Hazardous Materials Release Response Plan and Inventory (Business Plans);
- California Accidental Release Prevention (CalARP);
- Hazardous Waste (including Tiered Permitting);
- Underground Storage Tanks (USTs);
- Aboveground Storage Tanks (ASTs) (Spill Prevention, Control, and Countermeasures requirements); and
- UFC Article 80 Hazardous Material Management Program (HMMP) and Hazardous Material Identification System (HMIS).

As the CUPA for the County, the Los Angeles County Health Department, Environmental Health Division maintains the records regarding location and status of hazardous materials sites in the county and administers programs that regulate and enforce the transport, use, storage, manufacturing, and remediation of hazardous materials. A Participating Agency is a local agency that has been designated by the local CUPA to administer one or more Unified Programs within their jurisdiction on behalf of the CUPA. The Los Angeles County Health Department, Environmental Health Division has designated the Los Angeles Fire Department (LAFD) as a Participating Agency. The LAFD monitors the storage of hazardous materials in the city for compliance with local requirements. Specifically, businesses and facilities that store more than threshold quantities of hazardous materials as defined in California HSC Code Chapter 6.95 are required to file an Accidental Risk Prevention Program with LAFD. This program includes information such as emergency contacts, telephone numbers, facility information, chemical inventory, and hazardous materials handling and storage locations. LAFD also has the authority to administer and enforce federal and state laws and local ordinances for USTs. Plans for the construction/installation, modification, upgrade, and removal of USTs are reviewed by LAFD Inspectors. LAFD, in their role as a Participating Agency of the CUPA, also oversees and addresses issues relating to the presence and handling of contaminated soils that may be present at the project site. In addition, the LAFD may consult with other agencies (e.g., DTSC and the LARWQCB) if the nature of the contamination warrants the involvement of these agencies.

COUNTY OF LOS ANGELES 2035 GENERAL PLAN SAFETY ELEMENT

The project is subject to relevant goals, policies, and actions listed in the Los Angeles County 2035 General Plan (County of Los Angeles 2015). Goals, policies, and actions related to hazardous materials are included below.

Goal S 7. Effective County emergency response management capabilities.

> ***Policy S 7.1.*** Ensure that residents are protected from the public health consequences of natural or human-made disasters through increased readiness and response capabilities, risk communication, and the dissemination of public information.
>
> ***Policy S.4.3.*** Coordinate with other County and public agencies, such as transportation agencies and health care providers, on emergency planning and response activities, and evacuation planning.

COUNTY OF LOS ANGELES MUNICIPAL CODE

The Los Angeles County Code Title 2 (Administration), Division 3 (Departments and other Administrative Bodies), Chapter 2.68 (Emergency Services), provides plans to provide coordination of emergency operations to protect the public peace, health, and lives and property of people in Los Angeles County in the event of an emergency. This portion of the County Code provides the direction for the emergency organization; and the coordination of the emergency functions of the County with all other public agencies, corporations, organizations, and affected private persons.

COUNTY OF LOS ANGELES BUILDING CODE

The County of Los Angeles Building Code (Title 33) establishes the minimum requirements to safeguard the public health, safety, and general welfare by regulating the repair, alteration, change of occupancy, addition to, and relocation of existing buildings. The provisions of Title 33 apply to any existing building or structure within the unincorporated territory of the Los Angeles County and to such work or use by the County in any incorporated city.

LOS ANGELES COUNTY OPERATIONAL AREA EMERGENCY RESPONSE PLAN

The County of Los Angeles developed the Emergency Response Plan to ensure the most effective allocation of resources for the maximum benefit and protection of the public in time of emergency. The Emergency Response Plan does not address normal day-to-day emergencies or the well-established and routine procedures used in coping with them. Instead, the operational concepts reflected in this plan focus on potential large-scale disasters like extraordinary emergency situations associated with natural and human-made disasters and technological incidents which can generate unique situations requiring an unusual or extraordinary emergency response. The purpose of the plan is to incorporate and coordinate all facilities and personnel of the County government, along with the jurisdictional resources of the cities and special districts within the County, into an efficient Operational Area organization capable of responding to any emergency using a Standard Emergency Management System, mutual aid and other appropriate response procedures. The goal of the plan is to take effective life-safety measures and reduce property loss, provide for the rapid resumption of impacted businesses and community services, and provide accurate documentation and records required for cost-recovery.

5.8.2.4 City of Los Angeles

While the project site is located within the city of Los Angeles, it is owned by the County of Los Angeles and is proposed for uses that benefit the public. Accordingly, the project is not subject to the regulatory controls of the City of Los Angeles. Nonetheless, City regulatory and planning documents that are most relevant to the project as they relate to hazards and hazardous materials are provided herein for informational purposes.

CITY OF LOS ANGELES GENERAL PLAN SAFETY ELEMENT

The City of Los Angeles General Plan Safety Element includes policies related to the City's response to hazardous materials and represents the long-range emergency response plan for the City of Los Angeles.

Goal 1. A city where potential injury, loss of life, property damage and disruption of the social and economic life of the City due to hazards is minimized.

> ***Policy 1.1.4 (Health/Environmental Protection).*** Protect the public and workers from the release of hazardous materials and protect City water supplies and resources from contamination resulting from accidental release or intrusion resulting from a disaster event, including protection of the environment and public from potential health safety hazards associated with program implementation.

Goal 2. A city that responds with the maximum feasible speed and efficiency to disaster events so as to minimize injury, loss of life, property damage and disruption of the social and economic life of the City and its immediate environs.

> ***Policy 2.1.2 (Health and environmental protection).*** Develop and implement procedures to protect the environment, sensitive species, and public from potential health and safety hazards associated with hazard mitigation and disaster recovery efforts.

CITY OF LOS ANGELES FIRE CODE

The City of Los Angeles Fire Code, Chapter V, Article 7, Section 57.101 et seq., of the City of Los Angeles Municipal Code (LAMC) establishes the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion, panic, or dangerous conditions in new and existing buildings, structures, and premises, and to provide a reasonable level of safety to firefighters and emergency responders during emergency operations. At the local level, the LAFD monitors the storage of hazardous materials for compliance with local requirements and enforces the Fire Code.

CITY OF LOS ANGELES METHANE CODE AND METHANE BUFFER ZONES

The City of Los Angeles Methane Seepage Regulations (Methane Code), Chapter IX, Article I, Division 71, Section 91.7103 et seq., of the LAMC, establishes requirements for buildings and paved areas located in methane zones and methane buffer zones. The project site is located within a designated methane zone mapped by the City (City of Los Angeles 2022).

Requirements for new construction within such zones include methane gas sampling and, depending on the detected concentrations of methane and gas pressure at the site, application of design remedies for reducing potential methane impacts. The required methane mitigation systems are based on the Site Design Level, with more involved mitigation systems required at the higher Site Design Levels.

EMERGENCY MANAGEMENT DEPARTMENT, EMERGENCY OPERATIONS ORGANIZATION, AND EMERGENCY OPERATIONS CENTER

The City's Emergency Management Department consists of four divisions and two units: the administrative services division, communications division, community emergency management division, operations division, planning unit, and training exercise unit. The Emergency Management Department works with City departments, municipalities, and with community-based organizations to ensure that the City and its residents have the resources and information they need to prepare, respond, and recover from emergencies, disasters, and significant events. The Emergency Operations Organization is the operational department responsible for the City's emergency preparations (planning, training, and mitigation), response, and recovery operations. The Emergency Operations Organization centralizes command and information coordination to enable its unified chain-of-command to operate efficiently and effectively in managing the City's resources.

The Emergency Operations Center is the focal point for coordination of the City's emergency planning, training, response, and recovery efforts. Emergency Operations Center processes follow the National All-Hazards approach to major disasters such as fires, floods, earthquakes, acts of terrorism, and large-scale events in the city that require involvement by multiple City departments.

5.8.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse impacts related to hazards and hazardous materials if it would:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as result, would it create a significant hazard to the public or the environment.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Thresholds a) through f) are discussed under Section 5.8.5, Environmental Impact Analysis, below. However, it has been determined that the project would not result in significant impacts related to wildland fires (threshold g). The project site is surrounded by a variety of urban land uses and is not classified by the California Department of Forestry and Fire Protection (CAL FIRE) as located within a very high fire hazard severity zone in a state responsibility area or local responsibility area (CAL FIRE 2022). Therefore, the project would not interfere with emergency response or evacuation plans during wildfires, exacerbate wildfire risks, require the installation of wildfire prevention infrastructure, or expose

people or structures to post-fire flooding or landslides. As a result, threshold g) will not be further discussed in this section. See Chapter 7, Other CEQA Considerations, for a brief evaluation of this and other impacts found not to be significant.

5.8.4 Impact Assessment Methodology

The project's potential impacts associated with hazards and hazardous materials were evaluated based on a comprehensive review of the desktop environmental database search prepared by SWCA, the *La Brea Tar Pits Master Plan Preliminary Civil Engineering Narrative* prepared by KPFF dated March 4, 2021, the *Methane Survey Report for the La Brea Tar Pits Site Master Plan* prepared by Leighton Consulting, Inc., dated January 12, 2023 (see Appendix G), and all applicable regulatory requirements.

5.8.5 Environmental Impact Analysis

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

CONSTRUCTION

During project demolition, earthwork, grading, and building construction, hazardous materials such as fuel and oils associated with construction equipment, as well as coatings, paints, adhesives, and caustic or acidic cleaners, could be routinely used on-site. In addition, the project would require earthwork activities with excavations that could reach up to approximately 10 feet. Due to anticipated soil impacts from the naturally occurring tar seeps present throughout the project site, on-site soils may not be suitable for reuse and would need to be exported for proper remediation and disposal (KPFF 2021). Of this export, it is conservatively assumed that an estimated 53,000 cubic yards may include potentially hazardous substances, which would be exported to an appropriate disposal facility based on waste sampling and characterization, which would be required for any material leaving the site. Each disposal facility would require testing of the material being proposed for disposal to characterize and determine whether they could accept the material. Facilities that would potentially accept the materials include those characterized as Class I for federal hazardous waste (e.g., U.S. Ecology in Beatty, Nevada), Class II for California hazardous waste (e.g., Kettleman Hills Landfill in Kettleman City, California), or Class III for non-hazardous waste (e.g., Chiquita Canyon Landfill in Castaic, California).

Health and safety responsibilities are managed at the project site by a Safety and Risk Management professional. The Safety and Risk Management professional is responsible for managing the use of hazardous materials at the project site in compliance with regulatory standards and reporting requirements. Construction contractors would be required to comply with applicable federal, state, and local laws and regulations regarding the transport, use, and storage of hazardous construction-related materials (Section 5.8.2, Regulatory Setting), and all potentially hazardous materials used during construction would be required to be handled and disposed of in accordance with manufacturers' specifications and instructions. When tested for hydrocarbon range and EPA SW-846 hazardous waste test methods, tar could also be characterized as hazardous material due to flammability and potential for vapor inhalation. The presence of the naturally occurring tar seeps throughout the project site and the required removal of contaminated soils to an off-site location have the potential to create a hazard to construction workers at the site during construction activities, the public, and the staff at La Brea Tar Pits. Construction-related impacts could be *significant*. Construction-related impacts could be *significant*.

OPERATION

Upon project completion, the use of hazardous materials typically used in museums and for building and grounds maintenance, including cleaning solvents and pesticides for landscaping, would occur. As proposed operations would be similar to those operations occurring presently on-site, substantial increases in the amount or type of operational hazardous wastes would not be expected. Activities involving the handling and disposal of hazardous waste would occur in compliance with all applicable federal, state, and local requirements concerning the handling and disposal of hazardous waste.

The project site is susceptible to naturally occurring tar seeps, including the Central Green and parking lot areas. The location of past and existing tar seeps is generally shown in Figure 5.8-1, including seeps within the existing parking lot. Implementation of the project would not change the expected attributes or characteristics of this naturally occurring phenomenon currently at the project site.

As described in Section 5.8.1.4, various strategies have been employed to manage tar seeps within the project site, including implementing a series of open-bottom manholes around apparent tar seeps to collect and concentrate tar below grade. Vacuum trucks (also known as "pumper" trucks) then periodically pump out the water and tar that collects within the manhole and empty the contents into the Lake Pit. This activity is performed by a contractor licensed to handle and transport these materials to ensure that any tar material pumped from the manholes that could be considered hazardous does not come in contact with the public or employees at the project site. In addition, water collected during this process is treated via an underground clarifying system located west of the Lake Pit that filters out fine oil particulates and settleable constituents through a two-step reverse clarifier sequence and is then discharged into the sewer system per an existing agreement between the Foundation and LASAN (Foundation 2023). Another strategy the staff at La Brea Tar Pits have implemented is using cones or other barriers (e.g., chain-link fencing) around aboveground tar seeps to limit access to these areas. Implementation of these strategies has adequately and safely managed tar seeps at the site to-date (Foundation 2023).

Operation of the project would not create new tar seeps within the project site. Further, operation of the project would not trigger the need to change the existing tar management approach or modify the existing protocol to manage tar accumulation at the project site. The existing strategies discussed above address the project site's dynamic conditions and serve to prevent operational hazards associated with the routine movement and disposal of the tar during the operational life of the project. In addition, any new facilities or structures constructed on the project site, including the new museum building, would be designed to accommodate this naturally occurring phenomenon through the engineering and design process to provide appropriate foundational materials that would provide barriers for intrusion and ensure structural stability. Therefore, operational hazards associated with the routine movement and disposal of the tar throughout the project site, including in areas that may interface with the new facilities proposed by the project, would be *less than significant*.

HAZ Impact 1
During project construction, the project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Construction workers, facility employees, and the public could be exposed to hazardous materials associated with the naturally occurring tar seeps present within the project site through the required removal of contaminated soils to an off-site location. Impacts during project construction could be significant.
Project operation would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Operational impacts would be less than significant.

HAZ Impact 1	
(CEQA Checklist Appendix G Threshold IX. a)	
Mitigation Measures	
HAZ/mm-1.1	*Prior to earthwork activities, the project contractor, in coordination with the LAFD and the County, through the Foundation, shall be required to prepare a Soil Management Plan (SMP) for the removal of contaminated soils and their transportation off-site. The SMP shall be prepared in accordance with all relevant and applicable federal, state, and local laws and regulations that pertain to the transportation and disposal of hazardous materials and waste. The SMP shall:* • *Describe the methodology to identify and manage (reuse or off-site disposal) contaminated soil during soil excavation and/or construction;* • *Provide protocols for confirmation sampling, segregation and stockpiling, profiling, backfilling, disposal, guidelines for imported soil, and backfill approval from the DTSC Information Advisory on Clean Imported Fill Material; and* • *In addition, the LAFD may consult with other agencies (e.g., DTSC and the LARWQCB) if the nature of the contamination warrants the involvement of these agencies.*
HAZ/mm-1.2	*The following requirements and precautionary actions shall be implemented when disturbing soil at the project site:* • *No soil disturbance or excavation activities shall occur without a project site-specific Health and Safety Plan (HASP). Any soil that is disturbed, excavated, or trenched due to on-site construction activities shall be handled in accordance with applicable local, state, and federal regulations, as well as sampled and analyzed by a certified laboratory for constituents in accordance with the accepting landfill's requirements (including testing for the presence of hydrocarbons, volatile organic compounds, semi-volatile organic compounds, heavy metals, and pesticides).* • *The contractor shall prepare a project-specific HASP. It is the responsibility of the contractor to review available information regarding project site conditions, including the SMP, and potential health and safety concerns in the planned area of work. The HASP shall describe the proposed construction activities and hazards associated with each activity. Hazard mitigation shall be presented in the HASP to limit construction-related risks to workers. The HASP shall include emergency contact numbers, maps to the nearest hospital, gas monitoring action levels, gas response actions, allowable worker exposure times, and mandatory personal protective equipment (PPE) requirements. The HASP shall specify Certificate of Competency action levels for construction workers as well as monitoring criteria for increasing the level of PPE. The HASP shall be signed by all workers on-site to demonstrate their understanding of the construction-related risks.* • *The contractor and each subcontractor shall require their employees who may directly come in contact with Suspect Soil (soil that is stained or odorous) to perform all activities in accordance with the contractor's HASP. If Suspect Soil is encountered, to minimize the exposure of other workers to potential contaminants on the project site, the contractor may erect temporary fencing around excavation areas with appropriate signage as necessary to restrict access and to warn unauthorized on-site personnel not to enter the fenced area.* • *There shall be no reuse of excavated soil deemed inappropriate for reuse as defined in the project-specific SMP.* • *The contractor shall conduct, or have its designated subcontractor conduct, visual screening of soil during activities that include soil disturbance. If the contractor or subcontractor(s) encounter any Suspect Soil, the contractor and subcontractor(s) shall immediately stop work and take measures to not further disturb the soils (e.g., cover suspect soil with plastic sheeting) and inform the Foundation and the environmental*

HAZ Impact 1
monitor. The Foundation shall identify the environmental monitor—an experienced professional trained in the practice of the evaluation and screening of soil for potential impact working under the direction of a licensed Geologist or Engineer—prior to the beginning of work. • *Prior to excavation activities, the contractor or designated subcontractor shall establish specific areas for stockpiling Suspect Soil, should it be encountered, to control contact by workers and dispersal into the environment, per the provisions provided in the SMP.*
Impacts Following Mitigation
Implementation of HAZ/mm-1.1 and HAZ/mm-1.2 would reduce construction impacts associated with routine transport, use, or disposal of hazardous materials to less than significant. Operational impacts would be less than significant.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

CONSTRUCTION

As discussed above, during project construction, activities (including earthwork, grading, and building construction) would likely require the use of hazardous materials such as fuel and oils associated with construction equipment, coatings, paints, adhesives, and caustic or acidic cleaners could be used and would require proper handling, management, and in some cases, waste disposal. The use, handling, storage, and disposal of these materials could result in hazardous materials releases and, subsequently, the exposure of people and the environment to hazardous materials. However, as previously discussed, all potentially hazardous materials used during construction would be handled, used, and disposed of in accordance with manufacturers' specifications and instructions, thereby reducing associated risks. In addition, as described in Section 5.8.2, Regulatory Setting, various regulations establish specific guidelines regarding risk planning and accident prevention, protection from exposure to specific chemicals, and the proper storage of hazardous materials. The project would be required to be in full compliance with all applicable federal, state, and local requirements concerning the use, storage, and management of hazardous materials. General construction and OSHA regulations require the on-site availability of Safety Data Sheets for all potentially hazardous materials. Additionally, spill containment kits would be maintained on-site during construction to respond to the release of potentially hazardous construction-related chemicals.

Regarding impacted soils from naturally occurring tar seeps on-site, project construction activities have the potential to create a hazard to workers at the site as well as the public, as tar could also be characterized as hazardous material due to flammability and the potential for vapor inhalation. Soil removal activities during construction would require appropriate regulatory protocols and management during all soil disturbance activities. Excavated soil with naturally occurring tar impacts would be stored on plastic sheeting to reduce the potential for naturally occurring tar to come in contact with surficial soils. Soil stockpiles would be bermed to contain any potential run-off or seepage and covered when not in use. Soil would be transported in lined and covered trucks properly manifested in accordance with United States Department of Transportation and other regulatory requirements. Excavated soil, including soil with naturally occurring tar in it, would be disposed of in accordance with CalEPA and federal EPA requirements and by contractors licensed to handle and transport these materials.

Regarding surface vapors, the project site is located within a designated methane zone mapped by the City. Extensive areas of Southern California are underlain by areas with high concentrations of methane; the occurrence of methane under the ground surface is typically related to subsurface methane gas produced from naturally occurring petroleum fields. A subsurface investigation was conducted by Leighton Consulting, Inc., on October 18 and October 19, 2022, and the results of this investigation were documented in the Methane Survey Report prepared for the project, dated January 12, 2023 (see Appendix G). The Methane Survey Report identified elevated methane concentrations of up to 50,000 ppmv in the soils at the project site. Based on these findings, the project site is classified as Site Design Level V based on the LAMC Ordinance No. 175790. The typical trigger concentration in which gas protection systems are required to be installed in Los Angeles County is 5,000 ppmv; therefore, an active methane mitigation is required beneath any proposed structures and should follow Site Design Level V of the City's Department of Building and Safety Methane Code. Additionally, for existing buildings located within a methane zone, additions, alterations, repairs, changes of use, or changes of occupancy must comply with the methane mitigation requirements of LAMC Sections 91.7104.1 and 91.7104.2, when required by LAMC Chapter IX, Article 1, Division 81 or 82. Methane systems should be designed in accordance with the latest regulatory control measures, including the City of Los Angeles Methane Hazard Mitigation Standard Plans, as required by the Department of Building and Safety.

Based on the discussion above, impacts related to impacted soils from naturally occurring tar seeps on-site and subsurface methane gas, as well as associated potential impacts to soil and groundwater, could occur during project construction and may exacerbate the risk of spill and/or accident conditions involving the release of hazardous materials into the environment. Impacts during construction could be *significant*.

OPERATION

Upon project completion, operation of the project would be similar to those operations occurring on-site under existing conditions and would continue to support a variety of museum and research-related activities requiring the use and storage of hazardous materials typically associated with museums (Section 5.8.1.1). As such, the use of hazardous materials typically used in museums and for building and grounds maintenance, including cleaning solvents and pesticides for landscaping, would occur as they do under existing conditions. However, as previously discussed, all potentially hazardous materials used during project operation would be handled, used, and disposed of in accordance with manufacturers' specifications and instructions, thereby reducing associated risks. In addition, as described in Section 5.8.2, Regulatory Setting, various regulations establish specific guidelines regarding risk planning and accident prevention, protection from exposure to specific chemicals, and the proper storage of hazardous materials. As with existing practice, operation of the project would be required to be in full compliance with all applicable federal, state, and local requirements concerning the use, storage, and management of hazardous materials to reduce the risk of release of hazardous materials into the environment.

While project operation would not exacerbate the risk of upset and accident conditions involving the release of tar-related hazardous materials into the environment, the existing high concentration of subsurface methane gas at the project site would require ongoing control measures to ensure a properly designed methane mitigation system would provide a barrier for hazardous vapors. Due to the high potential for elevated concentrations of methane gas at the project site, operational impacts related to the release of hazardous materials into the environment could be *significant*.

HAZ Impact 2	
Construction of the project could result in the release of hazardous materials into the environment related to naturally occurring tar seeps and subsurface methane gas. Impacts during project construction could be significant. During project operation, hazardous vapors from subsurface methane gas could result in the release of hazardous materials into the environment. Impacts during project operation could be significant. (CEQA Checklist Appendix G Threshold IX. b)	
Mitigation Measures	
Construction Mitigation	
Implement Mitigation Measures HAZ/mm-1.1 and HAZ/mm-1.2.	
HAZ/mm-2.1	*During construction activities at the project site, controls shall be in place to address the effects of subsurface gases and impacted soil and groundwater on workers and the public. During construction, the following shall be implemented:* • *Monitoring devices for methane and benzene shall be present to alert workers of elevated gas concentrations when subsurface soil-disturbing work is being performed.* • *Any trench or excavation wider than 18 inches and having a depth greater than 2× its narrowest width shall be monitored with a portable combustible gas detector. The portable detector shall have a resolution capable of reporting to 1% LEL (Lower Explosive Limit), or 0.1% by volume in air, or in parts per million (ppm). If concentrations of combustible gases reach or exceed 20% LEL, or 1.0% by volume in air, or 10,000 ppm, the trench or excavation shall be evacuated until such time as the gas concentrations are determined to be steadily below these levels. All welding and electrical equipment shall be removed from the trench/excavation until the area is deemed to be safe. Portable blowers are the most appropriate means of controlling combustible gas concentrations. The blower motors and appurtenant electrical wiring shall not be placed in the trench or excavation.* • *No welding, cutting, or other hot work shall be performed close to flammable tars which, when subjected to heat, might produce flammable or toxic vapors (per OSHA 1910.252(a)(3)(i)). Smoking should also be avoided when working near tar seeps.* • *Contingency procedures shall be in place if elevated gas concentrations are detected, such as the mandatory use of PPE, evacuating the area, and/or increasing ventilation within the immediate work area where the elevated concentrations are detected.* • *Workers shall be trained to identify exposure symptoms and implement alarm response actions.* • *Soil and groundwater exposure during excavations shall be minimized to reduce the surface area which could off-gas. This shall be achieved by staggering exposed excavation areas.* • *Soil removed as part of construction shall be sampled and tested for off-site disposal in a timely manner. If soil is stockpiled prior to disposal, it shall be managed in accordance with the project's Stormwater Pollution Prevention Plan.* • *Fencing shall be erected to limit public access and allow for gas dilution. The construction contractor can determine the appropriate type of fencing, as long as public access is restricted such that interaction with hazardous construction conditions does not occur.* • *All requirements of the project-specific HASP shall be implemented and followed as described in HAZ/mm-1.2.*

HAZ Impact 2	
Operation Mitigation	
HAZ/mm-2.2	*As part of the final project design, the project engineer shall develop and implement a methane mitigation system. The mitigation system, which would provide a barrier for hazardous vapors, methane, and tar, consists of a subslab venting system that exhausts to the atmosphere, a subslab impermeable gas/tar barrier membrane system, and a monitoring system consisting of probes above and below the gas barrier membrane. The monitoring program consists of routine (quarterly) monitoring and reporting to the County Public Works, Environmental Programs Division. The Environmental Programs Division shall also review the plans to see if the criteria meet the requirements of Los Angeles County Code 110.4 Methane Gas Hazards. Additionally, tar collection systems underneath the gas mitigation systems need to be evaluated by the engineer and by the county engineer to evaluate the performance of the overall system.* *A contingency plan should also be prepared to describe how matters shall be handled in the event that high concentrations of methane gas enter a building despite the mitigation measures.* *The inspection and periodic observations of membrane and vapor control measures shall be performed by the Vapor Barrier Engineer (i.e., the Engineer or his Designee). At a minimum, inspection/observation shall take place during the installation of the vent piping, after backfilling of the vent piping, during the installation of the vapor barrier, after the installation of the vapor barrier (prior to backfilling), during the placement of the protection course, immediately prior to placement of foundation concrete, during and at the completion of the vent riser installation for the vent piping, and at the completion of construction prior to the issuance of the system certification and certification of occupancy.*
Impacts Following Mitigation	
Implementation of HAZ/mm-1.1, HAZ/mm-1.2, and HAZ/mm-2.1 during project construction would reduce impacts associated with the release of hazardous materials into the environment to less than significant. *Implementation of HAZ/mm-2.2 would reduce the operational impacts associated with the release of hazardous materials associated with the project to less than significant.*	

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

The nearest schools to the project site include Fusion Academy Miracle Mile, located approximately 0.12 mile directly east of the project site, and Hancock Park Elementary School, located approximately 0.45 mile northwest of the project site. Based on the list of cumulative development projects in the project vicinity (see Chapter 4, Environmental Setting), no proposed new school facilities are located within 0.25 mile of the project site.

CONSTRUCTION

Construction of the project would involve the use of hazardous materials common to urban construction projects and museum operations. All activities involving the handling, use, storage, transport, and disposal of hazardous materials and wastes would occur in compliance with applicable federal, state, and local requirements. However, as discussed in HAZ Impacts 1 and 2, project construction could create a significant hazard to the public or the environment associated with the naturally occurring tar seeps present within the project site through the required removal of contaminated soils to an off-site location. In addition, construction of the project could result in the release of hazardous materials into the environment related to subsurface methane gas. As such, project construction could result in potential

hazardous emissions or the handling of hazardous materials and wastes within 0.25 mile of an existing school. Impacts could be *significant*.

OPERATION

As stated in HAZ Impacts 1 and 2, while the project operation would not exacerbate the use, handling, and disposal of hazardous materials or increase the risk of spill and accident conditions involving the release of hazardous materials into the environment, the existing, naturally occurring tar seeps and the existing high concentration of subsurface methane gas at the project site would require control measures to ensure proper collection and disposal of accumulated tar near the ground surface as well as a methane mitigation system to provide a barrier for hazardous vapors (see Mitigation Measure HAZ/mm-2.2). As such, operational impacts associated with potential hazardous emissions or the handling of hazardous materials and wastes within 0.25 mile of an existing school could be *significant*.

HAZ Impact 3
The project could introduce hazardous materials within 0.25 mile of an existing or proposed school during both construction and operation. Impacts during project construction and operation could be significant. (CEQA Checklist Appendix G Threshold IX. c)
Mitigation Measures
Construction Mitigation
Implement Mitigation Measures HAZ/mm-1.1, HAZ/mm-1.2, and HAZ/mm-2.1.
Operation Mitigation
Implement Mitigation Measure HAZ/mm-2.2.
Impacts Following Mitigation
Implementation of HAZ/mm-1.1, HAZ/mm-1.2, and HAZ/mm-2.1 during project construction would reduce impacts associated with the emission of hazardous materials in the vicinity of existing or proposed schools to less than significant. *Implementation of HAZ/mm-2.2 during project operation would reduce impacts associated the emission of hazardous materials in the vicinity of existing or proposed schools to less than significant.*

d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The project site is not identified on any of the hazardous materials lists compiled pursuant to Government Code Section 65962.5 (Section 5.8.1.2). The environmental records review conducted by SWCA on July 21, 2022, identified four historic dry cleaners and one historic photography lab within a 1-mile radius of the project site. Historically, dry cleaners have had a high frequency of spills and discharges. The primary contaminants from dry cleaners are the chlorinated solvents PCE, TCE, and VC. These contaminants are volatile, mobile, and resistant to degradation. The concern for properties near historical dry cleaners is vapor intrusion—the movement of contaminant vapors through the soil, utility corridors, or other pathways, which can then permeate foundations and concentrate in enclosed indoor areas. Old photography labs are also commonly identified as sources of contamination. However, the records search

did not indicate any areas of concern related to historical hazardous materials sites within the project site or vicinity of the project site (EDR 2022). Therefore, construction and operation of the project would not create a significant hazard to the public or the environment as it relates to hazardous materials sites compiled pursuant to Government Code Section 65962.5. *No impact* would occur.

HAZ Impact 4
The project site is not identified on any of the hazardous materials lists compiled pursuant to Government Code Section 65962.5. Construction and operation of the project would not create a significant hazard to the public or the environment as it relates to hazardous materials sites compiled pursuant to Government Code Section 65962.5. No impact would occur. (CEQA Checklist Appendix G Threshold IX. d)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. No impact would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

The project site is not located within 2 miles of a public airport or public use airport. The nearest airport to the project site is Santa Monica Airport, which is approximately 6 miles southwest of the project site. Therefore, the project would not result in an airport-related safety hazard during either project construction or operation. *No impact* would occur.

HAZ Impact 5
The project site is not located within 2 miles of a public airport or public use airport. The project would not result in an airport-related safety hazard during either project construction or operation. No impact would occur. (CEQA Checklist Appendix G Threshold IX. e)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. No impact would occur.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The project site is not located along a designated Disaster Route as defined by County Public Works. The nearest designated Disaster Routes to the project site include Beverly Boulevard approximately 1 mile to the north, Olympic Boulevard approximately 0.4 mile to the south, La Brea Avenue approximately 0.6 mile to the east, and North La Cienega Boulevard approximately 1.2 miles to the west.

CONSTRUCTION

While all construction activities, including construction staging of equipment, would be situated entirely within the project site, it is possible that project construction and the need for unique construction-period access may occur in adjacent street rights-of-way during certain periods of the day. However, the designated Disaster Routes discussed above would not be impacted in such a way that the project would interfere with the County or City's Emergency Response Plan. Therefore, construction impacts associated with emergency response and emergency evacuation plans would be *less than significant*.

OPERATION

Upon project completion, the project operation would comply with LAFD access requirements and would not include features that would impede access to and around the site. Thus, the project would not cause an impediment along the designated disaster routes or impair implementation of any adopted emergency response or emergency evacuation plans. Therefore, operational impacts associated with emergency response and emergency evacuation plans would be *less than significant*.

HAZ Impact 6
The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan during either construction or operation. Construction and operational impacts would be less than significant. (CEQA Checklist Appendix G Threshold IX. f)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to an adopted emergency response plan or an emergency evacuation plan would be less than significant.

5.8.6 Cumulative Impact Analysis

Cumulative growth and related development projects in the vicinity of the project site are discussed in Chapter 4, Environmental Setting. The geographic area where projects have potential to contribute to cumulative impacts varies depending on the environmental resource under consideration. The geographic scope of analysis for cumulative hazardous materials impacts is limited to the project site and its immediately adjacent area (defined as the adjacent Los Angeles County Museum of Art parcel, and all land uses and roadways directly and immediately surrounding the project site, including those along West 6th Street, South Curson Avenue, and Wilshire Boulevard). This is because impacts relative to hazardous

materials are most typically site-specific. For example, hazardous materials incidents tend to be limited to a smaller, more localized area surrounding the immediate spill location, and the extent of the release could only be cumulative if two or more hazardous materials releases occurred at the same time and overlapped at the same location.

As previously discussed, the project would have no impact related to being located on an identified hazardous materials site pursuant to Government Code Section 65962.5 (threshold d) or being situated within 2 miles of a public or private airstrip (threshold e). In addition, the project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan during either construction or operation (threshold f). Accordingly, the project could not contribute to cumulative impacts related to these topics and they are not discussed further. For this analysis, cumulative impacts related to hazards and hazardous material could occur if the incremental impacts of the proposed project combined with the incremental impacts of other projects, including those identified in Chapter 4, Environmental Setting. The following three projects are known projects that are in close proximity to the project site that could contribute to cumulative impacts:

- **Metro D (Purple) Line Extension:** Extension of underground light rail transit service infrastructure to parallel Wilshire Boulevard located directly adjacent to the project site along with seven new transit stations. This project is under construction with the first phase (Wilshire/ La Brea, Wilshire/Fairfax, and Wilshire/ La Cienega Stations) anticipated to be completed and in operation by 2024.
- **Los Angeles County Museum of Art Renovation:** Located directly adjacent to the project site (on parcels directly west and south across Wilshire Boulevard) at 5906 West Wilshire Boulevard. The project includes museum renovation and is under construction with an anticipated completion date of 2024.
- **Wilshire Curson Project:** Located approximately 0.03 mile southeast of the project site at 5700-5780 Wilshire Boulevard, 712-752 South Curson Avenue, 5721-5773 West 8th Street, and 715-761 South Masselin Avenue. The project includes office and commercial uses and would involve both the renovation of existing buildings as well as the demolition and construction of new buildings. The project is currently under environmental review, and a construction timeline was not available at the time of publication for this EIR.

Each of the related projects has or would require evaluation for potential threats to public safety, including those associated with the use, storage, and/or disposal of hazardous materials and the potential for the release of hazardous materials into the environment as a result of construction and operation. In addition to the environmental review conducted for the projects, it is important that all project-related activities for the projects listed above would be required to comply with all applicable local, state, and federal laws, rules, and regulations regulating the use, disposal, transport, and management of hazardous materials. In addition to the projects above, activities would occur within the project area within the construction timeframe that would not require review under CEQA. For instance, the establishment of a new business in the area that uses hazardous materials may not trigger CEQA review. In addition, during the construction phase and operational life of the project, there could be proposed development projects in the vicinity that would not require discretionary review. As well, unforeseen accidents could always potentially occur through the routine use of hazardous substances by and at surrounding commercial and residential land uses.

Although existing regulations and review processes would likely address hazardous materials concerns, because of the conditions related to the occurrence of petroleum deposits, tar, and methane at the project site and within this general area of the city, it is possible that cumulatively considerable impacts to hazardous materials would occur in the project area if different hazardous conditions or incidents were to occur at the same time (i.e., two or more accidents occurred at the same time).

As identified in the project analysis above, the project could result in:

- Significant construction and operational impacts related to creating a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials associated with the naturally occurring tar seeps present within the project site (threshold a);
- Significant construction and operational impacts associated with the release of hazardous materials into the environment due to naturally occurring tar seeps and subsurface methane gas present within the project site (threshold b); and
- The introduction of hazardous materials within 0.25 mile of an existing or proposed school during both construction and operation (threshold c).

Because construction and operation of the project could result in these direct impacts, the potential exists for the project to also contribute significantly to cumulative impacts. If mitigation were not to be implemented, it is conceivable that the project would significantly contribute to these impacts. Therefore, the project's contribution could be cumulatively considerable; impacts could be *significant*.

Project mitigation measures have been identified and included to address these impacts. The identified mitigation measures would address the direct impacts associated with the project itself as well as the project's potential contribution to cumulatively considerable and significant hazardous materials impacts. Implementation of HAZ/mm-1.1 and HAZ/mm-1.2 during construction would reduce the project's construction and operational impacts associated with routine transport, use, or disposal of hazardous materials to less than significant with mitigation (threshold a). Implementation of HAZ/mm-1.1, HAZ/mm-1.2, and HAZ/mm-2.1 during project construction and implementation of HAZ/mm-2.2 during project operation would reduce impacts associated with the release of hazardous materials into the environment to less than significant with mitigation (thresholds b and c).

HAZ Impact 7 (Cumulative Impacts)
Prior to the consideration of proposed mitigation measures, construction and operation of the project could result in hazardous materials impacts associated with the naturally occurring tar seeps and methane conditions present at the project site, including accidental spills or releases associated with the disposal, transport, and management of hazardous materials. If unaddressed, potential contributions to cumulative hazardous materials impacts could be significant.
Mitigation Measures
Implement Mitigation Measures HAZ/mm-1.1, HAZ/mm-1.2, HAZ/mm-2.1, and HAZ/mm-2.2.
Impacts Following Mitigation
With implementation of Mitigation Measures HAZ/mm-1.1, HAZ/mm-1.2, HAZ/mm-2.1, and HAZ/mm-2.2, the project's contribution to cumulative impacts related to release of hazardous materials into the environment would be reduced to less than significant.

5.9 HYDROLOGY AND WATER QUALITY

This section provides a description of the existing water resources in the region and at the project site, then provides an evaluation of the potential for the project to result in impacts related to hydrology, water quality, drainage, groundwater resources, and flooding. The analysis is based on information provided in the Los Angeles Regional Water Quality Control Board's (LARWQCB's) 2014 *Water Quality Control Plan for the Los Angeles Region* (Basin Plan) and the Enhanced Watershed Management Program for the Ballona Creek Watershed (EWMP). In addition, project-specific reports used in this analysis include the *Preliminary Civil Engineering Narrative* prepared by KPFF Consulting Engineers (KPFF), dated March 2021, *Low Impact Development (LID) and Hydrology Report* prepared by KPFF, dated June 2023 (Appendix H), and the *Geology and Soil Discipline Report* prepared by Shannon and Wilson, dated January 27, 2023 (Appendix E).

5.9.1 Existing Conditions

5.9.1.1 Surface Water

REGIONAL SURFACE WATER

The project site is located within the Santa Monica Bay Watershed Management Area (WMA) in the Los Angeles Basin (Figure 5.9-1). The Santa Monica Bay WMA encompasses an area of 414 square miles, with the northern boundary extending from the crest of the Santa Monica Mountains and the Ventura–Los Angeles County line through downtown Los Angeles to the Pacific Ocean. The boundary then extends south and west across the Los Angeles plain to include the area east of Ballona Creek and north of the Baldwin Hills. Within the Santa Monica Bay WMA, surface water flows into the Santa Monica Bay through 28 catchment basins that are further grouped into nine subwatershed areas. These nine watershed areas include the North Coast, Malibu Creek, Topanga Creek, Santa Monica Canyon, Pico-Kenter, Ballona Creek, El Segundo-LAX, South Bay, and Palos Verdes (LARWQCB 2014).
The seasonal normal rainfall in the Santa Monica Bay WMA ranges from 26.72 inches in the San Gabriel Mountains to 7.27 inches in the desert. The average annual rainfall for the county is 15.17 inches (Los Angeles County Department of Public Works [County Public Works] 2021).

LOCAL SURFACE WATER

The project site is within the Ballona Creek Watershed (Figure 5.9-2). The Ballona Creek Watershed totals about 130 square miles and includes all or parts of the cities of Beverly Hills, Culver City, Inglewood, Los Angeles, Santa Monica, and West Hollywood, as well as unincorporated areas of Los Angeles County. The watershed is highly developed, with its land use consisting of 64% residential, 8% commercial, 4% industrial, and 17% open space (County Public Works 2022).

Ballona Creek flows as an open channel for approximately 9.5 miles from mid-Los Angeles (approximately 2 miles south of the project site), flowing generally southwest through Culver City, reaching the Pacific Ocean at Playa del Rey (Marina del Rey Harbor), where it discharges into Santa Monica Bay (see Figure 5.9-2). Most of the creek is concrete-lined, with only the estuary portion of the creek, from Centinela Avenue to the outlet, being soft bottomed. Ballona Creek is fed by a network of underground storm drains, which reaches north into Beverly Hills and West Hollywood. The major tributaries to the Ballona Creek include Centinela Creek, Sepulveda Canyon Channel, Benedict Canyon Channel, and numerous storm drains (County Public Works 2021).

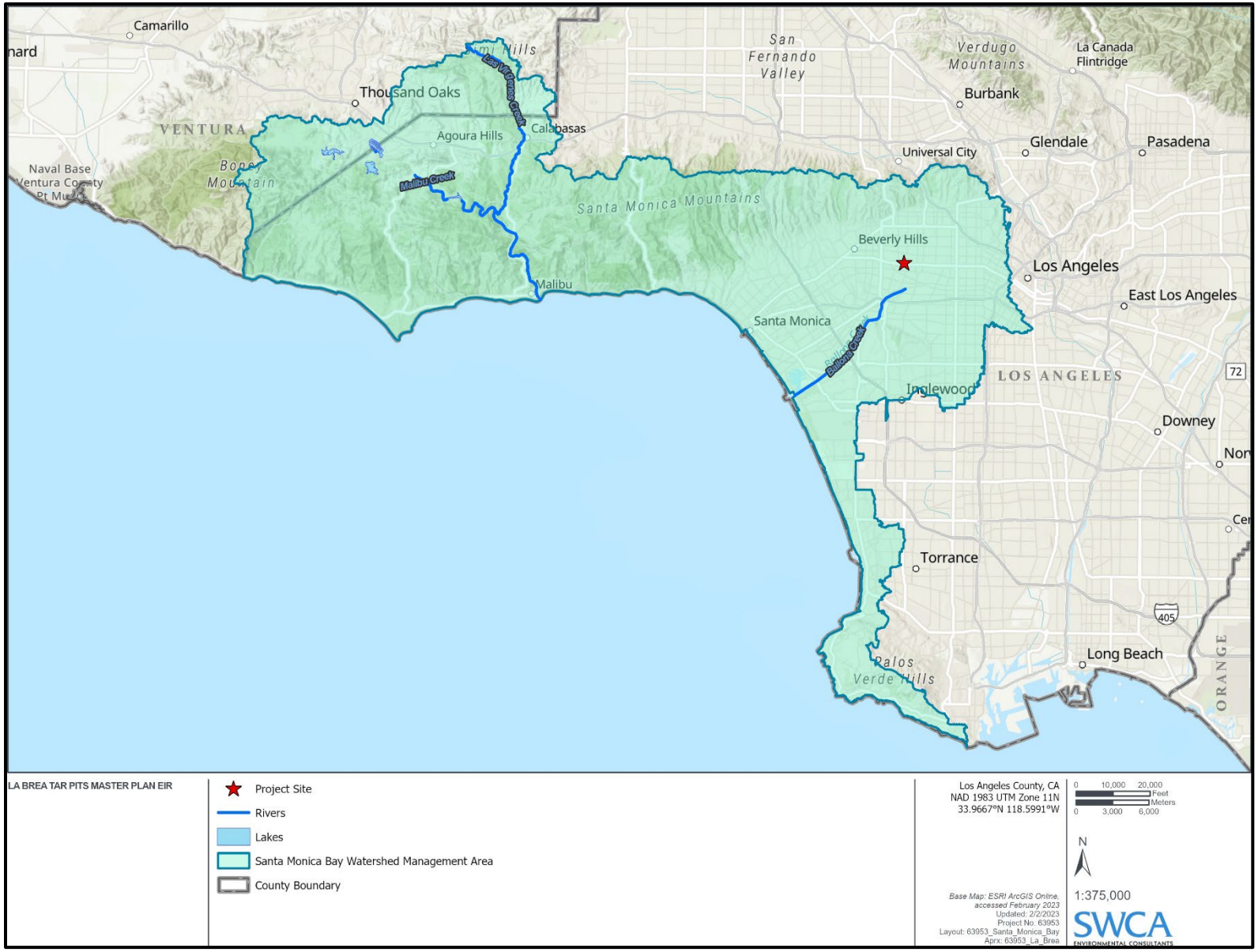


Figure 5.9-1. Santa Monica Bay Watershed Management Area.

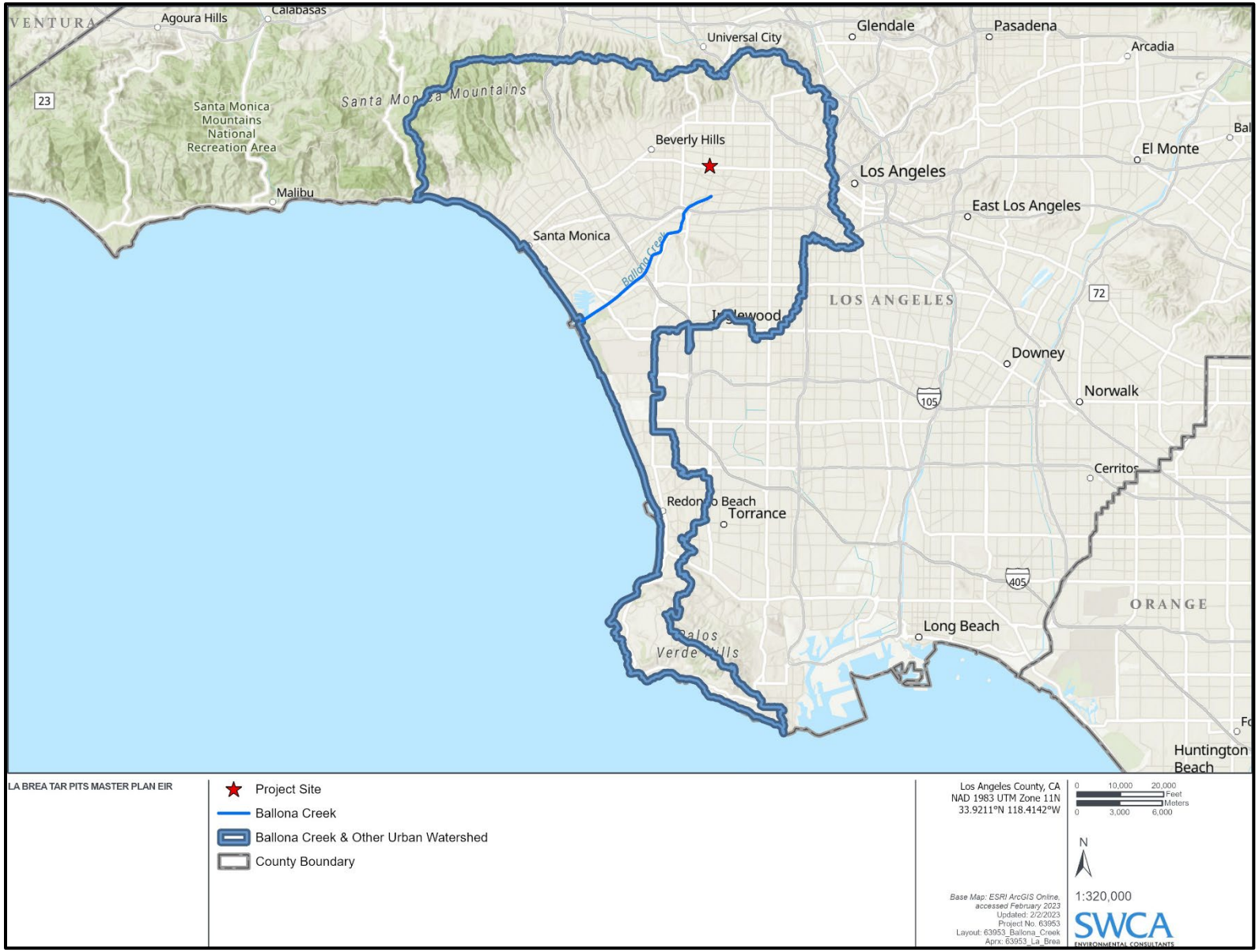


Figure 5.9-2. Ballona Creek watershed area.

In the vicinity of the project site, stormwater runoff enters off-site catch basins and underground storm drainage pipes which convey stormwater through underground pipe networks into Ballona Creek. Underground stormwater drainage facilities located off-site along Wilshire Boulevard (a 30-inch-diameter main line) are owned and maintained by the City of Los Angeles (City). Underground stormwater drainage facilities located off-site along Ogden Drive are owned and maintained by Los Angeles County Flood Control District (LACFCD). The existing catch basin and stormwater infrastructure located in Wilshire Boulevard have been designed to carry the 50-year storm event per the Los Angeles County Hydrology Manual and currently have sufficient capacity to accept the stormwater runoff from the surrounding existing developed areas (County Public Works 2006).

SURFACE WATER AT THE PROJECT SITE

Surface water of note on the project site includes that from Oil Creek. Oil Creek is a historic feature which, as early as 1941 (based on historical aerial imagery), conveyed flow from approximately the intersection of 6th Street and South Curson Avenue southwest to the intersection of Wilshire Boulevard and South Ogden Drive. As discussed in Section 5.3, Biological Resources, Oil Creek appears to receive its primary hydrologic input source from groundwater. Oil Creek also receives hydrologic inputs from precipitation and irrigation system runoff. Stormwater runoff around Lake Pit and Oil Creek drains into the Lake Pit. There is a system at the west end of Lake Pit to manage the water level in the Lake Pit. Low-flow storm water runoff from Oil Creek also is pumped to Lake Pit. However, large-flow rain events draining to Oil Creek bypass the low-flow pump. This occurs via a weir wall within the downstream inlet structure at the terminus of Oil Creek and connects to the LACMA storm drain.

Existing Drainage

The project site is nearly level with a gentle slope downward from northeast to southwest. In the northeast corner of the site, the existing asphalt surface parking lot slopes from east to west. There are existing catch basins in both the northwest and southwest corners of the parking lot. These catch basins connect to underground storm drainage piping which joins a 12-inch-diameter stormwater collection pipeline that collects stormwater flows from the George C. Page Museum (Page Museum), as well as landscape drainage around the multi-purpose lawn.

Currently, the existing project site is 68.1% pervious.[1] For the purposes of analyzing hydrology and drainage patterns for the project, the streets adjacent to the project site have been included in the studied area analyzed in the Low Impact Development (LID) and Hydrology Report prepared by KPFF, dated June 2023 (see Appendix H). With the addition of the adjacent streets, the overall permeability of the existing hydrology study area is 59.3% (Appendix H). The existing drainage patterns on-site include four drainage management areas as described in Table 5.9-1 and shown in Figure 5.9-3. Table 5.9-1 also provides the existing percent permeability, peak discharge flow rates, and runoff volume by drainage area.

[1] A pervious surface allows water to percolate through to the area underneath rather than becoming runoff. Impervious surfaces are solid surfaces that prevent infiltration and water penetration.

Table 5.9-1. Existing Drainage Area Descriptions

Drainage Area (DA)	Description	Percent (%) Permeability	Peak Flow (cfs)	Runoff Volume (cu-ft)
DA-1	Drainage Area 1 is within the central core of the project site. Area drains and catch basins collect surface runoff and discharge to an existing natural channel, Oil Creek. Oil Creek ultimately drains to an existing 30-inch storm drain that connects south into a City of Los Angeles mainline located in Wilshire Boulevard.	58.56%	21.19	73,086.58
DA-2	Drainage Area 2 is highest on the southeast corner at the intersection of Wilshire Boulevard and South Curson Avenue and slopes to the northwest of the project site toward West 6th Street and Ogden Drive. The north edge of the project site slopes toward West 6th Street where runoff flows to the street gutter and ultimately to existing curb inlets located in the street. Similarly, east of the Page Museum, the landscaping slopes east towards South Curson Avenue where the runoff drains north to West 6th Street. A portion of the roof runoff generated by the Page Museum also discharges directly to South Curson Avenue.	49.00%	5.39	43,826.33
DA-3	Drainage Area 3 includes runoff from the southern portion of the project site which drains into the Lake Pit. A small portion of the southeast corner of the site drains directly to Wilshire Boulevard where it is collected by existing curb inlets.	85.79%	9.65	17,673.44
DA-4	Drainage Area 4 includes runoff that drains to Wilshire Boulevard and consists entirely of public right-of-way.	0%	0.59	11,350.44

Note: cfs = cubic feet per second; cu-ft = cubic feet

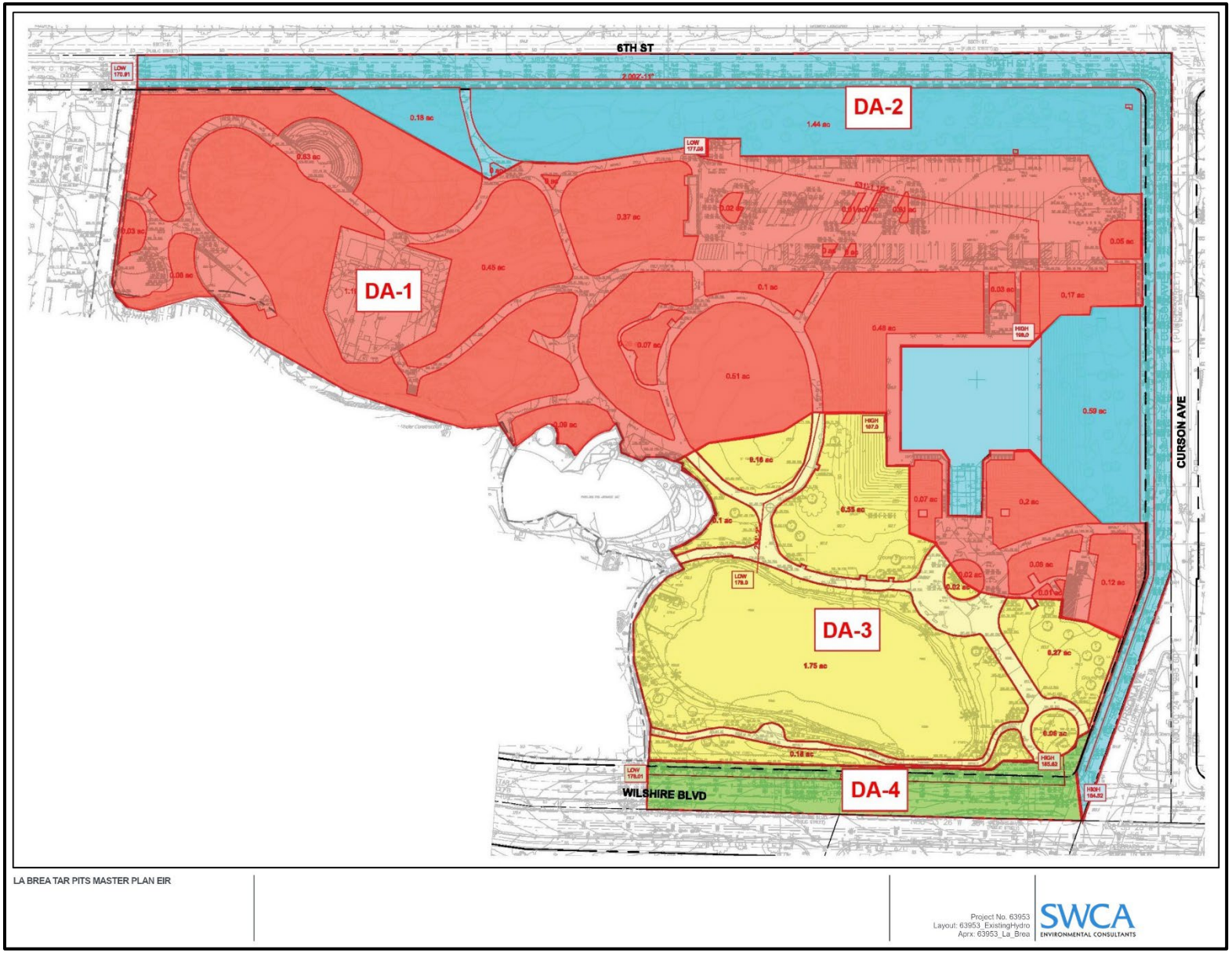


Figure 5.9-3. Existing hydrology and drainage area map.

SURFACE WATER QUALITY

Water quality in the majority of Ballona Creek (including the Ballona Estuary and Wetlands, terminating in the Pacific Ocean) has been impaired by pollutants from dense clusters of residential, industrial, and other urban activities. Constituents of concern listed for Ballona Creek under the federal Clean Water Act Section 303(d) List include cadmium (sediment), chlordane (tissue and sediment), coliform bacteria, copper (Dissolved), cyanide Silver (sediment), Dichlorodiphenyltrichloroethane (DDT), lead, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), sediment toxicity, Shellfish Harvesting Advisory, silver, selenium toxicity, trash, viruses (enteric), and zinc (LARWQCB 2022).

Pursuant to Section 303(d) of the federal Clean Water Act, the State Water Resources Control Board (SWRCB) and the LARWQCB identify impaired bodies of water that do not meet water quality standards and prioritize them for development of Total Maximum Daily Loads (TMDLs). TMDLs are action plans with the purpose of restoring clean water. TMDLs identify the sources of pollution in a given waterbody and specify the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. Those facilities and activities that are discharging into the waterbody, collectively, must not exceed the TMDL. The Ballona Creek Watershed has TMDLs for PCBs, DDT, cadmium, zinc, chlordane, indicator bacteria, PAHs, copper, toxicity, lead, silver, trash, and viruses (enteric) (LARWQCB 2022).

Besides the Lake Pit system discussed previously, the project site does not implement any structural stormwater best management practices (BMPs). However, there are a range of non-structural BMPs that are currently used throughout the project site to minimize the impact of pollutant sources, including general housekeeping practices such as regular trash collection and street sweeping, and proper storage of hazardous materials and waste. Based on the existing operations within the project site, the on-site runoff likely contains the following pollutants of concern: sediment, nutrients, pesticides, metals, pathogens, and oil and grease.

5.9.1.2 Groundwater

REGIONAL AND LOCAL GROUNDWATER

The project site is located within the city of Los Angeles, which is underlain by the Los Angeles Coastal Plain Groundwater Basin. The Los Angeles Coastal Plain Groundwater Basin totals approximately 580 square miles and is divided into the following subbasins: Hollywood, Santa Monica, Orange County Coastal Plain, Central, and West Coast Basins (Figure 5.9-4). Groundwater flow in the Los Angeles Coastal Plain Groundwater Basin is generally south-southwesterly and may be restricted by natural geological features. Replenishment of groundwater basins occurs mainly by percolation of precipitation throughout the region via permeable surfaces, spreading grounds, and groundwater migration from adjacent basins, as well as injection wells designed to pump freshwater along specific seawater barriers to prevent the intrusion of salt water (California Department of Water Resources [DWR] 2004).

Within the Los Angeles Coastal Plain Groundwater Basin, the project site is underlain by the Central Subbasin, commonly referred to as the “Central Basin”, totaling approximately 280 square miles and is bounded on the north by a surface divide called the La Brea high, and on the northeast and east by emergent less-permeable Tertiary rocks of the Elysian, Repetto, Merced, and Puente Hills. The southeast boundary between Central Basin and Orange County Coastal Plain roughly follows Coyote Creek, which is a regional drainage province boundary. The southwest boundary is formed by the Newport Inglewood fault system and the associated folded rocks of the Newport Inglewood uplift. The Los Angeles and San Gabriel Rivers drain inland basins and pass across the surface of the Central Basin on their way to the Pacific Ocean (DWR 2004).

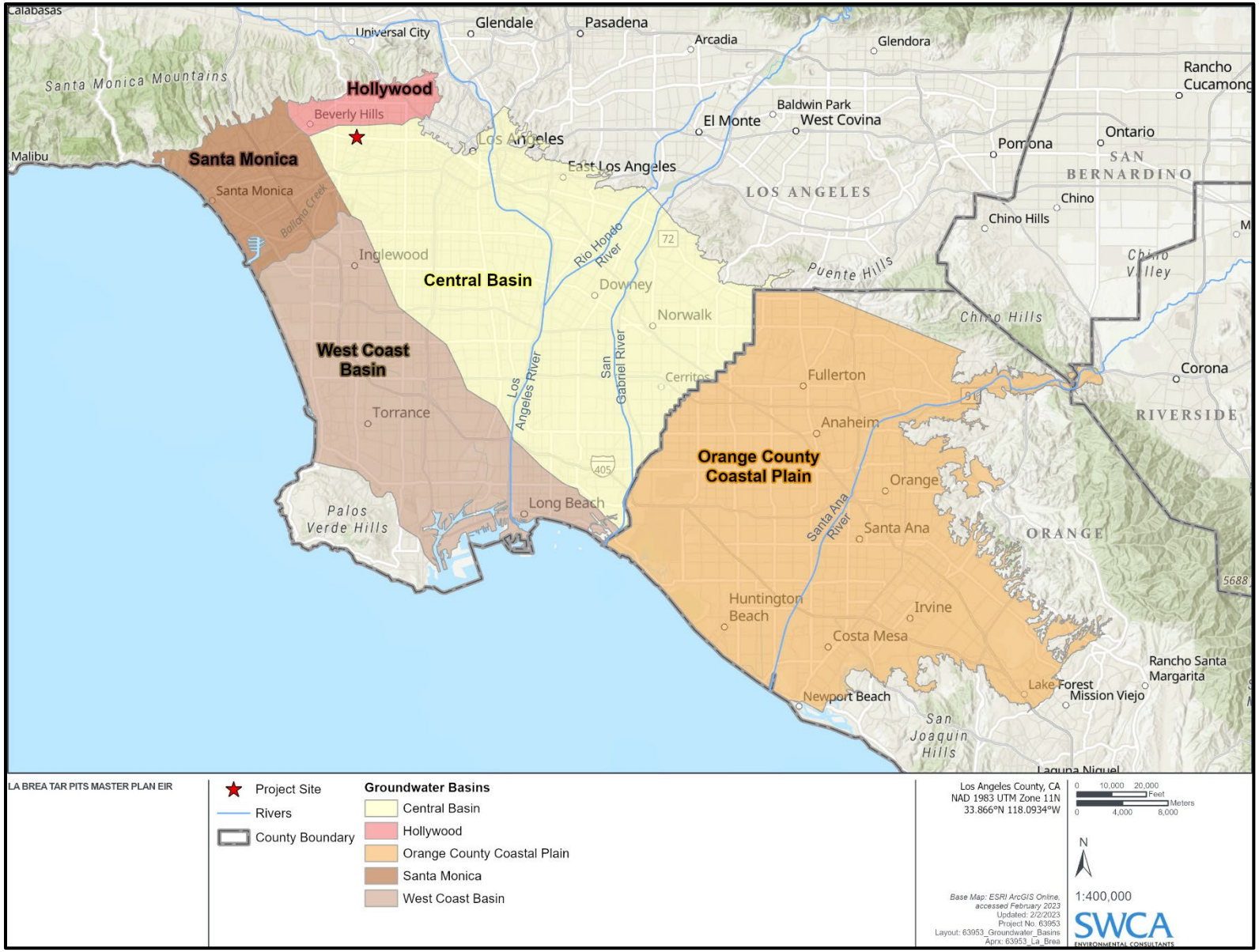


Figure 5.9-4. Los Angeles Coastal Plain Groundwater Basin.

The Central Basin is further divided hydrogeologically into four subareas: the Los Angeles Forebay, Montebello Forebay, Whittier Area, and Pressure Area. The forebays are areas where confining layers are thin or absent and infiltration of precipitation and surface water can recharge deeper potable water supply aquifers. The project site is located in the northwestern portion of the Central Subbasin.

GROUNDWATER CONDITIONS AT THE PROJECT SITE

Groundwater depth at the project site fluctuates in response to rainfall, seasonal variations, and other factors, and varies throughout the site. According to the *Geology and Soil Discipline Report, La Brea Tar Pits Museum Master Plan Project* (Geology and Soil Discipline Report) prepared for the project by Shannon and Wilson dated January 27, 2023 (Appendix E), the project site lies within the 10-foot water level contour of the historically high groundwater levels, indicating that the historical high groundwater depth is at or shallower than 10 feet below ground surface (bgs) (Shannon and Wilson 2023). Previous subsurface boring explorations conducted at the project site encountered groundwater levels at depths less than 10 feet bgs. Two of previous boring sites adjacent to the project site have been converted to groundwater monitoring wells, with groundwater data being collected over 1.5 to 2 years. Over that time, the shallowest groundwater depth encountered was approximately 1 foot bgs, corresponding to an elevation of approximately 167.5 feet above mean sea level, and approximately 5.7 feet bgs, corresponding to an elevation of 164 feet above mean sea level (Shannon and Wilson 2023).

Groundwater levels at the east side of the project site are typically found at very shallow depths at or near the water surface elevation of Lake Pit, as the Lake Pit is a naturally occurring open waterbody. According to the *Preliminary Civil Engineering Narrative* prepared by KPFF in March 2021, substantial groundwater intrusion has occurred, and continues to occur, in the lowest level of the Page Museum (KPFF 2021). Groundwater intrusion has also been observed within access manholes, vaults, and pits throughout the project site. Groundwater depths increase and fall off from the northeast corner of the project site, where it is found to be very shallow, to the southwest corner of the project site, where it is found to be deeper. This pattern appears to mimic the historical evidence of a natural spring known as Oil Creek which had headwaters near the intersection of 6th Street and Curson Avenue. Oil Creek has been disturbed and manipulated over time. It is partially paved where the parking lot is located and is channelized with pavers near its terminus. It is dominated by non-native grasses in parts and planted with native riparian vegetation in other parts. Oil Creek historically flowed in a southwesterly course lending credence to the theory that the natural flow of water may still exist, only below the ground surface. If natural groundwater flow does exist on the project site, it is assumed to be relatively slow due to site soil being rendered viscous by the prevalence of tar. Tar occurs within the groundwater as observed at Lake Pit, and tar seeps occur randomly throughout the site. Both of these indicate the potential for near-surface groundwater and tar to be encountered (KPFF 2021).

WATER QUALITY

As previously mentioned, the city overlies the Los Angeles Coastal Plain Groundwater Basin, which falls under the jurisdiction of the LARWQCB. According to the Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, water quality objectives applying to all groundwaters of the region include those concerning bacteria, chemical constituents and radioactivity, mineral quality, nitrogen (nitrate, nitrite), taste, and odor. Within the Central Basin, the following constituents of concern include: boron, chloride, sulfate, total dissolved solids, and nitrate (DWR 2004).

5.9.1.3 Flooding and Hydrological Hazards

Flood hazard areas identified on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area

that will be inundated by the flood event having a 1% chance of being equaled or exceeded in any given year. The 1% annual chance flood is also referred to as the base flood or 100-year flood. According to the FEMA FIRM No. 06037C1605F, dated September 26, 2008, the project site is within FEMA Flood Zone X, which is defined as "areas determined to be outside the 0.2 percent annual chance floodplain" or not within a 100-year flood zone (FEMA 2008).

The project site is located approximately 10 miles east of the coastline along the Pacific Ocean. Based on the California Department of Conservation Map of Los Angeles County Tsunami Hazard Areas, the project site is not located within a tsunami zone (California Department of Conservation 2019).

There are two bodies of standing water present in the immediate vicinity of the project site. The larger of the two is the Lake Pit, located in the southern portion of the site. The second body of water is a small pond within a topographic low area that includes Pit 91. Both surface bodies of water within the project site would have low potential to cause a seiche as they are considered too small or shallow. Further, the water surface level at the Lake Pit is several feet below the edge of the surrounding bank. As such, neither are expected to generate a seiche large enough to overflow their banks. Additionally, the Safety Element of the City's General Plan maps the project site within the potential inundation area for the Hollywood Reservoir, which is held by the Mulholland Dam. The Mulholland Dam is a Los Angeles Department of Water and Power (LADWP) dam located in the Hollywood Hills, approximately 6 miles northeast of the project site.

5.9.2 Regulatory Setting

5.9.2.1 Federal

FEDERAL CLEAN WATER ACT, 33 USC 1251 ET SEQ. (1977)

The federal Clean Water Act (CWA) is the primary federal law regulating discharges of pollutants into waters of the U.S. and regulating water quality standards for surface waters. The CWA prohibits the discharge of any pollutants from a point source into navigable waters unless a National Pollutant Discharge Elimination System (NPDES) permit is obtained. The following CWA sections include relevant policies for regulating water quality:

- **Section 208** requires all states to assess damages to water quality from nonpoint source pollution, including runoff. Section 208 requires states to develop either regulatory or non-regulatory programs to control nonpoint source pollution.
- **Section 303(d)** authorizes the U.S. Environmental Protection Agency (EPA) to assist states, territories, and authorized tribes in listing impaired waters and developing TMDLs for the identified waterbodies. A TMDL establishes the maximum amount of a pollutant allowed in a listed waterbody. In addition, a TMDL establishes a starting point for restoring water quality.
- **Section 304(a)(4)** requires the EPA to designate potential water pollutants as either conventional pollutants or toxic pollutants based on the latest scientific knowledge regarding the effects of pollutants on water quality. Conventional pollutants include biochemical oxygen demand total suspended solids, fecal coliform, pH, oil, and grease. The EPA has designated 126 "priority" toxic pollutants.
- **Section 313** requires that each federal agency that has jurisdiction over any facility or is engaged in an activity that may result in discharge or runoff of pollutants must comply with all federal, state, and local water pollution control requirements. This may include adherence to all requirements, including, but not necessarily limited to, reporting, recordkeeping, and/or permitting requirements.

- **Section 401** requires a water quality certification to be issued or waived by states and authorized tribes prior to issuance of a permit or license to conduct activities that may result in discharge to waters of the U.S. In cases where a state or tribe does not have authority, the EPA is responsible for issuing certification. The major federal licenses and permits subject to Section 401 include: 1) CWA Section 402 and 404 permits issued by the EPA or U.S. Army Corps of Engineers (USACE); 2) Federal Energy Regulatory Commission (FERC) licenses for hydropower facilities and natural gas pipelines; and 3) Rivers and Harbors Act Section 9 and 10 permits.
- **Section 402** establishes the NPDES. Discharges of point source pollutants to waters of the U.S. are prohibited unless they are compliant with provisions of the CWA. Typically, compliance is achieved by obtaining authorization to discharge pursuant to an NPDES permit issued by the EPA or a state agency that has an approved NPDES program. NPDES permits generally contain water quality- and/or technology-based standards for effluent discharges, monitoring requirements, analytical testing methods, and reporting requirements.
- **Section 404** requires facilities that discharge dredged or fill materials into waters of the U.S. to apply for a permit issued by the USACE.
- **Section 405** requires that facilities that treated domestic sewage must meet federal requirements for the use and disposal of sewage discharge through land application, surface disposal, or incineration. These requirements are incorporated to permits issued under CWA Section 402.

The project would be subject to CWA Section 208, 303(d), 304(a)(4), 313, 401, 402, 404, and 405 permits.

EXECUTIVE ORDER 11988

FEMA oversees floodplains and manages the National Flood Insurance Program. FEMA also prepares FIRMs for states and other communities participating in the program. FIRMs delineate regulatory floodplains to assist communities with land use and floodplain management decisions. Specifically, Executive Order 11988, Floodplain Management requires federal agencies to avoid long- and short-term impacts associated with the occupancy and modification of floodplains to the extent feasible. Executive Order 11988 also requires agencies to avoid direct and indirect support of floodplain management wherever there is a practicable alternative. According to FEMA FIRM No. 06037C1605F, dated September 26, 2008, the project site is located within "Zone X (unshaded)," which corresponds to areas of minimal flood hazard (FEMA 2008).

FEDERAL ANTIDEGRADATION POLICY

The Federal Antidegradation Policy, adopted in 1972, requires states to develop statewide policies to prevent degradation of surface water and groundwater resources and identify methods for implementing them. Pursuant to the Code of Federal Regulations (CFR), state antidegradation policies and implementation methods shall, at a minimum, protect and maintain: 1) existing in-stream water uses; 2) existing water quality where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the State finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and 3) water quality in waters considered an outstanding national resource. While this policy was established after the adoption of the State of California Antidegradation Policy, it laid the groundwork for other states to adopt antidegradation policies to protect surface and groundwater quality.

5.9.2.2 State

CALIFORNIA DEPARTMENT OF WATER RESOURCES

The California Department of Water Resources (DWR) is the state agency that studies, constructs, and operates regional-scale flood protection systems, in partnership with federal and local agencies. DWR also provides technical, financial, and emergency response assistances to local agencies related to flooding.

Several bills were signed by Governor Schwarzenegger in 2007, adding to and amending state flood and land use management laws. The laws contain requirements and considerations that outline a comprehensive approach to improving flood management at state and local levels.

FloodSAFE California is a strategic multifaceted program initiated by DWR in 2006. FloodSAFE is guiding the development of regional flood management plans, which encourage regional cooperation in identifying and addressing flood hazards. Regional flood plans include flood hazard identification, risk analyses, review of existing measures, and identification of potential projects and funding strategies. The plans emphasize multiple objectives, system resiliency, and compatibility with state goals and Integrated Regional Water Management Plans (IRWMPs). DWR has the lead role to implement FloodSAFE, and will work closely with state, federal, tribal, and local partners to help improve integrated flood management systems statewide. DWR's role is to advise and provide assistance as a resource to local jurisdictions as they pursue compliance.

As required by California Water Code section 6161, the DWR's Division of Safety of Dams (DSOD) regulates the siting, design, construction, and periodic review of all dams in the state. DSOD reviews and approves inundation maps prepared by licensed civil engineers and submitted by dam owners for extremely high, high, and significant hazard dams and their critical appurtenant structures. Inundation maps approved by DSOD are a tool used to develop emergency action plans, and the maps are intended to provide general information for emergency planning. The project site is identified in the City's Safety Element as being located within the potential inundation area for the Hollywood Reservoir, which is held by the Mulholland Dam. The Mulholland Dam is a LADWP dam located in the Hollywood Hills, approximately 6 miles northeast of the project site and is ultimately regulated and monitored by DSOD and the USACE to prevent dam failure.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) (Water Code Section 13000 et seq.) created the SWRCB and the nine Regional Water Quality Control Boards (RWQCBs) within the state. The SWRCB coordinates responsibilities of water quality and water rights within the state. The proposed project is within the jurisdiction of the Los Angeles RWQCB (LARWQCB), further discussed in Section 5.9.2.3, below.

The Porter-Cologne Act requires that waters of the State are protected. The SWRCB is given authority to enforce the Porter-Cologne Act, as well as CWA Section 401. In California, the SWRCB issues a statewide Construction General Permit to regulate runoff from construction sites involving grading and earth moving in areas over 1 acre. The Construction General Permit also applies to projects of less than 1 acre that are part of a larger plan of common development and requires covered construction projects to use the best available technology economically achievable and the best conventional pollution control technology. Each construction project subject to the Construction General Permit is required to have a Stormwater Pollution Prevention Plan (SWPPP) prepared. A SWPPP identifies likely sources of sediment and pollution and incorporates measures to minimize sediment and pollution in runoff water.

The proposed project site is approximately 13 acres in size and is therefore subject to the Construction General Permit.

CALIFORNIA ANTIDEGRADATION POLICY

The California Antidegradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High Quality Water in California, was adopted by the SWRCB pursuant to State Board Resolution No. 68-16 in 1968. Unlike the Federal Antidegradation Policy, the California Antidegradation Policy applies to all waters of the State (e.g., isolated wetlands and groundwater), not just surface waters. The policy states that whenever the existing quality of a waterbody is better than the quality established in individual Basin Plans such high quality shall be maintained, and discharges to that waterbody shall not unreasonably affect present or anticipated beneficial uses of that water resource.

CALIFORNIA TOXICS RULE

In 2000, the EPA promulgated the California Toxics Rule, which establishes water quality criteria for certain toxic substances to be applied to waters in the State. In 1994, a California state court revoked the State's water quality control plans, which contained numeric criteria for water quality. This was in direct violation of the CWA and required EPA action. The EPA then implemented the California Toxics Rule. The EPA promulgated this rule based on Section 303(c)(2)(B) of the Clean Water Act, which dictates that States must adopt numeric criteria in order to protect human health and the environment. The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water such as inland surface waters and enclosed bays and estuaries that are designated by the LARWQCB as having beneficial uses protective of aquatic life or human health.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM CONSTRUCTION GENERAL PERMIT

Construction associated with the proposed project would disturb more than 1 acre of land surface affecting the quality of stormwater discharges into waters of the U.S. The proposed project would, therefore, be subject to the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the U.S. from construction sites that disturb 1 acre or more of land surface, or that are part of a common plan of development or sale that disturbs more than 1 acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines.

The Construction General Permit requires that construction sites be assigned a Risk Level of 1 (low), 2 (medium), or 3 (high), based both on the sediment transport risk at the site and the receiving waters risk during periods of soil exposure (e.g., grading and site stabilization). The sediment risk level reflects the relative amount of sediment that could potentially be discharged to receiving waterbodies and is based on the nature of the construction activities and the location of the site relative to receiving waterbodies. The receiving waters risk level reflects the risk to the receiving waters from the sediment discharge.

The Construction General Permit requires the development and implementation of a SWPPP that includes specific BMPs designed to prevent sediment and pollutants from contacting stormwater from moving off-site into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management, and good housekeeping, and are intended to protect surface water quality by

preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Each category contains specific BMPs to achieve the goals of the overarching category. In addition, the SWPPP is required to contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a waterbody listed on the 303(d) list for sediment.

The SWPPP must be prepared before construction begins. The SWPPP must contain a site map(s) that delineates the construction work area, existing and proposed buildings, parcel boundaries, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list BMPs and the placement of those BMPs that the applicant would use to protect stormwater runoff. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a waterbody listed on the 303(d) list for sediment. Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, vehicle and equipment washing, and fueling. The Construction General Permit also sets post-construction standards (i.e., implementation of BMPs to reduce pollutants in stormwater discharges from the site following construction).

In the project site, the Construction General Permit is implemented and enforced by the LARWQCB, which administers the stormwater permitting program. Dischargers are required to electronically submit a notice of intent and permit registration documents in order to obtain coverage under this Construction General Permit. Dischargers are responsible for notifying the LARWQCB of violations or incidents of non-compliance, as well as for submitting annual reports identifying deficiencies of the BMPs and how the deficiencies were corrected. The risk assessment and SWPPP must be prepared by a State Qualified SWPPP Developer and implementation of the SWPPP must be overseen by a State Qualified SWPPP Practitioner. A Legally Responsible Person, who is legally authorized to sign and certify permit registration documents, is responsible for obtaining coverage under the permit.

CONSTRUCTION GENERAL PERMIT (SWRCB ORDER 2009-0009-DWQ, AS AMENDED)

For stormwater discharges associated with construction activity in the State of California, the SWRCB has adopted the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities ("Construction General Permit"; SWRCB Order 2009-0009-DWQ) to avoid and minimize water quality impacts attributable to such activities. The Construction General Permit is required for all projects where construction activity would disturb 1 acre or more of soil. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling and excavation. The Construction General Permit requires the development and implementation of a SWPPP, which would include and specify water quality BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off-site into receiving waters. Routine inspection of all BMPs is required under the provisions of the Construction General Permit, and the SWPPP must be prepared and implemented by "qualified individuals" as defined by the SWRCB.

NPDES MUNICIPAL STORMWATER PERMIT AND STORMWATER QUALITY MANAGEMENT PROGRAM

In 1987, amendments to the Clean Water Act expanded the NPDES permit program to regulate discharges from storm drains owned and operated by municipalities. In November 1990, EPA published regulations that established application requirements for stormwater permits for municipal stormwater discharges. In California, the NPDES stormwater permit program is administered and enforced by the SWRCB through the nine RWQCBs by issuing Waste Discharge Requirements and NPDES permits. These permits are reissued approximately every 5 years and also include applicable provisions of the state Porter-Cologne Act, which is the principal legislation for controlling stormwater pollutants in California. The permit establishes regulations covering discharge prohibitions, receiving water limitations, municipal operations (such as the proposed project), new development, construction site controls (construction site runoff), and other regulations to regulate surface water quality.

The discharge prohibitions prohibit the discharge of non-stormwater (materials other than stormwater) into, storm drain systems, and watercourses. The municipal operations regulations include a number of requirements to control and reduce non-stormwater discharges and polluted stormwater to storm drains and watercourses during operation, inspection, and routine repair and maintenance activities of municipal facilities and infrastructure, such as the proposed project. The requirements include source control, site design, and stormwater treatment requirements, such as minimizing disturbance of natural infiltration areas and the addition of impervious surfaces, controlling and directing runoff, and the use of infiltration and bioretention measures, among other measures.

The County of Los Angeles and 84 incorporated cities (Co-Permittees, including the City of Downey) implemented a stormwater quality management program (SQMP) to comply with LARWQCB Order No. R4-2012-0175-A01 Amending Order No. Order No. R4-2012-0175 as Amended by State Water Board Order WW 2015-0075, NPDES Permit No. CAS004001, *Waste Discharge Requirements For Municipal Separate Storm Sewer System (MS4), Discharges Within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4*, dated September 8, 2016. The SQMP has the goal of accomplishing the requirements of the MS4 Permit and reducing the amount of pollutants in stormwater runoff. The requirements include source control, site design, and stormwater treatment requirements, such as minimizing disturbance of natural infiltration areas and the addition of impervious surfaces, controlling and directing runoff, and the use of infiltration and bioretention measures, among other measures.

The SWMP requires the Co-Permittees to:

- Implement a public information and participation program to conduct outreach on stormwater pollution;
- Control discharges at commercial/industrial facilities through tracking, inspecting, and ensuring compliance at facilities that are critical sources of pollutants;
- Implement a development planning program for specified development projects;
- Implement a program to control construction runoff from construction activity at all construction sites within the relevant jurisdictions;
- Implement a public agency activities program to minimize stormwater pollution impacts from public agency activities; and
- Implement a program to document, track, and report illicit connections and discharges to the storm drain system.

The MS4 Permit contains the following provisions for implementation of the SQMP by the Co-Permittees:

1. General Requirements:
    a. Each permittee is required to implement the SQMP in order to comply with applicable stormwater program requirements.
    b. The SQMP shall be implemented and east permittee shall implement additional controls so that discharge of pollutants is reduced.
2. Best Management Practice Implementation:
    a. Permittees are required to implement the most effective combination of BMPs for stormwater/urban runoff pollution control. This should result in the reduction of stormwater runoff.
3. Revision of the SQMP:
    a. Permittees are required to revise the SQMP in order to comply with requirements of the RWOCB while complying with regional watershed requirements and/or waste load allocations for implementation of TMDLs for impaired waterbodies.
4. Designation and Responsibilities of the Principal Permittee:
    a. The Los Angeles County Flood Control District is designated as the Principal Permittee who is responsible for:
        i. Coordinating activities that comply with requirements outlined in the NPDES permit;
        ii. Coordinating activities among Permittees;
        iii. Providing personnel and fiscal resources for necessary updates to the SQMP;
        iv. Providing technical support for committees required to implement the SQMP; and
        v. Implementing the Countywide Monitoring Program required under this Order and assessing the results of the monitoring program.
5. Responsibilities of Co-Permittee:
    a. Each co-permittee is required to comply with the requirements of the SQMP as applicable to the discharges within its geographical boundaries. These requirements include:
        i. Coordinating among internal departments to facilitate the implementation of the SQMP requirements in an efficient way;
        ii. Participating in coordination with other internal agencies as necessary to successfully implement the requirements of the SQMP; and
        iii. Preparing an annual Budget Summary of expenditures for the stormwater management program by providing an estimated breakdown of expenditures for different areas of concern, including budget projections for the following year.
6. Watershed Management Committees (WMCs):
    a. Each WMC shall be comprised of a voting representative from each Permittee in the Watershed Management Area (WMA).
    b. Each WMC is required to facilitate exchange of information between Co-Permittees, establish goals and deadlines for WMAs, prioritize pollution control measures, develop and update adequate information, and recommend appropriate revisions to the SQMP.

7. Legal Authority:
    a. Co-Permittees are granted the legal authority to prohibit non-stormwater discharges to the storm drain system including discharge to the MS4 from various development types.

SUSTAINABLE GROUNDWATER MANAGEMENT ACT

The Sustainable Groundwater Management Act (SGMA) is managed by the DWR and provides a long-term statewide framework to protect groundwater resources. The SGMA comprises a three-bill legislative package, including Assembly Bill 1739, Senate Bill 1168, and Senate Bill 1319. The SGMA requires local agencies to form Groundwater Sustainability Agencies for high- and medium-priority basins. It is the responsibility of the Groundwater Sustainability Agencies to prepare and implement a Groundwater Sustainability Plan to mitigate overdraft.

The SGMA does not apply to the adjudicated portion of the Los Angeles Coastal Plain Groundwater Basin, Central Subbasin. However, the project site is within an area of the Los Angeles Coastal Plain Groundwater Basin, Central Subbasin that is not adjudicated. The Central Subbasin is within a low- and very low-priority basin, which has the option to develop a groundwater sustainability plan.

5.9.2.3 County of Los Angeles

INTEGRATED REGIONAL WATER MANAGEMENT PLANS

Integrated Regional Water Management Plans (IRWMPs) are planning documents that outline strategies for the sustainable management of water resources within a specific region delineated by one or more watersheds. IRWMPs generally contain an assessment of current and future water demand, water supply, water quality, and environmental needs. They address the challenges for delivering a stable and clean supply of water for the public, addressing stormwater and urban runoff water quality, providing flood protection, meeting water infrastructure needs, maximizing the use of reclaimed water, enhancing water conservation, and promoting environmental stewardship. There are four IRWMP regions in Los Angeles County: Antelope Valley IRWMP; Upper Santa Clara River IRWMP; Greater Los Angeles County IRWMP; and Los Angeles Gateway Region. The project site is within the Greater Los Angeles County IRWMP.

BASIN PLAN FOR THE COASTAL WATERSHEDS OF LOS ANGELES AND VENTURA COUNTIES

As required by the California Water Code, the LARWQCB has adopted a plan entitled, "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (Basin Plan). Specifically, the Basin Plan designated beneficial uses for surface waters and groundwater, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's Antidegradation Policy, and describes implementation programs to protect all waters in the Los Angeles Region. In addition, the Basin Plan incorporates (by reference) all applicable state and RWQCB plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the Basin Plan. The Basin Plan is a resource for the RWQCB and others who use water and/or discharge wastewater in the Los Angeles Region. Other agencies and organizations involved in environmental permitting and resource management activities also use the Basin Plan. The Basin Plan provides valuable information to the public about local water quality issues.

ENHANCED WATERSHED MANAGEMENT PROGRAM FOR BALLONA CREEK

The EWMP for the Ballona Creek Watershed was developed by the Ballona Creek Watershed Management, which includes the cities of Los Angeles (lead coordinating agency), Beverly Hills, Culver City, Inglewood, Santa Monica, West Hollywood, and the unincorporated County of Los Angeles and the LACFCD. The project site is within the Ballona Creek Watershed boundary and the jurisdictional area of the EWMP.

The EWMP for the Ballona Creek Watershed describes a customized compliance pathway that Los Angeles County MS4 Permittees in the watershed will use to fulfill the Watershed Management Program requirements contained in the 2012 MS4 Permit (Order No. R4-2012-0175; NPDES Permit No. CAS004001). The EWMP for the Ballona Creek Watershed identifies a detailed implementation strategy that provides not only water quality improvement but also environmental, aesthetic, recreational, water supply and/or other community enhancements.

The EWMP provides a multi-pollutant approach that maximizes the retention and use of urban runoff as a resource for water reuse, irrigation, and indoor use, while also creating additional benefits for the communities in the Ballona Creek Watershed. The EWMP also presents watershed control measures to address applicable stormwater quality regulations, including Low Impact Development (LID) control measures, green streets wherein street rights-of-way are landscaped to provide surfaces that retain runoff, and regional projects that are able to capture runoff from large upstream areas.

LOS ANGELES COUNTY LOW IMPACT DEVELOPMENT MANUAL

In 2008, the County adopted a Low Impact Development ordinance to require use of LID principles in all development projects except for road and flood infrastructure projects. The LID ordinance was amended in response to the 2012 MS4 Permit. The County prepared the 2014 LID Standards Manual to comply with the requirements of the NPDES MS4 Permit. The County LID Standards Manual provides guidance for the implementation of stormwater quality control measures in new development and redevelopment projects in unincorporated areas of the county, with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges. Chapter 12.84 of the Los Angeles County Code outlines LID Standards and their applicability to projects in the county. The LID Standards Manual addresses the following objectives and goals (County Public Works 2014):

- Lessen the adverse impacts of stormwater runoff from development and urban runoff on natural drainage systems, receiving waters, and other waterbodies;
- Minimize pollutant loadings from impervious surfaces by requiring development projects to incorporate properly designed, technically appropriate BMPs and other LID strategies; and
- Minimize erosion and other hydrologic impacts on natural drainage systems by requiring development projects to incorporate properly designed, technically appropriate hydromodification control development and technologies.

The provisions in Chapter 12.84 shall not be construed to augment any county, state, or federal ordinance, status, regulation, or other requirement governing the same or related matter, and where a conflict exists between a provision in Chapter 12.84 and such other ordinance, statute, regulation, or requirement, the stricter provision shall apply to the extent permitted by law.

COUNTY OF LOS ANGELES HYDROLOGY MANUAL

The County of Los Angeles Department of Public Works Hydrology Manual (Hydrology Manual) requires that a storm drain conveyance system be designed for a 25-year storm event and that the combined capacity of a storm drain and street flow system accommodate flow from a 50-year storm event (County Public Works 2006). Areas with sump conditions are required to have a storm drain conveyance system capable of conveying flow from a 50-year storm event. The County also limits the allowable discharge into existing storm drain facilities based on the municipal separate stormwater sewer systems permit and is enforced on all new developments that discharge directly into the County's storm drain system. Any proposed drainage improvements of County-owned storm drain facilities such as catch basins and storm drain lines requires the approval/review from the County Flood Control District department.

COUNTY OF LOS ANGELES 2035 GENERAL PLAN

The proposed project is subject to relevant goals, policies, and actions listed in the County of Los Angeles 2035 General Plan (County of Los Angeles 2015). Goals, policies, and actions related to the Conservation and Natural Resources Element are included below. The County of Los Angeles Board of Supervisors adopted the Los Angeles County 2035 General Plan on October 6, 2015. The 2035 General Plan is intended to provide policy framework for development within the county through the year 2035.

Conservation and Natural Resources Element

Goal C/NR 5. Protected and useable local surface water resources.

> ***Policy C/NR 5.1.*** Support the LID philosophy, which seeks to plan and design public and private development with hydrologic sensitivity, including limits to straightening and channelizing natural flow paths, removal of vegetative cover, compaction of soils, and distribution of naturalistic BMPs at regional, neighborhood, and parcel-level scales.
>
> ***Policy C/NR 5.2.*** Require compliance by all County departments with adopted Municipal Separate Storm Sewer System (MS4), General Construction, and point source NPDES permits.
>
> ***Policy C/NR 5.3:*** Actively engage with stakeholders in the formulation and implementation of surface water preservation and restoration plans, including plans to improve impaired surface waterbodies by retrofitting tributary watersheds with LID types of BMPs.
>
> ***Policy C/NR 5.4:*** Actively engage in implementing all approved Enhanced Watershed Management Programs/Watershed Management Programs and Coordinated Integrated Monitoring Programs/Integrated Monitoring Programs or other County-involved TMDL implementation and monitoring plans.
>
> ***Policy C/NR 5.5:*** Manage the placement and use of septic systems in order to protect nearby surface waterbodies.
>
> ***Policy C/NR 5.6***: Minimize point and non-point source water pollution.
>
> ***Policy C/NR 5.7:*** Actively support the design of new and retrofit of existing infrastructure to accommodate watershed protection goals, such as roadway, railway, bridge, and other—particularly—tributary street and greenway interface points with channelized waterways.

Goal C/NR 6. Protected and usable local groundwater resources.

> ***Policy C/NR 6.1.*** Support the LID philosophy, which incorporates distributed, post-construction parcel-level stormwater infiltration as part of new development.
>
> ***Policy C/NR 6.2:*** Protect natural groundwater recharge areas and regional spreading grounds.
>
> ***Policy C/NR 6.4:*** Manage the placement and use of septic systems in order to protect high groundwater.
>
> ***Policy C/NR 6.5:*** Prevent stormwater infiltration where inappropriate and unsafe, such as in areas with high seasonal groundwater, on hazardous slopes, within 100 feet of drinking water wells, and in contaminated soils

Goal C/NR 7. Protected and healthy watersheds.

> ***Policy C/NR 7.1.*** Support the LID philosophy, which mimics the natural hydrologic cycle using undeveloped conditions as a base, in public and private land use planning and development design.
>
> ***Policy C/NR 7.2***: Support the preservation, restoration and strategic acquisition of available land for open space to preserve watershed uplands, natural streams, drainage paths, wetlands, and rivers, which are necessary for the healthy function of watersheds.
>
> ***Policy C/NR 7.4:*** Promote the development of multi-use regional facilities for stormwater quality improvement, groundwater recharge, detention/attenuation, flood management, retaining non-stormwater runoff, and other compatible uses.

Safety Element

Goal S 2**:** An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to flood and inundation hazards.

> ***Policy S 2.6*****:** Work cooperatively with public agencies with responsibility for flood protection, and with stakeholders in planning for flood and inundation hazards.

Public Services and Facilities Element

Goal PS/F 2: Increased water conservation efforts.

> ***Policy PS/F 2.1:*** Support water conservation measures.

Water and Waste Management Element

Objective: To mitigate hazards and avoid adverse impacts in providing water and waste services and to protect the health and safety of all residents.

Objective: To develop improved systems of resource use, recovery, and reuse.

> ***Policy 25.*** Encourage development and application of water conservation, including recovery and reuse of storm and waste water.

Objective: To provide efficient water and waste management services.

***Objective*:** To maintain the high quality of our coastal, surface, and ground waters.

Policy 17. Protect public health and prevent pollution of ground water through the use of whatever alternative is necessary.

Policy 19. Avoid or mitigate threats to pollution of the ocean, drainage ways, lakes, and groundwater reserves.

5.9.2.4 City of Los Angeles

PLANNING AND LAND DEVELOPMENT HANDBOOK FOR LOW IMPACT DEVELOPMENT

The City of Los Angeles Bureau of Sanitation (referred to as Los Angeles Sanitation and Environment [LASAN]) is responsible for stormwater pollution control throughout the city in compliance with the Los Angeles County Municipal NPDES permit. The LASAN administers the City's stormwater program, which has two major components: pollution abatement and flood control. The Planning and Land Development Handbook for Low Impact Development provides guidance to developers for compliance with the County's Municipal NPDES permit through the incorporation of water quality management into development planning (LASAN 2016). The Planning and Land Development Handbook for Low Impact Development reiterates the policies contained within the Construction General Permit, provides specific minimum BMPs for all construction activities, and requires the preparation of a SWPPP and the filing of a notice of intent to comply with the State NPDES Construction General Permit requirements with the LARWQCB. The Planning and Land Development Handbook for Low Impact Development provides guidance to developers to ensure the post-construction operation of newly developed and redeveloped facilities comply with the developing planning program regulations of the city's stormwater program.

5.9.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse impacts related to hydrology and water quality if it would:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

   i. Result in substantial erosion or siltation on- or off-site.

   ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

   iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

   iv. Impede or redirect flood flows.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

5.9.4 Impact Assessment Methodology

The hydrology and water quality analysis presented in this chapter is based on literature review of relevant documents including the County of Los Angeles General Plan, the LARWQCB's Basin Plan, and EWMP for the Ballona Creek Watershed, as well as technical reports prepared for the project including the *Preliminary Civil Engineering Narrative* prepared by KPFF dated March 2021, the *Low Impact Development (LID) and Hydrology Report* prepared by KPFF, dated June 2023 (see Appendix H), and the *Geology and Soil Discipline Report* prepared by Shannon and Wilson on January 27, 2023 (see Appendix E).The LID and Hydrology Report outlines the existing and proposed hydrology and drainage management areas for the project site. The LID and Hydrology Report also provides the LID measures required to reduce the project's volume of stormwater runoff and potential pollutants in accordance with the Los Angeles County Department of Public Works' Low Impact Development Standards Manual dated (County Public Works 2014). Hydrology calculations for the project's proposed drainage follow the Los Angeles County Hydrology Manual methodology (County Public Works 2006). Detailed methodologies are provided in Appendix H. The results of the LID analysis are discussed in Section 5.9.5, threshold a. The results of the proposed modifications to the drainage on the project site are discussed below in Section 5.9.5, threshold c.

5.9.5 Environmental Impact Analysis

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

CONSTRUCTION IMPACTS

During project construction, particularly during the grading phase, stormwater runoff from precipitation events could cause exposed and stockpiled soils to be subject to erosion and convey sediments into municipal storm drain systems. It is anticipated that project earthwork activities would include an estimated 53,000 cubic yards of cut/export and potentially 37,000 cubic yards of imported fill. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. Pollutant discharges relating to the storage, handling, use and disposal of chemicals, adhesives, coatings, lubricants, and fuel could also occur. Due to the presence of naturally occurring tar (petroleum) in the subsurface soils, contaminated soils and impacted groundwater may be encountered when performing excavations; therefore, the project may have the potential to require dewatering during construction. Dewatering operations are practices that remove and discharge non-stormwater from an earthwork location into a drainage system in order to proceed with construction. Discharges from dewatering operations can contain high levels of fine sediments, which, if not properly treated, could lead to exceedance of NPDES requirements. During construction, temporary dewatering pumps and filtration would be used in compliance with the NPDES permit. These temporary systems would comply with all applicable NPDES requirements related to construction and discharges from dewatering operations, as well as the LARWQCB's Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties.

As project construction would disturb more than 1 acre of soil, the project would be required to obtain coverage under the NPDES Construction General Permit. In accordance with the requirements of the NPDES Construction General Permit, the project would prepare and implement a site-specific SWPPP that specifies BMPs to be used during construction to manage stormwater and non-stormwater discharges.

BMPs would include, but would not be limited to, erosion control, sediment control, non-stormwater management, and materials management BMPs. The SWPPP would include a description of potential sources of pollutants, including pollutants originating from off-site, which may flow across or through areas of construction. The SWPPP would specify the location, type, and maintenance requirements for BMPs necessary to prevent stormwater runoff from carrying construction-related pollutants into nearby receiving waters (in this case, Ballona Creek). BMPs would be required to be implemented to address the potential release of fuels, oil, and/or lubricants from construction vehicles and equipment (e.g., drip pans, secondary containment, washing stations), release of sediment from material stockpiles and other construction-related excavations (e.g., sediment barriers, soil binders), and other construction-related activities with the potential to adversely affect water quality. The number, type, location, and maintenance requirements of BMPs to be implemented as part of the SWPPP depend on site-specific risk factors, such as soil erosivity factors, construction season/duration, and receiving water sensitivity.

Compliance with the requirements of the LARWQCB (CWA NPDES Program and Porter-Cologne Act waste discharge requirements), Construction General Permit, and County stormwater regulations would be sufficient to address the potential for buildout of the project to violate water quality standards or waste discharge requirements during construction activities. Therefore, impacts related to degradation of surface or groundwater quality from construction activities would be *less than significant*.

OPERATIONAL IMPACTS

The project would decrease the overall permeability of the project site from 59.3% to 51.9%, representing an approximate 7% decrease in pervious surfaces within the project site upon project completion (KPFF 2023b).

Increased impervious surfaces from the expanded parking lot and drop-off area would collect automobile-derived pollutants such as oils, greases, heavy metals, and rubber. During storm events, these pollutants would be transported into the proposed stormwater management system by surface runoff. An increase in point-source and nonpoint-source pollution could result from increases in development intensity that may directly impact water quality specific to site drainage patterns. These increases would have the potential to increase the quantity of pollutants and non-stormwater discharges that could adversely impact water quality.

As provided in the Preliminary Civil Engineering Narrative and Low Impact Development (LID) and Hydrology Report, the project proposes to implement three LID BMPs to manage stormwater runoff, in accordance with the Los Angeles County LID Standards Manual (KPFF 2021, 2023b). The three LID BMPs are biofiltration planters, which are shallow vegetated planters that are designed to receive and detain stormwater runoff from the building and site, filter the runoff, and eventually discharge the filtered runoff to the public storm drain system. Planters are sized to treat 150% of the required 85th percentile storm, mitigated stormwater volume. To protect the amended soil within the planters from tar infiltration as well as prevent high groundwater from flooding the planters, the project is proposing closed-bottom planters with an underdrain (KPFF 2023b). The proposed biofiltration planters have been sized based on tributary area and are as follows:

- In the northwestern portion of the site, Oil Creek is proposed to be refurbished as a bioswale. The existing creek drainage would be cleared, lined with an impermeable liner, and partially filled with gravel subdrainage with a perforated pipe, amended soil, and plants. Runoff would be conveyed to the creek via sheet flow and existing or relocated underground pipes. After being filtered by the biofiltration media, stormwater would be collected at the bottom of the system and connected to the existing downstream stormwater system.

- In the northeastern portion of the site, the large planter within the proposed drop-off area would be constructed as a biofiltration planter. The planter would be excavated down 4 to 5 feet, lined with an impermeable liner, and filled with gravel subdrainage with a perforated pipe, amended soil, and plants. Supporting wall structures would likely be required underground (appearing at the surface as curbs), to separate the compacted soil for traffic loading and the uncompacted biofiltration media. Runoff would be conveyed to the system via sheet flow, filtered by the system, and then collected in the perforated subdrain and piped to the existing site stormwater system.
- In the southeastern portion of the site, east of Lake Pit, an in-ground biofiltration planter would be installed. The construction of this system would be similar to the Oil Creek system as described above. Subdrainage would be connected into public storm drain mains in either Wilshire Boulevard or South Curson Avenue.

Detailed figures and LID calculations are provided in Appendix H. The project would also be subject to LARWQCB post-construction stormwater management requirements.

While incorporation of the LID BMPs (i.e., the three proposed biofiltration areas) and LARWQCB post-construction stormwater management requirements would improve stormwater runoff water quality, which would benefit the water quality of downstream surface waters as well as underlying groundwater resources, additional non-structural BMPs would also need to be implemented to ensure that the increase in impervious surfaces with project implementation would not contribute to the degradation of surface or groundwater quality. Without implementation of non-structural BMPs, operational impacts related to degradation of surface or groundwater quality could be *significant*.

HYD Impact 1	
During project construction, the project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Construction impacts would be less than significant. Implementation of the project would increase impervious surfaces within the project site, and project operation would have the potential to contribute to the degradation of surface or groundwater quality. Operational impacts could be significant. (CEQA Checklist Appendix G Threshold X. a)	
Mitigation Measures	
HYD/mm-1.1	*The Foundation shall implement the following non-structural Best Management Practices (BMPs) for the life of the project:* ***Open Paved Areas and Biofiltration Planter Areas*** • *Regular sweeping of all open and planter areas, at a minimum, on a weekly basis in order to prevent dispersal of pollutants that may collect on those surfaces.* • *Regular pruning of the trees and shrubs in the planter areas to avoid formation of dried leaves and twigs, which are normally blown by the wind during windy days. These dried leaves are likely to clog the surface inlets of the drainage system when rain comes, which would result in flooding of the surrounding area due to reduced flow capacities of the inlets.* • *Trash and recycling containers shall be used such that, if they are to be located outside or apart from the principal structure, are fully enclosed and watertight in order to prevent contact of stormwater with waste matter, which can be a potential source of bacteria and other pollutants in runoff. These containers shall be emptied and the wastes disposed of properly on a regular basis.*

HYD Impact 1	
	Education and Training • *Annual training of employees on property management and proper methods of handling and disposal of waste shall be provided. Employees should understand the on-site BMPs and their maintenance requirements.* ***Landscape Management*** • *Landscaping shall be maintained using minimum or no pesticides.* ***Litter Control*** • *An adequate number of trash receptacles shall be provided and inspected regularly. Leaky receptacles shall be prepared or replaced. Receptacles shall be covered.* • *Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site.* ***Housekeeping of Loading Docks*** • *Loaded and unloaded items shall be moved indoors as soon as possible.* ***Catch Basin Inspection*** • *Stormwater pollution prevention information shall be provided. Owner shall be made aware that the following is to be followed: "Property owner shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create potential discharge to storm drains."* • *Catch basins shall be inspected regularly.* ***Design and Construct Trash and Waste Storage Areas to Reduce Pollutant Introduction*** • *Trash and waste will be handled and stored for pickup adjacent to the loading dock. This limits the potential introduction of pollutants into the site. Trash and waste pickup will occur regularly.* ***Use Efficient Irrigation Systems and Landscaping Design*** • *Landscape shall be generally designed to provide an efficient and continuous irrigation system.* • *Landscape areas shall be designed to include plants that are friendly to the climate of Los Angeles.* ***Storm Drain Stencil Signage*** • *Stencil or label all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language to prevent dumping of improper materials into the urban runoff conveyance system.*
HYD/mm-1.2	*The Foundation shall ensure all structural and non-structural Best Management Practices (BMPs) are operated, monitored, and maintained for the life of the project pursuant to the following:* • *All structural BMPs shall be inspected, cleaned-out, and where necessary, repaired, at the following minimum frequencies: 1) prior to October 15th each year; 2) during each month between October 15th and April 15th of each year and, 3) at least twice during the dry season (between April 16th and October 14th of each year).* • *Debris and other water pollutants removed from structural BMPs during cleanout shall be contained and disposed of in a proper manner.* • *The drainage system, the associated structures, and BMPs shall be maintained according to manufacturer's specification to ensure maximum pollutant removal efficiencies.*

HYD Impact 1
Impacts Following Mitigation
Based on required compliance with state and local water quality protection requirements, construction impacts related to water quality standards or waste discharge requirements would be less than significant. *Implementation of HYD/mm-1.1 and 1.2 would reduce operational impacts related to water quality standards or waste discharge requirements to less than significant.*

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

CONSTRUCTION

As discussed in HYD Impact 1, dewatering operations are expected during construction only and appropriate compliance and contaminant measures would be implemented to avoid impacts associated with potential groundwater discharges. Due to the operation of temporary dewatering systems, local groundwater hydrology in the immediate vicinity of the project site would be minimally affected. As the groundwater pumping is localized and limited in duration during construction, regional impacts to groundwater flow and level are not considered to be significant. Additionally, no water supply wells are located at the project site or within 1 mile of the project site that could be impacted by construction, nor would the project include the construction of water supply wells. Therefore, the project would not substantially deplete groundwater supplies or affect groundwater recharge in a manner that would result in a net deficit in aquifer volume or permanent lowering of the local groundwater table during construction. Construction impacts would be *less than significant*.

OPERATION

Upon project implementation, the project would increase impervious surface area on the project site, which could reduce the amount of water percolating down into the underground aquifer that underlies the project site. However, the project includes design features that would maximize the percolation of rainfall into the groundwater basin, such as the three biofiltration systems and proposed permeable landscape areas. With implementation of these proposed components, buildout of the project would not adversely affect local groundwater recharge levels.

The project would not directly pump local groundwater to serve the project's water demand. Domestic water and water for fire protection would be supplied by LADWP (see Section 5.15, Utilities and Service Systems, for a discussion of water supply). Therefore, the project's operational impacts related to groundwater supplies and groundwater recharge would be *less than significant*.

HYD Impact 2
The project would not substantially decrease groundwater supplies or interfere with groundwater recharge. Construction and operational impacts would be less than significant. (CEQA Checklist Appendix G Threshold X. b)

HYD Impact 2
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to groundwater recharge and groundwater supply would be less than significant.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation on- or off-site;

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

iv. Impede or redirect flood flows?

CONSTRUCTION

Grading, excavation, and other earth-moving activities associated with project construction could have the potential to alter existing drainage patterns and flows within the project site. Construction activities would be temporary in nature and the drainage patterns would follow the proposed drainage plan as described in the following discussion. During construction, the previously described SWPPP required by the

General Construction Permit would prevent construction site runoff from affecting off-site drainage patterns, as described above in HYD Impact 1, and through the use of BMPs and erosion control measures to be used during construction to prevent erosion and off-site siltation. Compliance with the NPDES Municipal Permits and its MS4 BMP requirements implemented in the SQMP, along with city code requirements, would reduce the amount of pollutants in stormwater runoff through the use of BMPs such as managing surface water runoff, on-site infiltration, and connecting to the existing City stormwater drainage system. Adherence to the regulatory requirements and regulatory plans described above would decrease the potential for drainage pattern alteration and decrease erosion and sedimentation effects. Construction impacts would be *less than significant*.

OPERATION

Based on the calculations provided in the LID and Hydrology Report, implementation of the project would decrease the overall permeability of the project site (Appendix H). When looking at the hydrology study area, which includes both the project site and a portion of the adjacent streets, the overall permeability decreases from 59.3% to 51.9%.

The project's proposed grading and drainage plan for the site has been designed to use the existing topography of the site and maintain historic drainage patterns to the maximum extent feasible, with

integration of additional water quality and drainage facilities to meet or exceed applicable LARWQCB Post-Construction Stormwater Management Requirements. The project proposes four drainage management areas that correspond with the existing drainage outfalls, as described below and shown in Figure 5.9-5:

- Drainage Area 1: Northwestern portion of the project site and expansion of Page Museum (new museum). Runoff drains to Biofiltration Planter 1 and overflows to Oil Creek.
- Drainage Area 2: Parking lot, the Page Museum, and the area to the east of the Page Museum. Runoff drains to Biofiltration Planter 2 and overflows to West 6th Street.
- Drainage Area 3: Southern portion of the project site. Runoff drains to Biofiltration Planter 3 and overflows to the Lake Pit.
- Drainage Area 4: Public right-of way on Wilshire Boulevard. Runoff drains to existing storm drains on consists of runoff that drains to Wilshire Boulevard.

Three of the proposed drainage management areas would include biofiltration planters designed in accordance with LID requirements, as described in threshold a. In the northwestern portion of the site, Oil Creek is proposed to be restored as a bioswale. Runoff would be conveyed to the creek via sheet flow and existing or relocated underground pipes, filtered, and then conveyed to the existing downstream stormwater system. In the northeastern portion of the site, the larger planter within the proposed drop off would be constructed as a biofiltration planter. Runoff would be conveyed to the system via sheet flow, filtered, and then piped to the existing stormwater system. In the southeastern portion of the site, an in-ground biofiltration planter would be constructed. Runoff would be conveyed to the system via sheet flow, filtered, and then conveyed into public storm drain mains in either Wilshire Boulevard or South Curson Avenue.

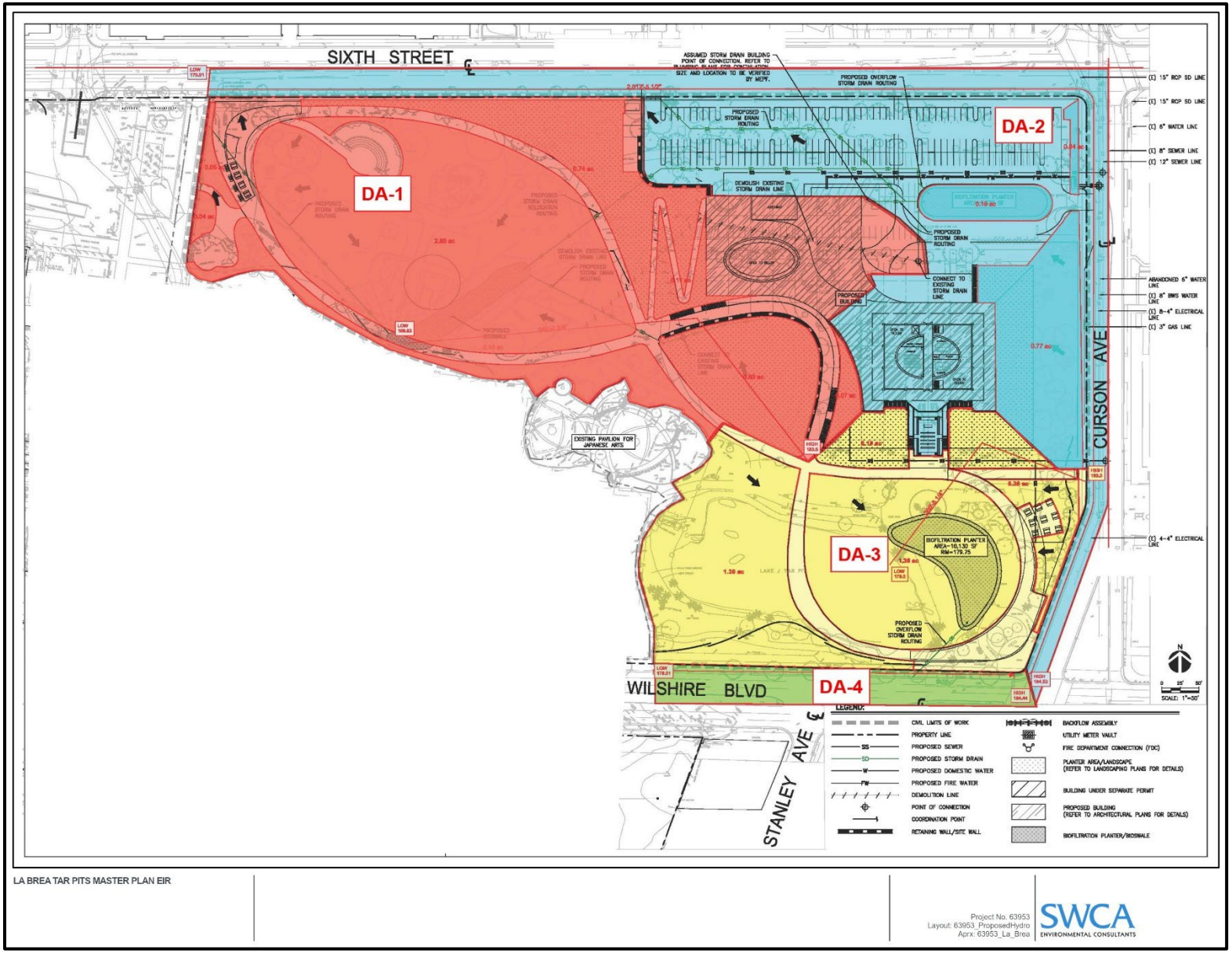


Figure 5.9-5. Proposed drainage plan.

Table 5.9-2 provides a comparison of the 25-year peak discharge flow rates and runoff volume, as well as permeability percentage by drainage area for the existing drainage patterns and the proposed drainage plan. For the purposes of the calculations shown in Table 5.9-2, it is important to note that the hydrology study area is defined as including both the project site and a portion of the adjacent streets (as shown in Figures 5.9.3 and 5.9.5).

Table 5.9-2. Existing and Proposed Drainage Comparison

Drainage Area (DA)	Existing	Proposed	Change
DA-1			
Percent (%) permeability	58.56%	67.04%	8.48%
Peak flow (cfs)	21.19	14.97	(6.22)
Volume (cu-ft)	73,086.58	52,243.53	(20,843.05)
DA-2			
Percent (%) permeability	49.00	17.57	(31.43)
Peak flow (cfs)	5.36	7.49	2.13
Volume (cu-ft)	43,826.33	79,014.93	35,188.60
DA-3			
Percent (%) permeability	85.79	81.55	(4.24)
Peak flow (cfs)	9.65	10.78	1.13
Volume (cu-ft)	17,673.44	21,982.98	4,309.54
DA-4			
Percent (%) permeability	0	0	0
Peak flow (cfs)	1.61	1.35	(0.26)
Volume (cu-ft)	11,350.44	9,566.80	(1,783.64)

Source: KPFF (2023b), provided in Appendix H.
Notes: cfs = cubic feet per second; cu-ft = cubic feet.

As shown in Table 5.9-2, peak flows and runoff volumes would decrease in DA-1 and DA-4, while increasing in DA-2 and DA-3 with implementation of the project. However, as described in the LID and Hydrology Report, the project's proposed runoff volumes are not anticipated to exceed the capacity of the existing storm drain conveyance system for any of the proposed drainage areas or for the project as a whole (Appendix H). Detailed explanations of the calculations shown in Table 5.9-2 are provided in Appendix H. The existing storm drainage infrastructure serving the project site has been designed by the City of Los Angeles to carry storm water flows per the Los Angeles County Hydrology Manual and the City of Los Angeles Department of Public Works Storm Drain Design Manual and is designed to carry the 50-year storm event per the Los Angeles County Hydrology Manual. No known deficiencies exist in the vicinity of the project. Furthermore, the project's proposed drainage plan would increase the water quality of discharged stormwater flows and reduce the peak discharge flow rates out of the site, thereby reducing the impact to downstream conveyance systems. Therefore, the project would be designed to capture, filter, and reduce the volume of any additional runoff from the project's proposed impervious surfaces in a way that mimics, as well as improves, existing drainage patterns. With adequate implementation and maintenance of SWPPPs, erosion and stormwater control plans, and drainage plans that would be required for the project site, the proposed project would not substantially alter the drainage pattern beyond the construction footprint and would not alter off-site drainage patterns. Operational impacts would be *less than significant*.

HYD Impact 3
The project would not substantially alter the existing drainage pattern of the site or increase surface water runoff in a manner that would result in substantial erosion or siltation, flooding, or an exceedance of stormwater drainage systems. Construction and operational impacts would be less than significant. (CEQA Checklist Appendix G Threshold X. c)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Construction and operational impacts related to drainage would be less than significant.

d) Would the project, in a flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation?

The Pacific Ocean is located over 9 miles southwest of the project site; consequently, there is no potential for the project site to be impacted by a tsunami as tsunamis typically only reach up to a few miles inland. In addition, the project site is not mapped as a tsunami inundation area (California Department of Conservation 2019). While there are two bodies of standing water present on the project site (i.e., the Lake Pit and a small pond that includes Pit 91), the existing grades around these areas are several feet below the edge of the surrounding banks. Given the elevation differences, the potential for the project to result in a seiche from Lake Pit or the small pond near Pit 91 is low.

According to the Safety Element of the General Plan, the project site is located within the potential inundation area for the Hollywood Reservoir, which is held by the Mulholland Dam (DWR 2022). The Mulholland Dam is operated by the LADWP and located in the Hollywood Hills, approximately 6 miles northeast of the project site. Dam safety regulations are the primary means of reducing damage or injury due to inundation occurring from dam failure. The Mulholland Dam, as well as others in California, are continually monitored by various governmental agencies (such as the State of California DSOD and the USACE) to prevent dam failure. Specifically, the California DSOD regulates the siting, design, construction, and periodic review of all dams in the state. In addition, LADWP operates the dams in the Los Angeles area and mitigates the potential for overflow and seiche hazards through control of water levels and dam wall height. These measures include seismic retrofits and other related dam improvements completed under the requirements of the 1972 State Dam Safety Act. Given the oversight by the Division of Safety of Dams, including regular inspections, and the LADWP's emergency response program, the potential for substantial adverse impacts related to inundation at the project because of dam failure would be less than significant.

Additionally, as discussed above, the project would include new structural BMPs throughout the project site which would reduce the amount of pollutants entering the stormwater system and groundwater.

Based on the foregoing, the project site is not located within a flood hazard zone or tsunami zone and the risk of seiche is low. Therefore, there would be no release of pollutants due to project inundation by these hazards during project construction and operation. *No impact* would occur.

HYD Impact 4
The project site is not in a flood hazard zone or tsunami zone and the risk of seiche is low. Therefore, there would be no risk of release of pollutants due to project inundation by these hazards. No construction or operational impacts would occur. (CEQA Checklist Appendix G Threshold X. d)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. No construction or operational impacts would occur as the project site is not in a flood hazard zone, tsunami zone, or seiche zone.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Pursuant to Section 303(d) of the Clean Water Act, states are required to identify waterbodies that do not meet their water quality standards. Biennially, the LARWQCB prepares a list of impaired waterbodies in the region, referred to as the 303(d) list. The 303(d) list outlines the impaired waterbody and the specific pollutant(s) for which it is impaired. All waterbodies on the 303(d) list are subject to the development of a TMDL. The project site is located within the Ballona Creek Watershed. Constituents of concern listed for the Ballona Creek Watershed include PCBs, DDT, cadmium, zinc, chlordane, indicator bacteria, PAHs, copper, toxicity, lead, silver, trash, cyanide, and viruses (enteric).

The County of Los Angeles, the City of Los Angeles, and all other cities in the regional watershed are responsible for the implementation of watershed improvement plans or Enhanced Watershed Management Programs to improve water quality and assist in meeting the TMDL thresholds. The objective of the EWMP Plan for the Ballona Creek is to determine the BMPs that will achieve required pollutant reductions while also providing multiple benefits to the community and leveraging sustainable green infrastructure practices. Compliance with the NPDES program would ensure that stormwater pollutants do not substantially degrade water quality during project construction and operation.

The project site is also located in the Coastal Plain of Los Angeles Groundwater Basin, Central Subbasin (referred to as the Central Basin). As noted previously in response to Threshold "HYD-2," implementation of the project would not result in substantial adverse effects on local groundwater supplies or groundwater recharge during project construction and operation.

Potential pollutants generated by the project would be those typical of museum- and park-related land uses and may include sediment, nutrients, pesticides, metals, pathogens, and oil and grease. The implementation of BMPs required by the County's LID Ordinance would target these pollutants to minimize pollutant loads in stormwater runoff. Implementation of the project's LID BMPs (i.e., three biofiltration areas) as well as the project mitigation measure included in HYD Impact 1 outlining the required non-structural BMPs would result in improved surface water runoff quality as compared to existing conditions. Therefore, the project would not introduce new pollutants or an increase in pollutants that would conflict with or obstruct any water quality control plans for the Ballona Creek Watershed.

With compliance with existing applicable regulatory requirements and implementation of LID BMPs, the project would not conflict with or obstruct implementation of a water quality control plan or a sustainable groundwater management plan. Construction and operational impacts would be *less than significant*.

HYD Impact 5
The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Construction and operational impacts would be less than significant. (CEQA Checklist Appendix G Threshold X. e)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Construction and operational impacts would be less than significant.

5.9.6 Cumulative Impact Analysis

Cumulative growth and related development projects in the vicinity of the project site are discussed in Chapter 4, Environmental Setting. The geographic area where projects have a potential to contribute to cumulative impacts varies depending on the environmental resource under consideration. The geographic scope of analysis for cumulative hydrology and water quality impacts on surface water hydrology is limited to the project site and its immediately adjacent area that would flow into the same drainage system. This is because impacts relative to hydrology and water quality are generally site-specific when the site is in a highly developed urban area with limited to no potential for flooding, dam failure, or other larger-scale event. Hydrology and water quality impacts could only be cumulative if two or more projects had impacts that spatially overlapped.

Significant cumulative impacts related to hydrology and water quality could occur if the incremental impacts of the project combined with the incremental impacts of one or more of the cumulative projects identified in Chapter 4 would substantially affect hydrology and water quality. The following cumulative projects would be geographically adjacent to and/or overlap with components of the project, and include activities that could affect hydrology and water quality:

- **Metro D (Purple) Line Extension:** Extension of underground light rail transit service infrastructure to parallel Wilshire Boulevard located directly adjacent to the project site along with seven new transit stations. This project is under construction with the first phase (Wilshire/ La Brea, Wilshire/Fairfax, and Wilshire/ La Cienega Stations) anticipated to be completed and in operation by 2024.
- **Los Angeles County Museum of Art Renovation:** Located directly adjacent to the project site (on parcels directly west and south across Wilshire Boulevard) at 5906 West Wilshire Boulevard. The project includes museum renovation and is under construction with an anticipated completion date of 2024.

The project would have no impact with respect to flood potential and impacts associated with inundation, by seiche or tsunami (threshold d). Therefore, the project would not contribute to cumulative impacts related to these topics and they are not discussed further.

Through compliance with existing regulations, the project would result in less than significant impacts related to groundwater supplies and groundwater recharge (threshold b), existing drainage patterns (threshold c) and conflicts with applicable water quality control plan or sustainable groundwater management plan (threshold e). Each of the related projects, as well as future development projects within the project vicinity would be subject to compliance with the requirements of the LARWQCB and the City or County, as applicable. In addition, discretionary development projects subject to review under CEQA would be evaluated for potential impacts associated with groundwater recharge, existing drainage patterns, and consistency with applicable water quality and groundwater management plans. Therefore, the project, in conjunction with the related projects, would not contribute to cumulative construction or operational impacts related to these issues.

Due to the existing built-out nature of the project site and the project vicinity, cumulative development would be expected to result in a minimal overall change to urban pollutant discharges to surface water runoff and groundwater percolation rates. However, construction activities could result in increased pollution levels of natural watercourses or underground aquifers. The types of pollutant discharges that could occur as a result of construction include accidental spillage of fuel and lubricants, discharge of excess concrete, and an increase in sediment runoff. Storm runoff concentrations of oil, grease, heavy metals, and debris typically increase as the amount of urban development increases in the watershed. Polluted runoff that may be generated during construction activities of cumulative development and projects considered in this analysis would be regulated by the SWRCB under NPDES Construction General Permits and would be minimized using standard construction BMPs. With adherence to these regulatory standards, the project's contribution to cumulative construction impacts would be *less than significant*.

As discussed in Section 5.9.5, threshold a), implementation of the project would increase impervious surfaces within the project site and project operation would have the potential to contribute to the degradation of surface or groundwater quality. If project mitigation were not to be implemented, it is conceivable that the project would contribute to cumulative impacts related to degradation of surface or groundwater quality. Therefore, cumulative operational impacts could be *significant*.

HYD Impact 6 (Cumulative)
Prior to consideration of the proposed mitigation measures, operation of the project could have the potential to contribute to the degradation of surface or groundwater quality. If unaddressed, potential contributions to cumulative impacts associated with degradation of surface or groundwater quality could be significant.
Mitigation Measures
Implement Mitigation Measures HYD/mm-1.1 and 1.2.
Impacts Following Mitigation
With implementation of Mitigation Measures HYD/mm-1.1 and 1.2, project's contribution to cumulative impacts related to the degradation of surface or groundwater quality would be less than significant.

5.10 LAND USE AND PLANNING

This section provides the existing land use and planning context for the project site and provides an analysis of the potential environmental impacts related to land use and planning that may result from implementation of the project. This section also includes a project consistency analysis with applicable land use policies and analysis of potential impacts that may result from conflicts with applicable land use policies.

While the project site is located within the boundaries of the city of Los Angeles, it is owned by the County of Los Angeles and is proposed for uses that benefit the public. Accordingly, the project is subject to the regulatory controls of the County of Los Angeles and not the City of Los Angeles. Nonetheless, this section includes consideration of related environmental policies within the County of Los Angeles (County) General Plan (2015), as well as the City of Los Angeles (City) General Plan (2001a), the Wilshire Community Plan (2001b), and the Southern California Association of Government's (SCAG's) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (2020).

5.10.1 Existing Conditions

5.10.1.1 Regional Setting

The project site is located at 5801 West Wilshire Boulevard within the jurisdictional boundaries of the City of Los Angeles, in Los Angeles County. Los Angeles County is one of the largest counties in the country, encompassing approximately 4,083 square miles, consisting of 88 incorporated cities, including the City of Los Angeles, with approximately 2,650 square miles of unincorporated areas (SCAG 2019). The unincorporated areas of Los Angeles County include large amounts of sparsely populated land, with more than half of the unincorporated area designated for natural resources. Land uses in the incorporated areas of Los Angeles County represent diverse urban, suburban, and rural land use patterns. Los Angeles is the second largest city in the nation and the largest city in California, encompassing approximately 470 square miles. Downtown Los Angeles, where the project site is located, is the largest urbanized center within Southern California (SCAG 2020).

The County of Los Angeles is one of six counties included in the Southern California Association of Governments. SCAG is the federally designated Metropolitan Planning Organization for six Southern California counties: Los Angeles, Riverside, San Bernardino, Orange, Imperial, and Ventura. SCAG is mandated to create regional plans that address transportation, growth management, hazardous waste management, and air quality.

5.10.1.2 Project Site Setting

The project site is located within the Mid-Wilshire corridor in the city of Los Angeles, approximately 5.5 miles west of downtown Los Angeles and approximately 8.6 miles east of the Pacific Ocean. The project site includes 13 acres of Hancock Park and is bounded by West 6th Street to the north, South Curson Avenue to the east, Wilshire Boulevard to the south, and the Los Angeles County Museum of Art (LACMA) to the west. The area is known as the Miracle Mile neighborhood.

While the project site is owned by the County, it is not located within an unincorporated area of the County. Therefore, the County does not establish land use and zoning designations for the project site. Instead, the project site is located within the incorporated boundaries of the City of Los Angeles, and is identified in the City General Plan and the Wilshire Community Plan (City of Los Angeles 2001a, 2001b) with a land use designation of Public Facilities (PF) and an associated zoning designation of Public Facilities, Height District 1, Development Limitation (PF-1D) (Figures 5.10-1 and 5.10-2).

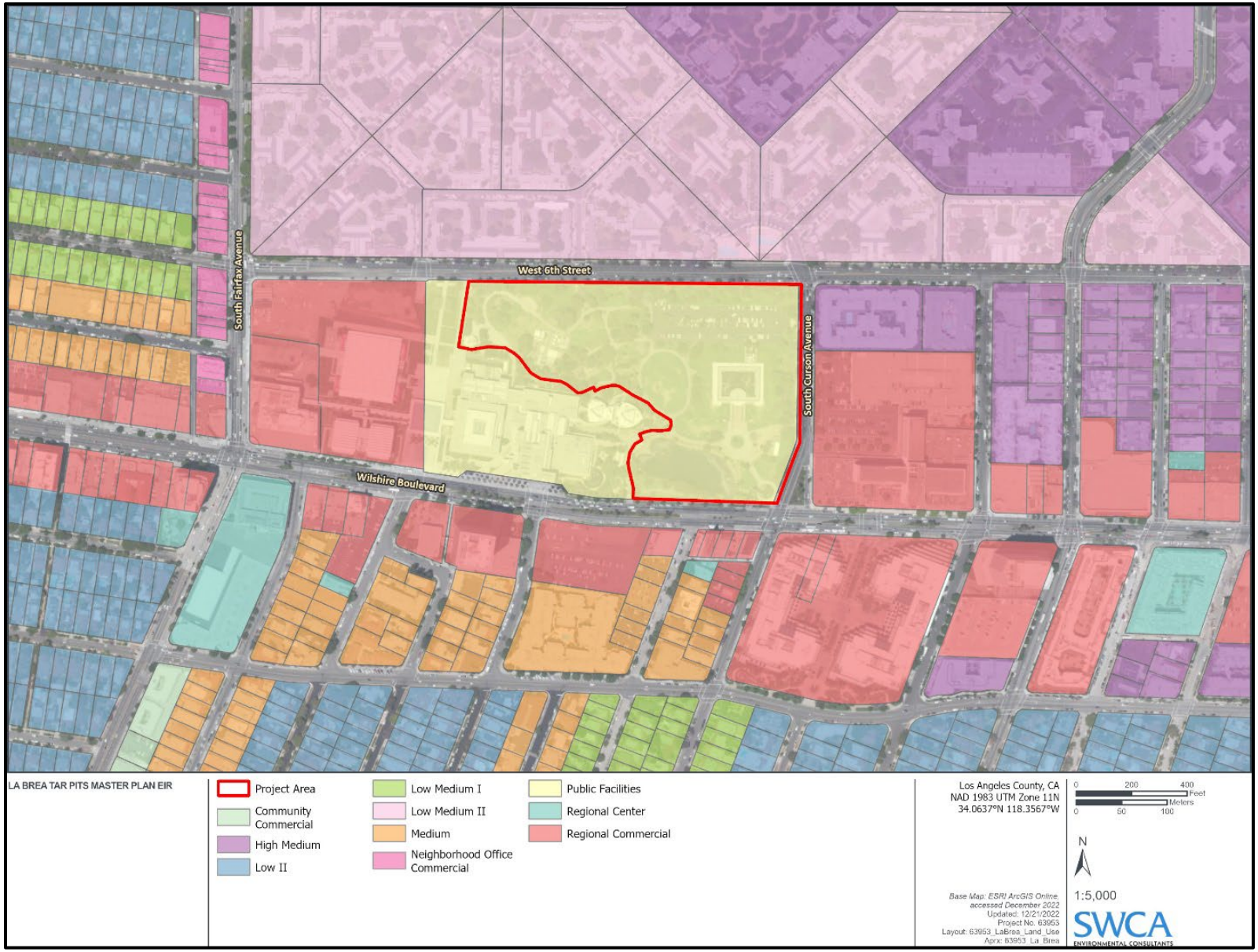


Figure 5.10-1. Existing City land use designations within the project vicinity.

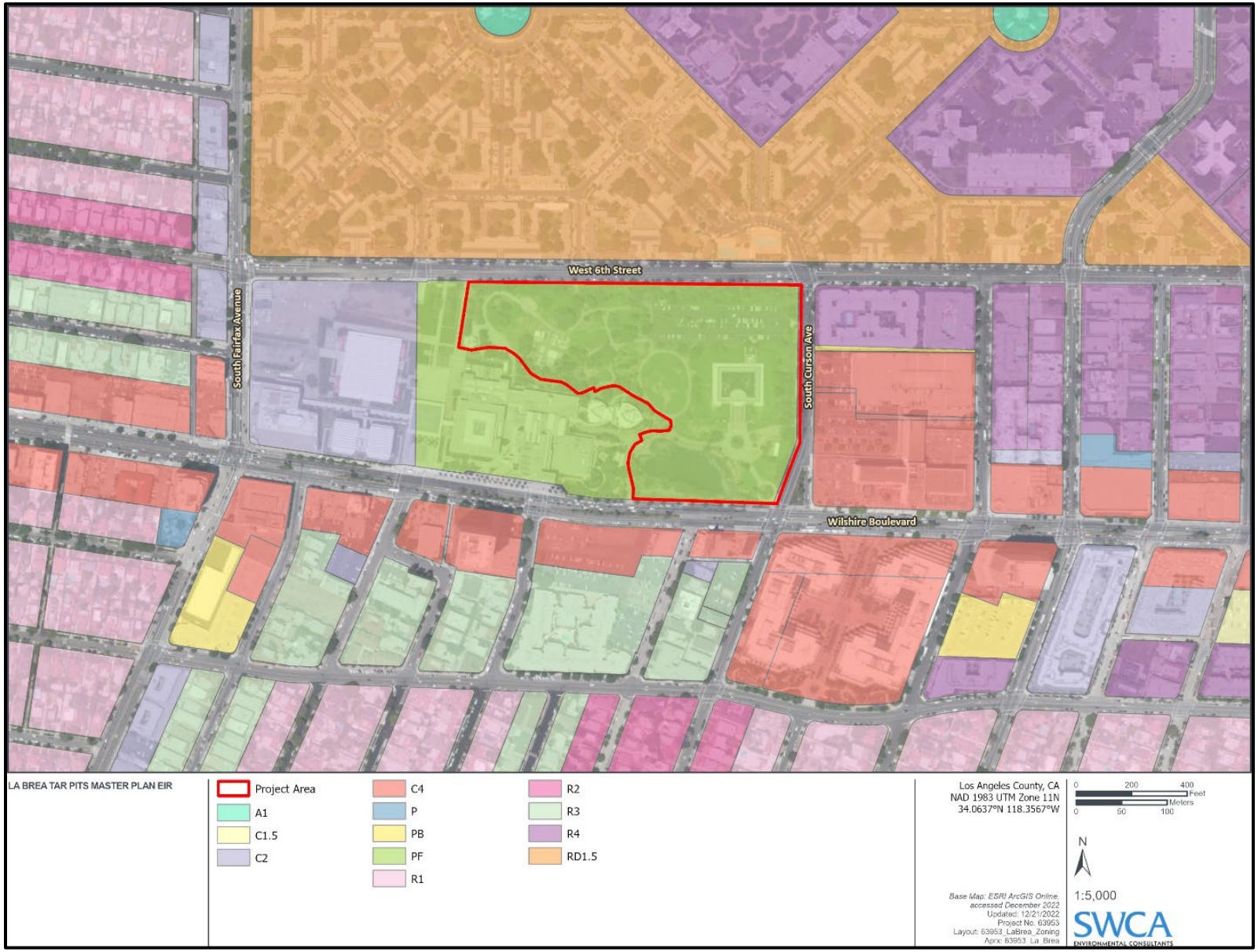


Figure 5.10-2. Existing City zoning designations within the project vicinity.

However, the regulations and guidelines set forth in the City's Zoning Ordinance do not apply to the project site, because it is owned and operated by the County. The guidelines of the City's PF zone are included here for informational purposes only. The PF zone permits a wide array of land uses, including farms and nurseries, public parking facilities, fire and police stations, government buildings, structures, offices and service facilities inducing maintenance yards, public libraries, post offices and facilities, public health facilities, public elementary and secondary schools, and any joint public and private development uses (City of Los Angeles 2022). The Height District 1 designation within the PF zone establishes no height limit and a maximum floor area ratio (FAR) of 3:1 (City of Los Angeles 2020).

5.10.1.3 Surrounding Land Uses

The project site is in a highly developed urban area characterized by a mix of commercial, office, and residential uses as well as neighboring museum-related uses and the open space provided within Hancock Park. The land uses surrounding the project site are designated and zoned by the City. Table 5.10-1 provides a summary of existing surrounding land uses in vicinity of the project site.

Table 5.10-1. Existing Surrounding Land Uses in the Project Vicinity

Location	Jurisdiction	Description of Existing Uses	Land Use Designation(s)*	Zoning Designation(s)†
North of the project site	City of Los Angeles; Wilshire Community Plan	Park La Brea; two-story garden apartments and pool	Low Medium II Residential	RD1.5-1-O
East of the project site	City of Los Angeles; Wilshire Community Plan	Commercial and residential uses	Regional Center Commercial; High Medium Residential	C4-2-CDO-SN PB-2 R4-2
South of the project site	City of Los Angeles; Wilshire Community Plan	LACMA facilities; Peterson Automotive facilities; commercial lot under construction by Los Angeles County Metropolitan Transportation Authority for Wilshire/Fairfax Station; office uses ranging from two to 31 stories.	Regional Center Commercial; Medium Residential	C4-2-CDO-SN R3-1
West of the project site	City of Los Angeles; Wilshire Community Plan	LACMA facilities including its Pavilion for Japanese Art and the future David Geffen Galleries; outdoor public art installation; and the Academy Museum of Motion Pictures	Regional Center Commercial	C2-2-CDO-SN

* Land use designations as identified in the City's Wilshire Community Plan (City of Los Angeles 2001b).

† Zoning designation definitions (City of Los Angeles 2020):

RD1.5-1-O: Restricted Density Multiple Dwelling Zone, Heigh District 1, Oil Drilling

C2-2-CDO-SN: Qualified Condition, Commercial, Community Design Overlay, Sign District

R3-1: Multiple Dwelling Zone, Height District 1

R4-2: Multiple Dwelling Zone, Height District 2

PB-2: Parking Building Zone, Height District 2

5.10.2 Regulatory Setting

5.10.2.1 Federal

There are no federal land use regulations applicable to the project.

5.10.2.2 State

CALIFORNIA GOVERNMENT CODE

California Government Code Section 65402(b) requires Counties proposing to construct public buildings or structures on land within the jurisdiction of a City with a general plan to submit the project to the planning agency of that City for a determination of conformity with the general plan. If the City does not provide a conformity determination within 40 days of submittal, the project is deemed to be in conformity with the general plan.

SENATE BILL 375

On September 30, 2008, Senate Bill (SB) 375 was instituted to help achieve Assembly Bill (AB) 32 goals through regulation of cars and light trucks. SB 375 aligns three policy areas of importance to local government: 1) regional long-range transportation plans and investments; 2) regional allocation of the obligation for Cities and Counties to zone for housing; and 3) achievement of greenhouse gas (GHG) emission reduction targets for the transportation sector set forth in AB 32. It establishes a process for the California Air Resource Board (CARB) to develop GHG emission reduction targets for each region (as opposed to individual local governments or households). SB 375 also requires Metropolitan Planning Organizations to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP) that guides growth while taking into account the transportation, housing, environmental, and economic needs of the region.

5.10.2.3 Regional

SOUTHERN CALIFORNIA ASSOCATION OF GOVERNMENTS REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY

On September 3, 2020, the SCAG Regional Council adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS), also known as Connect SoCal. The 2020-2045 RTP/SCS presents a long-term transportation vision through the year 2045 for the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. The 2020-2045 RTP/SCS contains baseline socioeconomic projections that are used as the basis for SCAG's transportation planning, and the provision of services by other regional agencies. SCAG's overarching strategy for achieving its goals is integrating land use and transportation. SCAG policies are directed toward the development of regional land use patterns that contribute to reductions in vehicle miles and improvements to the transportation system. Rooted in past RTP/SCS plans, Connect SoCal's "Core Vision" centers on maintaining and better managing the region's transportation network, expanding mobility choices by co-locating housing, jobs, and transit, and increasing investment in transit and complete streets. The plan's "Key Connections" augment the "Core Vision" to address challenges related to the intensification of core planning strategies and increasingly aggressive GHG reduction goals, and include, but are not limited to, Housing Supportive Infrastructure, Go Zones, and Shared Mobility.

Connect SoCal intends to create benefits for the SCAG region by achieving regional goals for sustainability, transportation equity, improved public health and safety, and enhancement of the region's overall quality of life. These benefits include a 5% reduction in vehicle miles traveled (VMT) per capita and 9% reduction in vehicle hours traveled, a 2% increase in work-related transit trips, creation of more than 264,500 new jobs, a 29% reduction in greenfield development, and (building off of the 2016-2040 RTP/SCS) a 6% increase in the share of new regional household growth occurring in high-quality transit

areas (HQTAs)[1] and a 15% increase in the share of new job growth in HQTAs. The project site is located in an HQTA as designated by the 2020-2045 RTP/SCS (SCAG 2020).

5.10.2.4 County of Los Angeles

COUNTY OF LOS ANGELES 2035 GENERAL PLAN

The County of Los Angeles 2035 General Plan (2035 General Plan) was adopted on October 6, 2015, and provides the policy framework and establishes the long-range vision for how and where the unincorporated areas will grow, and establishes goals, policies, and programs to foster healthy, livable, and sustainable communities. The General Plan contains the following 10 elements, each described below: land use, mobility, air quality, conservation and natural resources, parks and recreation, noise, safety, public services and facilities, economic development, and housing. Since the project would not involve removal of existing housing, construction of new housing, or zoning changes to or form residential zoning, no policies in the housing element would be applicable to the project. Table 5.10-2 provides a summary of the 2035 General Plan Elements.

Table 5.10-2. County of Los Angeles 2035 General Plan Element Summary

General Plan Element	Summary
Land Use Element	The Land Use Element provides strategies and planning tools to facilitate and guide future development and revitalization efforts. In accordance with the California Government Code, the Land Use Element designates the proposed general distribution and general location and extent of uses. The General Plan Land Use Policy Map and Land Use Legend serve as the "blueprint" for how land will be used to accommodate growth and change in the unincorporated areas.
Mobility Element	The Mobility Element provides an overview of the transportation infrastructure and strategies for developing an efficient and multimodal transportation network. It assesses the challenges and constraints of the Los Angeles County transportation system and offers policy guidance to reach the County's long-term mobility goals. Two sub-elements—the Highway Plan and Bicycle Master Plan—supplement the Mobility Element. These plans establish policies for the roadway and bikeway systems in the unincorporated areas, which are coordinated with the networks in the 88 cities in Los Angeles County. The Mobility Element also establishes a program to prepare community pedestrian plans, with guidelines and standards to promote walkability and connectivity throughout the unincorporated areas.
Air Quality Element	The Air Quality Element summarizes countywide and regional air quality issues and outlines the goals and policies that will improve air quality and reduce greenhouse gas emissions. One sub-element—the Community Climate Action Plan—supplements the Air Quality Element. This plan establishes actions for reaching the County's goals to reduce greenhouse gas emissions in the unincorporated areas.
Conservation and Natural Resources Element	The Conservation and Natural Resources Element guides the long-term conservation of natural resources and preservation of available open space areas in the county. It addresses the following conservation areas: Open Space Resources; Biological Resources; Local Water Resources; Agricultural Resources; Mineral and Energy Resources; Scenic Resources; and Historic, Cultural, and Paleontological Resources.
Parks and Recreation Element	The Parks and Recreation Element provides policy direction for the maintenance and expansion of the County's parks and recreation system. It aims to provide an integrated parks and recreation system that meets the needs of residents. The goals and policies set forth in the Parks and Recreation Element address the growing and diverse recreation needs of the communities served by the County. It is important to note that while the project site provides existing uses that benefit the public and passive recreational opportunities including open space, it is not designated as parkland and is not managed by the County Department of Parks and Recreation.
Noise Element	The purpose of the Noise Element is to reduce and limit the public's exposure to excessive noise levels. It sets the goals and policy direction for the management of noise in the unincorporated areas of the county.

[1] HQTAs are corridor-focused areas within 0.5 mile of an existing or planned transit stop or a bus transit corridor with a 15-minute or less service frequency during peak commuting hours.

General Plan Element	Summary
Safety Element	The purpose of the Safety Element is to reduce the potential risk of death, injuries, and economic damage resulting from natural and human-made hazards. The California Government Code requires the County General Plan to address "the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction, and other seismic hazards...; flooding; and wildland and urban fires." The Safety Element addresses only limited aspects of human-made disasters, such as hazardous waste and materials management.
Public Services and Facilities Element	The Public Services and Facilities Element promotes the orderly and efficient planning of public facilities and infrastructure in conjunction with land use development and growth. It focuses on services and facilities that are affected the most by growth and development: drinking water; sanitary sewers; solid waste; utilities; early care and education; and libraries. It also discusses the key role of collaboration among County agencies in efficient and effective service provision and facilities planning.
Economic Development Element	The Economic Development Element outlines the County's economic development goals and provides strategies that contribute to the economic well-being of Los Angeles County. The overall performance of the economy and economic development efforts strongly impacts land use and development patterns. Through the implementation of this element, the County is planning for the economic health and prosperity of its physical and social environments and planning strategically for the future economy.
Housing Element	The Housing Element determines the existing and projected housing needs within the unincorporated areas of the county and establishes goals, policies, and implementation programs that guide decision-making on housing needs.

Source: County of Los Angeles (2015)

LOS ANGELES COUNTY CODE

Title 22, Planning and Zoning, of the County of Los Angeles County Code regulates development of unincorporated areas of the County through land use designations and development standards regarding allowable uses, density, height, and design. The project site is not located within an unincorporated area of the county; therefore, the County does not establish the land use and zoning designations for the project site. However, since the project site is owned by the County, any structures constructed as part of the project would be built in accordance with the 2020 County of Los Angeles Building Code and other applicable Los Angeles County Code requirements for development.

5.10.2.5 City of Los Angeles

Although the project site is located within the city of Los Angeles, it is owned by the County of Los Angeles. Accordingly, the project is subject to the regulatory controls of the County of Los Angeles and not the City of Los Angeles. Nonetheless, consideration of the city-level regulatory framework fulfills the intended purpose of CEQA as disclosing all relevant information associated with the project. The City's land use policy standards are implemented at the community level via community plans. The project site is located within the City's Wilshire Community Plan area. As such, the Wilshire Community Plan constitutes the local land use policy standards under the City General Plan. As identified in the Wilshire Community Plan and City's General Plan (City of Los Angeles 2001a, 2001b), the project site has a land use designation of Public Facilities (PF) and a zoning designation of Public Facilities, Height District 1 (PF-1D). However, the regulations and guidelines set forth in the City of Los Angeles General Plan and the Wilshire Community Plan do not apply to the project site, because it is owned and operated by the County. The City of Los Angeles General Plan and the Wilshire Community Plan are discussed below for informational purposes only.

CITY OF LOS ANGELES GENERAL PLAN

The City of Los Angeles General Plan (City General Plan), originally adopted in 1974, is a comprehensive long-term document that provides principles, policies, and objectives to guide future development and to meet the existing and future needs of the City. A number of these principles, policies, and objectives serve to mitigate environmental effects. The City General Plan consists of a series of documents which includes the seven elements mandated by the State of California: Land Use, Circulation (implemented through the 2035 Mobility Plan), Noise, Safety, Housing, Open Space, and Conservation. In addition, the City General Plan includes elements addressing Air Quality, Infrastructure Systems, Public Facilities and Services, Health and Wellness, as well as the Citywide General Plan Framework Element (Framework Element). The Land Use Element for the City General Plan includes 35 local area plans known as Community Plans that guide land use at the local level. As previously noted, the project site is in the Wilshire Community Plan area. For the purposes of this EIR, the elements of the City General Plan that have been considered for the project include the City's Framework Element and the chapters therein, City's Mobility Plan 2035, and City's Conservation Element. Each is described in the sections below.

Framework Element

The Framework Element establishes the conceptual basis for the City General Plan that sets forth a Citywide comprehensive long-range growth strategy and establishes Citywide policies regarding land use, housing, urban form, neighborhood design, open space and conservation, economic development, transportation, infrastructure, and public services. This element provides guidelines for future updates of the City's community plans and does not supersede the more detailed community and specific plans. Table 5.10-3 provides a summary of the Framework Element and the chapters therein.

Table 5.10-3. City of Los Angeles General Plan Framework Element and Chapter Summary

Framework Element Chapter	Summary
Land Use Chapter	The Land Use Chapter designates Districts (i.e., Neighborhood Districts, Community Centers, Regional Centers, Downtown Center, and Mixed-Use Boulevards) that include standards and policies that shape the scale and intensity of proposed uses with the purpose of supporting the vitality of the City's residential neighborhoods and commercial districts. The establishment of the designated arrangement of land uses and development densities addresses an array of environmental issues, including, but not limited to reductions in VMT, reductions in noise impacts, improved efficiency in the use of energy, improved efficiency and thus greater service levels within the infrastructure systems, availability of open space, compatibility of land uses, support for alternative modes of transportation, and provision of an attractive pedestrian environment.
Housing Chapter	The overarching goal of the General Plan Framework Housing Chapter is to define the distribution of housing opportunities by type and cost for all residents of the city. The General Plan Framework Housing Chapter recognizes that the distribution of housing in proximity to transit can reduce vehicle trips and provide residents with the opportunity to walk between their home, job, and/or neighborhood services.
Urban Form and Neighborhood Design Chapter	The Urban Form and Neighborhood Design Chapter establishes the goal of creating a city that is attractive to future investment and a city of interconnected, diverse neighborhoods that builds on the strength of those neighborhoods and functions at both the neighborhood and citywide scales. The purpose of the Urban Form and Neighborhood Design Chapter is two-fold: first, to support the population distribution principles of the Framework Element through proper massing and design of buildings, and second, to enhance the physical character of neighborhoods and communities within the city. The Framework Element does not directly address the design of individual neighborhoods or communities but embodies general neighborhood design and implementation programs that guide local planning efforts and lay a foundation for community plan updates. The Urban Form and Neighborhood Design Chapter encourages growth in areas that have a sufficient base of both commercial and residential development to support transit service.

Framework Element Chapter	Summary
Open Space and Conservation Chapter	The Open Space and Conservation Chapter contains goals, objectives, and policies to guide the provision, management, and conservation of public open space resources; address the outdoor recreational needs of the City's residents; and guide amendments to the City General Plan Open Space Element and Conservation Element. This chapter also includes policies to resolve the City's open space issues. Specifically, this chapter contains open space goals, objectives, and policies regarding resource conservation and management, outdoor recreation, public safety, community stability, and resources development.
Economic Development Chapter	The Economic Development Chapter seeks to identify physical locations necessary to attract continued economic development and investment to targeted districts and centers. Goals, objectives, and policies focus on retaining commercial uses, particularly within walking distance of residential areas, and promoting business opportunities in areas where growth can be accommodated without encroaching on residential neighborhoods.
Transportation Chapter	The goals, objectives, policies, and related implementation programs of the Transportation Chapter are set forth in the Transportation Element of the City General Plan adopted by the City in September 1999. As an update to the prior Transportation Element of the City General Plan, the City Council initially adopted Mobility Plan 2035 (Mobility Plan) in August 2015. The Mobility Plan was readopted in January 2016 and amended in September 2016. Accordingly, the goals of the Transportation Chapter of the Framework Element are now implemented through the Mobility Plan, which is discussed further below.
Infrastructure and Public Services Chapter	The Infrastructure and Public Services Chapter addresses infrastructure and public service systems, including wastewater, stormwater, water supply, solid waste, police, fire, libraries, parks, power, schools, telecommunications, street lighting, and urban forests. For each of the public services and infrastructure systems, basic policies call for monitoring service demands and forecasting the future need for improvements, maintaining an adequate system/service to support the needs of population and employment growth, and implementing techniques that reduce demands on utility infrastructure or services. Generally, these techniques encompass a variety of conservation programs and attention is also placed on the establishment of procedures for the maintenance and/or restoration of service after emergencies, including earthquakes.

Source: City of Los Angeles (2001a)

Mobility Plan 2035

The overarching goal of the Mobility Plan 2035 is to achieve a transportation system that balances the needs of all road users. As an update to the City General Plan Transportation Element, the Mobility Plan incorporates "complete streets" principles. In 2008, the California State Legislature adopted AB 1358, The Complete Streets Act, which requires local jurisdictions to "plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban or urban context." The Mobility Plan includes the following five main goals that define the City's high-level mobility priorities: Safety First; Access for All Angelenos; World Class Infrastructure; Collaboration, Communication, and Informed Choices; and Clean Environments and Healthy Communities. Each of the goals contains objectives and policies to support the achievement of those goals.

Conservation Element

The City General Plan includes a Conservation Element. The Conservation Element incorporates natural open space, agricultural, and other open space features of the State's General Plan requirements and references other city plans that address mandated subjects, including water supply and demand, which is addressed by city water plans and the Infrastructure Systems Element. The Conservation Element also addresses archaeological, paleontological, and mineral resources. The Conservation Element primarily addresses preservation, conservation, protection, and enhancement of the City's natural resources.

Section 3 of the Conservation Element recognizes the City's responsibility for identifying and protecting its archaeological and paleontological resources, and Section 5 recognizes the City's cultural and historical heritage. In these sections, the Conservation Element establishes objectives to protect important archaeological and paleontological resources, as well as its cultural and historical sites and resources for historical, cultural, research, and community educational purposes. It provides corresponding policies to continue to protect these resources potentially affected by proposed land development, demolition, or property modification activities.

WILSHIRE COMMUNITY PLAN

The Wilshire Community Plan was adopted originally adopted on September 19, 2001, and includes approximately 8,954 acres (about 14 square miles), totaling approximately 3% of the total land in the City of Los Angeles. The Wilshire Community Plan area is often spoken of as the Mid-city section of Los Angeles. The eastern edge of the approximately 2.5-mile-wide by 6-mile-long plan area is about 6 miles west of downtown Los Angeles, while the western edge abuts the City of Beverly Hills.

The Wilshire Community Plan establishes specific goals, objectives, policies, and programs to meet the existing and future needs of the Wilshire community. The Wilshire Community Plan aims to enhance the positive characteristics of residential neighborhoods while providing a variety of housing opportunities, improve the function, design, and economic vitality of the commercial areas, preserve and enhance the positive characteristics of existing uses which provide the foundation for community identity, such as scale, height, bulk, setbacks, and appearance, maximize the development opportunities around the existing and future transit systems while minimizing adverse impacts, preserve and strengthen commercial developments to provide a diverse job-producing economic base, and improve the quality of the built environment through design guidelines, streetscape improvements, and other physical improvements which enhance the appearance of the community.

The project site is located within the Wilshire Community Plan area and has a land use designation of Public Facilities (PF) (City of Los Angeles 2001b).

CITY OF LOS ANGELES MUNICIPAL CODE

Chapter I of the City of Los Angeles Municipal Code (LAMC) regulates development through zoning designations and development standards. Although the project site is located within the city of Los Angeles, the project site is owned by the County of Los Angeles; therefore, the project site is not subject to the City's Zoning Code. However, the project's consistency with the LAMC's zoning designations and development standards for the project site is evaluated for informational purposes.

As previously discussed, the project site is zoned Public Facilities, Height District 1 (PF-1D). In accordance with the LAMC, the PF zone permits a wide array of land uses including farms and nurseries; public parking facilities; fire and police stations; government buildings, structures, offices, and service facilities inducing maintenance yards; public libraries; post offices and facilities; public health facilities; public elementary and secondary schools; and any joint public and private development uses. The Height District 1 designation within the PF zone establishes no height limit and a maximum FAR of 3:1.

Implementation of the project would not include changes to the project site that would alter the nature of the current uses on-site or introduce new uses that would alter the intent of the PF zoning designation. In addition, the proposed renovations to the existing George C. Page Museum (Page Museum) and construction of the new museum building would result in maximum building heights of 30 feet.

Consistency with Applicable Plans and Policies

Table 5.10-4 through Table 5.10-7 list applicable plans and policies pertaining specifically to land use and planning that were adopted for the purpose of avoiding or mitigating an environmental effect and a preliminary evaluation of the project's consistency with the guidelines and requirements detailed therein. A conflict between a project and an applicable plan is not necessarily a significant impact under CEQA unless the inconsistency would result in an adverse physical change to the environment that is a "significant environmental effect" as defined by State CEQA Guidelines Section 15382.

A general overview of these policy documents is presented above in Section 5.10.2, Regulatory Setting. Policies with which the project may be inconsistent are discussed further in Section 5.10.5, Environmental Impact Analysis.

Table 5.10-4. Preliminary Project Policy Consistency Evaluation—County of Los Angeles General Plan

Goals, Policies, Plans, Programs, and Standards	Preliminary Consistency Determination
Land Use Element	
Goal LU 5 Vibrant, livable, and healthy communities with a mix of land uses, services and amenities.	**Consistent**. The project would expand and improve existing public-serving uses on the project site. The project includes increased capacity to support research, exhibitions, amenities, programs, and community engagement at the museum. The new pedestrian path would connect the existing structures and would provide improved bicycle and pedestrian access throughout the site. The project also includes additional café and retail opportunities associated with the museum buildings. Improvements to the Central Green would further promote a destination community lawn that continues to encourage community activities and events within Hancock Park. In addition, the proposed infrastructure improvements and drivable path for food trucks would increase event and dining opportunities on-site.
Policy LU 5.2 Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs.	**Consistent.** Buildout of the project would increase the total museum square footage to 104,000 square feet and would include exhibit spaces, two theaters, and research and collections rooms. The existing Page Museum would be renovated to allow for enlarged exhibition space, and other amenities. The renovation would also allow much of the collection space to reorganized and enlarged to provide better display of the collections to the public.
Policy LU 5.3 Support a mix of land uses that promote bicycling and walking and reduce VMT.	**Consistent**. The project would reconfigure the existing pathways on-site into a continuous path, which would enhance walkability and accessibility to all the elements of the park. A walking path would be constructed with interpretive signage, as well as provide areas to sit and enjoy the scenery of Hancock Park. The project would include a new school drop-off area on South Curson Avenue that would lead to the education museum entrance.
Policy LU 6.2 Encourage land uses and developments that are compatible with the natural environment and landscape.	**Consistent.** The project includes the construction of a new museum building and renovations to the existing Page Museum, which would be compatible with existing uses within and surrounding the project site. The project also would enhance the Tar Pits site with new plazas, entrances, landscaping, and pedestrian paths that would be designed to integrate the renovations to the Page Museum, the new museum building, and existing uses within Hancock Park.
Goal LU 7 Compatible land uses that complement neighborhood character and the natural environment.	**Consistent**. The project includes renovation and upgrades throughout the Page Museum and the Tar Pits site to unify all elements of Hancock Park. The proposed pedestrian path connects the existing structures and enhances amenities for community and research. There would be greater visibility from Wilshire Boulevard and the surrounding context, which would further connect La Brea Tar Pits to the greater community of Los Angeles.
Goal LU 10 Well-designed and healthy places that support a diversity of built environments.	**Consistent**. See the consistency analysis for Goal LU 5.

Goals, Policies, Plans, Programs, and Standards	Preliminary Consistency Determination
Policy LU 10.3 Consider the built environment of the surrounding area and location in the design and scale of new or remodeled buildings, architectural styles, and reflect appropriate features such as massing, color, detailing, or ornament.	**Consistent.** As discussed in Chapter 3, Project Description, the renovations to the Page Museum and construction of the new museum building have been designed to be consistent with the scale and diversity of the existing built environment and surrounding areas. Particular attention has been given to integrating the outdoor and indoor elements of La Brea Tar Pits and Hancock Park. Buildings and structures on-site, including the museum buildings and the gateway features at Wilshire and 6th Street, would be constructed at a maximum height of 30 feet when measured from the terrace level, which would be generally consistent with buildings in the area, which range in height from one to 31 stories.
Policy LU 10.4 Promote environmentally sensitive and sustainable design.	**Consistent**. The museum buildings would be designed to meet the County's Green Building Standards Code. A sloped green roof would be installed to the north of the Page Museum and curve to the west. The project would also add extensive sustainability features to the Page Museum, including enhanced daylighting, rainwater collection leading to bioswales, and rooftop solar photovoltaic panels. The numerous existing and future public transit options and pedestrian amenities within the project vicinity also promote sustainability by reducing VMT and air pollution associated with use of passenger vehicles. Furthermore, water conservation measures would include the use of drought-tolerant planting, a new Pleistocene Garden bioswale at the Lake Pit entry, which would support sustainable stormwater management, and a new biofiltration zone at Oil Creek, which would manage stormwater.
Policy LU 10.5 Encourage the use of distinctive landscaping, signage, and other features to define the unique character of districts, neighborhoods or communities, and engender community identity, pride and community interaction.	**Consistent.** The project would include public plazas, a garden, and pedestrian paths that would be designed to integrate the new building and existing uses within Hancock Park and provide for outdoor programming such as outdoor music and educational spaces. New identification signage would be provided as part of the project that would be consistent with the design of existing signage within Hancock Park.
Policy LU 10.6 Encourage pedestrian activity through the following: • Designing the main entrance of buildings to front the street; • Incorporating landscaping features; • Limiting masonry walls and parking lots along commercial corridors and other public spaces; • Incorporating street furniture, signage, and public events and activities; and • Using wayfinding strategies to highlight community points of interest.	**Consistent**. The project would enhance walkability and accessibility throughout La Brea Tar Pits by providing a continuous paved pedestrian path linking all the existing elements of the park. Pedestrian entrances would be provided leading into the central lobby from Central Green and from the parking lot to the new museum building. The proposed landscaping concept for Hancock Park would be divided into three distinct zones encircled by the looping path system. Each loop of the pedestrian path would have its own usage and distinguished theme representing different geologic epochs—Pleistocene in the southeastern loop, Holocene in the northwestern loop, and Anthropocene in the central loop. In addition, the woodland forest zone of the western loop would be extended along the park's peripheral edges to provide shade to the picnic areas and parking lot to the north, and therefore encourage pedestrian activity around Hancock Park.
Policy LU 10.7 Promote public spaces, such as plazas that enhance the pedestrian environment, and, where appropriate, continuity along commercial corridors with active transportation activities.	**Consistent**. The project would reconfigure the existing pedestrian pathways on-site into a continuous paved pedestrian path linking all the existing elements of the project site. A large, shaded canopy would stretch down Wilshire Boulevard and curve around to South Curson Avenue to create a new welcome pavilion and shaded entry plaza; this would provide orientation, spaces for gathering and queuing, and restrooms. A picnic area would also be located under the shaded canopy. Like the Wilshire Gateway, a canopy of shade trees would be installed at the 6th Street Gateway, which would allow for play areas, picnic areas, seating and interpretation zones at the protected tar seeps, the Dorothy Brown Amphitheater, Observation Pit, and Pit 91.
Goal LU 11 Development that utilizes sustainable design techniques.	**Consistent**. See the consistency analysis for Policy LU 10.4.
Policy LU 11.1 Encourage new development to employ sustainable energy practices, such as utilizing passive solar techniques and/or active solar technologies.	**Consistent.** See the consistency analysis for Policy LU 10.4.

Goals, Policies, Plans, Programs, and Standards	Preliminary Consistency Determination
Policy LU 11.2 Support the design of developments that provide substantial tree canopy cover and utilize light-colored paving materials and energy-efficient roofing materials to reduce the urban heat island effect.	**Consistent**. The Master Plan's proposed planting strategy includes the introduction or relocation of at least 150 to 200 trees on-site.[2] Tree species selected for planting would be drought-tolerant and/or of a native tree species and would primarily require moist to dry soil conditions. The project's contribution to the urban heat island effect would be minimal due to the surrounding existing park and recreational areas, including Central Green, and the proposed site design and landscaping plan, which includes a canopy of shade trees for the entry plaza at Wilshire Gateway and 6th Street Gateway. Additionally, photovoltaic solar panels would be installed on the roof of the Page Museum along with sloped green roofs to reduce building heating during the day. In addition, refer to the consistency analysis for Policy LU 10.4.
Policy LU 11.3 Encourage development to optimize the solar orientation of buildings to maximize passive and active solar design techniques.	**Consistent**. The project would maximize solar design techniques by adding extensive sustainability features to the Page Museum, including a sloped green roof and rooftop solar photovoltaic panels.
Policy LU 11.7 Encourage the use of design techniques to conserve natural resource areas.	**Consistent.** See the consistency analysis for LU 11.2.
Mobility Element	
Goal M 2 Interconnected and safe bicycle- and pedestrian-friendly streets, sidewalks, paths and trails that promote active transportation and transit use.	**Consistent with Mitigation**. The project would include the implementation of a paved pedestrian path within the project site that would be accessible to members of the public during park operating hours. The project site is currently served by a complete network of sidewalks around the project site block and adjacent street network, with signalized intersections and crosswalks. The project would not involve changes to the existing bikeways or introduce features that would remove pedestrian facilities or increase pedestrian crossing distances. In addition, the project would implement Mitigation Measure TRA/mm-1.1, requiring development of a Transportation Demand Management (TDM) program to coordinate on multimodal improvements in the study area and to reduce employee and visitor vehicle trips and related effects on project access safety and circulation.
Policy M 2.6 Encourage the implementation of future designs concepts that promote active transportation, whenever available and feasible.	**Consistent**. See the consistency analysis for Goal M 2.
Air Quality Element	
Goal AQ 1 Protection from exposure to harmful air pollutants.	**Consistent with Mitigation**. Mitigation Measure AQ/mm-3.1 would ensure that the project would not result in harmful air pollutants that would exceed the localized South Coast Air Quality Management District (SCAQMD)-recommended localized significance thresholds during construction or operation. In addition, the project would also implement Mitigation Measure HAZ/mm-2.1 requiring additional controls to address the effects of subsurface hazardous materials that may be present, including methane.
Policy AQ 1.1 Minimize health risks to people from industrial toxic or hazardous air pollutant emissions, with an emphasis on local hot spots, such as existing point sources affecting immediate sensitive receptors.	**Consistent**. The project's construction activities would not expose sensitive receptors to localized emissions concentrations in excess of SCAQMD standards. In addition, the project would not result in operational impacts that would expose sensitive receptors to localized emissions concentrations in excess of SCAQMD standards, increase the cancer risk, increase the cancer burden, or create any carbon dioxide hot spots.
Policy AQ 1.2 Encourage the use of low or no volatile organic compound (VOC) emitting materials.	**Consistent with Mitigation**. Mitigation Measure AQ/mm-3.1 would require adherence to SCAQMD Rule 1113, which limits the VOC content of architectural coating and other emitting materials.

[2] The La Brea Tar Pits Master Plan does not provide an exact number of trees to be relocated versus new trees introduced to the site. The Los Angeles County Museum of Natural History Foundation will develop additional detail when the construction plans are more fully developed, likely after the CEQA process is complete.

Goals, Policies, Plans, Programs, and Standards	Preliminary Consistency Determination
Policy AQ 1.3 Reduce particulate inorganic and biological emissions from construction, grading, excavation, and demolition to the maximum extent feasible.	**Consistent with Mitigation**. The project would implement Mitigation Measure AQ/mm-3.1 requiring all SCAQMD rules and regulations to serve as mitigation measures for the project during construction.
Goal AQ 3 Implementation of plans and programs to address the impacts of climate change.	**Consistent with Mitigation**. The project would not conflict with the GHG reduction policies, strategies, and regulations outlined in the following plans and programs addressing climate change: CARB's 2022 Climate Change Scoping Plan; SCAG's 2020-2045 RTP/SCS; the County of Los Angeles General Plan; Senate Bill 32 2030 GHG reduction target; and the Executive Order S-3-05 2050 GHG reduction goal. In addition, the project would implement Mitigation Measure GHG/mm-1.1 to ensure the project would not include the installation of natural gas infrastructure. In addition, implementation of Mitigation Measure GHG/mm-1.1 would ensure the project provides more electric vehicle charging stations than the mandatory requirements set forth in the Los Angeles County Code, Title 31, Green Building Standards (Code Section 5.106.5.3.3).
Policy AQ 3.5 Encourage energy conservation in new development and municipal operations.	**Consistent**. See the consistency analysis for Policy LU 10.4.
Policy AQ 3.6 Support rooftop solar facilities on new and existing buildings.	**Consistent**. See the consistency analysis for LU 11.3.
Conservation and Natural Resources Element	
Goal C/NR 3 Permanent, sustainable preservation of genetically and physically diverse biological resources and ecological systems including: habitat linkages, forests, coastal zone, riparian habitats, streambeds, wetlands, woodlands, alpine habitat, chaparral, shrublands, and Significant Ecological Areas (SEAs).	**Consistent with Mitigation**. The project site is not located in an SEA. The project site is dominated by a large lawn surrounding the museum consisting of primarily non-native planted trees and shrubs. It provides limited wildlife habitat due to the combination of high levels of human activity, the lack of surface water, and the low quantity of native plants. However, there are currently over 300 trees on-site, both non-native and native species, including the Coast live oak which is a species protected under the Los Angeles Oak Tree Ordinance. The Master Plan's proposed planting strategy includes the introduction or relocation of 150 to 200 trees on-site. Tree species selected for planting would be drought-tolerant and/or of a native tree species and would primarily require moist to dry soil conditions. The trees provide potential nesting habitat for birds as well as in the native plant area of Oil Creek. Oil Creek supports a community of hydrophytic and riparian vegetation. It is dominated by mowed grasses and non-native plants, with scattered native species. The project would implement the following mitigation measures to protect and preserve the biological resources on-site: BIO/mm-2.1 to protect sensitive and regulated resources at and along Oil Creek; BIO/mm-3.1 to protect sensitive and regulated resources at and around the Lake Pit; BIO/mm-4.1 and BIO/mm-4.2 to avoid impacts to nesting birds; BIO/mm-5.1 and BIO/mm-5.2 to avoid conflicts with the County of Los Angeles Oak Tree Ordinance.
Policy C/NR 3.1 Conserve and enhance the ecological function of diverse natural habitats and biological resources.	**Consistent with Mitigation**. See the consistency analysis for Goal C/NR 3.
Goal C/NR 5 Protected and useable local surface water resources.	**Consistent**. Surface water at the project site includes that from Oil Creek. The project would be required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. In accordance with the requirements of the NPDES Construction General Permit, the project would prepare and implement a site-specific Stormwater Pollution Prevention Plan (SWPPP) that specifies best management practices (BMPs) to be used during construction to manage stormwater and non-stormwater discharges. BMPs would include, but would not be limited to, erosion control, sediment control, non-stormwater management, and materials management BMPs.

Goals, Policies, Plans, Programs, and Standards	Preliminary Consistency Determination
Policy C/NR 5.1 Support the LID philosophy, which seeks to plan and design public and private development with hydrologic sensitivity, including limits to straightening and channelizing natural flow paths, removal of vegetative cover, compaction of soils, and distribution of naturalistic BMPs at regional, neighborhood, and parcel-level scales.	**Consistent**. The project would be subject to compliance with the Los Angeles County Department of Public Works' Low Impact Development (LID) design guidelines, which promote the use of natural infiltration systems, evapotranspiration, and the reuse of stormwater. Specifically, the project would be required to implement BMPs for managing stormwater runoff in accordance with the current Los Angeles County LID Standards Manual.
Policy C/NR 5.2 Require compliance by all County departments with adopted Municipal Separate Storm Sewer System (MS4), General Construction, and point source NPDES permits.	**Consistent**. See the consistency analysis for Goal C/NR 5**.**
Goal C/NR 6 Protected and usable local groundwater resources.	**Consistent**. The project includes design features that would maximize the percolation of rainfall into the groundwater basin, such as the three biofiltration systems and proposed permeable landscape areas**.** Dewatering operations are expected during construction only and appropriate compliance and contaminant measures would be implemented to avoid impacts associated with potential groundwater discharges. Due to the operation of temporary dewatering systems, local groundwater hydrology in the immediate vicinity of the project site would be minimally affected. As the groundwater pumping is localized and limited in duration during construction, regional impacts to groundwater flow and level are not considered to be significant.
Policy C/NR 6.1 Support the LID philosophy, which incorporates distributed, post-construction parcel-level stormwater infiltration as part of new development.	**Consistent**. The project would introduce three biofiltration areas within the project site in compliance with LID Design Guidelines to support sustainable stormwater management on-site.
Goal C/NR 7 Protected and healthy watersheds.	**Consistent**. See the consistency analysis for Goal C/NR 5.
Policy C/NR 7.1 Support the LID philosophy, which mimics the natural hydrologic cycle using undeveloped conditions as a base, in public and private land use planning and development design.	**Consistent**. See the consistency analysis for Policy C/NR 6.1.
Goal C/NR 14 Protected historic, cultural, and paleontological resources.	**Potentially Inconsistent**. The project's conceptual plan includes components to enhance the preservation of, and access to, existing cultural and paleontological resources on-site. This would include improvements to existing tar pit sites involving the construction of clearly defined viewing areas around each of the tar pits, with improved pit protection zones and fencing, seating, and interpretive signage. However, project implementation would result in significant physical changes, partial demolition, and new construction affecting the two designated historical resources within the project site: the La Brea Tar Pits Historic District and the Page Museum. While implementation of project Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5 would reduce impacts, the project would alter these resources in such a way that they would no longer convey the reasons for their significance within the parameters of the design and key features envisioned in the Master Plan. There are no mitigation measures that would reduce these impacts to less than significant while keeping the primary elements of the Master Plan; therefore, residual impacts of the project would remain significant and unavoidable and would be potentially inconsistent with this goal.
Policy C/NR 14.1 Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.	**Potentially Inconsistent**. See the consistency analysis for Goal C/NR 14.

Goals, Policies, Plans, Programs, and Standards	Preliminary Consistency Determination
Policy C/NR 14.2: Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.	**Potentially Inconsistent**. See the consistency analysis for Goal C/NR 14.
Policy C/NR 14.3 Support the preservation and rehabilitation of historic buildings.	**Potentially Inconsistent**. See the consistency analysis for Goal C/NR 14.
Policy C/NR 14.5 Promote public awareness of historic, cultural, and paleontological resources.	**Consistent**. The project's conceptual plan includes components to enhance the preservation of, and access to, existing cultural and paleontological resources on-site. This would include improvements to existing tar pit sites involving the construction of clearly defined viewing areas around each of the tar pits, with improved pit protection zones and fencing, seating, and interpretive signage. In addition, the project's proposed landscape concept would divide the project site into three distinct zones encircled by the looping path system. Each loop of the pedestrian path would have its own usage and distinguished theme representing different geologic epochs.
Policy C/NR 14.6 Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.	**Consistent with Mitigation**. The project would implement Mitigation Measures CR-ARCH/mm-1.1 through CR-ARCH/mm-1.4 to address the archaeological sensitivity of the site and the potential to discover additional resources. In addition, the project has high paleontological sensitivity. The project would implement Mitigation Measures GEO/mm-6.1 through GEO/mm-6.5 which would ensure retention of a qualified project paleontologist, preparation of a paleontological resources management plan, paleontological resources sensitivity training, paleontological resources monitoring, and treatment and curation of discoveries, if encountered.
Parks and Recreation Element	
Goal P/R 1 Enhanced active and passive park and recreation opportunities for all users.	**Consistent**. The project would reconfigure the existing pedestrian pathways on-site into a continuous paved pedestrian path linking the existing elements of the site: Lake Pit and Wilshire Gateway to the southeast, Central Green, museum, tar seeps, and 6th Street Gateway in the northwest. Each loop of the pathway would contain distinct themes and programming. The project would also provide enhanced dining opportunities on-site by improving the infrastructure to allow for a drivable path for food trucks to access Central Green. The proposed canopy and shade trees at Wilshire Gateway would create a new welcome pavilion for orientation, spaces for gathering and queuing, and restrooms. A picnic area would also be located under the shaded canopy. Another new canopy would be installed at 6th Street Gateway to welcome visitors in a shaded park space where community park and recreational needs are balanced with the research activities of La Brea Tar Pits. Vegetated berms around these recreation areas would create seating areas and elevated vantage points for visitors.
Policy P/R 1.2 Provide additional active and passive recreation opportunities based on a community's setting, and recreational needs and preferences.	**Consistent**. See the consistency analysis for Goal P/R 1.
Policy P/R 1.8 Enhance existing parks to offer balanced passive and active recreation opportunities through more efficient use of space and the addition of new amenities.	**Consistent**. See the consistency analysis for Goal P/R 1.
Policy P/R 1.11 Provide access to parks by creating pedestrian and bicycle-friendly paths and signage regarding park locations and distances.	**Consistent**. See the consistency analysis for Goal M 2.
Noise Element	
Goal N 1 The reduction of excessive noise impacts.	**Consistent with Mitigation.** The project would implement Mitigation Measure NOI/mm-1.1 to reduce construction-related noise impacts. Upon project completion, operation of the project would not generate operational noise above applicable thresholds.

Goals, Policies, Plans, Programs, and Standards	Preliminary Consistency Determination
Policy N 1.3 Minimize impacts to noise-sensitive land uses by ensuring adequate site design, acoustical construction, and use of barriers, berms, or additional engineering controls through Best Available Technologies (BAT).	**Consistent.** See the consistency analysis for Goal N 1.
Policy N 1.6 Ensure cumulative impacts related to noise do not exceed health-based safety margins.	**Consistent.** Cumulative noise impacts would be avoided through compliance with identified project-specific mitigation, and no additional mitigation is needed to avoid or minimize potential cumulative impacts. Related projects in the vicinity would be required to adhere to all noise-related ordinances and regulations of the LAMC.
Public Services and Facilities Element	
Policy PS/F 1.2 Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.	**Consistent.** The project would comply with applicable County Fire Code and Building Code requirements during construction and operation of the project. The project also would comply with recommendations from the County Fire Department and Los Angeles Fire Department, which would ensure adequate fire prevention features would be provided that would reduce any potential increased demand for fire protection and emergency medical services. Regarding police services, the project would implement comprehensive safety and security features to enhance public safety and reduce the demand for police services. In addition, because the project does not include any residential uses, the project would not directly affect the existing officer-to-resident ratio or the crimes-per-resident ratio. Regarding emergency access and response times during construction and operation, the project would maintain the existing circulation adjacent to the project site and would not include the permanent closure of any adjacent roads or install barriers along adjacent roads which could impede emergency access. The project does not involve the development of residential uses; therefore, the project would not result in a substantial increase in demand for schools, libraries, parks, and/or recreational facilities. Rather, the project would open new public outdoor space at Hancock Park, including Central Green, plazas/welcome pavilions, and a new shaded outdoor classroom.
Goal PS/F 4: Reliable sewer and urban runoff conveyance treatment systems.	**Consistent with Mitigation.** As detailed in Section 5.15 Utilities and Service Systems, Mitigation Measure UTL/mm-1.1 would require additional engineering analysis at the final project design phase to determine if additional sewer lines are necessary to covey project flows to a point in the sewer system with sufficient capacity. Ultimately, this sewage flow from the project would be conveyed to the Hyperion Water Reclamation Plant, which has sufficient capacity for the project. In addition, the project would be required to obtain coverage under the NPDES Construction General Permit. In accordance with the requirements of the NPDES Construction General Permit, the project would prepare and implement a site-specific SWPPP that specifies BMPs to be used during construction to manage stormwater and non-stormwater discharges. BMPs would include, but would not be limited to, erosion control, sediment control, non-stormwater management, and materials management BMPs.
Policy PS/F 5.5 Reduce the County's waste stream by minimizing waste generation and enhancing diversion.	**Consistent.** Construction of the project would make use of local, recycled, and renewable materials where possible and reuse construction materials such as grading debris within the project site. In addition, in accordance with the County's Green Building Standards Code, which sets forth recycling requirements for construction and demolition projects, the project would recycle a minimum of 65% of debris generated by weight. The project would also include clearly marked, source-sorted receptacles to facilitate recycling with a focus on items such as paper, cardboard, glass, aluminum, plastic, and cooking oils. The project would also provide for source-sorted receptacles for the recycling of organic waste and adequate areas for the collection, loading, and removal of recycled materials, including organic waste.
Policy PS/F 5.7 Encourage the recycling of construction and demolition debris generated by public and private projects.	**Consistent**. See the consistency analysis for Policy PD/F 5.5.

Table 5.10-5. Preliminary Project Policy Consistency Evaluation—City of Los Angeles General Plan (Framework Element Chapters, Conservation Element, and the Mobility Plan 2035)

Objective/Policy	Analysis of Project Consistency
Land Use Chapter	
Objective 3.1 Accommodate a diversity of uses that support the needs of the City's existing and future residents, businesses, and visitors.	**Consistent**. The project would result in increased capacity of the existing public museum facilities to support research, state-of-the-art exhibitions, amenities, programs, and community engagement at the museum to enrich the visitor experience and to support active educational programming. The project would include the redesign and renovation of the Hancock Park community park green space to increase the sustainable landscape and site design, support recreational uses, and enhance the paleontologically important resources on-site.
Policy 3.1.1 Identify area on the Long-Range Land Use Diagram and in the community plans sufficient for the development of a diversity of uses that serve the needs of existing and future residents (housing, employment, retail, entertainment, cultural/institutional, educational, health, services, recreation, and similar uses), provide job opportunities, and support visitors and tourism.	**Consistent**. The project site is identified in the City's General Plan and the Wilshire Community Plan as having a land use and zoning designation of Public Facilities. The project would support the intent of this designation as it would not modify the overall purpose and use of the site as one that provides uses that benefit the public. The project site would continue to support museum-related uses, including recreational uses, an educational center including two theaters, restaurant and retail uses, and other public programming that will continue to serve the needs of residents, provide employment opportunities, and support visitors and tourism.
Policy 3.1.3 Identify area for the establishment of new open space opportunities to serve the needs of existing and future residents. These opportunities may include a citywide linear network of parklands and trails, neighborhood parks, and urban open spaces.	**Consistent**. The project would open new public outdoor space at Hancock Park, including Central Green, a 28,000-square- foot destination community lawn, and plazas/welcome pavilions. The project would also create a continuous paved pedestrian path linking all the existing elements of the park to create an active site of visible research and play for existing and future residents.
Policy 3.1.4 Accommodate new development in accordance with land use and density provisions of the General Plan Framework Long-Ranged Land Use Diagram and Table 3-1.	**Consistent**. See the consistency analysis for Objective 3.1 and Policy 3.1.1. The new museum building would have a maximum height of 30 feet. Therefore, the project would result in new development in accordance with land use and density provisions of the Framework Element Long-Range Land Use Diagram and Table 3-1 (Land Use Standards and Typical Development Characteristics).
Objective 3.2 Provide for the spatial distribution of development that promotes an improved quality of life by facilitating a reduction of vehicular trips, vehicle miles traveled, and air pollution.	**Consistent with Mitigation**. The project would be in an area well-served by public transit provided by the Los Angeles County Metropolitan Transportation Authority (Metro), as well as several bus lines. In addition to the numerous existing and future public transit options, pedestrian amenities provided throughout the project site would also promote an improved quality of life by facilitating a reduction of vehicle trips, VMT, and air pollution. In addition, Mitigation Measure TRA/mm-1.1 would require the preparation and implementation of a Transportation Demand Management (TDM) program to reduce museum employee and visitor vehicle trips and increase alternative modes such as walking, bicycling, public transit, and rideshare.
Policy 3.2.1 Provide a pattern of development consisting of distinct districts, centers, boulevards, and neighborhoods that are differentiated by their functional role, scale, and character. This shall be accomplished by considering factors such as the existing concentrations of use, community-oriented activity centers that currently or potentially service adjacent neighborhoods, and existing or potential public transit corridors and stations.	**Consistent.** The project includes the renovation of existing museum facilities and development of a new museum building, which would be consistent with the existing museum and parking uses on the project site. Therefore, the project would not change the functional role of the project site. In terms of scale and character, the new museum building would be two stories in height (maximum of 30 feet) and integrate with the surrounding urban development along Wilshire Boulevard and the park setting of Hancock Park. The purpose of the project is to renovate La Brea Tar Pits to enhance the presentation of its research collection and programmatic needs for its visitors today and into the future. Accordingly, the project would allow for the continued provision of community-oriented activity centers to serve adjacent neighborhoods and the City, while taking advantage of the project's location in an area well-served by numerous existing and future public transit options.

Objective/Policy	Analysis of Project Consistency
Policy 3.2.3 Provide for the development of land use patterns that emphasize pedestrian/bicycle access and use in appropriate locations.	**Consistent**. The project would reconfigure the existing pedestrian pathways on-site into a continuous paved pedestrian path linking all the existing elements of the park. A walking path would be constructed with interpretive signage and explanations related to the former industrial heritage of the site. The project site is currently served by a complete network of sidewalks around the project site block and adjacent street network, with signalized intersections and crosswalks. Access to the project site is available through the gateways along Wilshire Boulevards and West 6th Street. There is currently one bikeway in the project site vicinity on Hauser Boulevard and several others are planned along each roadway bordering the project site.
Policy 3.2.4 Provide for the siting and design of new development that maintains the prevailing scale and character of the City's stable residential neighborhoods and enhances the character of commercial and industrial districts.	**Consistent.** The Wilshire Community Plan identifies the project site as being surrounded by the Miracle Mile corridor, which is characterized by numerous high-rise office buildings, neighborhood retail, well-known entertainment establishments, and the City's greatest concentration of museums on Wilshire Boulevard between Fairfax Avenue and Burnside Avenue. Overall, the scale and character of the project would be compatible with the scale and character of the surrounding neighborhood.
Objective 3.8 Reinforce existing and establish new neighborhood districts which accommodate a broad range of uses that serve the needs of adjacent residents, promote neighborhood activity, are compatibility with adjacent neighborhoods, and are developed as desirable places to work and visit.	**Consistent**. See the consistency analysis for Policy 3.2.1 and Policy 3.2.4.
Policy 3.8.4 Enhance pedestrian activity by the design and siting of structures.	**Consistent.** The Master Plan has been developed to encourage better pedestrian access and circulation to Hancock Park and increase the scenic quality of the site. The project includes two entrances to the park: one at Wilshire Boulevard, which is in proximity to the museum, and one on 6th Street, which is in proximity to the revamped Pit 91. In addition, the project would enhance pedestrian activity with a new pedestrian pathway providing access to all educational and recreational activities within La Brea Tar Pits. Furthermore, the numerous existing and future public transit options and pedestrian amenities within the project site and vicinity would also enhance pedestrian activity in the area.
Policy 3.8.6 Encourage outdoor areas within neighborhood districts to be lighted for night use, safety and comfort commensurate with their intended nighttime use.	**Consistent.** Project lighting would include low-level exterior lights adjacent to buildings and along pathways for security and wayfinding purposes. In addition, low-level landscaping elements would also be incorporated throughout the project site to allow for visibility throughout the site. Lighting would be provided within the parking lot and along access points throughout the parking lot, which would help increase personal safety of visitors. Project lighting has been designed to minimize light trespass from the proposed building and from the overall project site. The entirety of Hancock Park is enclosed with an 8- to 10-foot-high metal fence that serves to secure the site by providing full closure of Hancock Park when La Brea Tar Pits, the Page Museum, and LACMA are closed in the evenings.
Goal 3E Pedestrian-oriented, high activity, multi- and mixed-use centers that support and provide identity for Los Angeles' communities.	**Consistent.** See the consistency analysis for Policy 3.2.1 and Policy 3.2.4.
Objective 3.9 Reinforce existing and encourage new community centers, which accommodate a broad range of uses that serve the needs of adjacent residents, promote neighborhood and community activity, are compatible with adjacent neighborhoods, and are developed to be desirable places in which to live, work and visit, both in daytime and nighttime.	**Consistent.** See the consistency analysis for Policy 3.2.1 and Policy 3.2.4.
Policy 3.9.7 Provide for the development of public streetscape improvements, where appropriate.	**Consistent.** The project would include landscaping that would extend along the park's peripheral edges to provide shade to picnic areas and the parking lot to the north. The proposed landscaping plan would be compatible with the existing landscaping along the perimeter of Hancock Park.

Objective/Policy	Analysis of Project Consistency
Policy 3.9.8 Support the development of public and private recreation and small parks by incorporating pedestrian-oriented plazas, benches, other streetscape amenities and where appropriate, landscaped play areas.	**Consistent.** See the consistency analysis for Objective 3.1 and Policy 3.1.3.
Policy 3.9.9 Require that outdoor areas of developments, parks, and plazas located in community centers be lighted for night use, safety, and comfort commensurate with their intended nighttime use, where appropriate.	**Consistent.** See the consistency analysis for Policy 3.8.6.
Urban Form and Neighborhood Design Chapter	
Objective 5.4 Encourage the development of community facilities and improvements that are based on need within the centers and reinforce or define those centers and the neighborhoods they serve.	**Consistent**. See the consistency analysis for Objective 3.1.
Policy 5.4.4 Encourage the use of community facilities for nighttime activity through the use of appropriate roadway and pedestrian area lighting.	**Consistent.** See the consistency analysis for Policy 3.8.6. The project lighting provided along pathways would support the use of community facilities for nighttime activity.
Objective 5.5 Enhance the livability of all neighborhoods by upgrading the quality of development and improving the quality of the public realm.	**Consistent**. See the consistency analysis for Policy 3.1.3, Policy 3.2.1, and Policy 3.2.4.
Objective 5.8 Reinforce or encourage the establishment of a strong pedestrian orientation in designated neighborhood districts, community centers, and pedestrian-oriented subareas within regional centers, so that these districts and centers can serve as a focus of activity for the surrounding community and a focus for investment in the community.	**Consistent.** While the project site is not located within a designated neighborhood district, community center, or pedestrian-oriented subarea, the project would encourage pedestrian activity within and surrounding the project site. The proposed museum building, pedestrian walkways, landscaping, and other site improvements were designed to encourage better pedestrian access and circulation. In addition, the project would provide a variety of outdoor open spaces within the project site, including landscaped plazas, gardens, and pedestrian paths that would be designed to integrate the new museum building and existing uses within Hancock Park.
Policy 5.8.4 Encourage that signage be designed to be integrated with the architectural character of the buildings and convey a visually attracted character.	**Consistent.** New identification signage would be provided as part of the project. Proposed signage would be designed to be aesthetically compatible with the existing and proposed architecture within the project site and the surrounding area and would be architecturally integrated into the design of the new museum building.
Objective 5.9 Encourage proper design and effective use of the built environment to help increase personal safety at all times of the day.	**Consistent.** Project lighting would include low-level exterior lights adjacent to buildings and along pathways for security and wayfinding purposes. In addition, low-level landscaping elements would also be incorporated throughout the project site to allow for visibility throughout the site. Security on-site would be provided by both on-site personnel and technology/equipment (e.g., surveillance and monitoring equipment, adequate lighting, adequate signage for pedestrian orientation, etc.). With regard to the parking lot, proper lighting would be provided within the parking lot and along access points throughout the parking lot, which would help increase personal safety of visitors. The entirety of Hancock Park is enclosed with an 8- to 10-foot-high metal fence that serves to secure the site by providing full closure of Hancock Park when La Brea Tar Pits, the Page Museum, and LACMA are closed in the evenings.
Open Space and Conservation Chapter	
Policy 6.3.3 Utilize development standards to promote development of public open space that is visible, thereby helping to keep such spaces and facilities as safe as possible.	**Consistent**. See the consistency analysis for Objective 5.9.

Objective/Policy	Analysis of Project Consistency
Policy 6.4.8 Maximize the use of existing public open space resources at the neighborhood scale and seek new opportunities of private development to enhance the open space resources of the neighborhoods.	**Consistent**. See the consistency analysis for Policy 3.1.3.
Transportation Chapter	
Objective 2 Mitigate the impacts of traffic growth, reduce congestion and improve air quality by implementing a comprehensive program of multi-modal strategies that encourages physical and operational improvements, as well as demand management.	**Consistent with Mitigation**. The project would be in an area well-served by public transit provided by Metro, as well as several bus lines. In addition to the numerous existing and future public transit options, pedestrian amenities provided throughout the project site would also promote an improved quality of life by facilitating a reduction of vehicle trips, VMT, and air pollution. In addition, Mitigation Measure TRA/mm-1.1 would require the preparation and implementation of a TDM Program to reduce museum employee and visitor vehicle trips and increase alternative modes such as walking, bicycling, public transit, and rideshare. Also see the consistency analysis for Objective 3.2.
Policy 3.13 Enhance pedestrian circulation in neighborhood districts, community centers, and appropriate locations in regional centers and along mixed-use boulevards; promote direct pedestrian linkages between transit portals/platforms and adjacent commercial development through facilities orientation and design.	**Consistent**. See the consistency analysis for Objective 3.1, Objective 3.2, and Policy 3.8.4.
Mobility Plan 2035 (as a Supplement to the Transportation Chapter of the Framework Element)	
Policy 1.6 Design detour facilities to provide safe passage for all modes of travel during times of construction.	**Consistent with Mitigation.** Mitigation Measure TRA/mm-4.1 would require the development and implementation of a detailed Construction Management Plan. The Construction Management Plan would include measures for pedestrian and vehicular traffic controls (i.e., flag persons) during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways; scheduling of construction-related deliveries, haul trips, etc.; and safety precautions for pedestrians and bicyclists including but not limited to such measures as alternate routing and protection barriers as appropriate. The Construction Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community.
Policy 2.3 Recognize walking as a component of every trip and ensure high-quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.	**Consistent**. See the consistency analysis for Policy 3.8.4.
Policy 2.10 Facilitate the provision of adequate on and off-street loading areas.	**Consistent.** The project would include three loading and service entrances that would accommodate deliveries for laboratories, exhibition material, food service, events, and staff offices. Two of the entrances would be from the parking lot into the new museum building on the north side, and the third entrance would be from the parking lot into the Page Museum, also on the north side. The project also includes a new school drop-off area from South Curson Avenue, adjacent to Wilshire Gateway picnic area. School buses and other vehicles would also be able to access the parking lot from South Curson Avenue and drop off in the loading area in the parking lot.
Policy 2.16 Ensure that future modifications to any scenic highway do not impact the unique identity or characteristic of that scenic highway.	**Consistent.** The portion of Wilshire Boulevard between Fairfax Avenue and Sycamore Avenue, adjacent to the project site, is a City-designated scenic highway as described in the Mobility Plan 2035. The project would not impact the landscaped median along Wilshire Boulevard; the median is a primary feature that contributes to the scenic value of this portion of the roadway. The project would not be modifying Wilshire Boulevard and no earthwork along Wilshire Boulevard is proposed by the project. In addition, the project would not substantially damage or remove visually prominent or character-defining features of the project site. As such, the project would retain the unique identity and characteristics of the Wilshire Boulevard and would not substantially damage scenic resources within a designated scenic highway.

Objective/Policy	Analysis of Project Consistency
Policy 3.1 Recognize all modes of travel, including pedestrian, bicycle, transit, and vehicular modes – including goods movement – as integral components of the City's transportation system.	**Consistent.** See the consistency analysis for Objective 3.2.
Policy 3.3 Promote equitable land use decisions that result in fewer vehicle trips by providing greater proximity and access to jobs, destinations, and other neighborhood services.	**Consistent.** See the consistency analysis for Objective 3.2 and Policy 3.2.1.
Policy 3.4 Provide all residents, workers, and visitors with affordable, efficient, convenient, and attractive transit services.	**Consistent.** See the consistency analysis for Objective 3.2.
Infrastructure and Public Services Chapter	
Policy 9.3.1 Reduce the amount of hazardous substances and the total amount of flow entering the wastewater system.	**Consistent with Mitigation.** As evaluated in Section 5.9, Hydrology and Water Quality, during construction of the project, a SWPPP would be prepared and implemented, as required under the NPDES General Construction Permit. The SWPPP would require implementation of BMPs including erosion control measures, sediment control measures, non-stormwater management, and materials management measures, to minimize the discharge of pollutants in stormwater runoff into nearby receiving waters (in this case, Ballona Creek). The project would also be required to comply with the County's LID Standards Manual, which promotes the use of natural infiltration systems, evapotranspiration, and the reuse of stormwater. The project would retain stormwater through three proposed biofiltration areas to be captured in below grade cisterns, and used on-site for toilets, urinals, landscape irrigation, and cooling towers to reduce the amount of flow entering the wastewater system. In addition, as discussed in Section 5.8, Hazards and Hazardous Materials, the project would implement Mitigation Measures HAZ/mm-1.1 requiring the preparation of a Soils Management Plan to ensure any potentially contaminated soils would be excavated and transported off-site in accordance with all relevant and applicable federal, state, and local laws and regulations.
Policy 9.3.2 Consider the use of treated wastewater for irrigation, groundwater recharge, and other beneficial purposes.	**Consistent.** See the consistency analysis for Policy 9.3.1.
Objective 9.6 Pursue effective and efficient approaches to reducing stormwater runoff and protecting water quality.	**Consistent.** See the consistency analysis for Policy 9.3.1.
Objective 9.10 Ensure that water supply, storage, and delivery systems are adequate to support planned development.	**Consistent.** As concluded in Los Angeles Department of Water and Power's (LADWP's) 2020 Urban Water Master Plan, projected water demand for the City, where the project site is located, would be met by the available supplies during an average year, single-dry year, and multiple-dry year in each year from 2025 through 2045. In addition, projects that conform to the demographic projection from the RTP by SCAG and are currently located in the City's service area are considered to have been included in LADWP's water supply planning efforts; therefore, the projected water supplies would meet projected demands.

Objective/Policy	Analysis of Project Consistency
Objective 9.12 Support integrated solid waste management efforts.	**Consistent.** The project would be consistent with City and County policies that have been developed to reduce landfill waste streams as well as AB 939, AB 341, and AB 1826. Specifically, the project would include clearly marked, source-sorted receptacles to facilitate recycling with a focus on items such as paper, cardboard, glass, aluminum, plastic, and cooking oils. In addition, the project would provide for source-sorted receptacles for the recycling of organic waste. In accordance with AB 1327 and AB 1826, the project would also provide for adequate areas for the collection, loading, and removal of recycled materials, including organic waste. Furthermore, construction activities would also make use of local, recycled, and renewable materials where possible and reuse construction materials such as grading debris within the project site.
Goal 9L Sufficient and accessible parkland and recreation opportunities in every neighborhood of the City, which gives all residents the opportunity to enjoy green spaces, athletic activities, social activities, and passive recreation.	**Consistent.** The project would contribute to the achievement of this City goal through the establishment of multiple recreation zones throughout the park, including Central Green, gardens, plazas at Wilshire Gateway and 6th Street Gateway, and a pedestrian path that would be designed to integrate the new museum building and renovated Page Museum with existing uses within Hancock Park The project would also provide for outdoor programming, such as a new outdoor classroom with a shade canopy at Pit 91.
Goal 9P Appropriate lighting required to (1) provide for nighttime vision, visibility, and safety needs on streets, sidewalks, parking lots, transportation, recreation, security, ornamental, and other outdoor locations; (2) provide appropriate and desirable regulation of architectural and informational lighting such as building façade lighting or advertising lighting; and (3) protect and preserve the nighttime environment, views, driver visibility, and otherwise minimize or prevent light pollution, light trespass, and glare.	**Consistent with Mitigation.** Upon project completion, lighting within the project site would include interior and low-level exterior lights adjacent to the buildings and along pathways for security and wayfinding purposes. In addition, low-level lighting for accent signage, parking information, and architectural features would also be incorporated. The new museum building would introduce a new source of light including exterior lights adjacent to the building and for the second-floor outdoor amenities when in use. The current design of the project does not include electronic signage or signs with flash, mechanical, or strobe lights. However, given the conceptual nature of the project at this stage of design and development, the resulting lighting and design features cannot be determined with certainly and certain design details that could create light and potential glare may be introduced as the building plans are more fully developed. Mitigation Measure AES/mm-4.1 and Mitigation Measure AES/mm-4.2 would require lighting restrictions during project construction and implementation of project design features in accordance with Title 22 of the County Code.
Objective 9.40 Ensure efficient and effective energy management in providing appropriate levels of lighting for private outdoor lighting for private streets, parking areas, pedestrian areas, security lighting, and other forms of outdoor lighting and minimize or eliminate the adverse impact of lighting due to light pollution, light trespass, and glare.	**Consistent.** See the consistency analysis for Goal 9P.
Policy 9.40.1 Require lighting on private streets, pedestrian oriented areas and pedestrian walks to meet minimum City standards for street and sidewalk lighting.	**Consistent.** See the consistency analysis for Goal 9P.
Policy 9.40.2 Require parking lot lighting and related pedestrian lighting to meet recognized national standards.	**Consistent.** See the consistency analysis for Goal 9P.

Objective/Policy	Analysis of Project Consistency
Conservation Element	
Section 3 Archaeological and Paleontological Objective: Protect the city's archaeological and paleontological resources for historical, cultural, research and/or educational purposes.	**Consistent with Mitigation.** The Master Plan includes components to enhance the preservation of, and access to, existing cultural and paleontological resources on-site. The project would implement Mitigation Measures CR-ARCH/mm-1.1 through CR-ARCH/mm-1.4 to address the archaeological sensitivity of the site and the potential to discover additional resources. In addition, the project has high paleontological sensitivity. The project would implement Mitigation Measures GEO/mm-6.1 through GEO/mm-6.5 which would ensure retention of a qualified project paleontologist, preparation of a paleontological resources management plan, paleontological resources sensitivity training, paleontological resources monitoring, and treatment and curation of discoveries, if encountered.
Section 3 Archaeological and Paleontological Policy: Continue to identify and protect significant archaeological and paleontological sites and/or resources known to exist or that are identified during land development, demolition or property modification activities.	
Section 5 Cultural and Historical Objective: Protect important cultural and historical sites and resources for historical, cultural, research, and community educational purposes.	**Potentially Inconsistent**. The Master Plan includes components to enhance the preservation of, and access to, existing cultural and paleontological resources on-site. This would include improvements to existing tar pit sites involving the construction of clearly defined viewing areas around each of the tar pits, with improved pit protection zones and fencing, seating, and interpretive signage.
Cultural and Historical Policy: Continue to protect historic and cultural sites and/or resources potentially affected by proposed land development, demolition or property modification activities.	However, project implementation would result in significant physical changes, partial demolition, and new construction affecting the two designated historical resources within the project site, which are the La Brea Tar Pits Historic District and the Page Museum. While implementation of project Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5 would reduce impacts, the project would alter these resources in such a way that they would no longer convey the reasons for their significance within the parameters of the design and key features envisioned in the Master Plan. There are no mitigation measures that would reduce these impacts to less than significant while keeping the primary elements of the Master Plan; therefore, residual impacts of the project would remain significant and unavoidable and would be potentially inconsistent with this goal.

Table 5.10-6. Preliminary Project Consistency Evaluation—Wilshire Community Plan

Goal/Objective/Policy	Analysis of Project Consistency
Residential	
Policy 1-3.2 Support historic preservation goals in neighborhoods of architectural merit and/or historic significance.	**Potentially Inconsistent.** Project implementation would result in significant physical changes, partial demolition, and new construction affecting the two designated historical resources within the project site, which are the La Brea Tar Pits Historic District and the Page Museum. While implementation of project Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5 would reduce impacts, the project would alter these resources in such a way that they would no longer convey the reasons for their significance within the parameters of the design and key features envisioned in the Master Plan. There are no mitigation measures that would reduce these impacts to less than significant while keeping the primary elements of the Master Plan; therefore, residual impacts of the project would remain significant and unavoidable and would be potentially inconsistent with this goal.
Policy 1-3.4 Monitor the impact of new development on residential streets. Locate access to major development projects so as not to encourage spillover traffic on local streets.	**Consistent.** The project would implement Mitigation Measure TRA/mm-1.1, requiring development of a Transportation Demand Management (TDM) program to coordinate on multimodal improvements in the study area and to reduce employee and visitor vehicle trips and related effects on project access safety and circulation.

Goal/Objective/Policy	Analysis of Project Consistency
Commercial	
Policy 2-2.1 Encourage pedestrian-oriented design in designated areas and in new development.	**Consistent.** The project would reconfigure the existing pedestrian pathways on-site with a continuous pedestrian path linking all the existing elements of the site. Each loop would contain distinct themes and programming to immerse visitors into La Brea history. The design of the new museum building and Page Museum building have also been designed to improve pedestrian access and circulation. In addition, the new entrances to the museum buildings via Wilshire Gateway and 6th Street Gateway would open new public outdoor space for orientation, gathering and queuing, restrooms, a picnic area and play area, and seating and interpretation zones at the protected tar seeps.
Policy 2-2.3 Encourage the incorporation of retail, restaurant, and other neighborhood serving uses in the first floor street frontage of structures, including mixed use projects located in Neighborhood Districts.	**Consistent.** Although the project would not be in a Neighborhood District, the project would incorporate a ground-floor restaurant and retail spaces that are compatible with the surrounding commercial area.
Policy 2-3.1 Improve streetscape identity and character through appropriate controls of signs, landscaping, and streetscape improvements; and require that new development be compatible with the scale of adjacent neighborhoods.	**Consistent.** The project would include new identification signage that would be consistent and compatible with existing museum signage and other signage in the vicinity of the project site. The project would include landscaping along the pedestrian path with a distinguishing theme representing different geologic epochs and a variety of new landscaping along the perimeter of the western loop that would be extended along the park's peripheral edges. The new museum building would be a low-rise structure along Wilshire Boulevard.
Recreation and Park Facilities	
Goal 4 Provide adequate recreation and park facilities to meet the needs of residents in the Wilshire Community.	**Consistent**. The project would include improvements to the Central Green, a publicly accessible community lawn to promote activities and events that take place in Hancock Park. The improved Central Green would continue to support health and wellness programs, visiting school children, museum tour groups, and community members. The improved infrastructure and drivable path for food trucks would increase event and dining opportunities. The project would also implement a new canopy and shade trees at Wilshire Gateway to would allow for picnic areas, and the new canopy at 6th Street Gateway would welcome visitors to a shaded park space where community park and recreational needs are balanced with the research activities of La Brea. These recreation zones would create an active site of visible research and play.
Objective 4-1 Conserve, maintain and better utilize existing recreation and park facilities, which meet the recreational needs of the community.	**Consistent.** The project would redesign and renovate the Hancock Park community park green space to increase sustainable landscape and site design, to support passive recreational use, to increase the visibility of this important cultural destination, and to enhance connections to the Miracle Mile neighborhood. Specifically, the project would include improvements to the existing 28,000-square foot multi-purpose grass lawn, Central Green, which would provide a setting for community activities, recreation, events, and public gathering. The project would also install a new welcome pavilion with a canopy and shade trees at Wilshire Gateway, and a shaded welcome area at 6th Street Gateway. These new recreational areas would be designed to integrate the new museum building and existing uses within Hancock Park, which would enhance these existing facilities to meet the recreational needs of the community.
Policy 4-1.1 Preserve and improve the existing recreational facilities and park spaces.	**Consistent**. See the consistency analysis for Objective 4-1.
Policy 4-1.2 Encourage the shared use of other public facilities for recreational purposes.	**Consistent**. See the consistency analysis for Objective 4-1.

Goal/Objective/Policy	Analysis of Project Consistency
Objective 4-3 Ensure the accessibility, security and safety of parks by their users, particularly families with children and senior citizens.	**Consistent.** Lighting provided within the public outdoor space would include low-level exterior lights adjacent to buildings and along pathways for security and wayfinding purposes. In addition, low-level lighting to accent signage, architectural features, and landscaping elements would also be incorporated throughout the project site. Due to the transparency in building design, areas of concealment are minimized, which would help increase personal safety at all times of the day. In addition, security would be provided by both on-site personnel and technology/equipment (e.g., surveillance and monitoring equipment, adequate lighting, adequate signage for pedestrian orientation, etc.). Further, outdoor spaces would be clearly defined and landscaping on the project site would be used as natural barriers and shade in picnic areas. Lastly, the entirety of Hancock Park is enclosed with an 8- to 10-foot-high metal fence that serves to secure the site by providing full closure of Hancock Park when La Brea Tar Pits, the Page Museum, and LACMA are closed in the evenings. This perimeter fencing would remain as an existing safety feature with project implementation restricting access to the project site at night.
Policy 4-3.1 Ensure that parks are adequately policed, monitored, maintained and illuminated for safe use at night, as appropriate.	**Consistent**. See the consistency analysis for Objective 4-3.
Open Space	
Goal 5 Provide sufficient open space in balance with development to serve the recreational, environmental health and safety needs of the Wilshire Community, and to protect environment and aesthetic resources.	**Consistent**. See the consistency analysis for Policy 2-2.1, Policy 2-3.1, Objective 4-1, and Objective 4-3.
Objective 5-1 Preserve existing open space resources and where possible develop new open space.	**Consistent**. See the consistency analysis for Policy 2-2.1.
Policy 5-1.1 Encourage the retention of passive visual open space to provide a balance of urban development.	**Consistent**. See the consistency analysis for Objective 2-2.1 and Objective 4-1.
Policy 5-1.3 Convert and upgrade underutilized publicly owned property.	**Consistent.** The purpose of the Master Plan is to reimagine La Brea Tar Pits by renovating the Page Museum, constructing a new museum building, and redesigning the Hancock Park community park green space to enhance the presentation of the Tar Pits research collection and programmatic needs for its visitors today and into the future and enrich the existing Hancock Park. The existing museum structure would be expanded to address deferred maintenance of the building envelope and systems, meet modern seismic, electrical, and building code standards, and meet sustainability goals consistent with the County's Sustainability Plan. The new museum building would provide expanded fossil storage facilities that enable access for scientific research and preserve, expanded laboratory research facilities, and exhibition facilities.
Policy 5-1.4 Unused or underutilized public lands should be considered for open space and recreational purposes.	**Consistent**. See the consistency analysis for Objective 4-1 and Policy 5-1.3.
Transportation	
Goal 11 Encourage a system of safe, efficient and attractive bicycle and pedestrian routes.	**Consistent.** Primary pedestrian access to the project site would be provided from Wilshire Boulevard but would also be available from 6th Street. The two new entrances connect to the main pedestrian pathway that links all elements of the park, which provides an inviting Tar Pits experience. Low-level exterior lighting would be incorporated along the pedestrian pathway and entrances to ensure safety, especially during the nighttime for visitors.
Objective 11-2 Promote pedestrian mobility, safety, amenities, and access between employment centers, residential areas, recreational areas, schools, and transit centers.	**Consistent.** The project would provide new outdoor open spaces, including improvements to the existing 28,000-square foot multi-purpose lawn, Central Green, landscaped plazas, a garden, and a pedestrian path that would link project features and existing uses within Hancock Park. The project would also be located within an area that is well-served by public transit.

Goal/Objective/Policy	Analysis of Project Consistency
Goal 12 Encourage alternative modes of transportation to reduce single-occupancy vehicular trips.	**Consistent.** See the consistency analysis for Objective 11-2.
Policy 12-1.1 Encourage non-residential developments to provide employee incentives for using alternative to the automobile (carpools, vanpools, buses, shuttles, subways, bicycles, walking) and provide flexible work schedules.	**Consistent with Mitigation.** Mitigation Measure TRA/mm-1.1 would require development of a TDM program, which includes incentives for employees to use alternative forms of transportation, including strategies such as providing subsides for participation in the LA Metro vanpool and transit passes, as well as offering flexible work schedules and telecommuting, when feasible.
Goal 15 Provide a sufficient supply of well-designed and convenient off-street parking lots and facilities throughout the plan area.	**Consistent.** Development of the project includes an upgrade of the parking lot located to the north of the project site. The parking lot would be expanded from 63,000 square feet to 65,000 square feet and increase an approximately 5 to 15 parking spaces. New landscaping and vehicle access lanes would be added to the parking lot and a vehicle drop-off loop would be provided to facilitate vehicle circulation and visitor entry through a pedestrian entrance to the museum leading from the parking lot.
Historic and Cultural Resources	
Goal 17 Preserve and restore cultural resources, neighborhoods and landmarks, which have historical and/or cultural significance.	**Potentially Inconsistent**. The project's conceptual plan includes components to enhance the preservation of, and access to, existing cultural and paleontological resources on-site. This would include improvements to existing tar pit sites involving the construction of clearly defined viewing areas around each of the tar pits, with improved pit protection zones and fencing, seating, and interpretive signage. However, project implementation would result in significant physical changes, partial demolition, and new construction affecting the two designated historical resources within the project site, which are the La Brea Tar Pits Historic District and the Page Museum. While implementation of project Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5 would reduce impacts, the project would alter these resources in such a way that they would no longer convey the reasons for their significance within the parameters of the design and key features envisioned in the Master Plan. There are no mitigation measures that would reduce these impacts to less than significant while keeping the primary elements of the Master Plan; therefore, residual impacts of the project would remain significant and unavoidable and would be potentially inconsistent with this goal.
Objective 17-1 Ensure that the Wilshire Community's historically significant resources are protected, preserved, and/or enhanced.	**Potentially Inconsistent**. See consistency analysis for Goal 17.
Policy 17-1.1 Encourage the preservation, maintenance, enhancement and reuse of existing historic buildings and the restoration of original facades.	**Potentially Inconsistent**. See consistency analysis for Goal 17.

Table 5.10-7. Preliminary Project Consistency Evaluation—SCAG 2020-2045 RTP/SCS

Goals and Principles	Analysis of Project Consistency
Goal 5. Reduce greenhouse gas emissions and improve air quality	**Consistent with Mitigation.** The project would not conflict with the GHG reduction policies strategies and regulations of this plan; however, to further reduce the project's potential GHG emissions, the project would implement Mitigation Measure TRA/mm-1.1 requiring development of a Transportation Demand Management (TDM) program with specific strategies aimed to reduce project employee and visitor vehicle trips and increase alternative modes such as walking, bicycling, public transit, and ridesharing. In addition, Mitigation Measure GHG/mm-1.1 would ensure the project would not include the installation of natural gas infrastructure. In addition, Mitigation Measure GHG/mm-1.1 would ensure the project provides more electric vehicle charging stations than the mandatory requirements set forth in the Los Angeles County Code, Title 31, Green Building Standards (Code Section 5.106.5.3.3). Further, Mitigation Measure AQ/mm-3.1 would require all SCAQMD rules and regulations to serve as mitigation measures for the project during construction. Operation of the project would not result in adverse impacts to air quality.
Goal 6. Support healthy and equitable communities	**Consistent.** The project would support the health of visitors by improving existing and creating new outdoor public spaces and improved landscaping that would support visitors and employees' mental health, encourage community interaction, and improve air quality. The project would also encourage pedestrian mobility via the proposed easily accessible paved pedestrian path linking the existing elements of the site. Each loop of the pathway would contain distinct themes and programming. The new museum building design would use sustainable design features such as enhanced daylighting, rainwater collection leading to bioswales, and a sloped green roof.
Goal 10. Promote conservation of natural and agricultural lands and restoration of habitats	**Consistent with Mitigation.** The project site is dominated by a large lawn surrounding the museum consisting of primarily non-native planted trees and shrubs. It provides limited wildlife habitat due to the combination of high levels of human activity, the lack of surface water, and the low quantity of native plants. However, there are currently over 300 trees on-site, both non-native and native species, including the Coast live oak which is a species protected under the Los Angeles Oak Tree Ordinance. The Master Plan's proposed planting strategy includes the introduction or relocation of 150 to 200 trees on-site. Tree species selected for planting would be drought-tolerant and/or of a native tree species and would primarily require moist to dry soil conditions. The trees provide potential nesting habitat for birds as well as in the native plant area of Oil Creek. Oil Creek supports a community of hydrophytic and riparian vegetation. The project would be required to implement the following mitigation measures to protect and preserve the biological resources on-site: BIO/mm-2.1 to protect sensitive and regulated resources at and along Oil Creek; BIO/mm-3.1 to protect sensitive and regulated resources at and around the Lake Pit; BIO/mm-4.1 and BIO/mm-4.2 to avoid impacts to nesting birds; and BIO/mm-5.1 and BIO/mm-5.2 to avoid conflicts with the County of Los Angeles Oak Tree Ordinance.

5.10.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project could result in significant adverse environmental impacts related to land use and planning if it would:

a) Physically divide an established community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

5.10.4 Methodology

Sources used in the assessment of land use and planning impacts include the County's General Plan, the City's General Plan, the Wilshire Community Plan, and the 2020-2045 SCAG RTP/SCS. The project's potential consistency with relevant County and City General Plan policies are evaluated in Table 5.10-4 through Table 5.10-7. Only project elements that have the potential to conflict with an applicable goal,

policy, or program are evaluated further in this section. Based on State CEQA Guidelines, inconsistency with an adopted policy does not constitute an impact unless it may cause either a direct or indirect physical change in the environment, or a reasonably foreseeable physical change in the environment (Section 21065). Therefore, the analysis provided in this section focuses on the goals and policies with which the project may potentially be inconsistent, and the potential physical impacts on the environment that may result from those potential inconsistencies.

5.10.5 Environmental Impact Analysis

a) Would the project physically divide an established community?

The project site includes 13 acres of the eastern and northwestern portions of Hancock Park, located within a highly urban area that includes a mix of commercial uses and residential uses. As shown in Figure 3-3 in Chapter 3, Project Description, the project components include either the renovation and expansion of existing facilities or reconfiguration of existing project site elements with the intent of enhancing the current uses and promoting connectivity throughout the project site. There are no existing residential uses on-site and no residential uses are proposed by the project.

CONSTRUCTION

As noted, there are no existing residential uses on the project site nor would the project introduce a residential component during construction that would be physically separated or otherwise disrupted by the project. Construction of the project would occur within the boundaries of the existing project site, which would not affect the continued functioning of, access to, or otherwise obstruct aspects of the physical linkages between surrounding land uses and this part of the community. Furthermore, construction of the project would not involve features such as a highway, aboveground infrastructure, or an easement through an established neighborhood having the potential to divide an established community. As such, construction of the project would not divide an established community. *No impact* would occur.

OPERATION

Following construction activities, implementation of the project would result in renovations to the Page Museum and construction of the new museum building intentionally designed to be consistent with the scale and diversity of the existing built environment and surrounding areas. Particular attention has been given to integrating the outdoor and indoor elements of La Brea Tar Pits and Hancock Park. Buildings and structures on-site, including the museum buildings and the gateway features at Wilshire and 6th Street would be constructed at a maximum height of 30 feet when measured from the terrace level.
The proposed pedestrian path and the gateway features would connect project site features and increase walkability and accessibility throughout the project site. Further, the proposed improvements to the passive recreation areas on-site (e.g., children's play area, picnic tables) would occur in existing areas intended for community gathering purposes and would not introduce features that would divide these established uses. While the project proposes the expansion and relocation of the existing parking lot to the north of its current location by approximately 50 to 70 feet, it would not introduce a new barrier or division to the project site.

In addition, the project operation would not require the permanent closure of any streets surrounding the project site which currently provide access to surrounding uses, nor would operation of the project require the construction of any new roadways or other mobility features that would result in a new barrier through the existing community. It should be noted that the entirety of Hancock Park is enclosed with an 8- to 10-foot-high metal fence that serves to secure the site by providing full closure of Hancock Park when

La Brea Tar Pits, the Page Museum, and LACMA are closed in the evenings. This perimeter fencing would remain as an existing feature with project implementation and while it does restrict access to the project site at night, it is an existing safety feature and would not be considered an element that would divide an established community.

Given the project includes the renovation and expansion of the existing Page Museum and associated facilities within the existing boundary of the project site and would not introduce features that would implement barriers or divide the established uses within the project site or within the greater area of Hancock Park and the surrounding neighborhood, the project operation would not physically divide an established community. *No impact* would occur.

LUP Impact 1
The project would not include features that would physically divide an established community during construction and operation. No impact would occur. (CEQA Checklist Appendix G Threshold XI. a)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. There would be no impacts associated with division of an established community.

b) Would the project cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The consistency analysis of the applicable land use plans, policies, and regulations considers the holistic impacts associated with implementation of the project and does not provide separate construction and operation analyses. This is because most policies broadly consider the appropriateness of types of land uses. Also, the analysis is organized by the chronological placement of the particular policies within the guidance or regulatory document. Based on the evaluation of the project's potential consistency with relevant plans and policies in Chapter 5, Environmental Impact Analysis, of this EIR, the project would have the potential to result in inconsistencies with applicable policies pertaining to the alteration of designated historical resources. The project would be potentially inconsistent with the policies identified in Table 5.10-8 and evaluated below.

Table 5.10-8. Applicable Plans and Policies with which the Project Would Be Potentially Inconsistent

Plan	Potentially Inconsistent Objective, Goal, and/or Policy
County of Los Angeles General Plan	**Goal C/NR 14** Protected historic, cultural, and paleontological resources.
	Policy C/NR 14.1 Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
	Policy C/NR 14.2: Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.
	Policy C/NR 14.3 Support the preservation and rehabilitation of historic buildings.

Plan	Potentially Inconsistent Objective, Goal, and/or Policy
City of Los Angeles General Plan	**Cultural and Historical Objective**: Protect important cultural and historical sites and resources for historical, cultural, research, and community educational purposes.
	Cultural and Historical Policy: Continue to protect historic and cultural sites and/or resources potentially affected by proposed land development, demolition or property modification activities.
Wilshire Community Plan	**Policy 1-3.2** Support historic preservation goals in neighborhoods of architectural merit and/or historic significance.
	Goal 17 Preserve and restore cultural resources, neighborhoods and landmarks, which have historical and/or cultural significance.
	Objective 17-1 Ensure that the Wilshire Community's historically significant resources are protected, preserved, and/or enhanced.
	Policy 17-1.1 Encourage the preservation, maintenance, enhancement, and reuse of existing historic buildings and the restoration of original facades.

The project's conceptual plan includes components to enhance the preservation of, and access to, existing cultural and paleontological resources on-site. This would include improvements to existing tar pit sites involving the construction of clearly defined viewing areas around each of the tar pits, with improved pit protection zones and fencing, seating, and interpretive signage.

However, project implementation would result in significant physical changes, partial demolition, and new construction affecting the two designated historical resources within the project site, which are the La Brea Tar Pits Historic District and the Page Museum. While implementation of project Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5 would reduce impacts, the project would alter these resources in such a way that they would no longer convey the reasons for their significance within the parameters of the design and key features envisioned in the Master Plan. There are no mitigation measures that would reduce these impacts to less than significant while meeting the project objectives and keeping the primary elements of the Master Plan; therefore, impacts of the project would remain significant and unavoidable after implementation of the recommendations, creating inconsistencies with the applicable land use objectives, goals, and policies set forth in the County of Los Angeles General Plan, the City of Los Angeles General Plan, and the Wilshire Community Plan. Given there is no feasible mitigation to reduce impacts of the project related to historical resources or the identified land use policy inconsistencies, related impacts would be *significant and unavoidable*.

LUP Impact 2
Implementation of the project would result in the alteration of designated historical resources and would be potentially inconsistent with the objectives, goals, and policies of the County's General Plan Conservation and Natural Resources Element, the City's General Plan Conservation Element, and the Wilshire Community Plan as they pertain to the protection of designated historical resources. Impacts would be significant. (CEQA Checklist Appendix G Threshold XI. b)
Mitigation Measures
Implement Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5.
Impacts Following Mitigation
Upon implementation of Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5, impacts to historical resources from project implementation would remain significant and unavoidable; therefore, impacts related to land use policy conflicts would remain significant and unavoidable.

5.10.6 Cumulative Impacts

As stated in Section 5.10.5, the project would have no impact related to the physical division of an established community (threshold a) and would not contribute to cumulative impacts related to this issue.

The project site is located within a highly urban area that includes a mix of commercial uses and residential uses. Chapter 4, Environmental Setting, details the existing and reasonably foreseeable future development projects located within proximity to the project site. The related projects provided in Chapter 4 generally consist of infill development and redevelopment of existing uses, including mixed-use, residential, commercial, office, restaurant, retail, studio, museum, hotel, and combinations thereof. The project, in combination with the related projects provided in Chapter 4, could result in cumulative impacts if it would conflict with a land use plan, policy, or regulation, adopted for the purposes of mitigating an environmental effect (threshold b).

As discussed in LUP Impact 2, the project's significant and unavoidable impacts related to historic resources create inconsistencies with the applicable land use objectives, goals, and policies set forth in the County of Los Angeles General Plan, the City of Los Angeles General Plan, and the Wilshire Community Plan as identified in Table 5.10-8. While the project's Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5 would avoid, minimize, rectify, reduce, or compensate for the significance of the impacts to historical resources to the degree feasible, they would not mitigate impacts below the level of significance. As such, the identified land use policy inconsistencies would also be significant and unavoidable with no feasible mitigation to address the impact. When considered in combination with the impacts of these projects in the cumulative scenario, the project would contribute incrementally toward cumulative effects on historical resources associated with the project and related land use policies protecting these resources. The project's contribution to cumulative impacts related to conflicts with applicable land use plans and policies could be *significant*.

LUP Impact 3 (Cumulative Impacts)
The project would contribute incrementally toward cumulative effects on historical resources associated with the project and related land use policies protecting these resources (i.e., County of Los Angeles General Plan, the City of Los Angeles General Plan, and the Wilshire Community Plan). The potential inconsistencies are identified in Table 5.10-8. The project would contribute significantly to cumulative impacts to historic resources, which would be considered a significant impact.
Mitigation Measures
Implement Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5.
Impacts Following Mitigation
Upon implementation of Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5, impacts to historical resources would remain significant and unavoidable; therefore, the project's contribution to cumulative impacts related to land use policy conflicts focused on historic resources would remain significant and unavoidable.

5.11 NOISE AND VIBRATION

This section addresses the potential noise and vibration impacts associated with construction and operation of the project. It describes the existing noise levels at the project site, the regulatory setting, the impacts of the project, and feasible mitigation measures to reduce impacts, where applicable. The analysis in this section is based on the following noise report, included as Appendix I: *Noise and Ground Vibration Technical Report for the La Brea Tar Pits Master Plan* (SWCA 2022).

5.11.1 Existing Conditions

5.11.1.1 Noise Fundamentals

DEFINITION OF ACOUSTICAL TERMS

Noise is commonly defined as sound that is undesirable because it interferes with speech communication and hearing, causes sleep disturbance, or is otherwise annoying. The following acoustical terms are used throughout this analysis:

- Ambient sound level is defined as the composite of noise from all sources near and far (i.e., the normal or existing level of environmental noise at a given location).
- Decibel (dB) is the physical unit commonly used to measure sound levels. Technically, a dB is a unit of measurement that describes the amplitude of sound equal to 20 times the base 10 logarithm of the ratio of the reference pressure to the sound of pressure, which is 20 micropascals (μPa).
- Sound measurement is further refined by using a decibel "A-weighted" sound level (dBA) scale that more closely measures how a person perceives different frequencies of sound; the A-weighting reflects the sensitivity of the ear to low or moderate sound levels.
- Equivalent noise level (L_{eq}) is the energy average A-weighted noise level during the measurement period.
- The root-mean-squared maximum noise level (L_{max}) characterizes the maximum noise level as defined by the loudest single noise event over the measurement period.
- Day-night sound level (L_{dn}) is the A-weighted equivalent sound level for a 24-hour period with an additional 10-dB weighting imposed on the equivalent sound levels occurring during nighttime hours (10:00 p.m. to 7:00 a.m.).
- Community Noise Equivalent Level (CNEL) is a measure of the 24-hour average noise level that penalizes noise that occurs during the evening and nighttime hours, when noise is considered more disturbing. To account for this increase in disturbance, 5 dBA is added to the hourly L_{eq} during the evening hours (7:00 p.m. to 10:00 p.m.) and 10 dBA is added during the nighttime hours (10:00 p.m. to 7:00 a.m.).
- Percentile-exceeded sound level (L_{xx}) describes the sound level exceeded for a given percentage of a specific period.
- Noise-sensitive land use is defined as a location most likely to be adversely affected by excessive noise levels, or as a place where quiet is an essential element of their intended purpose.

SOUND LEVELS OF REPRESENTATIVE SOUNDS AND NOISES

The U.S. Environmental Protection Agency (EPA) has developed an index to assess noise impacts from a variety of sources. Noise levels in a quiet rural area at night are typically between 32 and 35 dBA. Quiet urban nighttime noise levels range from 40 to 50 dBA. Noise levels during the day in a noisy urban area are frequently as high as 70 to 80 dBA. Noise levels above 110 dBA become intolerable; levels higher than 80 dBA over continuous periods can result in hearing loss. Levels above 70 dBA tend to be associated with task interference. Levels between 50 and 55 dBA are associated with raised voices in a normal conversation (EPA 1974). In general, an average person perceives an increase of 3 dBA or less as barely perceptible. An increase of 10 dBA is perceived as a doubling of the sound. Table 5.11-1 provides criteria that has been used to estimate an individual's perception to increases in sound. Table 5.11-2 presents sound levels for some common noise sources and the human response to those decibel levels.

Table 5.11.1. Average Human Ability to Perceive Changes in Sound Levels

Increase in Sound Level (dBA)	Human Perception of Sound
2–3	Barely perceptible
5	Readily noticeable
10	Doubling of the sound
20	Dramatic change

Source: SWCA (2022)

NOISE ASSESSMENT COMPONENTS

A noise assessment is based on the following components: a sound-generating source, a medium through which the source transmits sounds, the pathways taken by these sounds, and an evaluation of the proximity to noise receptors. Soundscapes are affected by the following factors:

- **Source**. The sources of sound are any generators of small back-and-forth motions (i.e., motions that transfer their motional energy to the transmission path where it is propagated). The acoustic characteristics of the sources are very important. Sources must generate sound of sufficient strength, approximate pitch, and duration so that the sound may be perceived and can cause adverse effects, compared with the natural ambient sounds.
- **"Transmission path" or medium.** The "transmission path" or medium for sound or noise is most often the atmosphere (i.e., air). For the noise to be transmitted, the transmission path must support the free propagation of the small vibratory motions that make up the sound. Atmospheric conditions (e.g., wind speed and direction, temperature, humidity, precipitation) influence the attenuation of sound. Barriers and/or discontinuities (e.g., existing structures, topography, foliage, ground cover, etc.) that attenuate the flow of sound may compromise the path. For example, sound will travel very well across reflective surfaces such as water and pavement but can attenuate across rough surfaces (e.g., grass, loose soil).
- **Proximity to receptors.** A receptor is usually defined as a location where a state of quietness is a basis for use or where excessive noise interferes with the normal use of the location. Typical receptors include residential areas, monuments, schools, hospitals, churches, and libraries.

Table 5.11.2. Sound Levels of Representative Sounds and Noises

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1,000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 miles per hour		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	**— 70 —**	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	**— 60 —**	
		Large business office
Quiet urban daytime	**— 50 —**	Dishwasher next room
Quiet urban nighttime	**— 40 —**	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	**— 0 —**	Lowest threshold of human hearing

Source: California Department of Transportation (2022)

5.11.1.2 Ground-borne Vibration Fundamentals

Ground-borne vibration is a small, rapidly fluctuating motion transmitted through the ground. When seismic waves can be felt, they are called "ground vibrations." The ground vibration from surface waves is measured as the velocity of motion, or how many inches per second (in/sec) the ground is moving. The motion of the ground particles (vibration) happens in three dimensions: radial, transverse, and vertical. During vibration, each particle has a velocity, and the maximum velocity is referred to as the peak particle velocity (PPV). The resulting vector of all three components (i.e., radial, transverse, and vertical) combined is referred to as peak vector sum (PVS).

GROUND VIBRATION TERMS

Ground vibration is described using the following terms:

- Acceleration is the rate at which particle velocity changes.
- Crest factor is the ratio of peak particle velocity to maximum root mean square amplitude in an oscillating signal.

- Displacement is the farthest distance that the ground moves before returning to its original position.
- Frequency is the number of oscillations per second that a particle makes when under the influence of seismic waves.
- Hertz (Hz) is the unit of acoustic or vibration frequency representing cycles per second.
- Peak particle velocity (PPV) is the greatest particle velocity associated with an event.
- Peak vector sum (PVS) is the square root of the sum of the squares of the individual PPV values in all three vector directions.
- Particle velocity is the velocity at which the ground moves.
- Propagation velocity is the speed at which a seismic wave travels away from the blast.
- Root Mean Square (RMS) is the square root of the mean-square value of an oscillating waveform, where the mean-square value is obtained by squaring the value of amplitudes at each instant of time and then averaging these values over the sample time.
- Vibration Velocity Level (LV) is 10 times the common logarithm of the ratio of the square of the amplitude of the RMS vibration velocity to the square of the amplitude of the reference RMS vibration velocity.

GROUND VIBRATION AND STRUCTURE DAMAGE

Ground vibrations can produce permanent changes in the relative positions of "particles" that make up structures, resulting in "damage". The larger the vibration (i.e., the higher the ground movement speed), the greater is the potential for these permanent shifts in particle positions in structures. While structural damage associated with ground vibration can occur, noticeable vibration damage is often seen as cracks in drywall or plaster and exterior surfaces such as grout and stucco. This may, or may not, be a sign of structural damage. Since such cosmetic damage can also be caused by settling, temperature changes, and normal aging; overall, a few hairline cracks found in a house does not necessarily indicate a vibrational cause.

GROUND VIBRATION AND HUMAN PERCEPTION

In addition to concerns about structural damage, under specific conditions, humans can be startled or annoyed by ground vibration. Human response to vibration is difficult to evaluate due to differences in individual perception. Humans may detect lower levels of ground vibration than those levels that could adversely impact structures. The human body can distinctively perceive ground vibration as low as 0.1 in/sec, with some people being able to perceive even lower levels.

Table 5.11-3 indicates the average human response to vibration that may be anticipated when the person is at rest, situated in a quiet surrounding.

Table 5.11.3. Human Response to Ground Vibration

Average Human Response	PPV (in/sec)
Barely to distinctly perceptible	0.020–0.10
Distinctly to strongly perceptible	0.10–0.50
Strongly perceptible to mildly unpleasant	0.50–1.00

Average Human Response	PPV (in/sec)
Mildly to distinctly unpleasant	1.00–2.00
Distinctly unpleasant to intolerable	2.00–10.00

Source: California Department of Transportation (2020)

Section 12.08.350 of the Los Angeles County Noise Control Ordinance defines "vibration" as the minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such direct means as, but not limited to, sensation by touch or visual observations of moving objects, and assumes a human perception threshold of 0.01 in/sec over the range of 1 to 100 hertz.

VIBRATION ASSESSMENT COMPONENTS

Vibration energy extends out as it travels through the ground, causing the vibration level to reduce with respect to the distance from the source. High-frequency vibration decreases much more rapidly than low frequencies, so that low frequencies tend to dominate the spectrum at large distances from the source. Geological factors that may influence the propagation of ground-borne vibration include the following:

- **Soil conditions.** The type of soil has a strong influence on the propagation of ground-borne vibration. Hard, dense, and compacted soil, stiff clay soil, and hard rock transfer vibration more efficiently than loose, soft soils, sand, or gravel.
- **Depth to bedrock.** Shallow depth to bedrock provides more efficient propagation of ground-borne vibration. Shallow bedrock concentrates the vibration energy near the surface, reflecting vibration waves back toward the surface that would otherwise continue to propagate farther down into the earth.
- **Soil strata.** Discontinuities in the soil layering can produce diffractions or channeling effects that impact the propagation of vibration over long distances.
- **Frost conditions.** Seismic waves typically propagate more efficiently in frozen soils than in unfrozen soils.
- **Water conditions.** The amount of moisture in the soil has an impact on vibration propagation. The depth of the water table in the path of the propagation also has substantial effects on ground-borne vibration levels.

Specific conditions at the source and receptor locations can also affect the vibration levels. For instance, how the source is connected to the ground (e.g., direct contact or via a structure) or when the source is underground versus on the surface will impact the amount of energy transmitted into the ground. At the receptor, vibration levels can be affected by variables such as the building construction and the foundation type.

5.11.1.3 Existing Land Use and Site Conditions

The project site is in an urbanized area surrounded by a variety of commercial uses, museums, and residential buildings. The project site is bounded by the Park La Brea Pool and multi-family residential uses to the north across West 6th Street; commercial and residential uses to the east across South Curson Avenue; the Craft Contemporary Museum and other museum and commercial uses to the south across Wilshire Boulevard; and museum and commercial uses to the west. The predominant noise sources in the vicinity of the project site include noise from vehicular traffic, commercial activities, park visitors,

landscaping equipment, parking lot activities, and construction noise from projects that are being developed in the area.

The nearest noise-sensitive land uses to the project site include four off-site residential receptors, ranging between 50 to 150 feet from the project site. As part of the noise monitoring conducted for the project, these off-site residential receptors (referenced hereafter as monitoring locations ST2, ST3, ST5, and ST6) were selected to represent noise-sensitive uses in the project site. Four commercial receptors (referenced hereafter as monitoring locations ST7, ST8, ST9, and ST10) were also selected to evaluate potential noise and vibration impacts adjacent to the project site. Additionally, two long-term noise monitoring locations were selected to provide the existing ambient noise levels at the project's site. The long-term noise monitors (LT-1 and LT-2) were placed at the southeast and northwest corners of the proposed project site (Figure 5.11-1). Table 5.11-4 provides a description of noise monitoring locations. The results of noise monitoring are shown in Table 5.11-5 (see Appendix I for a detailed description of monitoring efforts).

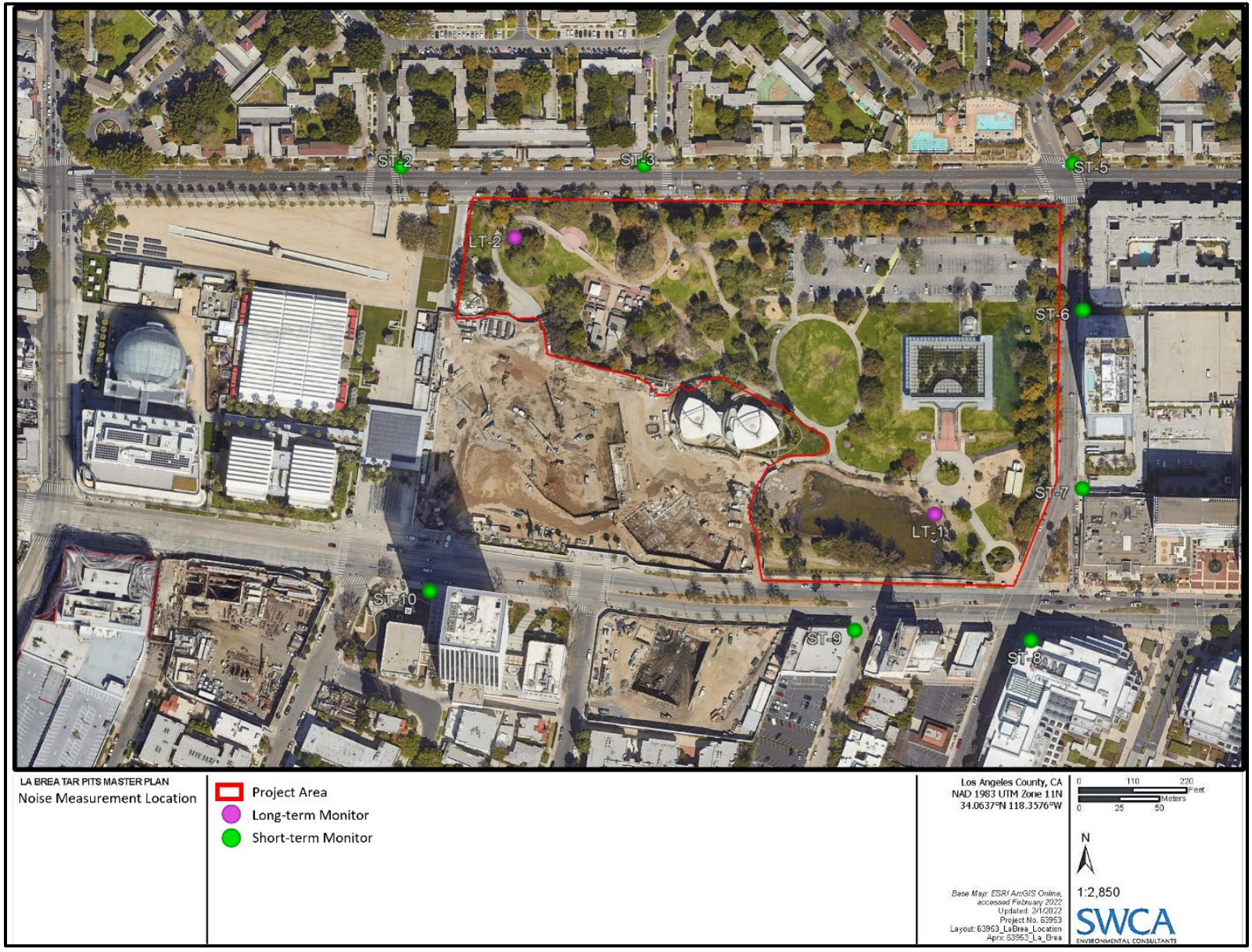


Figure 5.11-1. Noise measurement locations.

Table 5.11.4. Noise Monitoring Locations

Monitoring Location	Description	Approximate Distance from Measuring Location to Nearest Project Site Boundary*	Nearest Noise Land Use(s)
LT1	Northeast corner of the Lake Pit.	–	–
LT2	Northeast corner of Pit 13.	–	–
ST2	Multi-family residence on the north side of West 6th Street, northwest of the project site.	160 feet	Multi-Family Residential
ST3	Multi-family residence on the north side of West 6th Street, northwest of the project site.	72 feet	Multi-Family Residential
ST5	Multi-family residence on the north side of West 6th Street, northeast of the project site.	90 feet	Multi-Family Residential
ST6	Multi-family residence on the east side of Curson Avenue, east of the project site.	59 feet	Multi-Family Residential
ST7	Mixed-use commercial building on the east side of Curson Avenue, east of the project site.	61 feet	Commercial
ST8	Office building on the south side of Wilshire Boulevard, southeast of the project site.	124 feet	Commercial
ST9	Commercial building on the south side of Wilshire Boulevard, south of the project site.	114 feet	Commercial
ST10	Commercial building on the south side of Wilshire Boulevard, southwest of the project site.	669 feet	Commercial

Source: SWCA (2022)

Table 5.11.5. Measured Existing Ambient Noise Levels

	Measured Noise Levels (dBA)				Estimated Noise Levels (dBA)	
Monitoring Location	Daytime Hours (7:00 a.m.–7:00 p.m.)	Evening Hours (7:00 p.m.–10:00 p.m.)	Nighttime Hours (10:00 p.m.–7:00 a.m.)	L_{90} (24-hour)	L_{dn}* (24-hour)	CNEL* (24-hour)
LT1	58.9	54.2	53.0	46.6	60.6	60.9
LT2	56.6	54.2	51.7	46.0	59.1	59.5
ST2	67.5	–	–	52.1	66.7	68.1
ST3	65.5	–	–	51.8	65.3	66.4
ST5	74.9	–	–	56.1	73.1	75.1
ST6	62.8	–	–	51.5	63.8	64.4
ST7	64.8	–	–	54.6	64.9	65.9
ST8	69.8	–	–	57.1	68.5	70.2
ST9	74.6	–	–	63.7	72.8	74.8
ST10	67.1	–	–	54.7	66.4	67.8

Source: SWCA (2022)

Note: L_{90} is the sound level exceeded 90% of the time of the measurement period. Ldn is the A-weighted equivalent sound level for a 24-hour period with an additional 10 dB weighting imposed on the equivalent sound levels occurring during nighttime hours (10:00 p.m. to 7:00 a.m.).

* Estimated from measured daytime noise levels and estimated nighttime levels based on the presented nighttime hours in the Presumed Ambient Noise Levels, City of Los Angeles Municipal Code, Section 111.03.

As shown in Table 5.11-5, the existing daytime noise levels in project vicinity range between 62.8 and 74.9 dBA L_{eq}. The two long-term noise measurements (LT1 and LT2) indicate that the average hourly noise levels during daytime hours ranged between 56.6 and 58.9 dBA L_{eq} and between 59.5 and 60.9 dBA CNEL at the project site.

5.11.1.4 Existing Traffic Noise

In addition to the noise measurements, the existing traffic noise on local roadways in the surrounding area was calculated to quantify the 24-hour CNEL noise levels in the project site. Thirteen roadway segments were selected to represent the existing noise conditions for the analysis. Traffic noise levels were calculated using a proprietary noise model (i.e., SoundPlan Essential v5.1) based on the Federal Highway Administration (FHWA) Traffic Noise Model Version 2.5 (FHWA 2004). The inputs used in the traffic noise modeling included hourly traffic volumes, assumed traffic mix and daily distribution (the percentage of automobiles versus medium trucks and heavy trucks during each hour of the day), and traffic speeds based on the posted speed limits (see Appendix I for a detailed description of modeling efforts).

Table 5.11-6 presents the estimated traffic noise levels for the analyzed roadway segments based on existing traffic volumes for both a weekday and weekend. The estimated existing CNEL due to roadway traffic ranges from 62.6 dBA to 71.7 dBA for weekdays, and between 60.8 dBA and 69.8 dBA during weekends (see Table 5.11-6).

Table 5.11.6. Existing Roadway Traffic Noise Levels

Roadway Segment		Adjacent Land Use	Calculated Traffic Noise Levels, CNEL*		Noise-Sensitive Land Uses?	Existing Noise Exposure Compatibility Category†
			Weekday (dBA)	Weekend (dBA)		
6th Street	Between Fairfax Avenue and Ogden Drive	Residential	71.3	69.8	Yes	Normally unacceptable
	Between Ogden Drive and Curson Avenue	Residential	71.7	67.7	Yes	Normally unacceptable
	East of Curson Avenue	Residential	71.0	67.7	Yes	Normally unacceptable
Ogden Drive	North of 6th Street	Residential	62.6	60.8	Yes	Conditionally acceptable
	South of Wilshire Boulevard	Commercial	62.9	60.8	No	Normally acceptable
Spaulding Avenue	South of Wilshire Boulevard	Commercial	64.9	63.2	No	Normally acceptable
Curson Avenue	North of 6th Street	Residential	67.3	64.8	Yes	Conditionally acceptable
	Between 6th Street and Wilshire Boulevard	Residential	68.1	67.6	Yes	Conditionally acceptable
	South of Wilshire Boulevard	Residential	71.0	69.1	Yes	Normally unacceptable

Roadway Segment		Adjacent Land Use	Calculated Traffic Noise Levels, CNEL*		Noise-Sensitive Land Uses?	Existing Noise Exposure Compatibility Category†
			Weekday (dBA)	Weekend (dBA)		
Wilshire Boulevard	Between Fairfax Avenue and Ogden Drive	Museum	68.3	66	No	Normally acceptable
	Between Ogden Drive and Spaulding Avenue	Commercial	67.2	65.1	No	Normally acceptable
	Between Spaulding Avenue and Curson Avenue	Museum	69.4	67.0	No	Normally acceptable
	East of Curson Avenue	Commercial	67.8	65.8	No	Normally acceptable

* Detailed calculation worksheets are included in Appendix B of the Noise and Vibration Technical Report (see Appendix I).

† Noise compatibility is based on the most stringent land use and the higher of the calculated CNEL during weekday and weekend days. Normally Acceptable = Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable = New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Normally Unacceptable = New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable = New construction or development should generally not be undertaken.

5.11.1.5 Existing Ground-Borne Vibration Conditions

The primary ground-borne vibration source at urban settings is vehicular traffic. It is unusual for vibration from traffic sources to be perceptible, as trucks and buses typically generate vibration velocity levels of approximately 63 vibration velocity decibels (VdB) at 50 feet (Federal Transit Administration [FTA] 2018). Normally, 75 VdB is defined as the dividing line between barely perceptible and distinctly perceptible (FTA 2018). Therefore, it is expected that the existing ground-borne vibration levels at the project vicinity would be below the perceptible level.

5.11.2 Regulatory Setting

5.11.2.1 Federal

There are no federal noise standards or regulations that directly regulate environmental noise related to the construction or operation of the proposed project.

As well, no standards or limits applicable to potential building damage from ground-borne vibration have been adopted by a federal agency. However, the FTA has guidelines available to assess potential impacts on buildings and structures due to ground-borne vibration. The FTA's *Transit Noise and Vibration Impacts Assessment Manual* provides impact criteria concerning building damage during construction activities (FTA 2018). Table 5.11-7 includes the FTA vibration criteria for construction activities.

Table 5.11.7. Construction Vibration Impact Criteria for Building Damage

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

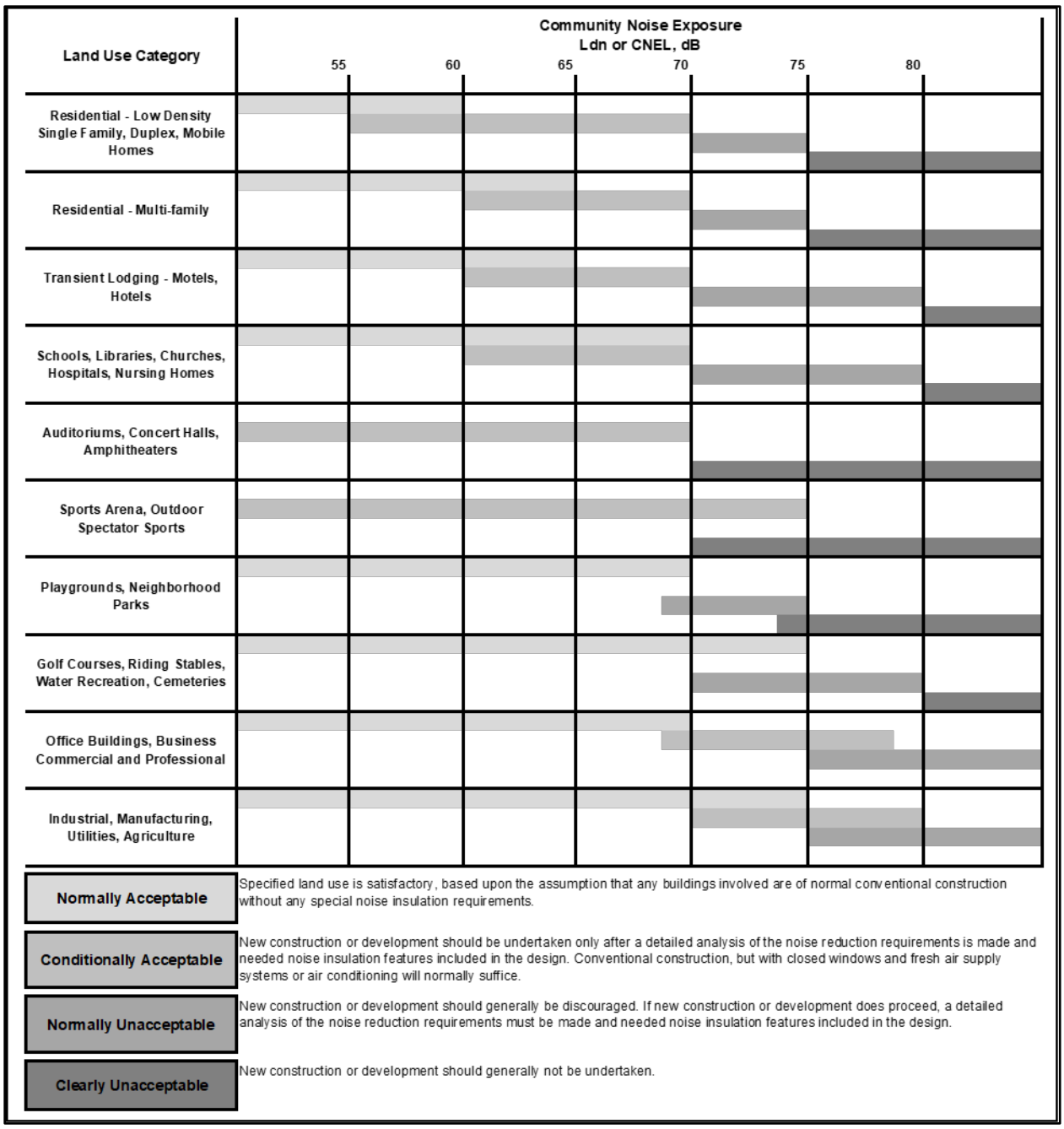
Source: FTA (2018)
PPV = peak particle velocity; in/sec = inch(es) per second

5.11.2.2 State

The State of California has not adopted statewide regulations or standards for noise. However, the *State of California General Plan Guidelines*, published and updated by the Governor's Office of Planning and Research (OPR), provides standards and the acceptable noise categories for different land uses (OPR 2017). Figure 5.11-2 provides the exterior noise standards associated with the different land uses evaluated by the State.

California also requires each local government entity to perform noise studies and implement a noise element as part of its general plan. The purpose of the noise element is to limit the exposure of the community to excessive noise levels; the noise element must be used to guide decisions concerning land use.

There are no state ground-borne vibration standards that directly apply to the project.



Source: OPR (2017)

Figure 5.11-2. Land use compatibility for exterior community noise exposure.

5.11.2.3 County of Los Angeles

COUNTY OF LOS ANGELES NOISE CONTROL ORDINANCE

The County of Los Angeles Noise Control Ordinance (Section 12.08 of the Los Angeles County Code [County Code]) identifies noise standards for exterior noise sources (Table 5.11-8). Regarding maximum exterior noise levels, County Code Section 12.08.390 states that exterior operational noise levels caused

by fixed noise sources shall not exceed the levels listed in Table 5.11-8, or the existing ambient noise level, whichever is greater (measured in dB).

Table 5.11.8. County of Los Angeles Exterior Operational Noise Standards

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Exterior Noise Level (dB)
I	Noise-sensitive area	Anytime	45
II	Residential properties	10:00 p.m. to 7:00 a.m. (nighttime)	45
		7:00 a.m. to 10:00 p.m. (daytime)	50
III	Commercial properties	10:00 p.m. to 7:00 a.m. (nighttime)	55
		7:00 a.m. to 10:00 p.m. (daytime)	60
IV	Industrial properties	Anytime	70

Source: Los Angeles County Code 12.08.390 - Exterior noise standards.

Section 12.08.390 of the County Code also states that no person shall operate or cause to be operated, any source of sound at any location within the unincorporated county, or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person which causes the noise level, when measured on any other property either incorporated or unincorporated, to exceed any of the following exterior noise standards:

> **Standard No. 1** shall be the exterior noise level which may not be exceeded for a cumulative period of more than 30 minutes in any hour. Standard No. 1 shall be the applicable noise level; or, if the ambient noise level exceeded for 50% of the time of the measurement duration (L_{50}) exceeds the foregoing level, then the ambient L_{50} becomes the exterior noise level for Standard No. 1.
>
> **Standard No. 2** shall be the exterior noise level which may not be exceeded for a cumulative period of more than 15 minutes in any hour. Standard No. 2 shall be the applicable noise level plus 5 dB; or, if the ambient noise level exceeded for 25% of the time of the measurement duration (L_{25}) exceeds the foregoing level, then the ambient L_{25} becomes the exterior noise level for Standard No. 2.
>
> **Standard No. 3** shall be the exterior noise level which may not be exceeded for a cumulative period of more than 5 minutes in any hour. Standard No. 3 shall be the applicable noise level plus 20 dB; or, if the ambient noise level exceeded for 8.3% of the time of the measurement duration ($L_{8.3}$) exceeds the foregoing level, then the ambient $L_{8.3}$ becomes the exterior noise level for Standard No. 3.
>
> **Standard No. 4** shall be the exterior noise level which may not be exceeded for a cumulative period of more than 1 minute in any hour. Standard No. 4 shall be the applicable noise level plus 15 dB; or, if the ambient noise level exceeded for 1.7% of the time of the measurement duration ($L_{1.7}$) exceeds the foregoing level, then the ambient $L_{1.7}$ becomes the exterior noise level for Standard No. 4.
>
> **Standard No. 5** shall be the exterior noise level which may not be exceeded for any period of time. Standard No. 5 shall be the applicable noise level plus 20 dB; or, if the highest ambient noise level that occurred at the site (L_0) exceeds the foregoing level, then the ambient L_0 becomes the exterior noise level for Standard No. 5.

The County Noise Control Ordinance also identifies specific restrictions regarding construction noise. Construction noise limits are included in Chapter 12.08.440, Noise Control, of the Los Angeles County Code of Ordinances. Pursuant to the County Noise Control Ordinance, the operation of equipment used in construction, repair, alteration, drilling, or demolition work is prohibited between the hours of 7:00 p.m. and 7:00 a.m., Monday through Friday; before 8:00 a.m. or after 6:00 p.m. on Saturday; and anytime on Sundays or legal holidays if such noise would create a noise disturbance across a residential or commercial real-property line. Table 5.11-9 identifies the maximum noise levels at the affected buildings allowed by the County Noise Control Ordinance.

Table 5.11.9. County of Los Angeles Construction Noise Limits

Time	Single-Family Residential	Multi-Family Residential	Semi-Residential/ Commercial
At Residential Structures			
Mobile Equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:			
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75 dBA	80 dBA	85 dBA
Daily, 8:00 p.m. to 7:00 a.m., and all day Sunday and legal holidays	60 dBA	64 dBA	70 dBA
Stationary Equipment. Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:			
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60 dBA	65 dBA	70 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA
At Business Structures			
Mobile Equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation of mobile equipment:			
Daily, including Sundays and legal holidays, all hours		85 dBA (All structures)	

Source: Los Angeles County Code 12.08.440 - Construction noise.
dBA = A-weighted decibel(s)

Section 12.08.560 of the County Noise Control Ordinance provides a ground-borne vibration limit as to not exceed the vibration human perception threshold of 0.01 in/sec (80 VdB).

5.11.2.4 City of Los Angeles

While the project site is located within the city of Los Angeles, it is owned by the County. Accordingly, the project is subject to the regulatory controls of the County of Los Angeles and not the City of Los Angeles (City). Nonetheless, the policy and regulatory documents of the City are provided herein. As described in Section 5.11.4, because the areas surrounding the project site are within the jurisdiction of the City of Los Angeles, the noise analysis considers both City and County criteria and regulations, with the more restrictive provisions applied regardless of whether the provisions are requirements or only considered advisory given they are not explicitly required of the project by regulation or ordinance.

NOISE ELEMENT OF THE CITY OF LOS ANGELES GENERAL PLAN

The *Noise Element of the City of Los Angeles General Plan* (City of Los Angeles 1999) addresses noise sources and noise mitigation strategies and regulations and provides objectives and policies that ensure

that noise from various sources does not create an unacceptable noise environment. The goal, objectives, and policies of the Noise Element that are relevant to the project are provided below for informational purposes and are used to inform the criteria by which the noise impacts of the proposed La Brea Tar Pits Master Plan are considered.

Goal – A city where noise does not reduce the quality of urban life.

Objectives and Policies –

> ***Objective 2 (Non-airport) -*** Reduce or eliminate non-airport-related intrusive noise, especially relative to noise-sensitive uses.
>
> > ***Policy 2.2.*** Enforce and/or implement applicable city, state, and federal regulations intended to mitigate proposed noise-producing activities, reduce intrusive noise, and alleviate noise that is deemed a public nuisance.
>
> ***Objective 3 (Land Use Development) -*** Reduce or eliminate noise impacts associated with proposed development of land and changes in land use.
>
> > ***Policy 3.1.*** Develop land use policies and programs that will reduce or eliminate potential and existing noise impacts.

The City's noise compatibility guidelines are based on the State's *General Plan Guidelines* (OPR 2017).

CITY OF LOS ANGELES MUNICIPAL CODE

Section 41.40(a) of the Los Angeles Municipal Code (LAMC) prohibits the use, operation, repair, or servicing of construction equipment, as well as job-site delivery of construction materials, between the hours of 9:00 p.m. and 7:00 a.m., where such activities would disturb "persons occupying sleeping quarters in any dwelling hotel or apartment or other place of residence." In addition, Section 41.40(c) prohibits construction, grading, and related job-site deliveries on or within 500 feet of land developed with residential structures before 8:00 a.m. or after 6:00 p.m. on any Saturday or national holiday or at any time on Sunday.

Section 112.05 of the LAMC places a noise level limit of 75 dBA at 50 feet for powered equipment or tools, which includes construction equipment in, or within 500 feet of, any residential zone between the hours of 7:00 a.m. and 10:00 p.m. Under the code, such limits shall not apply where compliance is technically infeasible. Technical infeasibility means that the noise limit cannot be achieved despite the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques during operation of the equipment.

Chapter XI of the LAMC (Noise Regulation) regulates noise from non-transportation noise sources such as commercial or industrial operations, mechanical equipment, or residential activities. These regulations do not apply to vehicles operating on public rights-of-way but do apply to noise generated by vehicles on private property, such as in parking lots or parking structures. The allowable noise levels are determined relative to the existing ambient noise levels at the affected location. Section 111.01(a) of the LAMC defines ambient noise as "the composite of noise from all sources near and far in a given environment, exclusive of occasional and transient intrusive noise sources and the particular noise source or sources to be measured. Ambient noise shall be averaged over a period of at least 15 minutes."

The Noise Regulation indicates that in cases where the actual ambient conditions are not measured, the City's presumed daytime and nighttime ambient noise levels, as defined in the LAMC Section 111.03, should be used (Table 5.11-10).

Table 5.11.10. City of Los Angeles Presumed Ambient Noise Levels

	Daytime (7:00 a.m. to 10:00 p.m.), L_{eq}	Nighttime (10:00 p.m. to 7:00 a.m.), L_{eq}
Zone	dBA	dBA
Residential, school, hospitals, hotels	50	40
Commercial	60	55
Manufacturing (M1, MR1, MR2)	60	55
Heavy manufacturing (M2, M3)	65	65

Source: City of Los Angeles Municipal Code, Section 111.03

L_{eq} = equivalent noise level

Section 111.02 states that under conditions where noise alleged to be offending occurs for more than 5 minutes but less than 15 minutes in any 1-hour period between the hours of 7:00 a.m. and 10:00 p.m. of any day, a 5-dBA allowance should be provided to the noise source. Additionally, under conditions where the offending noise occurs for 5 minutes or less in any 1-hour period between the hours of 7:00 a.m. and 10:00 p.m. of any day, an additional 5-dBA allowance can be provided to the noise source. Section 114.02 of the LAMC also provides noise regulations with respect to vehicle-related noise and prohibits the operation of any motor-driven vehicles upon any property within the city in a manner that would exceed the ambient noise level by more than 5 dBA.

CITY OF LOS ANGELES CEQA THRESHOLDS GUIDE

The *L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles* (City of L.A. Thresholds Guide; City of Los Angeles 2006) is a guidance document that draws together practical information useful to City staff, project proponents, and the public involved in the environmental review of projects in the city of Los Angeles subject to CEQA.

The City of L.A. Thresholds Guide defines "noise sensitive" as residences, transient lodgings, schools, libraries, churches, hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks. The City of L.A. Thresholds Guide includes a set of criteria to evaluate project impacts. The significance thresholds assist in determining whether a project's impacts would be presumed significant under normal circumstances and, therefore, require mitigation to be identified.

A project under CEQA would normally have a significance impact on noise levels from construction if:

- Construction activities lasting more than 1 day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise-sensitive use;
- Construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use; or
- Construction activities would exceed the ambient noise level by 5 dBA at a noise-sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

A project would normally have a significant impact on noise levels from project operations if the project causes the ambient noise level measured at the property line of affected uses to increase by 3 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" category, or any 5-dBA or greater noise increase (see Figure 5.11-2).

5.11.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse impacts related to noise if it would:

- Result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Result in generation of excessive groundborne vibration or groundborne noise levels.
- Be located within the vicinity of a private airstrip or within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, and if so, the project would expose people residing or working in the project area to excessive noise levels.

5.11.4 Impact Assessment Methodology

The following impact analysis is based, in part, on the *Noise and Ground Vibration Technical Report for the La Brea Tar Pits Master Plan* (SWCA 2022; see Appendix I).

While the project site is located within the city of Los Angeles, it is owned by the County of Los Angeles. Accordingly, the project is not subject to the regulatory controls of the City of Los Angeles; however, the areas surrounding the project site are within the City's jurisdiction. As such, the following analysis considers both City and County criteria and regulations, with the more restrictive provisions applied.

The following analysis evaluates the potential change in the existing noise levels at the project site and surrounding area due to an increase in noise and ground-borne vibration during both construction and operation of the project. The evaluation of potential impacts is based on the following criteria.

SHORT-TERM CONSTRUCTION NOISE CRITERIA

The County Noise Control Ordinance (Section 12.08.440 of the County Code) identifies noise standards for construction activities. The County's construction noise limit is 65 dBA for multi-family residential uses and 85 dBA for business structures. Similarly, the LAMC limit for construction noise lasting more than 10 days is 5 dBA above ambient levels. The following significance criteria are applied to the project, as set forth in the LAMC, the City of L.A. Thresholds Guide, and the County of Los Angeles Ordinance, with the more restrictive provisions applied:

- Construction activities would exceed the ambient noise level by 5 dBA (L_{eq}) or more at a noise-sensitive use.

SHORT-TERM CONSTRUCTION VIBRATION CRITERIA

Because there are currently no local regulatory standards for ground-borne vibration that are applicable to the project, then, based on FTA impacts with respect to building damage (see Table 5.11-7), ground-borne vibration would be considered significant if

- Ground-borne vibration levels from construction activities exceed 0.5 PPV at the nearest off-site reinforced-concrete, steel, or timber building; or
- Ground-borne vibration levels from construction activities exceed 0.3 PPV at the nearest off-site engineered concrete building; or
- Ground-borne vibration levels from construction activities exceed 0.2 PPV at the nearest off-site non-engineered timber and masonry building; or
- Ground-borne vibration levels from construction activities exceed 0.12 PPV at buildings extremely susceptible to vibration damage (e.g., historic buildings).

With respect to human annoyance, Section 12.08.560 of the Los Angeles County Noise Control Ordinance presents a threshold of 0.01 in/sec (80 VdB). Therefore, construction vibration impacts associated with human perception would be significant if:

- Ground-borne vibration levels from construction activities exceed 80 VdB at the off-site receptor.

LONG-TERM OPERATIONAL NOISE CRITERIA

Per Chapter XI of the LAMC, a noise level increase of 5 dBA over the ambient noise level at an adjacent property line is considered a noise violation for most operational noise sources. The Los Angeles County Noise Control Ordinance states that the exterior operational noise level caused by project-related on-site fixed sources shall not exceed the levels presented in Table 5.11-8 or the ambient noise level, whichever is greater. Therefore, project-related operational on-site (i.e., non-roadway) noise sources, such as outdoor building mechanical/electrical equipment, outdoor activities, or parking facilities, would be significant if

- Operational on-site activities would exceed the ambient noise level by 5 dBA (L_{eq}) or more at a noise-sensitive use.

TRAFFIC NOISE CRITERIA

Relating to roadway noise, a 24-hour average noise level metric (i.e., dBA CNEL) was used to assess noise impacts associated with the project based on the City's land use/noise compatibility guidelines and the City of L.A. Thresholds Guide (City of Los Angeles 2006). An increase of 3 dBA CNEL at noise-sensitive uses with ambient noise levels within the "normally unacceptable" or "clearly unacceptable" category (see Figure 5.11-2), or any 5-dBA or greater noise increase if the ambient noise level at the affected sensitive land use is within the "normally acceptable" or "conditionally acceptable" category, would be considered significant.

5.11.5 Environmental Impact Analysis

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

CONSTRUCTION NOISE

Worker vehicles and haul trucks transporting equipment and materials to and from the project site during construction would increase noise levels on the local roads in the project site. It is expected that construction trucks would typically access the project site from the nearby Interstate (I-) 10, taking the La Brea Avenue exit from the westbound I-10. Trucks would travel northbound to Wilshire Boulevard, continue westbound on Wilshire Boulevard, then northbound on Curson Avenue to the project site. The construction worker vehicles would not be restricted to travel exclusively on this haul route and instead are allowed to access the project site via other routes. However, to perform a conservative traffic noise analysis, all traffic for the project (i.e., worker and truck trips) is assumed to travel on this haul route.

The grading phase would be the peak period of construction with the highest number of construction trucks. There would be a maximum of 127 construction trucks (e.g., vendor, hauling), totaling 254 trips per day. The hourly truck trips were estimated based on 8-hour workdays and assuming a uniform distribution of trips. The hourly worker trips were estimated, assuming half of the workers would arrive in 1 hour, resulting in 38 worker trips per hour. The estimated roadway noise levels resulting from the addition of the project's construction-related traffic on these roadway segments are shown in Table 5.11-11. As shown in Table 5.11-11, the estimated noise levels generated by off-site construction traffic would be below the existing daytime ambient noise level at the noise-sensitive receptors along the haul routes.

Table 5.11.11. Off-site Construction Traffic Noise Levels

Construction Phase	Estimated Off-Site Construction Noise Levels along the Project Haul Routes, L_{eq} (Wilshire Boulevard / La Brea Avenue / Curson Avenue) dBA
Demolition	57.1
Site preparation	51.4
Grading	64.5
Building construction	59.6
Paving	52.8
Architectural coating	55.9
Existing ambient noise levels along the project haul routes, L_{eq}*	72.4 / 73.3 / 68.6
Significance threshold, L_{eq}†	68.6

Source: SWCA (2022)
* La Brea Avenue noise levels were taken from County of Los Angeles (2017:Table IV.I-14).
† Significance thresholds are equivalent to the existing daytime noise levels.

During project construction, noise from construction activities may intermittently dominate the noise environment in the immediate project site. Table 5.11-12 shows the noise levels from standard construction equipment at 50 feet from the source.

Table 5.11.12. Noise Levels for Common Construction Equipment

Equipment Description	Typical Maximum Noise Levels at 50 Feet (dBA)
Auger drill rig	85
Backhoe	80
Chain saw	85
Compressor (air)	80
Concrete saw	90
Crane	85
Dozer	85
Drill rig truck	84
Drum mixer	80
Dump truck	84
Excavator	85
Flat-bed truck	84
Front-end loader	80
Generator	82
Grader	85
Impact pile driver	95
Jackhammer	85
Man lift	85
Paver	85
Pickup truck	55
Pneumatic tools	85
Pumps	77
Rock drill	85
Roller	85
Scraper	85
Tractor	84
Trencher	82
Vibratory concrete mixer	80
Vibratory pile driver	95
Welder/torch	73

Source: FHWA (2011)

Construction activities associated with the project were assessed to last approximately 4 years, with completion anticipated in 2027. This is the most conservative analysis from a noise perspective given the most equipment would be on the site at one time if the project was implemented during one phase. During this time, noise from equipment use and activities on-site would vary throughout the project site, depending on various stages of construction. The predicted noise from construction activity is presented as a worst-case (highest noise level) scenario, where it is assumed that all equipment is present and operating simultaneously on-site for each stage of construction. Table 5.11-13 shows the highest construction noise levels at each of the analyzed monitoring locations. As shown in Table 5.11-13, the

estimated construction noise levels at off-site receptors ST2, ST5, ST8, ST9, and ST10 would be below the significance threshold. However, the estimated noise levels at receptors ST3, ST6, and ST7 would exceed the significance threshold by 2.7 dBA at ST3, 4.6 at ST6, and 3.9 dBA at ST7. As a result, noise impacts resulting from project construction could be *significant*.

Table 5.11.13. Estimated Construction Noise Levels at Nearby Sensitive Receptors

	Measured Daytime Ambient Noise Levels, L_{eq}	Estimated Construction Noise Levels by Construction Phases (Ambient plus Construction), L_{eq}						Significance Threshold, L_{eq}*
		Demolition	Site Preparation	Grading	Building Const.	Paving	Arch. Coating	
Receptor	**dBA**	**dBA**	**dBA**	**dBA**	**dBA**	**dBA**	**dBA**	**dBA**
ST2	67.5	68.8	69.2	70.5	67.8	67.5	67.6	72.5
ST3	65.5	67.2	**70.8**	**73.2**	66.6	65.7	65.8	70.5
ST5	74.9	75.2	75.4	75.8	75.0	75.0	74.9	79.9
ST6	62.8	**68.8**	**70.0**	**72.4**	65.9	64	63.4	67.8
ST7	64.8	68.3	**71.2**	**73.7**	65.9	65.1	65	69.8
ST8	69.8	70.9	71.4	72.5	70.0	69.8	69.8	74.8
ST9	74.6	75.1	75.4	76.0	74.7	74.6	74.6	79.6
ST10	67.1	67.7	67.6	68.0	67.3	67.1	67.1	72.1

Source: SWCA (2022)

Note: Values in **bold** exceed the significance threshold for that receptor.

* Threshold is equivalent to the measured daytime ambient noise levels plus 5 dBA.

NOI Impact 1

During project construction, the project could generate a substantial increase (5 dBA Leq) in ambient noise levels in the vicinity of the project, which could affect noise-sensitive land uses. As a result, the project could result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of established standards. Therefore, noise impacts resulting from project construction could be significant.

(CEQA Checklist Appendix G Threshold XIII. a)

Mitigation Measures

NOI/mm-1.1 The following measures shall be implemented to reduce construction-related noise impacts:

a) *Operation of equipment used in construction, alteration, drilling, or demolition work shall be prohibited between the hours of 7:00 p.m. and 7:00 a.m., Monday through Friday; before 8:00 a.m. or after 6:00 p.m. on Saturday; and any time on Sundays or legal holidays.*

b) *A temporary and impermeable 12-foot-high temporary barrier designed to provide a 10-dBA noise reduction, shall be erected along the eastern and northern sides of the project site boundary. This barrier shall be constructed in one of the following ways:*

- *from acoustical blankets hung over or from a supporting frame, or*
- *from commercially available acoustical panels lined with sound-absorbing material, or*
- *from common construction materials such as plywood, provided that the barrier is designed with overlapping material at the seams to ensure that no gaps exist between the panels.*

NOI Impact 1
c) *Noise levels from powered equipment or powered hand tools at a distance of 50 feet from the noise source or within 500 feet of a residential zone will be limited to 75 dBA, such limits shall not apply where compliance is technically infeasible. Technical infeasibility means that the noise limit cannot be achieved despite the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques during operation of the equipment.* d) *All construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise-suppression devices.* e) *Pneumatic tools used at the site shall be equipped with an exhaust muffler on the compressed air exhaust to minimize noise levels.* f) *Stationary noise sources shall be located as far from adjacent sensitive receptors as possible and shall be muffled and enclosed within temporary sheds or insulated barriers when possible.* g) *Prior to commencement of construction, a designated project contact person will directly notify the management of any surrounding residential properties located within 100 feet of the project site about the construction schedule and activities and provide a contact number to address any noise-related complaints during construction.* h) *A designated point of contact shall be identified to address noise-related complaints during construction. The noise disturbance coordinator will be responsible for responding to any local complaints about construction noise.*
Impacts Following Mitigation
With implementation of NOI/mm-1.1, construction impacts would be less than significant as demonstrated by the analysis conducted to calculate the effectiveness of the mitigation measures, shown in Table 5.11-14.

Table 5.11-14 shows the highest construction noise levels at each of the analyzed monitoring locations after implementation of Mitigation Measure NOI/mm-1.1. As shown in Table 5.11-14, implementation of the recommended mitigation measures would reduce construction-related noise to less than the significance threshold at the off-site sensitive uses.

Table 5.11.14. Estimated Construction Noise Levels at Nearby Sensitive Receptors after Mitigation

	Measured Daytime Ambient Noise Levels, L_{eq}	Estimated Construction Noise Levels by Construction Phases (Ambient plus Construction), L_{eq} †						Significance Threshold, L_{eq}*
		Demolition	Site Preparation	Grading	Building Const.	Paving	Arch. Coating	
Receptor	**dBA**	**dBA**	**dBA**	**dBA**	**dBA**	**dBA**	**dBA**	**dBA**
ST2	67.5	67.6	67.7	67.9	67.5	67.5	67.5	72.5
ST3	65.5	65.7	66.4	67.2	65.6	65.5	65.5	70.5
ST5	74.9	74.9	75.0	75.0	74.9	74.9	74.9	79.9
ST6	62.8	63.9	64.3	65.4	63.2	62.9	62.9	67.8
ST7	64.8	65.7	66.1	67.0	64.9	64.8	64.8	69.8
ST8	69.8	70.9	71.4	72.5	70.0	69.9	69.8	74.8
ST9	74.6	75.1	75.4	76.0	74.7	74.6	74.6	79.6
ST10	67.1	67.7	67.6	68.0	67.3	67.1	67.1	72.1

Source: SWCA (2022)

* Threshold is equivalent to the measured daytime ambient noise levels plus 5 dBA.

† Assumes an estimated noise reduction of 10 dBA due to noise barrier/wall.

OPERATIONAL NOISE

Once operational, the project would establish stationary on-site noise sources at the project site as well as contribute to off-site roadway traffic noise. New stationary noise sources would include the parking facilities, mechanical equipment (i.e., dry coolers and emergency generators), loading and waste compacting activities, and activities associated with the use of outdoor spaces (e.g., outdoor café located on the center terrace on the west side of the George C. Page Museum [Page Museum]; and Pit 91 outdoor classroom), and roadway traffic noise sources.

On-Site Stationary Noise Sources

Mechanical Equipment

As part of the project, noise-generating mechanical equipment at the project site would include numerous heating, ventilation, and air-conditioning (HVAC) equipment located in mechanical rooms throughout the Page Museum building, the new museum building, and the support building, rooftop dry coolers, and emergency generators. All mechanical rooms within the project buildings would be outfitted with sound attenuation measures to reduce noise levels at neighboring properties. The mechanical equipment that may be audible at nearby sensitive receptors would be the dry coolers (located on the rooftops of the buildings) and three emergency generators (located on the ground floor of each building). Table 5.11-15 shows the estimated noise levels at the evaluated off-site receptors from the operation of the proposed mechanical noise sources. As shown in Table 5.11-15, the estimated noise levels from the operation of the mechanical equipment would fall below the significance threshold of existing daytime ambient noise levels plus 5 dBA.

Table 5.11.15. Estimated Noise Levels from Mechanical Equipment

Off-Site Receptor	Existing Daytime Ambient Noise Levels, L_{eq}	Estimated Noise Levels from Mechanical Equipment, L_{eq}	Ambient plus Project Noise Levels, L_{eq}	Significance Threshold*
	dBA	dBA	dBA	dBA
ST2	67.5	50.1	67.6	72.5
ST3	65.5	59.2	66.4	70.5
ST5	74.9	53.1	74.9	79.9
ST6	62.8	57.2	63.9	67.8
ST7	64.8	56.4	65.4	69.8
ST8	69.8	52.1	69.9	74.8
ST9	74.6	52.0	74.6	79.6
ST10	67.1	47.3	67.1	72.1

Source: SWCA (2022)

* Significance thresholds are assumed to be equal to the measured daytime noise levels plus 5 dBA.

Parking Noise

The existing parking lot would be expanded from 63,000 square feet to 65,000 square feet and shifted to the northeast corner of the site. The parking lot would hold approximately 170 vehicle parking spaces, an increase of approximately 15 spaces. Sources of noise within the parking lot would primarily include car movements, doors opening and closing, people talking, and car alarms. Table 5.11-16 shows the estimated noise levels from parking activities at the off-site sensitive receptors. As shown in Table 5.11-

16, the estimated noise levels at all off-site locations would be below the project significance threshold (i.e., an increase of 5 dBA Leq over existing ambient noise levels).

Table 5.11.16. Estimated Noise Levels from Parking Activities

Off-Site Receptor	Existing Daytime Ambient Noise Levels, L_{eq}	Estimated Noise Levels from Parking Activities, L_{eq}	Ambient plus Project Noise Levels, L_{eq}	Significance Threshold*
	dBA	dBA	dBA	dBA
ST2	67.5	29.0	67.5	72.5
ST3	65.5	37.1	65.5	70.5
ST5	74.9	42.2	74.9	79.9
ST6	62.8	43.8	62.9	67.8
ST7	64.8	33.4	64.8	69.8
ST8	69.8	26.2	69.8	74.8
ST9	74.6	28.2	74.6	79.6
ST10	67.1	24.5	67.1	72.1

Source: SWCA (2022)

* Significance thresholds are assumed to be equal to the measured daytime noise levels plus 5 dBA.

Loading and Trash Compactor Activities

Two loading and service areas would accommodate deliveries for laboratories, exhibition material, food service, events, and staff offices. One of the loading areas would be located at the new museum building on the north side, and the second loading area would be located at the Page Museum, also on the north side. The project would include one waste compactor at each of the proposed loading areas. Table 5.11-17 shows the estimated noise levels from loading and trash compactor activities at the off-site sensitive receptors. As shown in Table 5.11-17, the estimated noise levels from the operation of the loading docks and the trash compactors would fall below the significance threshold of ambient noise levels plus 5 dBA L_{eq}.

Table 5.11.17. Estimated Noise Levels from Loading and Trash Compactor Operations

Off-Site Receptor	Existing Daytime Ambient Noise Levels, L_{eq}	Estimated Noise Levels from Loading and Trash Compactor Operations, L_{eq}	Ambient plus Project Noise Levels, L_{eq}	Significance Threshold*
	dBA	dBA	dBA	dBA
ST2	67.5	48.8	67.6	72.5
ST3	65.5	54.4	65.8	70.5
ST5	74.9	57.2	75.0	79.9
ST6	62.8	59.2	64.4	67.8
ST7	64.8	55.1	65.2	69.8
ST8	69.8	51.9	69.9	74.8
ST9	74.6	52.3	74.6	79.6
ST10	67.1	48.1	67.2	72.1

Source: SWCA (2022)

* Significance thresholds are assumed to be equal to the measured daytime noise levels plus 5 dBA.

Outdoor Areas

Outdoor areas (e.g., outdoor café located on the center terrace on the west side of the Page Museum; and Pit 91 outdoor classroom) would consist primarily of people congregating and conversing in those areas. Pit 91 would continue to be a key research and interpretation destination in the park. The project would demolish the current viewing station overlooking Pit 91 and construct a shaded outdoor classroom with canopy (2,880 square feet). The second floor of the Page Museum would contain two classrooms and a multipurpose space. An outdoor café would be located next to these spaces on the center terrace on the west side of the Page Museum (8,234 square feet). It should be noted that an outdoor sound system is not currently used at the Tar Pits site and the project would not include implementation of a sound system. However, consistent with existing conditions, a tour guide microphone and sound pack could be used during classroom activities and/or tours of the second-floor multipurpose space as needed.

Table 5.11-18 shows the estimated noise levels resulting from the use of outdoor areas at the off-site sensitive receptors. As shown in Table 5.11-18, the estimated noise levels at all analyzed receptors would not exceed the significance threshold of ambient noise levels plus 5 dBA L_{eq}.

Table 5.11.18. Estimated Noise Levels from Outdoor Uses

Off-Site Receptor	Existing Daytime Ambient Noise Levels, L_{eq}	Estimated Noise Levels from Outdoor Uses, L_{eq}	Ambient plus Project Noise Levels, L_{eq}	Significance Threshold*
	dBA	dBA	dBA	dBA
ST2	67.5	42.7	67.5	72.5
ST3	65.5	46.9	65.6	70.5
ST5	74.9	47.9	74.9	79.9
ST6	62.8	51.8	63.1	67.8
ST7	64.8	50.7	65.0	69.8
ST8	69.8	46.4	69.8	74.8
ST9	74.6	46.7	74.6	79.6
ST10	67.1	42.0	67.1	72.1

Source: SWCA (2022)

* Significance thresholds are assumed to be equal to the measured daytime noise levels plus 5 dBA.

Off-Site Traffic Noise

The project would generate new vehicle trips that would incrementally add to the existing traffic levels on surrounding streets and could result in an increase in the associated traffic noise levels. Based on the transportation assessment prepared for the project (Appendix J), the project would generate an estimated 1,293 new trips during the weekdays and 1,679 net new trips during the weekend.[1]

Based on the traffic noise modeling conducted for the project, the project would result in a maximum CNEL increase of 0.3 dBA during a weekday, and an estimated increase of 0.4 dBA during the weekend, between 6th Street and Wilshire Boulevard in comparison to existing traffic conditions. Therefore, the estimated off-site traffic noise level increase would be below the 3-dBA CNEL significance threshold based on the City's land use/noise compatibility guidelines and the City of L.A. Thresholds Guide.

[1] All trips are one-way.

Further analysis was prepared to determine the potential noise impacts associated with the project operation compared to the future noise conditions. Based on the traffic noise modeling conducted for the project, the project would result in a maximum CNEL increase of 0.4 dBA during weekdays along the road segment between Fairfax Avenue and Ogden Drive, and an estimated increase of 0.4 dBA during the weekend between 6th Street and Wilshire Boulevard in comparison to projected future traffic conditions. Therefore, the estimated off-site traffic noise level increase would be below the City of L.A. Thresholds Guide.

Composite Noise Levels

In addition to considering the project's operational off-site and on-site noise generation, the composite noise levels (i.e., noise levels from all on-site and off-site noise sources combined) experienced by surrounding sensitive receptors due to the project's operational noise sources occurring concurrently with existing noise sources are also evaluated to assess the potential overall increase in ambient noise levels at the analyzed monitoring locations. These off-site monitoring locations would experience noise levels generated by the project's mechanical equipment, outdoor areas, parking facilities, off-site traffic, and loading operations in addition to ambient noise levels generated by surrounding land uses and roadways. The analysis of the composite operational noise levels in the project vicinity was evaluated using the CNEL noise metric and is conducted using the following assumptions for each noise source:

- **Mechanical Noise:** Noise levels generated by the noise-generating mechanical equipment at the project site would occur continuously between 6:00 a.m. and 10:00 p.m.
- **Parking Facility:** Noise levels that would be generated at the project parking lot by peak-hour vehicle trips are assumed to occur continuously throughout the hours of 6:00 a.m. to 10:00 p.m.
- **Outdoor Activities:** Noise levels that would be generated at the outdoor areas are assumed to occur continuously throughout the hours of 7:00 a.m. to 7:00 p.m.
- **Off-Site Traffic:** Noise levels generated by off-site traffic are assumed to occur continuously for 24 hours per day.
- **Loading Area/Waste Compactor:** Noise levels generated by the project's loading areas and the waste compactors are assumed to occur for 3 hours between 7:00 a.m. and 10:00 p.m.

Table 5.11-19 presents the estimated composite noise levels in terms of CNEL at the off-site receptors. As shown in Table 5.11-19, the project would have a maximum increase of 1.9 dBA CNEL (at receptor ST6) during project operation. Therefore, the composite noise levels due to the project operations would remain below the 3-dBA CNEL significance threshold set forth in the City of L.A. Thresholds Guide and the City's Noise Regulations for noise-sensitive uses within the "normally unacceptable" or "clearly unacceptable" category. Based on this analysis, the project would not generate operational noise above the thresholds used for this analysis. Therefore, impacts related to operational noise would be *less than significant*.

Table 5.11.19. Composite Operational Noise Impacts

Off-Site Monitoring Location	Estimated Noise Levels								
	Existing Ambient	Off-Site Traffic	Mechanical	Parking	Trash Compactor and Loading	Outdoor Activities	Project Composite	Ambient plus Project	Increase
	CNEL	CNEL	CNEL	CNEL	CNEL	CNEL	CNEL	CNEL	CNEL
	dBA	dBA	dBA	dBA	dBA	dBA	dBA	dBA	dBA
ST2	68.1	52.9	51.3	30.2	46.0	39.7	55.8	68.3	0.2
ST3	66.4	43.9	60.4	38.3	51.6	43.9	61.1	67.5	1.1
ST5	75.1	50.8	54.3	43.4	54.4	44.9	58.5	75.2	0.1
ST6	64.4	54.1	58.4	45.0	56.4	48.8	61.7	66.3	1.9
ST7	65.9	54.7	57.6	34.6	52.3	47.7	60.4	67.0	1.1
ST8	70.2	54.7	53.3	27.4	49.1	43.4	57.8	70.4	0.2
ST9	74.8	53.9	53.2	29.4	49.5	43.7	57.5	74.9	0.1
ST10	67.8	52.3	48.5	25.7	45.3	39.0	54.5	68.0	0.2

NOI Impact 2
During project operation, the project would not generate a substantial increase in ambient noise in excess of applicable standards or thresholds; noise impacts during project operation would be less than significant. (CEQA Checklist Appendix G Threshold XIII. a)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Noise impacts related to project operation would be less than significant.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

CONSTRUCTION

The operation of heavy construction equipment at the project site would generate ground-borne vibration that could affect structures immediately adjacent to the project site or could also cause an annoyance to people at those locations. Based on the reference vibration levels for the different pieces of equipment and the distances from the primary project construction activities, construction vibration velocity levels were estimated at the different receptors. Table 5.11-20 shows the estimated PPVs at the off-site receptors and the estimated vibration impacts on buildings. Further, Table 5.11-21 shows the comparison between the estimated ground-vibration levels and the human annoyance threshold.

Table 5.11-20. Construction Vibration Impacts – Building Damage

Off-Site Receptor	Building Category	Estimated Vibration Velocity Levels at the Off-Site Receptors (PPV)						Significance Threshold, L_{eq}*
		Demolition	Site Preparation	Grading	Building Const.	Paving	Arch. Coating	
		in/sec	in/sec	in/sec	in/sec	in/sec	in/sec	in/sec
ST2	Non-engineered timber and masonry buildings	0.0051	0.0051	0.0051	0.0009	0.0016	0.0000	0.2
ST3	Non-engineered timber and masonry buildings	0.0021	0.0119	0.0119	0.0025	0.0038	0.0000	0.2
ST5	Non-engineered timber and masonry buildings	0.0029	0.0062	0.0062	0.0013	0.0095	0.0000	0.2
ST6	Engineered concrete and masonry buildings	0.0069	0.0107	0.0107	0.0025	0.0092	0.0000	0.3
ST7	Engineered concrete and masonry buildings	0.0070	0.0140	0.0140	0.0013	0.0043	0.0000	0.3
ST8	Engineered concrete and masonry buildings	0.0072	0.0072	0.0072	0.0006	0.0024	0.0000	0.3
ST9	Engineered concrete and masonry buildings	0.0088	0.0088	0.0088	0.0006	0.0025	0.0000	0.3
ST10	Engineered concrete and masonry buildings	0.0013	0.0013	0.0013	0.0006	0.0013	0.0000	0.3

Source: SWCA (2022)

* FTA construction vibration impact criteria for building damage (FTA 2018).

Table 5.11-21. Construction Vibration Impacts – Human Annoyance

Off-Site Receptor	Building Category	Estimated Vibration Velocity Levels at the Off-Site Receptors						Significance Threshold, L_{eq}*
		Demolition	Site Preparation	Grading	Building Const.	Paving	Arch. Coating	
		VdB	VdB	VdB	VdB	VdB	VdB	VdB
ST2	Non-engineered timber and masonry buildings	62	62	62	47	52	0	80
ST3	Non-engineered timber and masonry buildings	54	69	69	56	60	0	80
ST5	Non-engineered timber and masonry buildings	57	64	64	50	68	0	80
ST6	Engineered concrete and masonry buildings	65	69	69	56	67	0	80
ST7	Engineered concrete and masonry buildings	65	71	71	51	61	0	80

Off-Site Receptor	Building Category	Estimated Vibration Velocity Levels at the Off-Site Receptors						Significance Threshold, L_{eq}*
		Demolition	Site Preparation	Grading	Building Const.	Paving	Arch. Coating	
		VdB	VdB	VdB	VdB	VdB	VdB	VdB
ST8	Engineered concrete and masonry buildings	65	65	65	44	56	0	80
ST9	Engineered concrete and masonry buildings	67	67	67	44	56	0	80
ST10	Engineered concrete and masonry buildings	50	50	50	44	50	0	80

* FTA ground-borne vibration impact criteria for residences and buildings where people normally sleep for infrequent vibration events (FTA 2018).

As shown in Tables 5.11-20 and 5.11-21, vibration levels generated by the construction equipment at the project site during project construction would not exceed the vibration thresholds established for building damage or human annoyance at the surrounding structures. Therefore, construction impacts related to groundborne vibration would be *less than significant*.

OPERATION

During project operation, no anticipated uses of the project site would generate groundborne vibration or noise. Therefore, operational impacts related to groundborne vibration would be *less than significant*.

NOI Impact 3
The project would not generate excessive groundborne vibration or groundborne noise levels either during project construction or operation; impacts related to groundborne vibration and noise levels would be less than significant. (CEQA Checklist Appendix G Threshold XIII. b)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to groundborne noise would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The project site is not located within 2 miles of a private airstrip or public airport and is not within an airport land use plan. The nearest airport is Santa Monica Airport, located approximately 6 miles southwest of the project site. The project site does not include residential uses and therefore, no one resides on the project site. The project would not expose people working in the project site to excessive aircraft-related noise levels during either project construction or operation; therefore, *no impact* would occur.

NOI Impact 4
Because the project is not located in the vicinity of an airstrip or airport, the project would not expose people residing or working in the project site to excessive noise levels related to aircraft during either project construction or operation. No impact would occur. (CEQA Checklist Appendix G Threshold XIII. c)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. No impact would occur.

5.11.6 Cumulative Impact Analysis

Cumulative noise or vibration impacts can occur when more than one project is under construction simultaneously or when a project is expected to generate operational noise or vibration at the same time. The potential for cumulative noise impacts to occur is specific to the distance between the related projects and their stationary sources.

ON-SITE CONSTRUCTION NOISE

Related projects in the vicinity of the proposed project considered in this analysis include construction activities that could occur simultaneously with the construction of the project. Construction-related noise levels from the related projects would be short-term and intermittent. Further, it is assumed that the projects within the incorporated area of the City of Los Angeles would be required to comply with the City's Noise Ordinance No. 144,331 and No. 161,574. In addition, each of the related projects would be subject to Section 41.40 of the LAMC, which limits the hours of allowable construction activities, and Section 112.05 of the LAMC, which prohibits any powered equipment or powered hand tool from producing noise levels that exceed 75 dBA at a distance of 50 feet from the noise source within 500 feet of a residential zone. Noise resulting from cumulative construction activities would be reduced to the extent reasonably and technically feasible through mitigation measures proposed for each project and compliance with locally enforced noise ordinances. Therefore, with the related projects also complying with City requirements regarding construction noise impacts, the proposed project construction-related noise would be less than cumulatively considerable and would be *less than significant*.

OFF-SITE CONSTRUCTION-RELATED NOISE

In addition to the cumulative impacts of on-site construction activities, off-site construction trucks and worker trucks for the project would potentially result in cumulative impacts if the trucks for the related projects use the same haul route. To exceed the ambient noise levels, the total truck trips from related projects would need to increase by an approximate factor of 2.6 (i.e., increase from 69 trips per hour to 179 trips per hour). Based on the proposed project's limited contribution of construction traffic trips and the limited number of anticipated future development projects that would use the same or a similar haul route, traffic associated with the construction of the project and other related projects would not cumulatively add up to 179 or more hourly trips along Wilshire Boulevard and La Brea Avenue. Therefore, cumulative noise impacts from off-site construction would not be cumulatively considerable and would be *less than significant*.

ON-SITE CONSTRUCTION-RELATED VIBRATION

Ground-borne vibration impacts due to construction activities are generally limited to buildings located close to the construction site. The closest related project is the Los Angeles County Museum of Art (LACMA) renovation project, which is located adjacent to the project site. While the LACMA project may complete construction before the La Brea Tar Pits Master Plan is implemented, a conservative assumption is that construction could be occurring concurrently. The LACMA Building for the Permanent Collection Draft Environmental Impact Report (County of Los Angeles 2017) indicates that the estimated vibration velocity levels (from all construction equipment) would be below the significance thresholds at all off-site building structures. Therefore, due to the rapid attenuation of the ground-borne vibration, no cumulative impact concerning ground-borne vibration would occur; these cumulative impacts would be *less than significant*.

OFF-SITE CONSTRUCTION-RELATED VIBRATION

Based on FTA data, the vibration generated by a typical truck would be approximately 63 VdB (0.006 PPV) at 50 feet (FTA 2018). The shortest distance between the haul route and the receptor is approximately 25 feet. Ground-borne vibration generated by a haul truck at this distance would be approximately 0.016 PPV, which is well below the most stringent building damage threshold of 0.12 PPV. Additionally, the estimated vibration levels along the haul route would be approximately 72 VdB, below the human annoyance threshold of 80 VdB. Trucks from related projects are expected to produce similar vibration levels as the project. Thus, the ground-borne vibration levels from haul trucks would be below the 0.12 PPV threshold. Therefore, potential cumulative vibration impacts from off-site construction would be *less than significant*.

ON-SITE STATIONARY NOISE SOURCES

The LAMC limits stationary source noise from mechanical equipment; therefore, potential noise levels from these sources are expected to be less than significant for each related project. Based on the distance of the related projects from the project site, cumulative stationary source noise impacts associated with the operation of the project and neighboring related projects would be *less than significant*.

OFF-SITE MOBILE NOISE SOURCES

Traffic volumes would be generated by the project and other related projects and would produce roadway noise. Cumulative noise impacts due to mobile sources were analyzed by comparing the projected increase in traffic noise levels from the Existing Conditions to Future Cumulative Conditions. According to the traffic noise modeling conducted for the project, cumulative traffic volumes would result in a maximum increase of 2.5 dBA during a typical weekday, and 2.5 dBA during a typical weekend (SWCA 2022). Therefore, the cumulative noise impacts due to mobile (off-site) noise sources associated with the project, future growth, and related projects would be *less than significant*.

NOI Impact 5 (Cumulative Impacts)
The project would not contribute considerably to cumulative noise and/or vibration impacts.
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts would be less than significant.

5.12 RECREATION

This section of the EIR identifies existing park and recreational facilities in the project vicinity and evaluates potential environmental impacts to nearby parks and recreational facilities that would occur with project implementation. For the purposes of the information and analysis provided in this section, it is important to note that while the project site provides existing uses that benefit the public and passive recreational opportunities including open space and parkland, it is not managed by the respective parks and/or recreation departments of either the County or the City of Los Angeles (City).

5.12.1 Existing Conditions

The project site includes 13 acres of the eastern and northwestern portions of Hancock Park and broadly encompasses what is known as La Brea Tar Pits. Among the museum-related facilities on-site, the project site also provides open space and parkland that supports passive recreational use by the public. The Central Green and open space areas within the greater Hancock Park are the only public green spaces within 1.5 miles of the project site. Existing visitation at the George C. Page Museum (Page Museum) was estimated by using attendance counts from July 2017 (see Appendix J for more detail). Based on this approach, it is estimated that a typical summer visitation is around 2,000 visitors on an average weekday and 2,600 daily visitors on Saturdays. Most people visiting the Page Museum also visit and use the surrounding parkland. Additional visitors may use the park without visiting the museum. However, there is no quantification of this existing parkland use.

Within Los Angeles County, the Los Angeles County Department of Parks and Recreation (LA County Parks) manages most parkland. As noted above, while the project site provides passive recreational opportunities and parkland, it is not managed by LA County Parks. LA County Parks manages 73,214 acres of parkland, spread over 182 parks with over 475 sports amenities. LA County Parks operates a network of 9 regional parks, 19 community regional parks, 20 community parks, 38 neighborhood parks, 15 wildlife sanctuaries, 10 nature centers, 36 public swimming pools, more than 200 miles of multi-use trails for hiking, biking, and horseback riding, and the largest municipal golf system in the nation, consisting of 20 golf courses (LA County Parks 2021).

As outlined in the Parks and Recreation Needs Assessment, the County maintains 98,977 acres of regional open space, which includes facilities that are more than 5 acres and generally contain only passive amenities such as visitor centers, trails, picnic shelters, or restrooms (LA County Parks 2016). The County maintains 15,723 acres of local parks, which are defined as under 100 acres and contain active amenities such as athletic courts and fields, playgrounds, and swimming pools. The County maintains 18, 248 acres of regional recreation parks which are defined as over 100 acres and contain active amenities such as athletic courts and fields, playgrounds, and swimming pools. The County also maintains 768,699 acres of natural areas.

The City of Los Angeles Department of Recreation and Parks (City RAP) is responsible for the establishment, operation, and maintenance of all City-owned public parks and recreational facilities in the city. These recreational facilities include parks, swimming pools, public golf courses, recreation centers, museums, youth camps, tennis courts, sports programs, and programs for senior citizens. The City RAP also supervises construction of new facilities and improvements to existing ones. Currently, the City RAP maintains over 16,000 acres of parkland within 444 regional, community, and neighborhood parks; 422 playgrounds; 321 tennis courts; 184 recreational centers; 72 fitness areas; 62 swimming pools and aquatic centers; 30 senior centers; 26 skate parks; 13 golf courses; 12 museums, 9 dog parks; 187 summer youth camps; and helps support the Summer Night Lights gang reduction and community intervention program (City of Los Angeles 2022). The City RAP supports the city's urban wilderness and open spaces

by maintaining and caring for the park urban tree canopy, 13 lakes, and 92 miles of hiking trails. The City RAP oversees Griffith Park and operates Venice Beach, the Cabrillo Marine Aquarium, and 12 museums.

According to the City RAP Community Needs Assessment, city parks are classified as mini, neighborhood, community, or regional. A mini park is less than 1 acre in size and a neighborhood park ranges in size from 1 to 10 acres, with a service area of a 0.5 mile. The city contains 51 total acres of mini parks and 774 acres of neighborhood parks. A community park ranges in size from 10 to 50 acres and regional parks are generally more than 50 acres in size and serve the city and region. The city contains 2,966 acres of community parks and 32,289 acres of regional and large urban parks (City RAP 2009).

Based on these inventories, the current service level for all park land is 9.231 acres per 1,000 persons; however, this number is drastically skewed by the large number of regional/large urban park land (89.5% of all acreage falls into the regional/large urban park classification). Current service levels for all four park classifications used in the Community Needs Assessment are:

- Mini parks: 0.013 acre per 1,000 persons
- Neighborhood parks: 0.198 acre per 1,000 persons
- Community parks: 0.759 acre per 1,000 persons
- Regional and large urban parks: 8.261 acres per 1,000 persons
- Total parks: 9.231 acres per 1,000 persons

The project site is located within the Wilshire Community Plan area. The City RAP operates 20 public parks and recreational facilities in the Wilshire Community Plan area. The Wilshire Community Plan designates approximately 191 acres of park land, including about 100 acres within a private golf course (Wilshire Country Club).

5.12.1.1 Surrounding Parks and Recreational Facilities

There are several parks and recreational facilities located close to the project site. Table 5.12-1 lists the type of park, amenities, and the approximate walking distance from the project site for these public parks and recreational facilities.

Beyond the project site itself, there are no large open-space areas or parks contiguous or adjacent to the project site. The Kenneth Hahn State Recreation Area is located approximately 5 miles south of the site and Griffith Park, a City of Los Angeles park, is about 5.5 miles to the northeast.

Table 5.12-1. Parks and Recreational Facilities Surrounding the Project Site

Name	Address	Distance to Project Site (miles)	Amenities	Acreage
Wilshire Green Park	799 Courtyard Pace Los Angeles, CA 90036	0.15 mile	Benches, small gazebo	<0.5 acre
Carthay Circle Park	6313 South San Vicente Boulevard Los Angeles, CA 90048	0.80 mile	Benches	0.97 acre
Mansfield Avenue Park	698-690 S. Mansfield Avenue Los Angeles, CA 90036	0.86 mile	Tables and seats	<0.5 acre

Name	Address	Distance to Project Site (miles)	Amenities	Acreage
Pan Pacific Park	7600 Beverly Boulevard Los Angeles, CA 90036	0.94 mile	Pan Pacific Pool Barbecue pits, baseball diamond (lighted), basketball courts (lighted / indoor), children's play area, picnic tables, restroom(s), amphitheater, jogging path, kitchen, multipurpose sports field, outdoor fitness equipment, stage, basketball courts (unlighted / outdoor)	28 acres
La Cienega Park, Community Center, and Tennis Center*	8400 Gregory Way Beverly Hills, CA 90211	1.44 miles	Community Center, three baseball diamonds, playground, BBQ and picnic tables, outdoor fitness equipment, Tennis Center, and tennis courts	17 acres
Hamel Mini Park*	214 S. Hamel Drive Beverly Hills, CA 90211	1.74 miles	Children's playground, picnic tables	<0.5 acre
LA High Memorial Park	4625 W. Olympic Boulevard Los Angeles, CA 90019	1.81 miles	Children's playground	2.51 acres

Source: City of Beverly Hills (2022); City of Los Angeles (2022).

* Managed by the City of Beverly Hills. All other parks listed are managed by the City of Los Angeles.

5.12.2 Regulatory Setting

5.12.2.1 Federal

There are no federal recreation regulations applicable to the project.

5.12.2.2 State

There are no state recreation regulations applicable to the project.

5.12.2.3 County of Los Angeles

COUNTY OF LOS ANGELES 2035 GENERAL PLAN

The County's General Plan (County of Los Angeles 2015) includes Open Space Resource Areas, which refer to public and private lands and waters that are preserved in perpetuity or for long-term open space and recreational uses. Existing open space in the unincorporated areas include County parks and beaches, conservancy lands, state parklands, and federal lands. Open spaces can also include deed-restricted open space parcels and easements. Table 5.12-2 provides goals and policies within the County's General Plan that are relevant to the project and the Tar Pits site.

Table 5.12-2. County of Los Angeles General Plan, Relevant Policies and Objectives

Goal/Policy	Goal/Policy Description
Conservation and Natural Resource Element	
Goal C/NR 1	Open space areas that meet the diverse needs of Los Angeles County

Goal/Policy	Goal/Policy Description
Policy C/NR 1.2	Protect and conserve natural resources, natural areas, and available open spaces.
Goal C/NR 2	Effective collaboration in open space resource preservation.
Policy C/NR 2.2	Encourage the development of multi-benefit dedicated open spaces.
Policy C/NR 2.4	Collaborate with public, non-profit, and private organizations to acquire and preserve available land for open space.
Policy C/NR 2.3	Improve understanding and appreciation for natural areas through preservation programs, stewardship, and educational facilities.
Parks and Recreation Element	
Goal P/R 1	Enhanced active and passive park and recreation opportunities for all users.
Policy P/R 1.1	Provide opportunities for public participation in designing and planning parks and recreation programs.
Policy P/R 1.2	Provide additional active and passive recreation opportunities based on a community's setting, and recreational needs and preferences.
Policy P/R 1.5	Ensure that County parks and recreational facilities are clean, safe, inviting, usable and accessible.
Policy P/R 1.8	Enhance existing parks to offer balanced passive and active recreation opportunities through more efficient use of space and the addition of new amenities.
Policy P/R 1.11	Provide access to parks by creating pedestrian and bicycle-friendly paths and signage regarding park locations and distances.
Goal P/R 2	Enhanced multi-agency collaboration to leverage resources.
Policy P/R 2.5	Support the development of multi-benefit parks and open spaces through collaborative efforts among entities such as cities, the County, state, and federal agencies, private groups, schools, private landowners, and other organizations.
Goal P/R 5	Protection of historical and natural resources on County park properties.
Policy P/R 5.5	Preserve and develop facilities that serve as educational resources that improve community understanding of and appreciation for natural areas, including watersheds.
Policy P/R 5.6	Promote the use of County parks and recreational facilities for educational purposes, including a variety of classes and after school programs.

5.12.2.4 City of Los Angeles

While the project site is located within the city of Los Angeles, it is owned by the County of Los Angeles. Accordingly, the project is not subject to the regulatory controls of the City of Los Angeles. Nonetheless, regulatory and planning documents of the City of Los Angeles that are most relevant to the project as they relate to parks and recreational facilities are provided herein for informational purposes.

CITY OF LOS ANGELES GENERAL PLAN

Table 5.12-3 provides goals and policies within the City's General Plan that are most relevant to the project.

Table 5.12-3. City of Los Angeles General Plan, Relevant Policies and Objectives

Goal/Policy	Goal/Policy Description
Framework Element	
Policy 6.4.1	Encourage and seek to provide for usable open space and recreational facilities that are distributed throughout the city.
Policy 6.4.5	Provide public open space in a manner that is responsive to the needs and wishes of the residents of the city's neighborhoods through the involvement of local residents in the selection and design of local parks. In addition to publicly owned and operated open space, management mechanisms may take the form of locally run private/nonprofit management groups, and should allow for the private acquisition of land with a commitment for maintenance and public access.
Policy 6.4.8	Maximize the use of existing public open space resources at the neighborhood scale and seek new opportunities for private development to enhance the open space resources of the neighborhoods. • Encourage the improvement of open space, both on public and private property, as opportunities arise. Such places may include the dedication of "unbuildable" areas or sites that may serve as green space, or pathways and connections that may be improved to serve as neighborhood landscape and recreation amenities.
Policy 6.4.4	Consider open space as an integral ingredient of neighborhood character, especially in targeted growth areas, in order that open space resources contribute positively to the city's neighborhoods and urban centers as highly desirable places to live.

CITY OF LOS ANGELES PUBLIC RECREATION PLAN

The Public Recreation Plan, a component of the City's General Plan, establishes policies and standards related to parks and recreational facilities in the city. The Public Recreation Plan was adopted in 1980 by the Los Angeles City Council and amended by City Council resolution in March 2016 (City of Los Angeles 1980, 2016). The plan also addresses the need for publicly accessible neighborhood, community, and regional recreational sites and facilities across the city. The Public Recreation Plan focuses on recreational site and facility planning in underserved neighborhoods with the fewest existing resources and the greatest number of potential users (i.e., where existing residential development generates the greatest demand), as well as areas where new subdivisions, intensification of existing residential development, or redevelopment of "blighted" residential areas creates new demand.

WILSHIRE COMMUNITY PLAN

The Wilshire Community Plan establishes specific goals, objectives, policies, and programs to meet the existing and future needs of the Wilshire community (City of Los Angeles 2001). The Wilshire Community Plan aims to enhance the positive characteristics of residential neighborhoods while providing a variety of housing opportunities; improve the function, design, and economic vitality of the commercial areas; preserve and enhance the positive characteristics of existing uses which provide the foundation for community identity, such as scale, height, bulk, setbacks, and appearance; maximize the development opportunities around the existing and future transit systems while minimizing adverse impacts; preserve and strengthen commercial developments to provide a diverse job-producing economic base; and improve the quality of the built environment through design guidelines, streetscape improvements, and other physical improvements which enhance the appearance of the community. Table 5.12-4 provides goals and policies within the Wilshire Community Plan that are most relevant to the project.

Table 5.12-4. Wilshire Community Plan Objectives and Policies Relevant to the Proposed Project

Objective/Policy	Objective/Policy Description
Parks and Recreation	
Goal 4	Provide adequate recreation and park facilities to meet the needs of residents in the Wilshire Community Plan area.
Objective 4-1	Conserve, maintain and better utilize existing recreation and park facilities which meet the recreational needs of the community.
Policy 4-1.1	Preserve and improve the existing recreational facilities and park spaces. • Program: Maintain all open space designations within the Wilshire Community Plan. Designate open space parkland as acquired by the Department of Recreation and Parks.
Open Space	
Objective 5-1	Preserve existing open space resources and where possible develop new open space.
Policy 5-1.3	Convert and upgrade underutilized publicly owned property. • Program: Improve available rights-of-way throughout the Wilshire Community Plan area with landscaping, benches, picnic sites, walkways, for low-intensity recreational uses. Encourage this improvement separately, and in combination with transit center or busway improvements, currently under study by the Metropolitan Transportation Authority.

CITYWIDE COMMUNITY NEEDS ASSESSMENT

In 2009, the City RAP commissioned an update of the last Recreation and Parks Needs Assessment from 1999 as a preliminary step in developing a citywide park master plan and 5-year capital improvement plan. The Citywide Community Needs Assessment provides an inventory of existing facilities, defines geographic areas of need and recommended facilities to serve specific populations, and identifies priorities for additional parks and recreation facilities. The report provides a more current assessment of conditions and future needs compared to the Public Recreation Plan, while the Public Recreation Plan recommends the ratios of park acreage per person used in the analysis. Following the Community Needs Assessment, the City RAP began the 50 Parks Initiative, which is intended to substantially increase the number of parks and facilities across the city, with a specific focus on densely populated neighborhoods and communities that lack sufficient open space and recreational facilities.

5.12.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse impacts related to public services (parks) and recreation if it would:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; and/or

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

5.12.4 Impact Assessment Methodology

The impact assessment was based on a desktop review of the existing parks and recreational facilities in the vicinity of the project site and qualitatively evaluating the demand for increased use of these parks and recreational facilities upon project implementation. In addition, the project's proposed improvements to the passive recreational areas within the project site were evaluated for their potential to result in adverse impacts other than those addressed throughout this EIR.

5.12.5 Environmental Impact Analysis

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The project site includes 13 acres of Hancock Park and supports passive recreational use by the public. In addition to the publicly accessible recreational areas and open space provided within the project site, there are also a number of existing parks and recreational facilities located close to the project site (see Table 5.12-1). The project would have a significant environmental impact if implementation of the project were to result in a significant change to the existing environment in a manner that would physically deteriorate existing neighborhood and regional parks or other recreational facilities or result in other physical effects to the environment. Typically, a project's potential to result in physical deterioration is determined by evaluating how an increase in population generated by the project would affect existing recreational facilities. However, the project would not result in an increase in a residing population since there are no residential uses on the project site and the project does not propose to add residential uses. Rather, the project site is a cultural destination offering museum uses and open space areas for passive recreational use. As such, this analysis qualitatively considers the project's potential to impact the use of existing neighborhood and regional parks or other recreational facilities by construction workers, employees, and visitors to the project site during project construction and operation.

CONSTRUCTION

During project construction, portions of the 13-acre project site would be used to accommodate earthwork and construction activities as well as provide staging areas for equipment and materials. Access to portions of the passive recreational areas provided at the project site may be temporarily limited to the museum employees and visitors, and the public during construction, but would not be fully closed for access. As such, there is a potential for construction workers, museum employees and visitors, as well as members of the public to use parks and recreational facilities located near the project site during project construction. The nearest public park to the project site is Wilshire Green Park which is approximately 0.15 mile southeast of the project site and can be accessed at several locations along West 8th Street and Courtyard Place. This park is not located along major streets that would provide access to the project site during construction. The distance of this park from the construction activity and the intervening development would avoid potential noise or conflict with construction activities. A small number of construction workers may visit this park during or after a workday. However, construction workers are temporary employees with high turnover associated with the various phases of construction, so such park use would be intermittent and short-term in nature. Museum employees and visitors, as well as the public may also use nearby park and recreation facilities during construction, but this use would also be temporary and intermittent over the project's construction period. Therefore, construction of the project would not result in increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Construction impacts would be *less than significant*.

OPERATION

The project would not include residential uses that would introduce a new or permanent population that would use the site for recreation or increase the use of nearby parks or recreational facilities. As described in Chapter 3, Project Description, the project would result in an increase of approximately 20 new employees; however, this increase in employees is not expected to significantly increase recreational demand. New employment opportunities generated by the project may be filled, in part, by employees

already residing in the project vicinity who already use existing parks and recreational facilities. Given the nature of the project, it is likely that new employees would primarily remain on-site due to work obligations and the amount of time it would take for employees to access these off-site areas. While they may use nearby parks and recreational facilities within the project vicinity, it would not be in such a capacity that substantial physical deterioration of any one facility would occur or be accelerated. As stated in Section 5.13, Transportation and the Transportation Assessment (see Appendix J), the project would result in an increase in visitor trips to the project site upon project implementation. Estimated increases in visitors to the Page Museum resulting from the project have been estimated linearly related to the increase in square footage (67%). Based on these estimates, the increase in visitors on weekdays would be 1,350 people, and on Saturdays the increase would be approximately 1,750 people.[1] Additional visitors may use the park without visiting the museum. These visitors are primarily traveling to the project site to visit the museum and associated passive recreational amenities, including the open space areas, provided on-site. While visitors to the project site may use other nearby parks and recreational facilities, it would not be in such a way that would cause substantial physical deterioration as the proposed enhancements to the project site would offer the beneficial continued access to park and recreational space in an urban area where park and open space availability is somewhat limited.

Given the project would not result in a new or permanent population that would use the site for recreation or increase the use of nearby parks or recreational facilities and would continue to provide publicly accessible open space areas within the project site, implementation of the project would not result in an associated increase in the use of nearby existing parks and recreational facilities such that substantial physical deterioration of any existing recreational facilities would occur or be accelerated. Impacts would be *less than significant*.

REC Impact 1
The project would not result in substantial physical deterioration of existing parks and recreation facilities during either project construction or operation. Impacts would be less than significant. (CEQA Checklist Appendix G Threshold XVI. a)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to increased use of existing neighborhood and regional parks, or other recreational facilities would be less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

As described in Chapter 3, Project Description, the project would result in modifications to existing structures and enhancements to the passive recreational areas and outdoor open spaces within the 13-acre project site. While the project would not expand or increase the amount of area dedicated to existing

[1] Existing visitation at the George C. Page Museum was estimated by using attendance counts from July 2017 (See Appendix J for more detail). Based on this approach, it is estimated that a typical summer visitation is around 2,000 visitors on an average weekday and 2,600 daily visitors on Saturdays.

passive recreational uses, it would include improvements to the existing recreational areas and outdoor open spaces through modification to the existing pedestrian pathways into a continuous paved pedestrian path linking the existing elements of the site, including the Central Green. The project would also add a children's play area, picnic areas, and other new passive recreational amenities, such as seating areas and viewing points.

CONSTRUCTION

As described above, construction of the project would include improvements to existing passive recreational areas within the project site. These improvements are considered as part of the overall project design and no other recreational facilities besides the improvements proposed by the project would be implemented. Construction activities associated with improvements to the existing recreational areas within the project site could include grading and other ground-disturbing activities, landscaping modifications, as well as the use of construction equipment throughout the construction duration of the project. The potential for adverse physical effects on the environment during project construction are evaluated throughout the environmental topic areas presented in Chapter 5, Environmental Impact Analysis, of this EIR. These construction activities would result in a temporary increase in noise and an increase in air quality construction-related emissions, and could also have impacts on or related to aesthetics, biological resources, archaeological resources, geology and soils, and hazards and hazardous materials. Construction impacts related to the enhancement of on-site passive recreational facilities could be significant.

OPERATION

Upon project implementation, operation of the project would not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Operational impacts would be *less than significant*.

REC Impact 2
Construction of the project would include enhancements and modifications to existing recreational facilities within the 13-acre project site. These activities could have an adverse physical effect on the environment. Construction impacts could be significant. Operation of the project would not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Operational impacts would be less than significant. (CEQA Checklist Appendix G Threshold XVI. b)
Mitigation Measures
Implement construction-related Mitigation Measures AES/mm-4.1, AQ/mm-3.1; BIO/mm-1.1, BIO/mm-2.1, BIO/mm-3.1, BIO/mm-5.1 and 5.2, and BIO/mm-6.1; CR-ARCH/mm-1.1 through 1.4; GEO/mm-3.1 and 3.2, GEO/mm-4.1, and GEO/mm-6.1 through 6.5; GHG/mm-1.1; HAZ/mm-1.1 and1.2, and HAZ/mm-2.1 and 2.2; NOI/mm-1.1; TRA/mm-4.1 through 4.3; and TCR/mm-1.1 through 1.4.
Impacts Following Mitigation
Implementation of the project's construction-related mitigation measures referenced above would reduce construction impacts associated with enhancement of on-site passive recreational facilities to less than significant. Operational impacts would be less than significant.

5.12.6 Cumulative Impact Analysis

The geographic context for the cumulative impact analysis of parks and recreational facilities considers facilities within a 2-mile distance of the project site (see Table 5.12-1). These include facilities within the City's jurisdictional boundaries as well as the neighboring jurisdiction of the City of Beverly Hills. As provided in Chapter 4, Environmental Setting, a list of cumulative development projects in the vicinity of the project site also details nearby related projects, which consist of a variety of land uses, including residential, institutional, commercial, office, and mixed use. These related projects occur primarily as urban infill within the existing land use setting of the downtown Los Angeles area.

The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, as described in REC Impact 1. Further, the project site would continue to provide passive open space and recreational amenities for public use during project construction and operation in a downtown urban area where access to recreational spaces is limited. The demand and use of the existing parks and recreational facilities within the project vicinity would likely continue to increase with implementation of related development projects, many of which include residential uses which directly drive population growth and subsequently, the use of park and recreational facilities. As with the project, related projects and other future development projects would undergo discretionary review on a case-by-case basis and would be expected to coordinate with all requirements of the applicable plans, governing regulations, and municipal codes. The County, the City, and the neighboring jurisdictions all require payment of impact fees by development projects in accordance with each jurisdiction's applicable municipal ordinances to reduce impacts on local recreational and park resources due to the increased use and resulting physical deterioration of these facilities. Therefore, with the payment of fees by the related projects and any other future residential development within the city as well as the neighboring jurisdictions, and the provision of passive open space and recreational amenities on-site, construction and operation of the project, in conjunction with the related development, would not cumulatively contribute to impacts related to the increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Cumulative impacts during project construction and operation would be *less than significant*.

As described in REC Impact 2, construction of the project includes enhancements and modifications to existing recreational facilities which could have an adverse physical effect on the environment. Because construction of the project could result in these direct impacts, the potential exists for the project to also contribute significantly to cumulative impacts. If mitigation were not to be implemented, it is conceivable that the project would significantly contribute to these impacts. Therefore, the project's contribution could be cumulatively considerable; impacts could be *significant*.

Project mitigation measures have been identified and included to address the project's adverse physical effect on the environment, as identified in REC Impact 2. The identified mitigation measures would address the direct impacts associated with the project itself as well as the project's potential contribution to cumulatively considerable and significant construction impacts related to the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

REC Impact 3
Prior to the application of proposed project mitigation measures, the project could contribute to cumulative impacts associated with adverse physical effects on the environment. Cumulative construction impacts could be significant. Operation of the project would not contribute to cumulative impacts.
Mitigation Measures
Implement construction-related Mitigation Measures AES/mm-4.1, AQ/mm-3.1; BIO/mm-1.1, BIO/mm-2.1, BIO/mm-3.1, BIO/mm-5.1 and 5.2, and BIO/mm-6.1; CR-ARCH/mm-1.1 through 1.4; GEO/mm-3.1 and 3.2, GEO/mm-4.1, and GEO/mm-6.1 through 6.5; GHG/mm-1.1; HAZ/mm-1.1 through 1.3, and HAZ/mm-2.1; NOI/mm-1.1; TRA/mm-4.1 through 4.3; and TCR/mm-1.1 through 1.4.
Impacts Following Mitigation
With implementation of the project's construction-related mitigation measures referenced above, the project's contribution to cumulative construction impacts would be less than significant.

5.13 TRANSPORTATION

This section describes the existing environmental and regulatory settings related to traffic and transportation, including a description of roadways in the area and the existing traffic conditions. This section also discusses potential impacts on transportation and traffic that would result from implementation of the project and provides mitigation measures to reduce these impacts, where necessary.

The information and analysis in this section is based on the *La Brea Tar Pits Master Plan Final Transportation Assessment* (Transportation Assessment) prepared by Kittelson and Associates (Appendix J). While the project site is owned by the County of Los Angeles (County), the street system surrounding the project site is within the jurisdiction of the City of Los Angeles (City). As such, the Transportation Assessment was prepared pursuant to the City of Los Angeles Department of Transportation's (LADOT's) Transportation Assessment Guidelines (TAG) and the approved Memorandum of Understanding between the City and the County of Los Angeles Museum of Natural History (Museum of Natural History), dated May 2, 2022.

The Transportation Assessment includes additional analysis and project recommendations beyond the purview of a CEQA analysis. The report can be found in its entirety in Appendix J of this EIR.

5.13.1 Existing Conditions

For the purposes of this transportation analysis, the project site and the area surrounding the project site are collectively referred to as the transportation study area (Figure 5.13-1).

5.13.1.1 Roadway Network

The roadway system in the transportation study area consists of avenue, collector, and local streets that serve local and regional traffic demand. The roadways in the transportation study area are discussed below. Classifications are illustrated in Figure 5.13-2; modal priorities are illustrated in Figure 5.13-3. The classifications presented below are defined in the City's *Mobility Plan 2035.*

AVENUE I AND AVENUE II STREETS

Avenue I and Avenue II streets are major thoroughfares that are designed to have 100 feet of right-of-way and 70 feet of roadway width for Avenue I streets, and 86 feet of right-of-way and 56 feet of roadway width for Avenue II streets.

Wilshire Boulevard is an Avenue I street on the southern border of the project site. The road has a four-lane cross section with a center median that has eastbound left-turn lanes at intersection approaches. Both eastbound and westbound directions have a joint parking lane/bus lane along the curb that allow for vehicle parking except during weekday a.m. and p.m. peak periods, where buses and right-turning vehicles have exclusive access to these lanes. The curb-to-curb roadway width is approximately 76 feet and the posted speed limit is 35 miles per hour (mph). Wilshire Boulevard has multiple modal priorities; it is on the Transit Enhanced Network (Comprehensive Transit Enhanced Street), Bicycle Lane Network (Tier 2 Bicycle Lane), and Pedestrian Analysis Network. Wilshire Boulevard (east of Fairfax Avenue) is on the City's Vision Zero High-Injury Network.

Figure 5.13-1. Transportation study area.

Figure 5.13-2. Roadway classifications near the project site.

Figure 5.13-3. Modal priorities near the project site.

Fairfax Avenue is an Avenue II street on the western border of the block that includes the project site as well as the Los Angeles County Museum of Art (LACMA) and the Academy Museum of Motion Pictures. The road has a four-lane cross section with a center median that allows for left-turning vehicles at intersections. There are also designated right-turn lanes on the northbound approach to West 6th Street and the southbound approach to Wilshire Boulevard. There is limited street parking on the west side of the street. The curb-to-curb roadway width is approximately 60 to 68 feet (depending on the presence of parking and right-turn lanes), and the posted speed limit is 35 mph. Fairfax Avenue has multiple modal priorities; it is on the Transit Enhanced Network (Moderate Transit Enhanced Street), Bicycle Lane Network (Tier 3 Bicycle Lane), and Pedestrian Analysis Network.

6th Street is an Avenue II street on the northern border of the project site. The road has a three-lane cross section (two westbound lanes and one eastbound lane) with a center median that allows for left-turning vehicles at intersections. There are designated right-turn lanes at the eastbound approach to the Fairfax Avenue intersection and at the westbound approaches to the LACMA parking garage and Curson Avenue intersections. Street parking is available along most of the north side of the street, except for at the eastbound turn lane at South Fairfax Avenue, while parking on the south side of the street is provided for portions of the street east of the LACMA parking garage driveway. The curb-to-curb roadway width is approximately 58 feet, and the posted speed limit is 35 mph. 6th Street has multiple modal priorities; it is on the Neighborhood Enhanced Network (Neighborhood Network west of Wilshire Boulevard), Bicycle Enhanced Network (Tier 1 Protected Bicycle Lanes), and Pedestrian Analysis Network. 6th Street (east of Ogden Drive) is on the City's Vision Zero High-Injury Network.

COLLECTOR STREETS

Collector streets are lower-volume roadways (compared to Avenue I/II streets) that are designed to have 66 feet of right-of-way and 40 feet of roadway width.

Curson Avenue is a Collector street on the eastern edge of the project site. The road has a two-lane cross section and a northbound left-turn lane at the West 6th Street intersection. There is no on-street parking allowed on either side of the road. The west side of Curson Avenue fronting the project site between the site driveway and the bend in Curson Avenue is a dedicated loading zone for buses. The curb-to-curb roadway width is approximately 36 to 40 feet (depending on the presence of the northbound left-turn lane), and there is no posted speed limit. Curson Avenue south of 8th Street is on the Neighborhood Enhanced Network.

8th Street is a Collector street south of the project site. The road has a two-lane cross section. Between Fairfax Avenue and Curson Avenue, there is diagonal and parallel parking on the north side of the street, and parallel parking on the south side of the street. The curb-to-curb roadway width is approximately 40 to 55 feet (depending on the presence of diagonal parking), and there is no posted speed limit.

LOCAL STREETS

Local streets are low-volume roadways that are designed to have 60 feet of right-of-way and 36 feet of roadway width.

Ogden Drive is a Local street to the south of the project site that intersects with Wilshire Boulevard (Ogden Drive also intersects with West 6th Street on the north side of the project site, but this is a private roadway with gated access). The road has a two-lane cross section with no marked centerline beyond the immediate intersection area with Wilshire Boulevard, and there are separate northbound left- and right-turn lanes as the street terminates at Wilshire Boulevard. Street parking is allowed on both sides of the street. The curb-to-curb roadway width is approximately 38 to 48 feet (depending on the presence of turn lanes at Wilshire Boulevard), and there is no posted speed limit.

Spaulding Avenue is a Local street to the south of the project site that intersects with Wilshire Boulevard. The road has a two-lane cross section with no marked centerline beyond the immediate intersection area with Wilshire Boulevard. Street parking is allowed on both sides of the street. The curb-to-curb roadway width is approximately 38 feet, and there is no posted speed limit.

Orange Grove Avenue is a Local street south of the project site that intersects with Wilshire Boulevard and with 8th Street. It is a two-lane roadway with no marked centerline. On-street parking is allowed. North of 8th Street, the curb-to-curb width is approximately 35 feet. There is no posted speed limit.

Stanley Avenue is a Local street south of the project site that intersects with Wilshire Boulevard and with 8th Street. It is a two-lane roadway with no marked centerline. On-street parking is allowed. North of 8th Street, the curb-to-curb width is approximately 28 feet. There is no posted speed limit.

5.13.1.2 Existing Vehicle Volumes

Weekday and weekend multimodal (vehicle, bicycle, and pedestrian) counts were collected within the transportation study area in May 2022 to establish the existing transportation context. The study intersections and roadway segments are shown in Figure 5.13-1 and Figure 5.13-2 and additional information on the count data is provided in Appendix J.

Because of the ongoing changes to travel patterns since the start of the COVID-19 pandemic in spring 2020, as well as construction on Wilshire Boulevard during the weekday morning and midday periods, the weekday counts were generally lower than historical counts. Counts collected for the project were compared to historical intersection data from various years to create adjustments for existing intersection volumes. Adjustment methodology was verified and approved by City staff as part of the Transportation Assessment (see Appendix J).

EXISTING INTERSECTION VOLUMES

Automobile turning movement counts were collected at the five intersections shown in Table 5.13-1. Traffic counts were collected on Thursday, May 12, 2022, during the weekday morning (7:00 a.m. to 9:00 a.m.), midday (12:00 p.m. to 2:00 p.m.), and evening (4:00 p.m. to 6:00 p.m.) peak periods. Traffic counts were also collected on Saturday, May 14, 2022, during the Saturday midday (12:00 p.m. to 2:00 p.m.) peak period.

Table 5.13-1. Study Intersections

ID	Intersection	Traffic Control
1	Ogden Drive/Parking Garage/West 6th Street	Signalized
2	Curson Avenue/West 6th Street	Signalized
3	Ogden Drive/Wilshire Boulevard	Signalized
4	Spaulding Avenue/Wilshire Boulevard	Signalized
5	Curson Avenue/Wilshire Boulevard	Signalized

The May 2022 study intersection counts were compared to data collected between 2012 and 2015. It was found that the weekday a.m. peak hour counts were an average of 51% higher in previous years compared

to 2022; weekday midday counts were 35% higher, weekday p.m. counts were 28% higher, and Saturday midday counts were 70% higher. Therefore, it was concluded that:

- 51% growth would be applied uniformly to the May 2022 weekday a.m. peak hour intersection volumes to obtain the adjusted existing conditions volumes.
- 35% growth would be applied uniformly to the May 2022 weekday midday peak hour intersection volumes to obtain the adjusted existing conditions volumes. The exception is the Curson Avenue/West 6th Street intersection, where May 2022 counts would be used for the weekday midday peak hour since those were higher than historical counts.
- 28% growth would be applied uniformly to the May 2022 weekday p.m. peak hour intersection volumes to obtain the adjusted existing conditions volumes.
- 70% growth would be applied uniformly to the May 2022 Saturday midday peak hour intersection volumes to obtain the adjusted existing conditions volumes. The exception is the Curson Avenue/West 6th Street intersection, where May 2022 counts would be used for the Saturday midday peak hour since those were higher than historical counts.

EXISTING ROADWAY SEGMENT VOLUMES

Table 5.13-2 identifies the seven roadway segments where 24-hour bidirectional vehicle volumes were collected on Thursday, May 12, 2022, and Saturday, May 14, 2022. Figure 5.13-1 shows the location of these roadway segments.

Table 5.13-2. Study Roadway Segments

Roadway	Extent
8th Street	between Fairfax Avenue and Orange Grove Avenue
Orange Grove Avenue	between Wilshire Boulevard and 8th Street
Ogden Drive	between Wilshire Boulevard and 8th Street
Spaulding Avenue	between Wilshire Boulevard and 8th Street
Stanley Avenue	between Wilshire Boulevard and 8th Street
Curson Avenue	between Wilshire Boulevard and 8th Street
8th Street	between Stanley Avenue and Curson Avenue

The May 2022 roadway segment weekday data were compared to data collected between 2014 and 2016. It was found that the weekday daily volumes along these roadway segments were approximately 36% higher in previous years compared to 2022. Therefore, it was concluded that:

- A 36% growth rate would be applied to the May 2022 weekday daily volumes at locations where historical volumes were higher.
- Since historical weekend counts were not available, the ratio of volumes between weekday and weekend from the 2022 counts was applied to the adjusted weekday volumes.

Table 5.13-3 provides the adjusted weekday and Saturday daily volumes at the identified roadway segments.

Table 5.13-3. Existing 2022 (Adjusted) Daily Segment Volumes

Roadway	Extent	Weekday Daily Volume	Weekend Daily Volume
8th Street	between Fairfax Avenue and Orange Grove Avenue	7,343	4,780
Orange Grove Avenue	between Wilshire Boulevard and 8th Street	9,262	4,633
Ogden Drive	between Wilshire Boulevard and 8th Street	787	1,154
Spaulding Avenue	between Wilshire Boulevard and 8th Street	536	931
Stanley Avenue	between Wilshire Boulevard and 8th Street	2,006	1,372
Curson Avenue	between Wilshire Boulevard and 8th Street	1,216	784
8th Street	between Stanley Avenue and Curson Avenue	7,013	4,972

Source: Kittelson and Associates (2022); National Data and Surveying Services (2022).

5.13.1.3 Public Transit Facilities and Service

The transit system in the transportation study area consists of local bus service, as well as planned heavy rail service.

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY BUS SERVICE

There are three Los Angeles County Metropolitan Transportation Authority (Metro) bus routes that run on roads that parallel the project site.

- **Line 20 (Downtown Los Angeles – Westwood/Santa Monica via Wilshire Boulevard)** runs between Downtown Los Angeles and Santa Monica on Wilshire Boulevard along the entire route between these two destinations. Service runs 7 days a week; the bus runs 24 hours, with 15-minute headways during daylight hours and 30-minute headways during overnight every day of the week. Stops near the project site are located at Wilshire/Spaulding and Wilshire/Curson for both directions of travel.
- **Line 217 (Hollywood/Vine Station – La Cienega Station via Hollywood Boulevard-Fairfax Avenue)** runs between Los Angeles' Los Feliz and Baldwin Hills neighborhoods, on Vermont Avenue, Hollywood Boulevard, and Fairfax Avenue along the west side of the project site. Service runs 7days a week; the bus runs on 12- to 15-minute headways for the majority of the day every day of the week, with longer headways at the beginning and end of service. Stops near the project site are located at Fairfax/West 6th and Fairfax/Wilshire for both directions of travel.
- **Line 720 (Santa Monica – Downtown Los Angeles via Wilshire Boulevard)** runs between Downtown Los Angeles and Santa Monica on Wilshire Boulevard along the entire route between these two destinations. Service runs 7days a week; the bus runs on 5- to 10-minute headways for the majority of the day, with 15-minute headways during overnight hours of service. This is an express bus with limited stops, so the closest bus stops to the project site are at Wilshire/Cloverdale and at Wilshire/Crescent Heights.

LOS ANGELES DEPARTMENT OF TRANSPORTATION DASH BUS SERVICE

The Los Angeles Department of Transportation (LADOT) runs DASH Fairfax service on Wilshire Boulevard and Fairfax Avenue, connecting to Melrose Avenue and the Cedars-Sinai Medical Center. Service runs 7 days a week on 30-minute headways. Weekday service operates from 6:00 a.m. to 7:30 p.m., and weekend service operates from 9:00 a.m. to 7:00 p.m. DASH Fairfax services only

westbound on Wilshire Boulevard and northbound on Fairfax Avenue. Stops near the project site are located at Wilshire/Curson, Wilshire/Ogden, Wilshire/Fairfax, and Fairfax/West 6th.

ANTELOPE VALLEY TRANSIT AUTHORITY

The Antelope Valley Transit Authority, based in the Lancaster and Palmdale area within Los Angeles County's Antelope Valley, provides commuter bus service from Lancaster and Palmdale into Los Angeles. Route 786 (Century City/West Los Angeles) provides four runs from Lancaster and Palmdale into Los Angeles during the morning commute time period, and four runs from Los Angeles to Palmdale and Lancaster during the evening commute time period. The closest stop to the project site is located at Wilshire/La Cienega to the west.

EXISTING BUS STOPS

The Transportation Assessment identifies existing bus stops in the transportation study area. Bus stops are provided in regular succession along Wilshire Boulevard. The closest bus stop to the project site is located at the northwest corner of the Curson Avenue/Wilshire Boulevard intersection, on the north side of Wilshire Boulevard 65 feet west of the intersection. This stop serves Metro Route 20 and LADOT DASH Fairfax service. Passenger amenities consist of a bench, trash can, and shade structure, as well as nearby wayfinding for Hancock Park. Bus stop amenities along Wilshire Boulevard in the transportation study area generally include benches, trash cans, and enhanced crosswalks, but lack shelters, pedestrian-oriented wayfinding, and pedestrian-oriented lighting.

FUTURE HEAVY RAIL SERVICE

Metro's D Line subway (also known as the Purple Line) is under construction to extend service west along Wilshire Boulevard, with service eventually connecting to the University of California, Los Angeles (UCLA) campus. The project includes tunnels within the Wilshire Boulevard right-of-way, adjacent to the project site. When completed, the D Line would operate peak service as often as every 6 minutes in both directions. Trains may operate 24 hours a day, 7 days a week. The first phase of the D Line extension, which is slated to open in 2024, would include a new stop at Ogden Drive and Wilshire Boulevard (branded as the Wilshire/Fairfax stop). This subway stop would be located directly to the southeast of the project site and would be accessible via sidewalks and crosswalks along Wilshire Boulevard. In addition, Metro's Purple (D Line) Extension First Last Mile Plan includes recommendations to enhance bus stops along Wilshire Boulevard.

5.13.1.4 Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities are provided within the transportation study area and offer additional options for travel to and from the project site.

Bikeways are categorized into four types, as described below:

- **Class I Bikeway (Bike Path):** Also known as a shared path or multi-use path, a bike path is a paved right-of-way for bicycle travel that is completely separate from any street or highway (e.g., along a creek or channel).
- **Class II Bikeway (Bike Lane):** A striped and stenciled lane for one-way bicycle travel on a street or highway. This facility could include a buffered space between the bike lane and vehicle lane (referred to as a buffered bike lane) and the bike lane could be adjacent to on-street parking.

- **Class III Bikeway (Bike Route):** A signed route along a street where the bicyclist shares the right-of-way with motor vehicles. This facility can also be augmented using shared-lane markings (also known as "sharrows"). An enhanced bike route, known as a bicycle boulevard, can include traffic-calming treatments to slow down vehicles.
- **Class IV Bikeway (Separated Bike Lane):** Also known as a cycle track or a protected bike lane, this is a bikeway for the exclusive use of bicycles including a separation between the bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking. A cycle track can be one-way or two-way.

There is currently one bikeway in the transportation study area: parking-adjacent Class II bike lanes on Hauser Boulevard north of West 6th Street. There are several bike racks at the project site, on the same block as the project site, or within a short distance of the project site:

- four inverted-U bike racks on the north side of Wilshire Boulevard between Curson Avenue and Fairfax Avenue;
- three inverted-U bike racks on the south side of Wilshire Boulevard between Stanley Avenue and Curson Avenue; and
- two post-and-ring bike racks on the east side of Curson Avenue north of Wilshire Boulevard.

The sidewalk network on the project site's block and adjacent streets is complete with a mixture of curb-tight and buffered sidewalks around the site. All signalized intersections that touch a portion of the project site's block have a complete set of crosswalks, except for the south leg of the Fairfax Avenue/West 6th Street intersection, where pedestrian crossing is prohibited. There is a midblock crossing with a continental crosswalk and a pedestrian hybrid beacon on West 6th Avenue between Ogden Drive and Curson Avenue that aligns with an existing entrance to the project site on the south side of the road. There is also a signalized midblock pedestrian crossing with a continental crosswalk on Wilshire Boulevard west of Fairfax Avenue. The sidewalk network is built out in this area of Los Angeles, including adjacent to the immediate site area. Crosswalks in the transportation study area are generally high-visibility continental crosswalks. However, all four crosswalks at the Curson Avenue/Wilshire Boulevard intersection are standard crosswalks. High-visibility curb ramps with tactile domes are provided at some (but not all) crosswalks in the transportation study area.

Details on bicycle and pedestrian trips within the transportation study area are provided in the Traffic Assessment (see Appendix J).

5.13.2 Regulatory Setting

This section provides a summary of federal, state, regional and local regulations, plans, and policies that are applicable and provide regulatory context for consideration of the project. Compliance with the codes and regulations in this section is required. The consistency analysis for the plans and policies that are necessary in a CEQA transportation analysis is provided in Section 5.13.5, TRA Impact 1. In addition, refer to Section 5.10, Land Use and Planning, for additional discussion of the project's consistency with City and County transportation plans and policies.

5.13.2.1 Federal

AMERICANS WITH DISABILITIES ACT OF 1990

Titles I, II, III, and V of the Americans with Disabilities Act (ADA) have been codified in Title 42 of the United States Code, beginning at Section 12101. Title III discrimination based on disability in "places of public accommodation" (businesses and non-profit agencies that serve the public) and "commercial facilities" (other businesses). The regulation includes Appendix A through Part 36 (Standards for Accessible Design), establishing minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility. Examples of key guidelines include detectable warnings for pedestrians entering traffic where there is no curb, a clear zone of 48 inches for the pedestrian travelway, and a vibration-free zone for pedestrians. The project would be required to meet ADA regulatory requirements.

5.13.2.2 State

ASSEMBLY BILL 32 AND SENATE BILL 375

With the passage of Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, the State of California committed itself to reducing statewide greenhouse gas (GHG) emissions to 1990 levels by 2020. The California Air Resources Board (CARB) is coordinating the response to comply with AB 32. On December 11, 2008, CARB adopted its Scoping Plan for AB 32. This scoping plan included the approval of Senate Bill (SB) 375 as the means for achieving regional transportation-related GHG targets. SB 375 provides guidance on how curbing emissions from cars and light trucks can help the state comply with AB 32.

There are five major components to SB 375. First, regional GHG emissions targets: California ARB's Regional Targets Advisory Committee guides the adoption of targets to be met by 2020 and 2035 for each Metropolitan Planning Organization (MPO) in the state. These targets, which MPOs may propose themselves, are updated every 8 years in conjunction with the revision schedule of housing and transportation elements. Second, MPOs are required to prepare a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. The SCS and the Regional Transportation Plan (RTP) must be consistent with each other, including action items and financing decisions. If the SCS does not meet the regional target, the MPO must produce an Alternative Planning Strategy that details an alternative plan to meet the target. Third, SB 375 requires that regional housing elements and transportation plans be synchronized on 8-year schedules. In addition, Regional Housing Needs Assessment allocation numbers must conform to the SCS. If local jurisdictions are required to rezone land as a result of changes in the housing element, rezoning must take place within 3 years. Fourth, SB 375 provides CEQA streamlining incentives for preferred development types. Certain residential or mixed-use projects qualify if they conform to the SCS. Transit oriented developments also qualify if they: 1) are at least 50% residential; 2) meet density requirements; and 3) are within 0.5 mile of a transit stop. The degree of CEQA streamlining is based on the degree of compliance with these development preferences. Finally, MPOs must use transportation and air emissions modeling techniques consistent with guidelines prepared by the California Transportation Commission. Regional transportation planning agencies, Cities, and Counties are encouraged, but not required, to use travel demand models consistent with the California Transportation Commission guidelines.

CALIFORNIA VEHICLE CODE

The California Vehicle Code (CVC) provides requirements for ensuring emergency vehicle access regardless of traffic conditions. Sections 21806(a)(1), 21806(a)(2), and 21806(c) define how motorists and pedestrians are required to yield the right-of-way to emergency vehicles.

COMPLETE STREETS ACT

AB 1358, the Complete Streets Act (Government Code Sections 65040.2 and 65302), was signed into law by Governor Arnold Schwarzenegger in September 2008. As of January 1, 2011, the law requires Cities and Counties, when updating the part of a local general plan that addresses roadways and traffic flows, to ensure that those plans account for the needs of all roadway users. Specifically, the legislation requires Cities and Counties to ensure that local roads and streets adequately accommodate the needs of bicyclists, pedestrians, and transit riders, as well as motorists. At the same time, the California Department of Transportation (Caltrans), which administers transportation programming for the State, unveiled a revised version of Deputy Directive 64 (DD-64-R1 October 2008), an internal policy document that now explicitly embraces Complete Streets as the policy covering all phases of State highway projects, from planning to construction to maintenance and repair.

CONGESTION MANAGEMENT PROGRAM

The Congestion Management Program (CMP) is a State-mandated program enacted by the State legislature and was last updated in 2010 (Metro 2010). The program is intended to address the impact of local growth on the regional transportation system. Level of Service (LOS) is a qualitative measure used to describe traffic flow conditions, which range from excellent, nearly free-flow, traffic conditions at LOS A to stop-and-go traffic conditions at LOS F. Statutory requirements of the CMP include monitoring LOS on the CMP Highway and Roadway network, measuring frequency and routing of public transit, implementing the Transportation Demand Management and Land Use Analysis Program, and helping local jurisdictions meet their responsibilities under the CMP.

The Los Angeles County Metropolitan Transportation Authority (Metro), the local CMP agency, has established a countywide approach to implement the statutory requirements of the CMP. This approach includes designating a highway network that includes all State highways and principal arterials within the county and monitoring traffic conditions on the designated transportation network; performance measures to evaluate current and future system performance; promotion of alternative transportation methods; analysis of the impact of land use decisions on the transportation network; and mitigation to reduce impacts on the network. If LOS standards deteriorate in areas outside of infill opportunity zones, then local jurisdictions must prepare a deficiency plan to be in conformance with the countywide plan.

The CMP requires an EIR to evaluate traffic and public transit impact analyses for select regional facilities based on the quantity of project traffic expected to use those facilities. The CMP guidelines state that areas selected for analysis should be those that include the following locations:

- All CMP arterial monitoring intersections, including monitored on- or off-ramp intersections, where the project would add 50 or more trips during either the a.m. or p.m. weekday peak hours of adjacent street traffic; and
- Mainline freeway monitoring locations where the project would add 150 or more trips, in either direction, during either the a.m. or p.m. weekday peak hours.

SENATE BILL 743

On September 27, 2013, SB 743 was signed into law. SB 743 started a process that could fundamentally change transportation impact analysis as part of CEQA compliance. These changes include the elimination of auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts. SB 743 required the Governor's Office of Planning and Research to propose revisions to the State CEQA Guidelines establishing new criteria to "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" (Public Resources Code Section 21099(b)(1)).

The new State CEQA Guidelines Section 15064.3(b) was adopted in December 2018 by the California Natural Resources Agency. These revisions to the State CEQA Guidelines shift the focus of CEQA transportation analyses from driver delay to reduction of greenhouse gas emissions, creation of multimodal networks, and promotion of a mix of land uses (which in turn reduces regional vehicle trips). Vehicle miles traveled (VMT) is a measure of the total number of miles driven to or from a development and can be expressed in either total VMT or as an average per person.

Based on these changes, on July 30, 2019, the City of Los Angeles City Council adopted the CEQA Transportation Analysis Update, which sets forth the revised thresholds of significance for evaluating transportation impacts as well as screening and evaluation criteria for determining impacts. The CEQA Transportation Analysis Update establishes VMT as the City's formal method of evaluating a project's transportation impacts. In conjunction with this update, LADOT adopted its Transportation Assessment Guidelines (TAG) in July 2019 and updated in July 2020, which defines the methodology for analyzing a project's transportation impacts in accordance with SB 743.

STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM

Caltrans administers transportation programming, which is the public decision-making process that sets priorities and funds projects envisioned in long-range transportation plans. Caltrans commits expected revenues over a multi-year period to transportation projects. The Statewide Transportation Improvement Program (STIP) is a multiyear capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the State Highway Account and other sources.

5.13.2.3 Regional

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS 2020–2045 REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY

In compliance with SB 375, on September 3, 2020, the Southern California Association of Governments (SCAG) Regional Council adopted the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS), a long-range visioning plan that incorporates land use and transportation strategies to increase mobility options and achieve a more sustainable growth pattern while meeting GHG reduction targets set by CARB. The 2020–2045 RTP/SCS contains baseline socioeconomic projections that are used as the basis for SCAG's transportation planning, as well as the provision of services by the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. SCAG policies are directed toward the development of regional land use patterns that contribute to reductions in vehicle miles and improvements to the transportation system.

The 2020–2045 RTP/SCS builds on the long-range vision of SCAG's prior 2016–2040 RTP/SCS to balance future mobility and housing needs with economic, environmental, and public health goals. A substantial concentration and share of growth is directed to Priority Growth Areas, which include High-

quality Transit Areas, Transit Priority Areas, job centers, Neighborhood Mobility Areas, and Livable Corridors. These areas account for 4% of SCAG's total land area but the majority of directed growth. High-quality Transit Areas are corridor-focused Priority Growth Areas within 0.5 mile of an existing or planned fixed guideway transit stop or a bus transit corridor where buses pick up passengers at a frequency of every 15 minutes (or less) during peak commuting hours. Transit Priority Areas are Priority Growth Areas that are within 0.5 mile of a major transit stop that is existing or planned.

5.13.2.4 County of Los Angeles

COUNTY OF LOS ANGELES GENERAL PLAN

The Mobility Element, included as Chapter 7 of the Los Angeles County General Plan 2035 (County of Los Angeles 2015), provides an overview of the transportation infrastructure and strategies for developing an efficient and multimodal transportation network. The Mobility Element assesses the challenges and constraints of the County transportation system and offers policy guidance to reach the County's long-term mobility goals. It includes two sub-elements, the Highway Plan and the Bicycle Master Plan. These plans establish policies for the roadway and bikeway systems in the unincorporated areas, which are coordinated with the networks in the 88 cities in the County. The General Plan also established a program to prepare community pedestrian plans, with guidelines and standards to promote walkability and connectivity throughout the unincorporated areas. The County's General Plan Mobility Element is included here for informational purposes only.

LOS ANGELES COUNTY PUBLIC WORKS TRANSPORTATION IMPACT ANALYSIS GUIDELINES

The County published Transportation Impact Guidelines in July 2020 (County Department of Public Works 2020). Generally, these guidelines provide direction for the preparation of transportation impact analyses for development and transportation projects, including requirements and methodologies for VMT analyses. During the Transportation Assessment preparation process, the City and the County agreed that it would be most appropriate to use the City's assessment guidelines rather than the County's. This is primarily because the project would most affect the transportation network in the city.

5.13.2.5 City of Los Angeles

While the project site is located within the city of Los Angeles, it is owned by the County of Los Angeles and is proposed for uses that benefit the public. Accordingly, the project is not subject to the regulatory controls of the City of Los Angeles. However, the street system surrounding the project site is entirely within the City's jurisdiction. As such, the transportation analysis was prepared pursuant to the LADOT Transportation Assessment Guidelines, which require consistency analysis with the following plans, policies, and ordinances, including the City of Los Angeles Mobility Plan 2035 and the Los Angeles Municipal Code (LAMC).

CITY OF LOS ANGELES MOBILITY PLAN 2035

The Mobility Plan 2035, adopted on January 20, 2016, and readopted September 7, 2016, is a comprehensive update of the City's General Plan Transportation Element. The Mobility Plan 2035 provides the policy foundation for achieving a transportation system that balances the needs of all road users, incorporates "complete streets" principles, and lays the policy foundation for how future generations of Angelenos interact with their streets, in compliance with the Complete Streets Act.

The purpose of the Mobility Plan is to present a guide to the future development of a citywide transportation system for the efficient movement of people and goods. While the Mobility Plan focuses on the City's transportation network, it complements other components of the City General Plan that pertain to the arrangement of land uses to reduce VMT and policies to support the provision and use of alternative transportation modalities. The Mobility Plan includes the following five main goals that define the City's high-level mobility priorities: Safety First; World Class Infrastructure; Access for All Angelenos; Collaboration, Communication, and Informed Choices; and Clean Environments and Healthy Communities.

CITY OF LOS ANGELES MUNICIPAL CODE

Regarding construction traffic, LAMC Section 41.40 limits construction activities to the hours from 7:00 a.m. to 9:00 p.m. on weekdays and from 8:00 a.m. to 6:00 p.m. on Saturdays and national holidays. No construction is permitted on Sundays.

LAMC Section 12.37 sets forth requirements for street dedications and improvements for new development projects. Specifically, LAMC Section 12.37 states that no building or structure shall be erected or enlarged on any property, and no building permit shall be issued therefore, on any R3 or less restrictive zone, or in any lot in the RD1.5, RD2, or R3 Zones, if the lot abuts a major or secondary highway or collector street unless one-half of the street adjacent to the subject property has been dedicated and improved to the full width to meet the standards for a highway or collector street as provided in the LAMC. While LAMC Section 12.37 generally applies to projects meeting the above criteria, the authority to require right-of-way dedications and improvements for discretionary projects that involve zone changes or divisions of land falls under LAMC Sections 12.32 G.1 and 17.05.

With regard to on-site bicycle parking, LAMC Section 12.21 A.16 sets forth requirements for long-term and short-term bicycle parking for residential and commercial buildings. Where there is a combination of uses on a lot, the number of bicycle parking spaces required shall be the sum of the requirements of the various uses. LAMC Section 12.21 A.16 also includes facility requirements, design standards, and siting requirements for bicycle parking.

LAMC Section 12.26 J provides for Transportation Demand Management (TDM) and Trip Reduction Measures that are applicable to the construction of new non-residential gross floor area. Different TDM requirements are provided for developments in excess of 25,000 square feet of gross floor area, 50,000 square feet of gross floor area, and 100,000 square feet of gross floor area. The TDM requirements set forth therein vary depending upon the maximum non-residential gross floor area described above and include measures such as the provision of a bulletin board, display case, or kiosk with transit information and carpool/vanpool parking spaces.

LOS ANGELES DEPARTMENT OF TRANSPORTATION: TRANSPORTATION ASSESSMENT GUIDELINES

On July 30, 2019, LADOT updated its Transportation Impact Study Guidelines, travel demand model, and transportation impact thresholds based on VMT, pursuant to State CEQA Guidelines Section 15064.3 and the 2019 CEQA updates that implement SB 743. The City established the Transportation Assessment Guidelines (TAG) that include both CEQA thresholds (and screening criteria) and non-CEQA thresholds (and screening criteria). LADOT updated the TAG in July 2020. The CEQA thresholds provide the methodology for analyzing the Appendix G transportation thresholds, including providing the City's adopted VMT thresholds. The non-CEQA thresholds provide a method to analyze projects for purposes of entitlement review and making necessary findings to ensure the project is consistent with adopted plans and policies including the Mobility Plan.

Specifically, the TAG is intended to effectuate a review process that advances the City's vision of developing a safe, accessible, well-maintained, and well-connected multimodal transportation network. The TAG have been developed to identify land use development and transportation projects that may impact the transportation system; to ensure proposed land use development projects achieve site access design requirements and on-site circulation best practices, to define whether off-site improvements are needed, and to provide step-by-step guidance for assessing impacts and preparing Transportation Assessment Studies.

5.13.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in a significant impact related to transportation and traffic if it would:

a) Conflict with a project plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

b) Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b);

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or

d) Result in inadequate emergency access.

5.13.4 Impact Assessment Methodology

As described in the Transportation Assessment prepared by Kittelson and Associates (see Appendix J), impact assessment methodologies for each threshold of significance were developed in accordance with Section 2 of the LADOT TAG (LADOT 2020).

In order to support the assessment of projects' consistency with the City's transportation planning framework, the City has prepared a Plan Consistency Worksheet with questions to help guide whether the project would conflict with these programs, plans, ordinances, and policies. The Transportation Assessment prepared a Consistency Worksheet which considered the Mobility Plan 2035 Public Right-of-Way (PROW) Classification Standards for Dedications and Improvements, the Mobility Plan 2035 PROW Policy Alignment with Project-Initiated Changes, network access, and other applicable TDM and regional planning policies.

To consider the project's consistency with State CEQA Guidelines Section 15064.3, an off-model VMT analysis using visitor zip code data was used to conduct a full VMT impact analysis. This approach is appropriate because the project is a non-standard use with unique trip generation patterns and neither the City's VMT calculator tool nor the City's Travel Demand Forecasting model could be used for the assessment. To conduct this analysis, average recreation trip lengths from the 2012 California Household Travel Survey were used; the California Household Travel Survey provides zip code–based household data including mode choice and trip lengths. Information is further broken down by trip purpose (home, work, school, errands, dining, shopping, and recreation). The average recreation trip length would be obtained for the zip codes encompassing Los Angeles and Orange Counties. From there, the average trip length for museum visitors in fiscal year 2018 was estimated using visitor's reported zip codes. This would be estimated for visitors from zip codes within Los Angeles and Orange Counties, since they are more likely to make a unique, unlinked driving trip to the museum. The visitors' average trip lengths were then compared to the average trip length for recreation-related trips in the region. To determine impacts, the analysis considers the net increase in total VMT, since trips associated with uses such as event centers and regional-serving entertainment venues are typically discretionary trips made by individuals, which

may be substitute or new trips, based on LADOT traffic study guidelines. The analysis compares the visitor trip length to the average regional recreation trip length to see which is longer. If zip code–based trips are longer than the regional average, then the regional total VMT would increase, thus causing a potential impact. Additional information on the development of the methodology for the VMT impact analysis is provided in the Transportation Assessment prepared by Kittelson and Associates (see Appendix J).The determination of significance regarding the potential for increasing hazards was assessed based on the relative amount of pedestrian activity at project access points, design features/physical configurations that affect the visibility of pedestrians and bicyclists to drivers entering and exiting the project site, the type of bicycle facilities the project driveway(s) crosses and the relative level of use, the physical conditions of the project site and surrounding areas, and other conditions, including the approximate location of incompatible uses that would substantially increase a transportation hazard.

Analysis of the project's potential impacts related to emergency access included a review of vehicle access points to the project site. Construction activities and their impact on emergency access have also been evaluated. The determination of significance for this threshold considers the potential of the project to impede on emergency access on adjacent City streets and/or result in safety impacts.

For impacts during project operation, project trip generation is detailed in the Transportation Assessment prepared by Kittelson and Associates (see Appendix J). Operational trip generation for the project was prepared by first establishing an existing trip generation rate for the weekday daily, weekday a.m. peak hour, weekday midday peak hour, weekday p.m. peak hour, Saturday daily, and Saturday midday peak hour periods using historical data specific to the project site and the existing museum square footage and number of employees. Then, the trip generation rates were applied to the proposed increase in museum square footage to estimate the net increase in project-generated trips. Trip generation was estimated separately for employees and for visitors. All trips presented are one-way.

Table 5.13-4 provides the estimated net increase in vehicle trips generated by the project during project operation,[1] combining the net increases for both employee and visitor vehicle trips. The project is expected to generate 1,293 net new weekday daily vehicle trips and 1,679 net new Saturday daily vehicle trips.

Table 5.13-4. Net Vehicle Trip Generation Estimate

Weekday									
	AM Peak Hour			Midday Peak Hour			PM Peak Hour		
Daily	In	Out	Total	In	Out	Total	In	Out	Total
1,293	12	0	**12**	107	199	**306**	16	69	**85**
Saturday									
	AM Peak Hour			Midday Peak Hour			PM Peak Hour		
Daily	In	Out	Total	In	Out	Total	In	Out	Total
1,679	*(not analyzed)*			145	139	**284**	*(not analyzed)*		

Source: Kittelson and Associates (2022).

[1] The Traffic Assessment uses the term "museum expansion" to represent the action of the project, as the proposed increase in square footage was used to estimate the increase in project-generated trips. Throughout this EIR, all actions associated with project implementation are referred to collectively as "the project." For the purposes of this transportation analysis, these two terms are synonymous given the aforementioned methodology for projecting project-generated trips.

The George C. Page Museum (Page Museum) is one of several museums in the transportation study area. It is expected that a portion of visitors to the transportation study area would visit multiple museums in a single visit. This includes the additional visitors to the area due to the project; a portion of the increase in visitors could come from other nearby museums such as LACMA. Therefore, the trip generation used in the Transportation Assessment is conservative by linearly estimating the net increase in trips associated with the project.

5.13.5 Environmental Impact Analysis

The consistency analysis of the applicable transportation plans, policies, and regulations for threshold a) and threshold b) considers the holistic impacts associated with implementation of the project (i.e., it does not provide separate construction and operation analyses). This is because most policies broadly consider the appropriateness of types of land uses and the inclusion of features in the development plan that are consistent with the agency's long-range vision and goals. For threshold c), the focus is on the design features of the project so the question is inherently focused on how the project would function once fully constructed. Construction and operational impacts are addressed for threshold d).

a) Would the project conflict with a project plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

MOBILITY PLAN 2035 PROW CLASSIFICATION STANDARDS FOR DEDICATIONS AND IMPROVEMENTS

While the project includes new construction along Wilshire Boulevard (an Avenue I) and West 6th Street (an Avenue II), the property is not zoned for R3 or less restrictive zoning. Therefore, the project does not conflict with the dedication and improvement requirements that are needed to comply with the Mobility Plan 2035 Street Designations and Standard Roadway Dimensions.

MOBILITY PLAN 2035 PROW POLICY ALIGNMENT WITH PROJECT-INITIATED CHANGES

Given that the project includes physically modifying the curb placement along Curson Avenue, City plans and policies were reviewed in light of the proposed physical changes to determine if the City would be obstructed from carrying out the plans and policies. Curson Avenue along the project frontage is not on the High Injury Network. It is not a part of one of the designated multimodal networks. There are no existing or planned transit lines, transit stops, or bikeways along this segment. With the proposed change, the existing sidewalk would be maintained. The project proposes to modify the curb line to create a bay for a section of curb that is already designated as a bus zone, in place of the existing landscaped area. This moves loading/unloading out of the travel lanes to separate it from the adjacent travel lane.

The project also includes a new driveway on West 6th Street (an Avenue II). However, this does not result in exceeding 1 driveway per every 200 feet along the Avenue II frontage, locating it within 150 feet of the intersecting street, or locating it near a mid-block crosswalk. The project would not conflict with plans or policies that govern the public right-of-way.

NETWORK ACCESS

The project does not propose to vacate or otherwise restrict public access to a street, alley, or public stairway. It does not create a cul-de-sac and is not located adjacent to an existing cul-de-sac. Therefore, the project would not conflict with a plan or policies that ensures access for all modes of travel.

PARKING SUPPLY AND TRANSPORTATION DEMAND MANAGEMENT

The project would not propose a supply of on-site parking that exceeds the baseline amount as required in the LAMC. No increase in the on-site parking supply is anticipated from existing conditions, and the overall museum square footage is increasing. The project would not conflict with parking management policies.

The LAMC bicycle parking requirements for institutional uses are one short-term parking space per 10,000 of floor area, and one long-term parking space per 5,000 square feet of floor area. Since the project includes a net increase of 42,000 square feet, this means that four short-term spaces and eight long-term spaces are required. At this time, the project site plan is conceptual and therefore does not indicate the amount nor location of bike parking. Therefore, the project may conflict with the LAMC requirements for bicycle parking.

The TDM Ordinance requires projects between 25,000 and 50,000 square feet to provide a transportation information display with public transit information, contact information for rideshare and transit, ridesharing promotional material, bike route and facility information, and listing of on-site services or facilities. At the time of EIR development, the project site plan is conceptual and does not indicate the location of this required TDM measure. Therefore, the project may conflict with the LAMC requirements for TDM.

CONSISTENCY WITH REGIONAL PLANS

The project was reviewed to determine potential inconsistencies with GHG reduction targets forecasted in the SCAG RTP/SCS. The project was analyzed using a total VMT threshold (as opposed to an efficiency-based impact threshold). The project site functions as a regional attraction and the proposed project would result in a net increase in regional VMT. Since the project would result in a net increase in VMT, further evaluation was necessary to determine whether this project would be inconsistent with VMT and GHG reduction goals of the SCAG RTP/SCS.

It was determined that without mitigation measures, the project may be inconsistent with SCAG's goals related to improving mobility and accessibility, ensuring safety, maximizing transportation productivity, encouraging active transportation, and improving air quality. The project does not include transportation improvements to encourage and improve active transportation and public transit outside of on-site access and circulation improvements. The project may conflict with the following relevant RTP/SCS goals:

- Improve mobility, accessibility, reliability, and travel safety for people and goods
- Enhance the preservation, security, and resilience of the regional transportation system
- Increase person and goods movement and travel choices within the transportation system
- Reduce greenhouse gas emissions and improve air quality
- Leverage new transportation technologies and data-driven solutions that result in more efficient travel

CONCLUSION

Through the analysis above, it was determined that the project would be inconsistent with regional plans related to mobility and GHG reductions, as well as the LAMC requirements for bicycle parking and TDM. As such, the project could result in a *significant impact* related to consistency with plans, programs, ordinances, or policies.

TRA Impact 1	
The project could result in a significant impact related to consistency with transportation plans, programs, ordinances, or policies. (CEQA Checklist Appendix G Threshold XVII a)	
Mitigation Measures	

TRA/mm-1.1	*In consultation with the LADOT, the Los Angeles County Museum of Natural History Foundation (Foundation) shall prepare and implement a Transportation Demand Management (TDM) Program to reduce museum employee and visitor vehicle trips and increase alternative modes such as walking, bicycling, public transit, and rideshare.*
	
	The Foundation shall designate an existing member of staff as the on-site TDM Coordinator. This coordinator shall be responsible for monitoring and tracking employee and visitor mode share and annual reporting to LADOT.
	
	***Employee Strategies**:*
	
	Information shall be distributed to employees and displayed on a bulletin board, display case, or kiosk (displaying transportation information) where the greatest number of employees are likely to see it. The following measures may be applied to reduce employee vehicle trips and VMT:
	
	• *Provide a transportation information bulletin board on-site with public transit information, contact information for rideshare and transit, ridesharing promotional material, bike route and facility information, and listing of on-site services or facilities.*
	
	• *Provide facilities on-site to support bicycling to work, such as secure bike parking, showers, and lockers.*
	
	• *Encourage and support participation in Metro vanpool, including subsidies for participation.*
	
	• *Implement paid parking for employees.*
	
	• *Subsidize transit passes.*
	
	• *Offer flexible work schedules and telecommuting, when feasible.*
	
	***Visitor Strategies**:*
	
	Transportation information for visitors shall be displayed on La Brea Tar Pits' website and distributed with physical marketing materials. The following measures may be applied to reduce visitor vehicle trips and VMT:
	
	• *Advertise and offer discounted museum tickets for visitors who use public transit or a bicycle to visit the project.*
	
	• *Provide and maintain secure on-site bicycle parking for visitors and monitor usage to determine if additional bicycle racks are needed.*
	
	  ○ *Provide wayfinding signage directing bicyclists from the visitor entrances to where on-site bicycle parking is located.*
	
	  ○ *Ensure bicycle parking is well lit and monitored by staff.*
	
	• *Continue to have paid parking for visitors.*
	
	• *Coordinate with Metro to improve transit access and user comfort and encourage visitors to take local bus service or the future Purple Line extension to La Brea Tar Pits, through the following measures:*
	
	  ○ *Improve pedestrian wayfinding between the planned Purple Line station, local bus stops, and La Brea Tar Pits.*

TRA Impact 1	
	○ *Implement bus stop improvements such as shelters along Wilshire Boulevard bus stops that would be used by La Brea Tar Pits visitors.* ○ *Coordinate with Metro and the City of Los Angeles to ensure that safe and comfortable pedestrian facilities (such as ADA curb ramps and continental crosswalks) are available between local bus stops and the project entrances, including at the Curson Avenue/ Wilshire Boulevard intersection.* • *Coordinate with the City of Los Angeles to implement planned bikeways in the vicinity of the project site and contribute to the implementation of the bikeways. This includes planned bikeways along Wilshire Boulevard and West 6th Street.*
Impacts Following Mitigation	
With implementation of Mitigation Measure TRA/mm-1.1, impacts related to consistency with plans, programs, ordinances, or policies would be reduced to less than significant.	

b) Would the project conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)?

The California Household Travel Survey average trip lengths by trip purpose for households in Los Angeles County and Orange County indicate the average recreation trip length is 6.65 miles. Ticketing information and reported zip codes (for visitors from Los Angeles County and Orange County zip codes) from fiscal year 2018 were used to estimate the average visitor trip length. According to this subset of fiscal year 2018 visitors, the average trip length per visitor was 19.70 miles.

The average visitor trip length (19.70 miles) is higher than the average recreation trip length (6.65 miles). Visitors to the museum travel approximately 196% longer than the average recreation trip in Los Angeles and Orange Counties. Given that museum visitor trips are longer than regional recreation trip lengths, additional visitor trips to the project site due to the proposed project would result in a net increase in total VMT.

The Page Museum is one of several museums in the transportation study area. It is expected that a portion of visitors to the transportation study area would visit multiple museums in a single visit. This includes the additional visitors to the area due to the project; a portion of the increase in visitors could come from other nearby museums such as LACMA. Therefore, the VMT assessment used for the impact findings under TRA Impact 1 and TRA Impact 2 is conservative in that it assumes new visitors generated by the project would exhibit the same trip length patterns as existing visitors to the project site.

According to the California Air Pollution Control Officers Association (CAPCOA) *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (CAPCOA 2022), the maximum VMT reductions for various categories of on- and off-site measures range from approximately 2% to 65% for projects located in urban areas. However, given the magnitude of VMT that would need to be reduced—due to visitor trips being 196% longer than average regional recreation trips—Mitigation Measure TRA/mm-1.1 may be insufficient to reduce VMT to less-than-significant levels. Therefore, the project would result in a substantial increase in vehicle miles traveled and would be considered a *significant* impact.

TRA Impact 2
The project would result in a net increase in VMT and would result in a substantial increase in vehicle miles traveled. Impacts would be considered significant. (CEQA Checklist Appendix G Threshold XVII b)
Mitigation Measures
Implement Mitigation Measure TRA/mm-1.1.
Impacts Following Mitigation
Although implementation of TRA/mm-1.1 would reduce employee and visitor VMT and support multimodal connectivity, it may be insufficient to reduce VMT to less-than-significant levels. Therefore, the project's impacts related to causing substantial vehicle miles traveled would remain significant and unavoidable.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Once developed, the project would include a new driveway on West 6th Street that is 20 feet wide and consists of one inbound and one outbound lane. The driveway would be located approximately 450 feet west of the intersection with Curson Avenue and 250 east of the signalized pedestrian crossing. The driveway location does not result in exceeding 1 driveway per every 200 feet along the Avenue II frontage, locating it within 150 feet of the intersecting street, or locating it near a mid-block crosswalk. West 6th Street has relatively flat grades and there are no visible obstructions to sight distance for the proposed location. West 6th Street has an existing two-way left-turn lane for approximately 200 feet in each direction of the proposed driveway, with only one driveway on the north side which provides access to parking for the Park La Brea apartments. To minimize potential conflicts, the project driveway would be aligned across from the existing driveway on the north side of West 6th Street.

Pedestrian activity is high on West 6th Street and there is a sidewalk with landscaped separation between the curb and the sidewalk where the driveway would be located. Bicycle activity is moderate on West 6th Street and currently shares the roadway with vehicles, but there are planned protected bike lanes. Introduction of a new driveway would create a new conflict point between vehicles and pedestrians/bicyclists but would be designed to provide adequate sight distance and with curb radii that require slower speeds to complete turning movements.

A new loading zone is proposed along West 6th Street between the LACMA parking access and the signalized mid-block crossing connecting to the project site. The loading zone would replace existing on-street parking and would operate similar to the existing parking when considering whether the project would cause potential hazards.

The project also includes modifying the curb along Curson Avenue to provide a pull-out area for loading and unloading. The project proposes to modify the curb line to create a bay for a section of curb that is already designated as a bus zone. This moves loading/unloading out of the travel lanes to separate it from the adjacent travel lane.

Based on the proposed site plan and evaluation of geometric design and uses, the project would result in *less than significant* impacts when considering increasing hazards during project operation.

TRA Impact 3
Once developed, the project would not substantially increase hazards due to a geometric design feature; impacts would be less than significant. (CEQA Checklist Appendix G Threshold XVII c)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to hazards due to a geometric design feature would be less than significant.

d) Would the project result in inadequate emergency access?

CONSTRUCTION

Construction of the project would include renovation and expansion of the existing museum, demolition of the existing museum entrances, grading and excavation, and construction of new structures and related infrastructure. While all construction activities, including construction staging of equipment, would be situated entirely within the project site, it is possible that project construction and needs for unique construction-period access could cause temporary delays to vehicles (including emergency response providers) in the vicinity of the project site.

OPERATION

Once the project is constructed and operational, emergency vehicle access to the project site would be provided from the two site entrances off South Curson Avenue and off West 6th Street. As stated in the Transportation Assessment, the project may result in queuing and delays at the two major intersections directly next to (and providing access to) the project site, which could affect emergency access to the project site and other nearby sites.

The project would be required to be designed in accordance with the California Vehicle Code (CVC), which provides requirements for ensuring emergency vehicle access regardless of traffic conditions. In addition, the project's emergency vehicle access would need to comply with Los Angeles Fire Department (LAFD) access requirements as to not impede emergency access within the project vicinity, and all project driveways would be required to be designed according to LADOT standards to ensure adequate access, including emergency access, to the project site. While increased vehicle traffic may increase delays and queues on the network, the drivers of emergency vehicles normally have a variety of options for avoiding traffic, such as using sirens to clear a path of travel, activating emergency vehicle pre-emption phases on traffic signals, or driving in the lanes of opposing traffic. Pertaining to emergency access within the project site, a Preliminary Basis of Design Narrative was prepared for the project to outline the applicable codes related to fire safety and access features required to ensure adequate on-site circulation and access to the buildings and park areas within the project site (Code Consultants, Inc. [CCI] 2021). As outlined by CCI, the project would be designed in accordance with regulations set forth in the County of Los Angeles Building Code as well as the City of Los Angeles Fire Code as they pertain to fire safety and emergency access.

CONCLUSION

Given the project is undergoing continued development, the specific emergency access design and parameters have not been finalized, either for construction-period or post-construction conditions. For these reasons, emergency access impacts are considered *potentially significant*.

TRA Impact 4	
The project could result in inadequate emergency access during construction and operation. Project impacts would be potentially significant. (CEQA Checklist Appendix G Threshold XVII d)	
Mitigation Measures	
TRA/mm-4.1	*A construction traffic management plan (CTMP) shall be developed by the contractor, approved by the County and the City of Los Angeles Department of Transportation (LADOT), and implemented to alleviate construction period impacts. The CTMP will include, but may not be limited to, the following restrictions:* • *Prohibition of construction worker parking on nearby residential streets.* • *Prohibition of construction-related vehicles parking or staging on surrounding public streets.* • *Temporary pedestrian and vehicular traffic controls (i.e., flag persons) during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways.* • *Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate.* • *Scheduling of construction-related deliveries, haul trips, etc., shall occur outside the commuter peak hours to the extent feasible.*
TRA/mm-4.2	*Consultation shall occur with the City of Los Angeles Fire Department (LAFD) to analyze the project's emergency access design, including a review of the proposed vehicle access points. Construction activities and their impact on emergency access shall also be reviewed to ensure that the final design provides adequate access to the project site and neighboring businesses and residences.*
TRA/mm-4.3	*To improve emergency access safety and circulation, coordination shall occur with LADOT to explore the feasibility of implementing one or more of the following improvements:* • *Signal timing at the built-out intersection of Curson Avenue/Wilshire Boulevard shall be regularly updated to optimize traffic signal timing. In addition, the weekday a.m. and p.m. peak period bus-only lanes on Wilshire Boulevard shall be extended to the weekday midday and weekend midday peak hours to improve bus operations through that intersection.* • *Signal timing at the Curson Avenue/West 6th Street intersection shall be regularly updated to optimize splits. In addition, improve existing lane striping to extend the northbound left-turn lane at the intersection, and/or add an inbound left-turn lane at the project's Curson Avenue driveway.* • *Incorporate safety features to accommodate passenger pick-up and drop-off along West 6th Street when planned separated bike lanes are implemented.* • *Monitor driveway operations at Curson Avenue.*

TRA Impact 4	
	The County of Los Angeles does not have the authority to impose these measures because they are within the discretionally authority of the City of Los Angeles. Thus, while they are recommended, the County of Los Angeles is not required to implement them. However, the requirement to coordinate with the City and facilitate possible implementation of the above measures shall be required.
Impacts Following Mitigation	
Impacts related to inadequate emergency access would be less than significant with mitigation. Emergency access can be addressed and brought to a level of less-than-significant solely with the implementation of TRA/mm-4.1 and 4.2. However, the exploration and facilitation of the improvements identified in TRA/mm-4.3, which are under the City of Los Angeles jurisdiction, are recommended to further advance and improve transportation conditions in the project site.	

5.13.6 Cumulative Impact Analysis

In accordance with the LADOT Transportation Assessment Guidelines, this cumulative analysis analyzes the effects of the project in relation to other developments in proximity of the project site that are proposed, approved, or under construction. The LADOT TAG define related projects as those that are within a 0.5-mile radius from a project site for CEQA analysis, and 0.25 mile beyond the farthest study intersection for non-CEQA circulation analysis[2] (LADOT 2020).

Estimated trip generation for the nine cumulative projects included in the Transportation Assessment is provided in Table 5.13-5. More information on how the trip generation for the cumulative projects was developed is provided in the Transportation Assessment. The trip generation for the cumulative projects is conservative by not applying negative net new trips and instead assuming those to be zero. Accordingly, a hyphen in a cell of the table denotes that the related project generates either zero or negative net new trips for that specific time period and inbound/outbound trip generation.

Table 5.13-5. Related Projects Trip Generation

Project	Week-day Daily	Weekday a.m.			Weekday Midday			Weekday p.m.			Sat. Daily	Saturday Midday		
		In	Out	Total	In	Out	Total	In	Out	Total		In	Out	Total
LACMA Renovation	668	43	2	**45**	27	33	**60**	15	53	**68**	763	34	41	**75**
Mixed-Use Project	310	4	14	**18**	11	7	**18**	14	9	**23**	209	9	6	**15**
Wilshire Curson Project	17,576	1,692	261	**1,953**	378	1,283	**1,661**	491	1,666	**2,157**	8,176	319	1,083	**1,402**
Mixed-Use Residential Project	786	27	46	**73**	36	24	**60**	48	31	**79**	913	31	20	**51**

[2] The cumulative project list provided in Chapter 4, Environmental Setting, includes an expanded list beyond the geographic requirements of the LADOT Transportation Assessment Guidelines to allow consideration of potential cumulative impacts related to other environmental issue areas with a broader geographic reach.

Project	Week-day Daily	Weekday a.m.			Weekday Midday			Weekday p.m.			Sat. Daily	Saturday Midday		
		In	Out	Total	In	Out	Total	In	Out	Total		In	Out	Total
Mixed-Use Residential and Commercial Development	--	--	41	**41**	1	--	**--**	1	--	**--**	--	1	--	**--**
Olympic and Fairfax Mixed Use Project	--	--	12	--	3	2	**5**	3	3	**6**	--	2	2	**4**
Mixed-Use Project	1,609	49	93	**142**	51	16	**67**	66	21	**87**	762	43	14	**57**
San Vicente Medical/ Commercial Project	5,374	364	108	**472**	141	304	**445**	183	395	**578**	2,146	119	257	**376**
Olympic Boulevard Mixed-Use Project	99	6	3	9	4	--	**4**	5	--	**5**	30	3	--	**3**

Source: (Kittelson and Associates (2022).

Note: A hyphen (–) denotes that the related project does not generate net new trips for that time period and/or direction.

The analysis conducted for consistency with transportation plans and policies to determine if cumulative impacts may result from the project in combination with related projects in the transportation study area is as follows:

- **Mobility Plan 2035 PROW Classification Standards for Dedications and Improvements:** The LACMA Renovation is a related project that shares the block as well as West 6th Street and Wilshire Boulevard frontages with the project. However, while the LACMA Renovation also includes new construction along Wilshire Boulevard (an Avenue I) and West 6th Street (an Avenue II), the property is not zoned for R3 or less restrictive zoning. Therefore, cumulative conflicts are not anticipated.
- **Mobility Plan 2035 PROW Policy Alignment with Project-Initiated Changes:** Related projects in the transportation study area do not propose curb modifications and new driveways near the project. Therefore, cumulative conflicts are not anticipated.
- **Network Access:** The related projects in the transportation study area do not propose to vacate or restrict public access or create cul-de-sacs in proximity of the project. Therefore, cumulative conflicts are not anticipated.
- **Parking Supply and Transportation Demand Management:** It is not anticipated that related projects in the transportation study area would conflict with the City's parking management policies (either through providing sufficient parking supply or implementing parking management strategies). The potential project shortcomings related to bicycle parking and TDM requirements would be exacerbated by related projects in the transportation study area. Therefore, *cumulative conflicts are anticipated.*
- **Consistency with Regional Plans:** The LACMA Renovation, located directly to the west of the project and sharing the city block, is similarly a museum that serves as a regional attraction and would likely result in a net increase in regional VMT. *Therefore, cumulative conflicts with regional plans related to mobility and GHG reductions are anticipated*.

Other projects in the transportation study area are generally residential, office, and retail projects. However, the LACMA renovation, located directly to the west of the project and sharing the city block, is similarly a museum that serves as a regional attraction and would likely result in a net increase in regional VMT. Cumulative increases in VMT are anticipated. Therefore, the project would contribute to a *significant* cumulative impact related to causing substantial vehicle miles traveled and consistency with transportation plans, programs, ordinance, and policies.

The analysis of potential increased hazards was reviewed to determine if cumulative impacts may result from the project in combination with related projects in the transportation study area. Related projects in the area would likely contribute additional vehicle, pedestrian, and bicycle activity. The project design would not be impacted by the related projects nor the increase in activity. Thus, the project would result in a *less than significant* cumulative impact when considering increasing hazards based on the geometric design and uses of the project.

TRA Impact 5
The project would result in a significant contribution to cumulative transportation impacts by resulting in a net increase in VMT.
Mitigation Measures
Implementation of TRA/mm-1.1 shall be required.
Impacts Following Mitigation
Although implementation of TRA/mm-1.1 would reduce employee and visitor VMT and support multimodal connectivity, it may be insufficient to reduce VMT to less-than-significant levels. Therefore, the project's cumulative impacts related to causing substantial vehicle miles traveled would remain significant and unavoidable.

5.14 TRIBAL CULTURAL RESOURCES

This section of the EIR provides an assessment of potential impacts related to tribal cultural resources that could result from implementation of the project. The analysis in this section is based on the results of the consultation with affiliated California Native American tribes and research presented in a technical report prepared by SWCA. The tribal consultation is being conducted by the County of Los Angeles (County) for purposes of compliance with CEQA, specifically the requirements stated in Public Resources Code (PRC) Section 21080.3.1, as amended by Assembly Bill (AB) 52. The results of the tribal consultation and research used to inform the sections presented below are based on *Archaeological and Tribal Cultural Resources Assessment for the La Brea Tar Pits Master Plan Environmental Impact Report, Los Angeles, California* prepared by SWCA (Millington and Dietler 2023). The report will remain part of the confidential administrative record because of the detail describing the specific location of the archaeological and tribal sites (allowable pursuant to California Government Code 6254(r) and 6254.10; the Public Records Act, California Code of Regulations (CCR) Section 15120 (d), PRC Sections 5097.9 and 5097.993; and PRC Section 21082.3(c)).

In its capacity as the lead agency under CEQA, the County maintain ns a list of California Native American tribes that requested to receive notifications pursuant to PRC Sections 21080.3.1 and 21080.3.2 (AB 52). The list includes representatives from five tribal organizations. The County sent letters describing the project and providing information regarding consultation to representatives of these five tribes via certified mail on March 8, 2022:

- Fernandeño Tataviam Band of Mission Indians;
- Gabrieleno Band of Mission Indians – Kizh Nation;
- Gabrieleno/Tongva San Gabriel Band of Mission Indians;
- San Manuel Band of Mission Indians; and
- Tejon Indian Tribe.

Of these five Native American tribes, the County received requests for consultation with respect to the proposed project from:

- Fernandeño Tataviam Band of Mission Indians on March 9, 2022;
- Gabrieleno Band of Mission Indians – Kizh Nation on March 22, 2022; and
- Gabrieleno/Tongva San Gabriel Band of Mission Indians on May 3, 2022.

In response to a request from the County, the California Native American Heritage Commission (NAHC) provided a list of 38 individuals affiliated with tribal organizations who are included on a contact list for all of Los Angeles County. The list included the five contacts from the County's AB 52 list. The County sent informational letters to the 33 tribal contacts who were not on the AB 52 list on March 8, 2022. Of these, the County received input as part of informational outreach from one Native American tribe as follows:

- Gabrielino Tongva Indians of California Tribal Council on March 28, 2022.

This section includes the results of the consultation and includes mitigation measures to address potential impacts to tribal cultural resources. As described in Section 5.14.2, Regulatory Setting, PRC Section 21074 states that "tribal cultural resources" are defined as: 1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe that are listed in, or determined to be eligible for listing in, the national or state register of historical resources, or listed in a local register of historic resources; or 2) resources that the Lead Agency determines, in its discretion, are tribal cultural resources.

For the purposes of this EIR and as a result of the AB 52 consultation process, the identified Native American archaeological resource within the project site is considered a tribal cultural resource.

5.14.1 Existing Conditions

A description of the archaeological record of Native Americans who lived in the vicinity of the project site can be found in Section 5.4, Cultural Resources – Archaeological Resources. This overview covers the period beginning with the earliest documented arrival of Native Americans in this part of North America during the Terminal Pleistocene (approximately 11,500 years ago) and extends to the time in which Spanish colonists arrived in the mid-eighteenth century.

5.14.1.1 Gabrielino Ethnography and History

The project site is in an area historically occupied by the Gabrielino. Because there is no agreement over the most appropriate name for this group, the term Gabrielino is used in the remainder of this section to designate people who were indigenous to the Los Angeles Basin and southern Channel Islands and their descendants. The name "Gabrielino" (sometimes spelled Gabrieleno or Gabrieleño) originated as a reference to Native Americans who were affiliated with Mission San Gabriel, whereas those who were affiliated with the nearby Mission San Fernando were referred to as Fernandeño. In the Mission and Rancho periods, Mission San Gabriel included Native Americans from the greater Los Angeles area, as well as members of surrounding groups such as Kitanemuk, Serrano, and Cahuilla. Surrounding Native American groups included the Chumash and Tatataviam/Alliklik to the north, the Serrano to the east, and the Luiseño/Juaneño to the south. Interaction between the Gabrielino and many of their neighbors in the form of intermarriage and trade was well-documented in ethnographic accounts and oral histories.

The Gabrielino subsistence economy was centered on gathering and hunting. The surrounding environment was rich and varied, and the people utilized resources in mountain, foothill, valley, desert, riparian, estuarine, and open and rocky coastal eco-niches. As with most Native Californians, acorns were the staple food, which material evidence suggests was established several thousand years ago. Supplemental foods included the roots, leaves, seeds, and fruits of a variety of flora (e.g., islay, cactus, yucca, sages, and agave). Freshwater and saltwater fish, shellfish, birds, reptiles, and insects, as well as large and small mammals, were also consumed.

The Gabrielino used a variety of tools and implements to gather and collect food resources. These included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Groups residing near the ocean used oceangoing plank canoes and tule balsa canoes for fishing, travel, and trade between the mainland and the Channel Islands. Gabrielino people processed food with a variety of tools, including hammer stones and anvils, mortars and pestles, manos and metates, strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks. Food was consumed from a variety of vessels, including soapstone bowls, and Catalina Island steatite was used to carve ollas and cooking vessels.

At the time of Spanish colonization, the basis of Gabrielino religious life was the Chinigchinich, centered on the last of a series of heroic mythological figures. Chinigchinich gave instruction on laws and institutions and taught the people how to dance as a form of religious practice. He later withdrew into heaven, where he rewarded the faithful and punished those who disobeyed his laws. The origins of the Chinigchinich are somewhat unclear as it seems to have been relatively new when the Spanish arrived. It was spreading south into the southern Takic groups even as Christian missions were being built and may represent a mixture of Native and Christian belief and practices.

Deceased Gabrielino were either buried or cremated, with inhumation more common on the Channel Islands and the neighboring mainland coast, and cremation predominating on the remainder of the coast and interior. Remains were buried in distinct burial areas, either directly associated with villages or without apparent village association. Cremation ashes have been found in archaeological contexts buried within stone bowls and in shell dishes, as well as scattered among broken ground stone implements. Grave goods associated with burials/cremations varied in quantity and content and included projectile points, beads, steatite objects, and asphaltum. Well-preserved burial features have evidence of wrappings of nets, hide blankets or capes, or mats of tule reeds or seagrass. At least one formal grave marker, an elaborately etched sandstone slab, was reported in 1885 at a site between Los Angeles and the coast, near San Pedro. Archaeological data such as these correspond with ethnographic descriptions of an elaborate mourning ceremony that included a variety of offerings, including seeds, stone grinding tools, otter skins, baskets, wooden tools, shell beads, bone and shell ornaments, and projectile points and knives. Offerings varied with the gender and status of the deceased.

The traditional way of life for Native American people was dramatically altered by the Spanish mission system and later Mexican and American settlement in this part of Southern California. The dissolution of indigenous culture alienated them from their traditional subsistence patterns, social customs, and marriage networks. European diseases, against which they had no immunity, reached epidemic proportions, and Gabrielino populations rapidly declined. The increase in agriculture and the spread of grazing livestock into their collecting and hunting areas made maintaining traditional lifeways increasingly difficult. Although many Gabrielino were eventually subsumed by the mission system, some refused to give up their traditional existence and escaped into the interior regions of the state, where they survived as refugees, often in living in communities with other tribes.

Many researchers have brought attention to the role of Native American labor in developing and sustaining colonial settlements by providing crucial services and highly skilled roles across multiple types of industry. Gabrielino acquired equestrian skills used in herding, corralling, and branding cattle, and they routinely conducted the work of killing and skinning livestock. They demonstrated an aptitude for the engineering needed to create irrigation systems—finding grades, laying out ditches, and managing watering regimes. Irrigation was crucial for supplying domestic supplies and agriculture, especially wine making, which also relied on Gabrielino to plant the grapevines. Native women and children provided crucial household chores within the ranchos across the Los Angeles Basin. During the American period, Native Americans found work in citrus groves and other large-scale agricultural operations. During the twentieth century, Native Americans affiliated with Tribes from outside the region increasingly came to Los Angeles, some out of necessity or in pursuit of new opportunities, and others because of the federal government's termination and relocation policies. Native American workers made important contributions to several of the industries important during the early and middle parts of the twentieth century, such as aviation and film. It is estimated that several thousand Gabrielino descendants currently live in the Los Angeles area, though no reservation or rancherias were ever set aside and tribal organizations have not been federally recognized.

5.14.1.2 Gabrielino Placenames and Settlements

The project site is in an open alluvial plain comprising the northern portion of the Los Angeles Basin, bounded to the north by the Santa Monica Mountains. None of the Native American sites, placenames, or former settlements described in Gabrielino ethnographic records were located within the project site. Rather, the project site is situated in what was open prairie between two western communities located closer to the coast, and inland communities in what is now downtown Los Angeles.

The named Gabrielino settlements in closest proximity to the project site include the following: Kuruvungna Springs, approximately 5 miles to the east; Guaspet/Waachnga (hereafter Guaspet),

approximately 8 miles to the southwest near Ballona Creek; and two sites in the downtown Los Angeles area, Geveronga and Yaangna, approximately 6 and 7 miles to the west, respectively. In addition to the named communities, there are notable Native American archaeological sites in the Ballona Creek area, between 3 and 10 miles to the southwest—the Los Angeles Man Site (LAN-171) and the Haverty Site (LAN-172).

5.14.1.3 Sacred Lands File Search

The NAHC Sacred Lands File search was received from the NAHC on August 11, 2022, and produced negative results. The NAHC provided a list of Native American contacts and suggested contacting them to provide information on sacred lands that may not be listed in the Sacred Lands File. The County conducted informational outreach to tribes across Los Angeles County for the project, as well as formal consultation with tribes included on the County's AB 52 consultation list, which is described below. The responses to this outreach and consultation confirmed the sensitivity of existing archaeological discoveries and the potential for additional Native American materials to be preserved as buried deposits within the project site.

5.14.1.4 Existing Tribal Cultural Resources

As discussed in Section 5.4, Cultural Resources – Archaeological Resources, two archaeological sites identified in the California Historical Resources Information System (CHRIS), LAN-159 and LAN-1261H, have been combined and are referenced herein as the La Brea Tar Pits Archaeological Site (LAN-159/H), which is within the project site. A separate designation has been given to Hancock Park – La Brea as California Historical Landmark (CHL) No. 170 and an associated listing in the CHRIS as P-19-171007, but the historical significance of this resource and its status as a CHL focuses on the role of the site in the history of paleontology and excludes components that may be considered a tribal cultural resource.

LAN-159/H contains the material record of past Native American activities at the site from at least 10,000 to 3,200 years ago, and historical refuse from as long ago as the 1860s through the twentieth century (Millington and Dietler 2023). In terms of the Native American component of the La Brea Tar Pits Archaeological Site, there have been a total of 77 artifacts recovered from the site, in addition to the skeletal remains of a female Native American and a domesticated dog. The date range for the Native American component is based on radiocarbon dating1 on samples of the young female remains dated to 10,200–10,250 calibrated years before present (cal B.P.), a wooden atlatl foreshaft dated to 4536–5583 cal B.P., and a domesticated dog dated to 3250–3400 cal B.P. The historical component of the site (formerly LAN-1261H) was recovered from a single feature recorded in 1986 and was composed of various pieces of historical refuse, some indicating the materials were deposited as long ago as the 1860s. In addition to previously recorded resources within the project site, Phase 1 and Phase 2 investigations at the site confirmed the potential for previously undocumented and/or unknown Native American archaeological components and non-Native American historical artifacts to be located within the project site and near the previously recorded materials (Millington and Dietler 2023).

The boundary of LAN-159/H is defined as the full extent of the project site plus a small portion that extends outside the project site to the southwest and into the lawn area in front of the Shin'en Kan Pavilion (formerly site LAN-1261H). The Native American component of LAN-159/H includes 10 localities spread across an area measuring 185 meters (m) long and 30 m wide along the southwestern

[1] Calibrated radiocarbon dates are expressed here as cal B.P., or calibrated (years) before present, and are distinct from uncalibrated radiocarbon dates that require calculations to adjust for variations in the atmospheric carbon dioxide. As is the scientific convention for dates based upon radiocarbon measurements, dates expressed in B.P. are calculated backwards from the year 1950.

portion of Hancock Park and the project site. Artifacts were identified at depths ranging between 0.3 and 5.9 m below the surface, varying in absolute elevation based on the period in which they were deposited. Additional components could be present within the surface-level overburden—sediments created through artificial means—or in the underlying alluvium that is composed of asphaltic and non-asphaltic sediments. The remarkable preservation of Pleistocene floral and faunal remains for which La Brea Tar Pits are well known are those mainly deriving from the asphaltic sediments, although substantial portions of the fossil-bearing asphaltic sediments lack any evidence of human activity and may be too old to include them. Thus, while many portions of the LAN-159/H boundary are unlikely to contain additional Native American components, this boundary, based on the confirmed and likely archaeological expressions, represents a reasonable approximation for purposes of delineating LAN-159/H as a tribal cultural resource.

The age of the human remains demonstrates the longevity of La Brea Tar Pits as a place where Native Americans would gather and, at a minimum, collect the naturally occurring asphaltum (also known as bitumen). Bitumen was used for a variety of purposes, much of which involved its use as a waterproofing and adhesive agent. The La Brea site is the most substantial onshore bitumen source known in the Los Angeles Basin. Bitumen was also known to have been collected from coastal settings where the submarine tar seeps would produce tarballs that washed ashore, which were especially common in what are now Santa Barbara, Ventura, and Los Angeles Counties. One of the shell artifacts recovered from the La Brea Tar Pits Archaeological Site was stained with bitumen and interpreted as part of a small scoop used to extract bitumen.

Notably, when the Spanish party accompanying Portolá passed through the Los Angeles Basin in 1769, they followed a route west (approximated by segments of Wilshire Boulevard) and passed by the tar pits, later remarking on the presence of the tar (in Spanish, *la brea*) and marshes in their written accounts. It is widely assumed that Native Americans continued to use the site as a bitumen source at least into the early part of the Spanish period. Indeed, it was local Native American people who guided the Spanish along the route through this portion of the Los Angeles Basin, and the earliest ethnographic sources recording the Native American use of bitumen come from these Spanish records. La Brea Tar Pits still have cultural significance to contemporary Native American groups who observe traditional practices that incorporate the extraction and use of bitumen. Temporary Native American settlements or use-areas associated with bitumen extraction are likely to have once been present in the immediate vicinity; however, to date, few to no Native American artifacts have been documented outside of the components depicted in 10 localities within LAN-159/H.

Based strictly on a scientific assessment, LAN-159/H meets the definition of a historical resource and a unique archaeological resource. Given the input of consulting tribal parties (discussed below in Section 5.14.4, Impact Assessment Methodology), LAN-159/H is also a tribal cultural resource.

5.14.2 Regulatory Setting

The following section describes the regulations that are most relevant to the tribal cultural resources that may be affected by the project. Additional regulations that are relevant, but less directly so, are described in related sections of this EIR, including Section 5.4, Cultural Resources – Archaeological Resources, and Section 5.5, Cultural Resources – Historical Resources.

5.14.2.1 Federal

There are no federal regulations related to cultural resources applicable to the project.

5.14.2.2 State

State regulations applicable to tribal cultural resources include portions of the PRC, CCR, and Health and Safety Code are summarized in Section 5.4, Cultural Resources – Archaeological Resources. These include sections cross-referenced by portions of the PRC addressing tribal cultural resources. Specifically, these include provisions establishing the California Register of Historical Resources (CRHR) criteria, definitions of historical resources and unique archaeological resources, and the process by which human remains are treated, including steps requiring notification to the NAHC and designated most likely descendant if the remains are confirmed to be Native American in origin. The following sections focus on regulations that are more exclusively applicable to the assessment of tribal cultural resources and the government-to-government consultation process between California Native American tribes and the County as the CEQA Lead Agency.

ASSEMBLY BILL 52

AB 52 established the category of a tribal cultural resource for purposes of environmental review and formalized the lead agency–tribal consultation process. AB 52 amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. While CEQA requires assessment of tribal cultural resources independently from archaeological resources, tribal cultural resources may be archaeological in nature and require consideration as both types of resources.

TRIBAL CULTURAL RESOURCES

Section 4 of AB 52 adds Sections 21074(a) and (b) to the PRC, which address tribal cultural resources and cultural landscapes. Section 21074(a) defines tribal cultural resources as one of the following:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
   A. Included or determined to be eligible for inclusion in the CRHR.
   B. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Section 1(a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment." Effects on tribal cultural resources should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource."

TRIBAL CONSULTATION

The provisions of AB 52 require that the lead agency initiate consultation with California Native American groups that are traditionally and culturally affiliated with the project, including tribes that may not be federally recognized. PRC 21080.3.1(b) states that the lead agency is required to begin consultation prior to the release of a Negative Declaration, Mitigated Negative Declaration, or EIR if: 1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated

with the tribe, and 2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. PRC 21080.3.1(d) defines the minimum requirements for notification as sending "at least one written notification including a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section."

If a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects on tribal cultural resources, the consultation shall include those topics (PRC Section 21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3[a]). Consultation is defined according to California Government Code Section 65352.4 and is defined as the "meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement." Government Code Section 65352.4 requires that consultation be conducted in a manner that is mutually respectful of each party's sovereignty and recognizes the confidentiality of places of traditional cultural significance.

5.14.2.3 Local

Local regulatory and guidance documents pertaining to cultural resources, including archaeological resources and tribal consultation, are provided in Section 5.4 of this EIR. Of note is Policy C/NR 14.4 in the County of Los Angeles General Plan (2015), which requires proper notification procedures to Native American tribes, consistent with Senate Bill 18. While this policy does not apply to the project since there is no General Plan Amendment proposed, there is inference that proper tribal consultation should occur. The process and consultation that the County has implemented pursuant to PRC 21080.3.1 and the informational outreach are consistent with this guidance. Also, Policy C/NR 14.6 directs that proper notification and recovery processes shall be carried out for development on or near historic, cultural, and paleontological resources. Broadly, a tribal cultural resource that is archaeological in nature is considered to be a type of cultural resource and, thus, is addressed by this policy.

5.14.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse impacts related to tribal cultural resources if it would:

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

   i. Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k), or

   ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

5.14.4 Impact Assessment Methodology

LAN-159/H contains the material remains of Native American use between at least 10,000 and 3,200 years ago, and historical refuse from the 1860s through the twentieth century. It was determined that LAN-159/H is eligible for the CRHR under Criterion 4 because it possesses sufficient archaeological data with the potential to contribute important information to history and it retains integrity. The Native American component of the site also appears to meet the definition of a unique archaeological resource. Consulting tribal parties have also expressed that the site has cultural value, and the assembled evidence indicates that the site meets the definition of a tribal cultural resource. Therefore, for the purposes of this project, LAN-159/H is considered a historical resource and tribal cultural resource under CEQA. As with historical resources, the significance of a tribal cultural resource may be impacted by direct physical disturbance associated with future development or indirectly through a change in setting or increased use of the area.

On March 8, 2022, AB 52 consultation letters were sent to representatives from the following five tribal organizations who had previously requested to be included on the County's AB 52 consultation list: Fernandeño Tataviam Band of Mission Indians, Gabrieleno Band of Mission Indians – Kizh Nation, Gabrieleno/Tongva San Gabriel Band of Mission Indians, San Manuel Band of Mission Indians, and Tejon Indian Tribe. Responses were received from four of the five tribal parties. One of the four responding tribes stated they did not wish to consult, one requested a copy of the cultural and tribal cultural resources technical study or EIR section, and two groups requested consultation and have been actively engaged in correspondence with the County.

On March 4, 2022, the NAHC provided a list of 38 individuals affiliated with their respective tribal organizations who are included on a contact list for all of Los Angeles County. This is compiled from the same list included with a Sacred Lands File search but expanded to include County-wide contacts. The list included the five contacts from the County's AB 52 list. To be broadly inclusive of the area's Native American community, the County elected to share information and solicit input from tribes throughout the county. The County sent informational letters to the 33 tribal contacts who were not on the AB 52 list on March 8, 2022, and four responses were received. A representative from the Gabrielino Tongva Indians of California Tribal Council responded by providing input and asked to participate in the implementation of the proposed mitigation measures. The Pechanga Band of Indians requested a site visit for tribal members as an activity unrelated to the proposed project, which was granted by the County and facilitated by staff at the George C. Page Museum (Page Museum). Representatives from the Quechan Tribe of the Fort Yuma Reservation and the Rincon Band of Luiseno Indians acknowledged receiving the notification letters but did not have any information to provide and deferred to local groups.

This discussion focuses on the County's coordination with the following tribes that requested consultation for the project under AB 52:

- Fernandeño Tataviam Band of Mission Indians
- Gabrieleno Band of Mission Indians – Kizh Nation
- Gabrieleno/Tongva San Gabriel Band of Mission Indians

5.14.5 Environmental Impact Analysis

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed in or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. The lead agency shall consider the significance of the resource to a California Native American tribe.

The County, as the CEQA Lead Agency, has provided notification to Native American tribes affiliated with the project site pursuant to AB 52. Responses were received from four of the five tribes: Fernandeño Tataviam Band of Mission Indians, Gabrieleno Band of Mission Indians – Kizh Nation, Gabrieleno/Tongva San Gabriel Band of Mission Indians, and San Manuel Band of Mission Indians. Of those responses, Fernandeño Tataviam Band of Mission Indians, Gabrieleno Band of Mission Indians – Kizh Nation, and Gabrieleno/Tongva San Gabriel Band of Mission Indians have requested consultation for the project. The project site contains LAN-159/H, which is recommended eligible for the CRHR under Criterion 4 because it possesses sufficient archaeological data with the potential to contribute important information to history and it retains integrity. Based strictly on this scientific assessment, LAN-159/H meets the definition of a historical resource and a unique archaeological resource.

CONSTRUCTION

The project would result in renovation and upgrades throughout the Tar Pits complex, including the 13-acre portion of Hancock Park and the Page Museum. At the time of preparation of this report, final engineering, design, and grading plans for the project had not been finalized. Because the project design is at a preliminary stage, the level detail needed to determine the precise depth and extent of ground disturbance is not known. However, the level of design that has occurred to-date allows for a general characterization of the overall ground disturbance and excavation that would be necessary for the project. For impact assessment purposes, the design team for the project, working with the Los Angeles County Museum of Natural History Foundation and the County, estimates that, at most, the project would require excavations 6 to 10 feet below ground, potentially involving 53,000 cubic yards of cut/export and 37,000 cubic yards of imported fill. These estimates represent the most impactful scenario in terms of depths and horizontal extent of excavation within the project site. Thus, ground-disturbing activities have the potential to directly impact LAN-159/H as a tribal cultural resource.

Given the input provided by the consulting tribal parties, the contents of LAN-159/H and any additional components that may be buried within the project site have cultural value, which extends beyond the scientific data potential. The consulting tribal parties have stated that they consider the materials previously recorded and any that may be identified to have cultural value, regardless of whether they are recovered from their originally deposited setting or have been moved via artificial means over time. Furthermore, three of the consulting tribal parties and one of the tribes contacted for informational

purposes have stated in a more generalized sense that they consider the site to be sensitive, sacred, or otherwise culturally significant. The boundaries of Native American components previously recorded for LAN-159/H have been delineated within the larger site boundary that occupies the full extent of the project site. While not all subsurface settings within the project site boundary have an equal probability of containing additional Native American components, the boundary established for LAN-159/H represents a reasonable approximation of the area in which additional Native American materials could be preserved and provides an adequate basis on which the potential for project impacts can be assessed. Thus, LAN-159/H meets the definition of a tribal cultural resource. Therefore, impacts to tribal cultural resources during project construction could be *significant*.

OPERATION

Operation of the project would not result in any ground-disturbing activities such as grading or excavation outside of the existing research sites; therefore, there is no potential to encounter, alter, or disturb tribal cultural resources during project operation. No impact would occur during project operation.

TCR Impact 1
During project construction, the project could cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Sections 5020.1(k) and 5024.1. Construction impacts could be significant. Project operation would not cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Sections 5020.1(k) and 5024.1. No operational impacts would occur. (CEQA Checklist Appendix G Threshold XVIII. a, i and ii)
Mitigation Measures
TCR/mm-1.1 Retain Tribal Consultants. *a. Prior to any ground-disturbing activities on the project site associated with the proposed project, the Gabrieleno Band of Mission Indians – Kizh Nation, Gabrieleno/Tongva San Gabriel Band of Mission Indians, and* Gabrielino Tongva Indians of California *shall be retained as Tribal Consultants. Each of the Tribal Consultants shall provide the services of a representative, known as a Tribal Monitor. The Tribal Monitor(s) shall be present on-site and carry out actions described in the Archaeological and Tribal Cultural Resources Management Plan (AR-TCR Management Plan) and any actions required to comply with mitigation measures for tribal cultural resources. These actions shall include but not be limited to monitoring ground-disturbing activities. Ground disturbing activities are defined as excavating, digging, trenching, plowing, drilling, tunneling, quarrying, grading, leveling, removing trees, clearing, driving posts or pilings, augering, backfilling, blasting, stripping topsoil or a similar activity at the project site. The frequency of the monitoring services shall be provided on a rotational basis as outlined in TCR/mm-1.3.* *b. At least 21 days before any ground disturbing activities commence, each of the Tribal Consultants shall submit a letter of retention to the Museum of Natural History confirming that the that they have been retained consistent with the terms of the TCR/mm-1.1.*

TCR Impact 1	
TCR/mm-1.2	*Prior to any ground-disturbing activities on the project site associated with the proposed project, the Tribal Consultants or Tribal Monitors shall provide a worker training to on-site project personnel responsible for supervising ground-disturbing activities (i.e., foreman or supervisor) and machine operators. The initial training shall be conducted prior to the start of ground-disturbing activities in the project site. The worker training shall include but not be limited to any topics related to protocols related to tribal cultural resources, regulatory compliance requirements, monitoring procedures and stop-work restrictions, and any other applicable mitigation measures that must be adhered to during ground-disturbing activities for the protection of tribal cultural resources. As an element of the worker training, the Tribal Consultants or Tribal Monitors shall advise the construction crews on proper procedures to follow if an unanticipated tribal cultural resource is discovered during construction whether a Tribal Monitor is present or not. The Tribal Consultants or Tribal Monitors shall also provide the construction workers with contact information for the Tribal Consultants and Tribal Monitors. Once the ground disturbances have commenced, the need for additional or supplemental worker training shall be determined through consultation with the Tribal Consultants, and project proponent or their designated project supervisor. Within 5 days of completing a worker training, a list of those in attendance shall be provided to the Museum of Natural History by the Tribal Consultants, the Qualified Archaeologist, or a designee of either parties.*
TCR/mm-1.3	*Monitoring for Tribal Cultural Resources.* *a. Prior to any ground-disturbing activities associated with the project, a minimum of one Tribal Monitor shall be present during ground-disturbing activities as stipulated in the AR-TCR Management Plan. The AR-TCR Management Plan shall establish a monitoring schedule in a manner that provides opportunities for each of the three Tribal Consultants to participate in monitoring throughout the project's duration and within specific project phases that involve ground-disturbing activities. The monitoring schedule shall be determined at the sole discretion of the Museum of Natural History. The Museum of Natural History or their designee shall notify each Tribal Consultant in advance of its assigned monitoring period to allow for adequate preparation and planning. The Qualified Archaeologist shall be responsible for coordinating and communicating with the Tribal Consultants to address the need for consistency in reporting of the results during the rotational monitoring process. If one Tribal Monitor is unable to attend on a given day, but another Tribal Monitor is present, ground disturbing work shall commence. The need for additional monitors exceeding the two respective Tribal Monitors shall be assessed if the areas subject to monitoring exceeds what can be reasonably covered. The Tribal Monitors shall work under the direction of their respective Tribal Consultant.* *b. The Tribal Monitors shall complete daily monitoring logs that provide descriptions of the relevant ground-disturbing activities (the type of construction activities performed and location of ground-disturbing activities), sediment types, presence or absence of tribal cultural resources or potential tribal cultural resources, and any other facts, conditions, materials, or discoveries of significance to the Tribal Consultants. Monitor logs shall identify and describe any discovered tribal cultural resources or potential tribal cultural resources as defined in Public Resources Code Section 21074(a), which includes but is not limited to Native American artifacts, remains, places of significance, as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs shall be provided to the project lead agency and the Qualified Archaeologist for purposes of summarizing in the monitoring report.* *c. The Tribal Monitors shall have the authority to temporarily halt or redirect construction activities if a tribal cultural resource or potential tribal cultural resource is exposed during construction. If a tribal cultural resource or potential tribal cultural resource is identified, work in the immediate vicinity (not less than 50 feet) of the find shall stop unless another distance is determined by both the Tribal and Archaeological Monitors, which shall consider the nature of the find and the potential for additional portions of the resource to remain buried in the unexcavated areas of the project site. Construction activities may continue in other areas in coordination with the qualified archaeologist and tribal consultant.*

TCR Impact 1	
	d. If a potential component of the existing tribal cultural resource (LAN-159/H) is identified, it shall be assessed by the Tribal Consultants as a tribal cultural resource in terms of its cultural value, based on tribal expertise, and supported by substantial evidence. If the discovery is archaeological in nature, then the assessment shall also incorporate the Qualified Archaeologist's evaluation as a potential contributor to the significance of LAN-159/H based on the California Register of Historical Resources criteria or as a unique archaeological resource, as specific in the AR-TCR Management Plan and in substantial conformance with the Archaeological and Tribal Cultural Resources Assessment. Any identified tribal cultural resources shall be assessed by both Tribal Consultants and the materials shall be cataloged and stored at the Page Museum for the period in which the ground-disturbing activities are occurring. Further analysis and the disposition of any collected materials shall be determined through consultation with the Tribal Consultant, the County, and informed by the evaluation of the materials as elements that contribute to the significance of the archaeological resource. Any consultation required shall occur on an as-needed basis during the ground-disturbing activities and continue after tribal monitoring has concluded as part of the reporting process described in Part F of TCR/mm-1.4 and CR-ARCH/mm-1.4. *If initial monitoring identifies no further sensitivity (i.e., sediments incapable of containing tribal cultural resources) below a certain depth or within a certain portion of the project site, a corresponding reduction of monitoring coverage would be appropriate. The reasoning for and scale of the recommended reduction shall be assessed by the Tribal Consultant in consultation with the Qualified Archaeologist and communicated to the Museum of Natural History in writing prior to reduction. Monitoring for tribal cultural resources shall be required until there is written confirmation from the County or a supervisor responsible for overseeing the ground-disturbing activities that there shall be no further ground-disturbing activities on the project site or in connection with the project site, either for the duration of the project.* *e. Within one month of concluding the tribal cultural resources monitoring, the Tribal Consultants shall prepare a memo stating that the monitoring requirements have been fulfilled consistent with the terms of TCR/mm-1.3 and summarize the results of any finds and actions taken by the tribal monitor to implement the final measures related to tribal cultural resources. The memo shall be submitted to the Museum of Natural History and the Qualified Archaeologist to be attached to a final archaeological and tribal monitoring report prepared by the Qualified Archaeologist consistent with CR-ARCH/mm-1.4.*
TCR/mm-1.4	*If human remains are encountered during construction all ground-disturbing work shall be immediately diverted from the discovery as directed by the Tribal Consultant and Qualified Archaeologist and based on consideration of the possibility that additional or multiple Native American human remains may be located in the project site, and after having considered whether the bones are human or faunal. Upon discovery of human remains, whether the archaeological or tribal monitor is present, the Los Angeles County Coroner's Office shall be notified, as prescribed in PRC Section 5097.98 and Health and Safety Code Section 7050.5. If the Coroner determines that the remains are of Native American origin, the Coroner shall proceed as directed in Section 15064.5(e) of the State CEQA Guidelines, and as specified in the TCRMMP, which require the coroner to notify the NAHC who will appoint a Most Likely Descendent (MLD). Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated accordingly. While the coroner determines whether the remains are Native American and the MLD is designated and notified, the discovery is to remain confidential and secure to prevent any further disturbance.*
Impacts Following Mitigation	
Mitigation Measures TCR/mm-1.1 through TCR/mm-1.4 have been developed considering input from the Fernandeño Tataviam Band of Mission Indians, Gabrieleno Band of Mission Indians – Kizh Nation, Gabrieleno/Tongva San Gabriel Band of Mission Indians, and Gabrielino Tongva Indians of California. Implementation of TCR/mm-1.1 through TCR/mm-1.4 during project construction would reduce the project's construction impacts to less than significant. No operational impacts would occur.	

Grading plans and construction drawings have not been prepared and the specific phases of the project implementation have not been determined. Preparing the Archaeological Resources-Tribal Cultural Resources (AR-TCR) Management Plan using more advanced project designs and based on an anticipated schedule for the types of construction activities would allow the AR-TCR Management Plan to better account for this information in the document and ensure proper implementation. However, the project plans and design as proposed and the analysis of a known archaeological and tribal cultural resource, supported by substantial evidence, are sufficiently detailed to allow for the specific performance criteria to be identified for the AR-TCR Management Plan, the implementation of which would occur at a later time.

According to State CEQA Guidelines 15126.4(b)(3), preservation in place (i.e., avoidance) is the preferred manner of treatment of a significant archaeological site. If a previously unrecorded archaeological component of LAN-159/H is identified during ground-disturbing activities for the project and is found to contribute to the significance of the site, it is possible that under some circumstances preservation in place would not be a feasible form of mitigation under any of the examples listed in State CEQA Guidelines, and alternative treatment options would be required to avoid or reduce potentially significant impacts. If avoidance is not feasible, treatment may include archaeological data recovery (i.e., excavation, laboratory processing, and analysis) to obtain important information and thereby reduce potential impacts to less than significant.

5.14.6 Cumulative Impact Analysis

For the purposes of this EIR analysis, the geographic context for the analysis of cumulative impacts to tribal cultural resources is defined as the northwestern Los Angeles Basin—approximately the area west of the Los Angeles River, south of the Santa Monica Mountains, east of the Pacific coastline, and north of the Palos Verde Peninsula. The northwestern Los Angeles Basin area is large enough to contain a representative sample of Native American archaeological sites that could be important to affiliated California Native American tribes, and it is small enough to account for the cumulative impacts from projects on a more local scale. Importantly, the northwestern Los Angeles Basin is fully within the traditional territory of the Gabrielino and to a lesser extent the overlapping portions of the traditional territory of Tataviam-affiliated groups. The full extent of the traditional Gabrielino territory includes adjoining regions to the north, east, and south. Further discussion of the northwestern Los Angeles Basin as the geographic context used to analyze cumulative impacts is provided above in Section 5.4.6, which is focused upon archaeological resources but is relevant to the analysis of tribal cultural resources.

Tribal cultural resources are nonrenewable, irreplaceable, and inherently important to the Native American descendants, and their destruction prevents further study of past lifeways and history. Projects that could be developed in the northwestern Los Angeles Basin include the development projects listed in Chapter 4, Environmental Setting, as well as additional development projects beyond the geographical limit of the cumulative project listing contained in Chapter 4. The development of projects in the northwestern Los Angeles Basin could result in the destruction of tribal cultural resources and, particularly those for land development and transportation, would have the potential to result in a cumulative impact associated with the loss of tribal cultural resources. Given the potential for tribal cultural resources in the northwestern Los Angeles Basin and the number of construction activities that involve disturbance of areas sensitive for tribal cultural resources, cumulative impacts to tribal cultural resources could occur through physical demolition, destruction, relocation, or alteration to a resource such that it would cause an adverse change in the significance of tribal cultural resources—CRHR-eligible resources as defined in PRC Section 2020.1(k) or resources considered by the County to be tribal cultural resources pursuant to PRC Section 5024.1.

The project has the potential to contribute to a loss of tribal cultural resources that could combine with impacts from past, present, and reasonably foreseeable projects prior to implementation of the mitigation measures outlined previously in this section. The project's contribution toward cumulative effects on tribal cultural resources in the region could be significant if mitigation measures were not required and implemented to address the potential for direct impacts and the potential for project contribution to cumulative impacts.

As provided in the environmental impacts analysis in Section 5.14.5, a series of mitigation measures have been developed to address the project's potential for impacts to tribal cultural resources, which build upon and enhance the process put forward in Mitigation Measures CR-ARCH/mm-1.1 through CR-ARCH/mm-1.4. These mitigation measures have been developed to not only address direct impacts of project implementation, but also to address the project's contribution to cumulative tribal cultural resource impacts. Implementation of Mitigation Measures TCR/mm-1.1 through TCR/mm-1.4—which provide for retention of a qualified tribal consultant, worker training, monitoring by tribal monitors, and treatment of unanticipated discoveries—would ensure that tribal cultural resources impacts, both direct and contributions to cumulative impacts, are reduced to less than significant with mitigation. Taken together, implementation of these mitigation measures would ensure that the project would have less-than-significant impacts related to tribal cultural resources, as well as address the project's potential for significant contributions to potential cumulative tribal cultural impacts in the northwestern Los Angeles Basin.

TCR Impact 2 (Cumulative Impacts)
Prior to the consideration of proposed mitigation measures, construction of the project could result in significant contributions to cumulative impacts related to the disturbance and destruction of tribal cultural resources.
Mitigation Measures
Implement Mitigation Measures TCR/mm-1.1 through TCR/mm-1.4. These measures put forward a process that ensures any new tribal cultural resources or new components of an existing tribal cultural resource will be identified, inventoried, evaluated for significance in terms of its value to a California Native American tribe, and treated appropriately if found to be a contributing element.
Impacts Following Mitigation
With implementation of Mitigation Measures TCR/mm-1.1 through TCR/mm-1.4, the project's contribution to cumulative impacts to known and potentially unknown tribal cultural resources would be reduced to less than significant.

5.15 UTILITIES AND SERVICE SYSTEMS

This section of the EIR addresses the project's potential for environmental impacts related to the provision of utilities and service systems for the project. Utilities include water supply services, wastewater services, stormwater drainage, solid waste services, electricity services, and natural gas services.

While the project site is owned by the County of Los Angeles (County), the project site is located within the jurisdictional boundaries of the City of Los Angeles (City). Given the location of the project site within the city boundaries, the project's water and wastewater services as well as stormwater conveyance facilities and electricity are provided by various departments associated with the City, including the Los Angeles Department of Water and Power (LADWP) and City of Los Angeles Bureau of Sanitation (referred to as Los Angeles Sanitation and Environment [LASAN]). This section incorporates information provided in LADWP's 2020 *Urban Water Management Plan and* LASAN's 2019 *Sewer System Management Plan*, as well as Service Request correspondence letters (will serve letters) received from LADWP on October 28, 2022, and from LASAN on November 22, 2022 (see Appendix K).

5.15.1 Existing Conditions

5.15.1.1 Water Service

LADWP is responsible for providing water within the city of Los Angeles, including the project site. Water is supplied to the City from four primary sources: the Los Angeles Aqueduct system, local groundwater, purchased water from Metropolitan Water District of Southern California (MWD), and Colorado River Aqueduct (supplied by MWD). The Los Angeles Aqueduct supplies an average of 48% of the City's water, MWD purchases account for about 41%, local groundwater resources comprise 9%, and recycled water supplies 2% (LADWP 2020). The 2020 LADWP urban water management plan (UWMP) provides water demand and supply projections in 5-year increments to 2045, based on projected population estimates provided by the Southern California Association of Governments (SCAG) in its 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS), as summarized in Table 5.15-1. As shown, water supply would be equal to the water demand within LADWP's service area during average, single-dry and multi-dry years from 2025 through at least 2045.

Table 5.15-1. LADWP Water Demand and Supply Projections through Year 2045

	Year (acre-feet per year)				
Hydrologic Conditions	**2025**	**2030**	**2035**	**2040**	**2045**
Demand*					
Average year	642,600	660,200	678,800	697,800	710,500
Single dry year	674,700	693,200	712,700	732,700	746,000
Multi-dry years†	657,900	675,800	694,900	714,400	727,400
Supply					
Average year	642,600	660,200	678,800	697,800	710,500
Single dry year	674,700	693,200	712,700	732,700	746,000
Multi-dry year	657,900	675,800	694,900	714,400	727,400

Source: LADWP (2020)

* This total demand number is conservative, as it only includes passive conservation prior to fiscal year-end 2014.

† First year of multi-dry year.

Potable water for fire suppression systems, domestic cold water, and irrigation are provided by the LADWP from a water main located in South Curson Avenue. The project site's existing water usage during fiscal year 2021 to 2022 was 13,407 centum cubic feet (ccf) per year, which is equivalent to 30.8 acre-feet [af] per year or approximately 27,500 gallons per day (Foundation 2023). The existing fire suppression water line is served from a pipe connection to the public water main in South Curson Avenue adjacent to the northwest corner of the George C. Page Museum (Page Museum). There is one 3.5-inch domestic cold-water meter located in the sidewalk on South Curson Avenue adjacent to the southeast corner of the Page Museum. Water service to the Observation Pit and Project 23 is currently provided by Los Angeles County Museum of Arts (LACMA). Due to the relatively remote location of these service points compared to their proximity to LACMA, it is practical to assume that those demands would continue to be served by and coordinated with LACMA. There is also an existing public fire hydrant on the sidewalk on South Curson Avenue, just east of the Page Museum.

5.15.1.2 Wastewater Service

The sewer system and wastewater treatment facilities serving the project site are owned and operated by LASAN. LASAN operates and maintains a large collection of systems, serving a population of over 4 million within a 600-square mile service area. It consists of approximately 6,500 miles of sewers, 140,000 maintenance holes, and 44 pumping plants. LASAN also operates four water reclamation plants that have a combined capacity of 580 million gallons of recycled water per day (LASAN 2019).

Within LASAN, the Wastewater Engineering Services Division is responsible for the operation and maintenance of sewer and wastewater treatment facilities in the city of Los Angeles, including the project site. LASAN divides the wastewater treatment for the city into two major service areas: the Hyperion Service Area and the Terminal Island Service Area. The project site is within the Hyperion Service Area. The Hyperion Service Area is serviced by the Hyperion Sanitary Sewer System, which consists of the Hyperion Water Reclamation Plant, the Donald C. Tillman Water Reclamation Plant, and the Los Angeles-Glendale Water Reclamation Plant. Wastewater generated from the project site is conveyed via the local collector sanitary sewer system directly to the Hyperion Water Reclamation Plant for treatment. The Hyperion Water Reclamation Plant has the capacity to treat approximately 450 million gallons per day of wastewater for full secondary treatment and currently treats on average approximately 275 million gallons per day (LASAN 2019).

Under existing conditions, sewer discharge from the site is directed to the east where it connects by gravity to an existing City of Los Angeles public sewer main. The sewage infrastructure in the vicinity of the project site includes an existing 12-inch line on South Curson Avenue. The sewage from the existing 12-inch line feeds into an 18-inch line on Wilshire Boulevard then into a 39-inch line on Crescent Heights Boulevard before discharging into a 48-inch sewer line also located on Crescent Heights Boulevard (Appendix K). The Observation Pit and Project 23 sewer connections tie into LACMA infrastructure.

5.15.1.3 Stormwater Conveyance Facilities

Stormwater conveyance facilities serving the project site include both LASAN and the Los Angeles County Flood Control District infrastructure. There is a network of existing catch basins and underground storm drainage piping throughout the site under existing conditions. Existing catch basins are in both the northwest and southwest corners of the parking lot. These drains connect to underground storm drainage piping which join the 12-inch storm drain from the Page Museum, as well as landscape drainage around the multi-purpose lawn. Together, stormwater then drains to the southwest where it ties into a LACMA storm drain line and ultimately discharges to both LASAN and subsequently the Los Angeles County Flood Control District public infrastructure on Wilshire Boulevard (KPFF Consulting Engineers [KPFF] 2021).

5.15.1.4 Electricity and Natural Gas

Electric power service for the project site is provided by LADWP from an underground power distribution grid, including three underground 4.8-kilovolt circuits that run along West Wilshire Boulevard, South Spaulding Avenue, and South Ogden Drive. In addition, there are three 34.5-kilovolt circuits adjacent to the project site which also run along West Wilshire Boulevard (LADWP 2022).

Natural gas on the project site is provided by Southern California Gas Company (SoCalGas) from an existing public gas main located in South Curson Avenue. There is an existing gas meter located east of the Page Museum with a 1 to 1.5-inch gas line connecting to the Page Museum on the north side (KPFF 2021).

5.15.1.5 Telecommunications

Telecommunications at the Page Museum are provided by AT&T, Centrex, and Crown Castle. AT&T provides phone line and phone system services, Centrex provides support through copper phone line connectivity, and Crown Castle provides support to the internal network at the museum in addition to internet services.

5.15.1.6 Solid Waste

The Los Angeles County Public Works (County Public Works) operates the solid waste management system through their Countywide Integrated Waste Management Plan (CIWMP). Solid waste generated by single-family and some multi-family residences is collected by County Public Works. Remaining multi-family residences and all industrial and commercial buildings contract with private contracted waste haulers to collect, dispose, and recycle solid waste. A private waste management company, Southland Disposal Company, is responsible for the collection, disposal, and recycling of solid waste generated at the project site. Solid waste collection and disposal services for the project could be accepted at the Azusa Land Reclamation Company Landfill (Azusa Land Reclamation). Azusa Land Reclamation provides disposal services for communities, businesses, and industries serving the Los Angeles metropolitan area and eastern Los Angeles County. According to the California Department of Resources Recycling and Recovery (CalRecycle), Azusa Land Reclamation has a maximum permitted capacity of 80,571,760 cubic yards and is estimated to close in the year 2045 (CalRecycle 2023). Azusa Land Reclamation has a maximum daily throughput of 6,400 cubic yards per day, which is equivalent to approximately 1,664,000 cubic yards per year. In 2020, an average of 820 cubic yards per day of solid waste was disposed of at Azusa Land Reclamation, resulting in approximately 213,200 cubic yards per year (CalRecycle 2012; County Public Works 2021). As of December 31, 2020, Azusa Land Reclamation had a remaining permitted capacity of 52,342,017 cubic yards (County Public Works 2021).

Solid waste from the project site could also be disposed of at one or more of the other Class III landfills serving the County (Table 5.15-2). As shown in Table 5.15-2, the remaining capacity at other Class III landfills that could serve the project site is approximately 185,187,000 tons (County Public Works 2021).

The project site currently empties four 3-cubic yard bins of solid waste, including recyclable waste, three times a week. Additionally, one 3-cubic yard bin of green waste is emptied once every 4 to 6 weeks (Los Angeles County Museum of Natural History Foundation [Foundation] 2022). These generation rates are the equivalent of approximately 1,872 cubic yards of solid waste per year and approximately 39 cubic yards of green waste per year from the existing uses at the project site.

Table 5.15-2. Remaining Disposal Capacity for Los Angeles County Class III Landfills Serving the Project Site

Class III Landfill	Remaining Disposal Capacity (tons)
Azusa Land Reclamation	52,342,017
Chiquita Canyon	54,420,179
Sunshine Canyon City/County	54,079,158
Antelope Valley	10,178,644
Lancaster	9,873,404
Savage Canyon	4,261,790
Pebbly Beach	32,092
Total	**185,187,284**

Source: County Public Works (2021)

5.15.2 Regulatory Setting

5.15.2.1 Federal

CLEAN WATER ACT

In 1972, the federal Water Pollution Control Act (Clean Water Act [CWA]) was amended to prohibit the discharge of pollutants to waters of the United States unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The CWA focused on tracking point sources, primarily from wastewater treatment facilities and industrial waste dischargers, and required implementation of control measures to minimize pollutant discharges. The CWA was amended again in 1987, adding Section 402(p), to provide a framework for regulating municipal and industrial stormwater discharges. In November 1990, the U.S. Environmental Protection Agency (EPA) published final regulations that establish application requirements for specific categories of industries, including construction projects that encompass greater than or equal to 5 acres of land. The Phase II Rule became final in December 1999, expanding regulated construction sites to those greater than or equal to 1 acre. The regulations require that stormwater and non-stormwater runoff associated with construction activity that discharges either directly to surface waters or indirectly through Municipal Separate Storm Sewer Systems (MS4s), must be regulated by an NPDES permit.

SAFE DRINKING WATER ACT

The purpose of the Safe Drinking Water Act (SDWA) is to protect public health by regulating the nation's public drinking water supply. The Safe Drinking Water Act authorizes the EPA to set national health-based standards for drinking water to protect against both naturally occurring and human-made contaminants that may be found in drinking water. Potential contaminants include improperly disposed chemicals, animal wastes, pesticides, human threats, waste injected underground, and naturally occurring substances. In addition, water that is not properly treated may pose a threat to drinking water. The Safe Drinking Water Act applies to all public water systems across the nation. The EPA, individual states, and water systems work in coordination to ensure that these standards are met. The EPA identifies potential contaminants, determines an allowable maximum contaminant level, and enforces the set standards.

5.15.2.2 State

SUSTAINABLE GROUNDWATER MANAGEMENT ACT

The Sustainable Groundwater Management Act is a three-bill legislative package, comprising Assembly Bill (AB) 1739, Senate Bill (SB) 1168, SB 1319, and subsequent statewide regulations. The Sustainable Groundwater Management Act provides a statewide framework for the long-term protection of groundwater resources by requiring local agencies to form Groundwater Sustainability Agencies for high- and medium-priority basins.

Those Groundwater Sustainability Agencies are required to develop and implement a groundwater sustainability plan to mitigate overdraft of groundwater resources. The California Department of Water Resources (DWR) is responsible for assessing existing conditions and prioritizing groundwater basins within the state. The project site is within the Los Angeles Coastal Plain Groundwater Basin (4-011.02), which has been designated as a very low priority basin (DWR 2020).

URBAN WATER MANAGEMENT PLANNING ACT

The Urban Water Management Planning Act of 1983 (California Water Code Sections 10610 et seq.) requires that every supplier providing water for municipal purposes to more than 3,000 customers or suppliers supplying more than 3,000 acre-feet of water annually to prepare an urban water management plan (UWMP) every 5 years. The UWMP shall include a description of the service area, existing and planned sources of water available to the supplier, how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency's strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency's plan. In addition, every urban water supplier shall prepare and adopt a water shortage contingency plan as part of its UWMP that includes, but is not limited to, an analysis of water supply reliability over a 20-year planning time frame, the procedures used in conducting an annual water supply and demand assessment, definitions of standard water shortage levels corresponding to progressive ranges of up to 50% shortages and greater than 50% shortages, and shortage response actions that align with the defined shortage levels.

CALIFORNIA INTEGRATED WASTE MANAGEMENT ACT

The California Integrated Waste Management Act of 1989 (AB 939) mandated local jurisdictions to meet waste diversion goals of 25% by 1995 and 50% by 2000, and established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance. AB 939 requires Cities and Counties to prepare, adopt, and submit to CalRecycle a source reduction and recycling element to demonstrate how the jurisdiction will meet the diversion goals. Other elements included encouraging resource conservation and considering the effects of waste management operations.
The diversion goals and program requirements of the act are implemented through a disposal-based reporting system by local jurisdictions under California Integrated Waste Management Board regulatory oversight. AB 939 has achieved substantial progress in waste diversion, program implementation, solid waste planning, and protection of public health, safety, and the environment from landfills operations and solid waste facilities. In 2011, AB 341 was passed, requiring CalRecycle to require that local agencies adopt strategies that will enable 75% diversion of all solid waste by 2020.

SOLID WASTE REUSE AND RECYCLING ACCESS ACT

The California Solid Waste Reuse and Recycling Access Act (AB 1327) requires each local jurisdiction to adopt an ordinance requiring commercial, industrial, institutional building, marina, or residential

buildings having five or more living units to provide an adequate storage area for the collection and removal of recyclable materials. The sizes of these storage areas are to be determined by the appropriate jurisdictions' ordinance. If no such ordinance exists with the jurisdiction, the CalRecycle model ordinance shall take effect. Chapter 22.132 in the County of Los Angeles Code of Ordinances provides storage enclosure requirements for recycling and solid waste (County of Los Angeles 2023).

CALIFORNIA BUILDING CODE AND GREEN BUILDING STANDARDS

The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The CBC is adopted every 3 years by the Building Standards Commission.

"Green" building standards are virtually indistinguishable from any other building standards, are contained in the CBC, and regulate the construction of new buildings and improvements. Whereas the focus of traditional building standards has been protecting public health and safety, the focus of green building standards is to improve environmental performance. The green building standards were most recently updated in January 2023 and are detailed in the 2022 California Green Building Standards Code (CALGreen). CALGreen Section 5.408 requires the diversion of at least 65% of the construction waste generated during construction (CALGreen 2023).

MANDATORY COMMERCIAL RECYCLING PROGRAM

The Mandatory Commercial Recycling Program (AB 341) authorizes CalRecycle to develop and adopt regulations for mandatory commercial recycling. AB 341 requires all commercial businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. In addition, all multi-family homes with more than five units are also required to have a recycling program in place.

CALIFORNIA SENATE BILL 1374

SB 1374 was implemented to assist jurisdictions with diverting construction and demolition waste material. Per SB 1374, Public Resources Code (PRC) Section 41821 requires public agencies to include a summary of the progress made in diverting construction and demolition waste according to diversion goals included in AB 939. Per SB 1374, PRC Section 41850 authorizes CalRecycle to fine jurisdictions that do not meet the required goals. Additionally, per SB 1734, PRC Section 42912 requires that CalRecycle adopt a model ordinance for diverting 50% to 75% of all construction and demolition waste from landfills.

5.15.2.3 County of Los Angeles

COUNTY OF LOS ANGELES 2035 GENERAL PLAN

The County of Los Angeles 2035 General Plan provides the policy framework and establishes the long-range vision for how and where the unincorporated areas will grow, and establishes goals, policies, and programs to foster healthy, livable, and sustainable communities (County of Los Angeles 2015). The project is subject to relevant goals, policies, and actions listed in the County of Los Angeles 2035 General Plan. Goals, policies, and actions related to the Conservation and Natural Resources Element and Public Services and Facilities Element are included below.

Conservation and Natural Resources Element

Goal C/NR 5. Protected and useable local surface water resources.

Public Services and Facilities Element

Goal PS/F 1: A coordinated, reliable, and equitable network of public facilities that preserves resources, ensures public health and safety, and keeps pace with planned development.

> ***Policy PS/F 1.2.*** Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.

Goal PS/F 4. Reliable sewer and urban runoff conveyance treatment systems

> ***Policy PS/F 4.3.*** Ensure the proper design of sewage treatment and disposal facilities, especially in landslide, hillside, and other hazard areas.
>
> ***Policy PS/F 5.5.*** Reduce the County's waste stream by minimizing waste generation and enhancing diversion.
>
> ***Policy PS/F 5.6.*** Encourage the use and procurement of recyclable and biodegradable materials.
>
> ***Policy PS/F 5.7.*** Encourage the recycling of construction and demolition debris generated by public and private projects.

COUNTYWIDE INTEGRATED WASTE MANAGEMENT PLAN

Pursuant to AB 939, each County is required to prepare and administer a Countywide Integrated Waste Management Plan (CIWMP), including preparation of an annual report. The CIWMP is composed of the County's and the Cities' Source Reduction and Recycling Elements, an Integrated Waste Management Summary Plan, and a Countywide Siting Element. The Summary Plan describes the steps to be taken by local agencies, acting independently and in concert, to achieve the mandated state diversion rate by integrating strategies aimed toward reducing, reusing, recycling, diverting, and marketing solid waste generated within the county. County Public Works is responsible for preparing and administering the Summary Plan and the Countywide Siting Element. The County continually evaluates landfill disposal needs and capacity as part of the preparation of the CIWMP annual report. Within each annual report, future landfill disposal needs over the next 15-year planning horizon are addressed in part by determining the available landfill capacity.

5.15.2.4 City of Los Angeles

While the project site is located within the city of Los Angeles, it is owned by the County of Los Angeles. Accordingly, the project is not subject to the regulatory controls of the City of Los Angeles. Nonetheless, regulatory and planning documents of the City of Los Angeles that are most relevant to the project as they relate to utilities and service systems are provided herein for informational purposes.

CITY OF LOS ANGELES GENERAL PLAN

The City of Los Angeles General Plan is a policy document originally adopted in 1974 that serves as a comprehensive, long-term plan for future development of the city. The City General Plan sets forth goals, objectives, and programs to guide land use policies and meet the existing and future needs of the City. Goals, policies, and actions related to utilities and service systems are included below.

Objective 9.3. Increase the utilization of Demand Side Management strategies to reduce system demand and increase recycling and information.

> ***Policy 9.3.1.*** Reduce the amount of hazardous substances and the total amount of flow entering the wastewater system.
>
> ***Policy 9.3.2.*** Consider the use of treated wastewater for irrigation, groundwater recharge, and other beneficial purposes.

Objective 9.10. Ensure that water supply, storage, and delivery systems are adequate to support planned development.

Objective 9.12. Support integrated solid waste management efforts.

URBAN WATER MANAGEMENT PLAN

In accordance with the California Urban Water Management Planning Act, UWMPs are updated at 5-year intervals. LADWP adopted the 2020 UWMP on May 25, 2021. The 2020 UWMP complies with the Urban Water Management Planning Act, builds upon the goals and progress made in the 2015 UWMP, and currently serves as the City's master plan for reliable water supply and resource management consistent with the City goals and objectives. The UWMP details LADWP's efforts to promote the efficient use and management of its water resources. LADWP's UWMP used a service area–wide methodology in developing its water demand projections. This methodology does not rely on individual development demands to determine area-wide growth. Rather, the projected growth in water use for the entire service area was considered in developing long-term water projections for the City to the year 2045. Long-range projections are based on SCAG growth projections. The 2020 UWMP is based on projections in the 2020-2045 RTP/SCS.

5.15.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse environmental impacts related to utilities and service systems if it would:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

b) Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

5.15.4 Impact Assessment Methodology

The following impact assessment evaluates the potential for the project to require new or relocated utility infrastructure or exceed existing utility infrastructure capacities and whether or not any necessary improvements may have the potential to cause significant environmental effects. The assessment in this section is based in part on information provided within LADWP's 2020 *Urban Water Management Plan* and LASAN's 2019 *Sewer System Management Plan*, County Public Works' Countywide Integrated Waste Management Plan (CIWMP) *2020 Annual Report*, as well as Service Request correspondence letters (will serve letters) received from LADWP on October 28, 2022, and from LASAN on November 22, 2022. The project's potential to result in significant environmental impacts related to utilities and service systems was evaluated by determining if growth associated with the project would require new or relocated utility infrastructure or exceed existing infrastructure capacity and then, if improvements or additional infrastructure would be required, considering whether those additional facilities and/or improvements would result in potential impacts to the environment.

5.15.5 Environmental Impact Analysis

a) Would the project result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

WATER

Delivery of potable water to the project site would be provided by LADWP. Proposed on-site water delivery infrastructure would include a 3-inch water line and a 3-inch fire line at the northeast corner of the site beneath the proposed parking lot, which would connect to the existing water meter in the sidewalk on South Curson Avenue (KPFF 2021). From there, the project site is served by three water mains that include two 8-inch asbestos-cement pipelines along Wilshire Boulevard and Curson Avenue, and a cast-iron pipeline along 6th Street (LADWP 2022). New above grade backflow preventer devices would be located just inside the property line adjacent to the meter. Water service to both the Observation Pit, as well as Project 23, is currently provided by LACMA. Due to the relatively remote location of these service points compared to their proximity to LACMA, it is assumed that those demands would continue to be served by and coordinated with LACMA. Based on a response letter provided by LADWP on October 28, 2022, regarding the project's request for water and electric service connection, other than the improvements described above, LADWP confirmed that there are no known issues or deficiencies related to water services or facilities within the project site vicinity (see Appendix K). The estimated water demand anticipated upon project implementation is detailed in the analysis provided for threshold b).

WASTEWATER

Wastewater discharge from the project site is directed to the east where it connects by gravity to an existing City of Los Angeles public sewer main. The sewage infrastructure in the vicinity of the project site includes an existing 12-inch line on South Curson Avenue. The 12-inch line feeds into an 18-inch line on Wilshire Boulevard then into a 39-inch line on Crescent Heights Boulevard before discharging into a 48-inch sewer line also located on Crescent Heights Boulevard (LASAN 2022). The Observation Pit and Project 23 sewer connections tie into LACMA infrastructure. Wastewater generated from the new project elements, as proposed, would be conveyed from the sewer line at the northeast corner of the site beneath the proposed parking lot to the existing 12-inch sewer main along South Curson Avenue. On-site sewer lines would connect to the existing sewer main along South Curson Avenue. Ultimately, wastewater

flows from the project would be conveyed through these sewer lines and treated at the Hyperion Wastewater Reclamation Plant.

Based on a letter provided from LASAN dated November 22, 2022, LASAN analyzed its existing infrastructure capacity to convey and treat project wastewater flows (see Appendix K). Based on LASAN's calculations, the project would result in an increase of approximately 5,823 gallons of wastewater flow per day. With this level of flow, LASAN concluded that while there is sufficient capacity within the existing sewer system to treat wastewater flows generated by the project at the Hyperion Wastewater Reclamation Plant, the capacity to convey wastewater flows via the existing sewer lines serving the project site would require further detailed gauging and evaluation (see Appendix K). Given the exact timing of when the proposed new development is expected to be occupied and in consideration of LASAN requirements, detailed gauging and calculation of available sewer line capacities would be required as part of the permit process, which would occur when building plans are more fully developed and able to be submitted to LASAN. As part of this process, LASAN would identify specific sewer point connections, verify that capacity still exists in the infrastructure, and determine if new or additional sewer lines would need to be built to the planned point of connection (LASAN 2022).

STORMWATER DRAINAGE

As described in Section 5.9, Hydrology and Water Quality, implementation of the project would result in a decrease of pervious surfaces from 59.3% to 51.9%.and would modify the existing drainage management areas as shown in Figure 5.9-5 in Section 5.9 (per the *Low Impact Development (LID) and Hydrology Report* [KPFF 2023], provided as Appendix H). The project's proposed drainage pattern would convey all on-site drainage to on-site stormwater management systems (i.e., the three proposed biofiltration areas) prior to discharging stormwater off-site. The proposed drainage plan also includes a drainage area that is entirely within the public right-of-way and consists of runoff that drains directly to the existing Wilshire Boulevard stormwater facilities. In addition, the project's proposed grading and drainage plan for the site has been designed to use the existing topography of the site and maintain historic drainage patterns to the maximum extent feasible, with integration of additional water quality and drainage facilities to meet or exceed applicable Los Angeles Regional Water Quality Control Board (LARWQCB) Post-Construction Stormwater Management Requirements.

The proposed drainage plan consists of three new biofiltration systems to manage stormwater runoff, designed in accordance with the Los Angeles County Low Impact Development Standards Manual. Proper design of landscape features and site grading, as well as implementation of the proposed biofiltration systems, would have the potential to improve the quality of stormwater runoff from the project site. The City has designed the existing storm drainage infrastructure serving the project site to carry stormwater flows per the County of Los Angeles Department of Public Works Hydrology Manual (County Public Works 2006) and the City of Los Angeles Department of Public Works Storm Drain Design Manual (City of Los Angeles 1986) and is designed to carry the 50-year storm event per the County's Hydrology Manual. No known deficiencies exist in the vicinity of the project. Furthermore, the project's proposed drainage plan has the potential to increase the water quality of discharged stormwater flows through implementation of the project's proposed biofiltration areas and would result in peak discharge flow rates that are not anticipated to exceed the capacity of the existing storm drain conveyance system (see Appendix H for peak discharge flow rates per proposed drainage area). Therefore, the project would be designed to capture, filter, and reduce the volume of any additional runoff from the project's proposed pervious surfaces in a way that mimics, as well as improves, existing drainage patterns (see Section 5.9.5 and Appendix H for peak discharge flow rates per proposed drainage area).

ELECTRICITY AND NATURAL GAS

Upgrades would be required with respect to electric power and natural gas facilities, based on the construction of the new museum building. Point of connection to the project would be submitted to LADWP and SoCalGas prior to construction of the proposed development. Upgrades would be confined to the lateral connections to the project site and not any centralized facilities. Upgrades would likely be completed by either trenchless technology or completion of open trenching, to the depth of the underground utilities. The construction of the laterals would be temporary and would be subject to all applicable regulatory requirements. In addition, there would be solar electric power for the new museum building as well as additional energy-saving measures, including natural light to be harvested for the main spaces using large expanses of glass and skylights; daylighting systems to coordinate the levels of artificial lighting; HVAC systems that would be sized and designed in compliance with the CALGreen Code to maximize energy efficiency caused by heat loss and heat gain; and new and existing tree canopies to be used to protect building walls from sun exposure and provide shade for the ground area. In compliance with Title 24's Energy Efficiency Standards for Residential and Non-Residential Buildings in California, the proposed energy savings would help offset any additional energy demands and consumption resulting from the project (SWCA 2022). Chapter 7, Other CEQA Considerations, provides further analysis related to the project's energy consumption.

TELECOMMUNICATIONS

The project would continue to rely on the same internet and phone services as existing conditions expanding the services of current providers to the new museum (e.g., AT&T, Centrex, and Crown Castle). Future connections with these service providers are not anticipated to result in the need for construction of new or expanded infrastructure beyond the typical connections required within the project site to the new building.

CONSTRUCTION

Construction and installation of the utility infrastructure improvements described above would be conducted during the initial site preparation activities to allow for renovations within the project site and would require grading and ground-disturbance activities that have been considered throughout Chapter 5, Environmental Impact Analysis, of this EIR. Mitigation Measures AES/mm-4.1, AQ/mm-3.1; BIO/mm-1.1, BIO/mm-2.1, BIO/mm-3.1, BIO/mm-5.1 and 5.2, and BIO/mm-6.1; CR-ARCH/mm-1.1 through 1.4; CR-HIST/mm-1.1 through 1.5; GEO/mm-3.1 and 3.2, GEO/mm-4.1, and GEO/mm-6.1 through 6.5; GHG/mm-1.1; HAZ/mm-1.1 through 1.2 and HAZ/mm-2.1 and 2.2; NOI/mm-1.1; TRA/mm-1.1 and TRA/mm-4.1 through 4.3; and TCR/mm-1.1 through 1.4 have been identified to reduce potential impacts associated with construction of future uses on-site, including construction and installation of new utility infrastructure within the boundaries of the project site.

Construction and implementation of the infrastructure improvements that may be required beyond the project site would be expected to occur within existing roadway rights-of-way in areas that have been previously disturbed. As well, where applicable, the mitigation measures identified above apply to all project elements, including off-site improvements.

In addition, construction and installation of utility infrastructure would require preparation and implementation of a stormwater pollution prevention plan with construction best management practices for short- and long-term erosion control in accordance with RWQCB requirements. Construction crews would also be required to comply with California Code of Regulations Title 22, which regulates the use, storage, and transport of hazardous materials, and Health and Safety Code Division 20, Chapter 6.95, which requires the preparation and implementation of a hazardous material release response plan and the preparation of a hazardous materials inventory for materials used and stored at the site.

While adherence to applicable state and local regulations as well as implementation of identified project-specific mitigation measures would serve to reduce potential impacts related to construction of new or expanded utility infrastructure during project construction, whether additional or upgraded off-site LASAN infrastructure would be required is not known at this time and, if they were to be required, their location is not known. While there is sufficient capacity to treat wastewater flows from the project at the Hyperion Wastewater Reclamation Plant, LASAN will not be able to give a definitive confirmation of adequate sewer line capacity for the project without further detailed gauging and evaluation associated with more detailed architectural plans, which would be provided during the project's permitting phase. At this juncture, it is not known if new or upgraded sewer lines would be required and conclusion of this analysis would be speculative. Additional coordination with LASAN and consideration of sewer line capacity would be required to determine if additional sewer line infrastructure upgrades and/or new facilities would be necessary to accommodate the project. Therefore, impacts related to construction of new or expanded utility infrastructure could be *significant*.

OPERATION

Following implementation of the project, LADWP would maintain the project site's water and electricity infrastructure, LASAN would maintain the sewer and stormwater drainage infrastructure (stormwater drainage in coordination with the Los Angeles County Flood Control District), and natural gas infrastructure would be maintained by SoCalGas. Future maintenance and repair trips associated with maintenance of new utility infrastructure would occur on an as-needed basis and are not anticipated to generate a substantial number of vehicle trips that could result in an adverse quantity or concentration of criteria air pollutants or greenhouse gas emissions. Therefore, operation of utility infrastructure improvements would not result in long-term impacts, and operational impacts would be *less than significant*.

UTL Impact 1	
During project construction, the project could require the construction of new or expanded sewer lines from the project site to an identified point of connection within existing sewer system facilities. LASAN will not be able to give a definitive confirmation of adequate sewer system capacity for the project without further detailed gauging and evaluation associated with more detailed architectural plans, which would be provided during the project's permitting phase. At this juncture, it is not known if new or upgraded sewer lines would be required and conclusion of this analysis would be speculative. Impacts related to construction of new or expanded utility infrastructure could be significant. Operational impacts would be less than significant. (CEQA Checklist Appendix G Threshold XIX. a)	
Mitigation Measures	
UTL/mm-1.1	*To confirm the sewer system serving the project site can accommodate the total wastewater flows generated by the project, the Los Angeles County Museum of Natural History Foundation (Foundation) shall coordinate with Los Angeles Sanitation and Environment (LASAN) during project permitting and prior to construction for confirmation of sewer system capacity. LASAN shall make this determination by conducting detailed gauging and further evaluation to identify a specific sewer connection point and/or to determine if upgrading or additional sewer lines are necessary to accommodate the project.*

UTL Impact 1
Implement Mitigation Measures AES/mm-4.1; AQ/mm-3.1; BIO/mm-1.1, BIO/mm-2.1, BIO/mm-3.1, BIO/mm-5.1 and 5.2, and BIO/mm-6.1; CR-ARCH/mm-1.1 through 1.4; GEO/mm-3.1 and 3.2, GEO/mm-4.1, and GEO/mm-6.1 through 6.5; GHG/mm-1.1; HAZ/mm-1.1 and 1.2, and HAZ/mm-2.1 and 2.2; NOI/mm-1.1; TRA/mm-1.1 and TRA/mm-4.1 through 4.3; and TCR/mm-1.1 through 1.4.
Impacts Following Mitigation
With implementation of all the project mitigation measures listed above as well as UTL/mm-1.1, impacts related to construction of new or expanded water, wastewater, stormwater drainage, electric power, natural gas, and telecommunications facilities would be less than significant. Operational impacts would be less than significant.

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Domestic water supply services for the project would be provided by LADWP. Present and future water supplies available to the LADWP to provide water service to the project site include the Los Angeles Aqueducts, local groundwater, purchased water from MWD, and Colorado River Aqueduct (supplied by MWD).

CONSTRUCTION

Construction activities for the project would result in a temporary demand for water associated with soil compaction and earthwork, dust control, mixing and placement of concrete, equipment and site cleanup, irrigation for plant and landscaping establishment, testing of water connections and flushing, and other short-term related activities. These activities would occur incrementally throughout construction of the project (from the start of construction to project buildout). The amount of water used during construction would vary depending on soil conditions, weather, and the specific activities being performed.
As concluded in LADWP's 2020 UWMP, projected water demands for the City would be met by the available supplies during an average year, single-dry year, and multiple-dry year in each year from 2025 through 2045 (see Table 5.15-1). The project would not exceed the available supplies projected by LADWP. Therefore, as the intermittent water use during construction would be less than the proposed water consumption at the project site, the project's temporary and intermittent demand for water during construction would be met by the City's available supplies during each year of project construction. Construction impacts related to water supply and demand would be *less than significant*.

OPERATION

Development of the project would result in an increase in long-term water demand for consumption, operational uses, maintenance, and other activities on the project site. The project's anticipated water demand was estimated by using the net increase in square footage for new museum facilities proposed by the project (a factored increase of approximately 1.6 over the existing square footage) multiplied by existing water usage rates for the project site during fiscal year 2021 to 2022. As provided in Section 5.15.1.1, the project site's existing water usage was 13,407 ccf per year (30.80 af per year or approximately 27,500 gallons per day) (Foundation 2023). Based on the increase in building square footage proposed by the project, the projected water usage during project operation would be approximately 21,451 ccf per year (49 af per year or 43,894 gallons per day). This is an approximate increase of 37% in water demand with the project. This estimation does not account for the project's water conservation features, and it is not anticipated that the irrigation needs of the proposed landscaping

within the 13-acre site would require significant additional water, and that has not been factored out of the estimated water demand projection; therefore, the project's estimated water demand is conservative. In addition, LADWP's 2020 UWMP forecasts for projected water demand are based on the SCAG's population projections, which rely on the adopted land use designations contained within the general plans that cover the geographic area within LADWP's service. The water use projections included in the 2020 UWMP were based on the project site's existing "Public Facilities" land use designation on the City of Los Angeles Land Use Map. Because the project would be consistent with the City's existing land use designation, the water demand associated with the project was considered in the demand anticipated by the 2020 UWMP and analyzed therein. As stated in a letter provided by LADWP dated October 28, 2022, projects that conform to the demographic projections from SCAG's 2020-2045 RTP/SCS and are currently located in the City's service area are considered to have been included in the LADWP's water supply planning efforts (LADWP 2022). Because the project would be consistent with the demographic projections used in the SCAG's 2020-2045 RTP/SCS, as stated above, LADWP expects to have adequate water supplies to meet the demands of the project until at least 2045 (LADWP 2022). Therefore, sufficient water supplies are available to serve the project and no new or expanded entitlements are needed. Operational impacts related to water supply and demand would be *less than significant*.

UTL Impact 2
LADWP would have sufficient water supply to serve the water demand generated by the project and the existing service area during normal, single dry year, and multiple dry years conditions during both construction and operation of the project. Impacts related to water supply and demand would be less than significant. (CEQA Checklist Appendix G Threshold XIX. b)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to sufficient water supply would be less than significant.

c) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The project's wastewater treatment needs would be provided by LASAN. Wastewater from the project would be collected through LASAN's sewer collection system and would be treated at the Hyperion Water Reclamation Plant.

Implementation of the project would result in the renovation of the existing Page Museum, along with construction of the new museum building along with specific museum-related uses that would increase the amount of wastewater generated at the project site, thereby increasing the demand on existing LASAN wastewater treatment facilities. Table 5.15-3 includes the estimated wastewater discharges associated with the project as provided by LASAN (see Appendix K).

Table 5.15-3. Estimated Wastewater Generation (per capita/attendance)

Type Description	Wastewater Generation Rate (gpd/unit)	Quantity/Floor Area (sf/seats)	Wastewater Generation (gpd)
Existing			
Page Museum	30 gpd/1,000 sf	63,200 sf	1,896
Existing Total			**1,896**
Proposed with Project			
Renovated Page Museum	30 gpd/1,000 sf	63,200 sf	1,896
New Museum Building	30 gpd/1,000 sf	42,000 sf	1,260
Lobby	50 gpd/1,000 sf	4,000 sf	200
Exhibit Services	50 gpd/1,000 sf	24,000 sf	1,200
Theater #1	3 gpd/seat	70 seats	210
Theater #2	3 gpd/seat	190 seats	570
Research Room	50 gpd/1,000 sf	21,030 sf	1052
Administration Space	120 gpd/1,000 sf	11,090 sf	1,331
Proposed with Project Total			**7,719**
Net Increase (Proposed – Existing)			**5,823**

Source: LASAN (2022)
Note: gpd = gallons per day; sf = square feet

As shown, the estimated wastewater generation under existing conditions is 1,896 gpd and the estimated wastewater demand under the project is 7,719 gpd; therefore, the project would result in a net increase of approximately 5,823 gpd. Therefore, the flows contributed by the project would not result in an exceedance of the reclamation plant's capacity or effluent water quality standards set forth by the LARWQCB. In addition, the project would be required to comply with numerous federal, state, and local regulations that would reduce the potential for the project to exceed the wastewater treatment requirements of the LARWQCB. These include the federal Water Pollution Control Act, which regulates discharges of pollutants into the waters of the U.S.; the California Water Code, which controls all considerations of water and its use; and the Porter-Cologne Water Quality Control Act, which controls polluted discharges into state waters. Therefore, impacts would be *less than significant*.

UTL Impact 3
It has been determined that the wastewater treatment provider serving the project (LASAN) would have adequate capacity to serve the wastewater flows generated by the project. Impacts would be less than significant. (CEQA Checklist Appendix G Threshold XIX. c)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to adequate wastewater treatment capacity would be considered less than significant.

d) Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Implementation of the project would generate solid waste during construction and operation, which would be disposed of at Azusa Land Reclamation. As previously identified, the Azusa Land Reclamation has the capacity to accept and process 2,336,000 cubic yards of solid waste per year. In 2020, an average of 820 cubic yards of solid waste was disposed of at Azusa Land Reclamation facility per day, resulting in approximately 299,300 cubic yards of solid waste per year (County Public Works 2021). As a result, Azusa Land Reclamation has the capacity to accept and process approximately 2,036,700 cubic yards of additional solid waste per year.

CONSTRUCTION

Construction activities would include demolition of approximately 2,000 square feet of existing museum buildings and entrances, grading and excavation, and construction of approximately 44,000 square feet of new facilities and structures. Table 5.15-4 identifies the estimated amount of solid waste that would be generated by the project during construction.

Table 5.15-4. Estimated Construction Solid Waste Generation

Solid Waste Generator	Building Area (square feet)	Solid Waste Generation Rate (pounds/square foot)	Solid Waste Generated		
			pounds	tons	cubic yards
Construction	44,000	3.89	171,160	85.58	68.46
Demolition	2,000	155	310,000	155	124.00
Total					**192.46**

Source: EPA (1998)

As shown in Table 5.15-4, approximately 192.46 cubic yards of solid waste would be generated over the course of the proposed construction period. The project would be required to comply with mandatory waste reduction requirements identified in CALGreen Section 5.408, which requires the diversion of at least 65% of construction-related waste generated during construction. Based on required compliance with CALGreen waste diversion requirements, approximately 48.11 cubic yards of solid waste generated during project construction would be disposed of at Azusa Land Reclamation or one or more of the other Class III landfills serving the County (as shown in Table 5.15-2). As previously identified, Azusa Land Reclamation has the capacity to accept and process approximately 2,036,700 cubic yards of additional solid waste per year; therefore, there would be adequate available capacity to dispose of the approximately 68.46 cubic yards of solid waste generated during project construction. As such, the volume of solid waste generated during project construction would not exceed state or local disposal standards nor would it exceed the local infrastructure capacity to handle the waste disposal. Therefore, construction impacts would be *less than significant*.

OPERATION

As identified in Section 5.15.1.6, Solid Waste, the museum facility currently generates approximately 1,872 cubic yards of solid waste per year and approximately 39 cubic yards of green waste per year (Foundation 2022). The project would result in a net increase of 44,000 square feet of building space associated with improvements to the Page Museum and the construction of the new museum building. This new development would be an approximate 60% increase in building and facility square footage.

This expansion of use would result in a corresponding increase in the amount of solid waste generation. CalRecycle establishes waste generation rates for different land use types (e.g., residential, commercial, industrial); however, there is not a waste generation rate for museums or other similar land uses (CalRecycle 2022). As such, operational solid waste that would be generated by the project was estimated by assuming a 60% increase in solid waste in comparison to existing conditions, which reflects the 60% increase in building space associated with the project. However, since an increase in building space does not necessarily account for all waste-generating activities on-site, a conservative estimate was also identified by doubling the amount of existing solid waste generated at the project site.

Table 5.15-5 identifies the potential increase in operational solid waste that would be generated by the project.

Table 5.15-5. Estimated Operational Solid Waste Generation

Waste Type	Existing (cubic yards/year)	Existing+60% Increase in Solid Waste (cubic yards/year)	Existing+Doubling of Solid Waste (cubic yards/year)
Solid waste	1,872	2,764.8	3,744
Green waste	39	57.6	78
Total (cubic yards/year)		**2,822.4**	**3,822**

As shown in Table 5.15-5, the project would generate up to 3,744 cubic yards of solid waste and 78 cubic yards of green waste per year. Operational waste would be disposed of at Azusa Land Reclamation, which has the capacity to accept approximately 2,036,700 cubic yards of additional solid waste per year; therefore, a total increase of approximately 3,822 cubic yards of solid and green waste per year would not exceed existing capacity at Azusa Land Reclamation facility. Further, a minimum of 50% of all solid waste would be required to be recycled pursuant to AB 939, consistent with the State's solid waste reduction goals. Based on required compliance with AB 939, approximately 1,911 cubic yards of operational solid and green waste per year would be disposed of at Azusa Land Reclamation. Therefore, the volume of solid waste generated during operation of the project would neither exceed state or local disposal standards nor exceed the local infrastructure capacity to handle the waste disposal. Therefore, operational impacts would be *less than significant*.

UTL Impact 4
The project would not generate solid waste in excess of the capacity of local infrastructure or otherwise impair state or local solid waste reduction goals during construction and operation of the project. Impacts would be less than significant. (CEQA Checklist Appendix G Threshold XIX. d)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to an increase in solid waste would be less than significant

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

As discussed in UTL Impact 4, implementation of the project would generate solid waste during both construction and operation of the project, thus requiring the consideration of waste reduction and recycling measures. The project would be consistent with the applicable regulations associated with solid waste and would promote compliance with AB 939, AB 341, and AB 1826. Specifically, the project would include clearly marked, source-sorted receptacles to facilitate recycling with a focus on items such as paper, cardboard, glass, aluminum, plastic, and cooking oils. In addition, as described in UTL Impact 4, waste diversion and reduction during project construction and operations would be completed in accordance with CALGreen standards, County diversion standards, and the County Integrated Waste Management Plan. As a result, the project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste during both construction and operation. Impacts are considered *less than significant*.

UTL Impact 5
The project would comply with federal, state, and local solid waste reduction goals during construction and operation. Impacts would be less than significant. (CEQA Checklist Appendix G Threshold XIX. e)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to compliance with waste reduction goals would be less than significant.

5.15.6 Cumulative Impacts

Background to the cumulative analysis is provided in Chapter 4, Environmental Setting. Also included in Chapter 4 is a description of the geographic area that is considered in the cumulative development scenario for each of the resource areas. In general, because the analyses in the previous sections largely consider the overall capacity of the service provider and their projections based on population and existing and proposed land uses within their service areas, the preceding sections consider the overall growth and demands the service providers are anticipating with future development. While not anticipated, potential environmental impacts related to potential utilities and infrastructure improvements beyond the 13-acre La Brea Tar Pits project site would be addressed by implementing the resource-specific mitigation measures identified for the specific resource areas of concern (e.g., cultural resources). Because LASAN has indicated that there is some potential that additional sewer line capacity would be necessary to serve the project, it is most conservative to assume that an off-site upgrade of a sewer line could be required to serve the project in combination with other projects that may be developed in the area, as project plans for the La Brea Tar Pits Master Plan are finalized, and construction begins. As such, the project has the potential to result in secondary cumulatively considerable impacts related to the potential upgrades of LASAN sewer lines to serve the project and other development in LASAN's service area.

As discussed under UTL Impact 2, LADWP is projected to have sufficient water supplies to serve the project, its existing commitments, and the project's projected water demand during normal, single dry, and multiple dry year conditions to the year 2045 (LADWP 2020). Other reasonably foreseeable future projects proposed within the project site would be subject to environmental review to determine individual water demand and potential impacts to LADWP's water supply availability. Based on LADWP's current surplus of water supplies and the feedback received from LADWP on the utility's ability to serve the project, the project's potential contribution to cumulative impacts related to water supply are not considered cumulatively considerable.

As discussed under UTL Impact 3, based on the letter provided by LASAN in May 2022, LASAN has adequate treatment capabilities to serve the project and wastewater flows resulting from the project would be conveyed to the Hyperion Water Reclamation Plant, which LASAN determined has sufficient capacity to serve the project in combination with other growth within its service area (LASAN 2022). Based on the current and projected capacity of the Hyperion Water Reclamation Plant and LASAN's projections that it can serve the proposed project in combination with other reasonably anticipated projects in LASAN's service area, the project's potential contribution to cumulative impacts related to wastewater collection, treatment, and discharge would be less than cumulatively considerable.

As discussed under UTL Impact 4, based on the County's approved and future solid waste disposal capacity, project solid waste generation rates, and required adherence to applicable state and local waste diversion policies, solid waste generated during project construction and operation would not result in an excess of state or local standards or exceed the capacity of local infrastructure. Other reasonably foreseeable future projects would be subject to applicable state and local solid waste diversion policies and would also be subject to environmental review to determine individual impacts related to solid waste generation and disposal capacity.

In summary, the project would generally not be anticipated to result in cumulatively considerable environmental impacts related to the provision of utilities and services for the proposed project. While LASAN environmental impacts associated with construction and installation of utility infrastructure would range in the geographic scope depending on the resource area, there is some potential for secondary environmental impacts to occur with the development of new infrastructure. As such, the project could result in contributions to cumulatively considerable impacts related to off-site upgrades to LASAN's sewage collection system. At this juncture, it is not known if specific sewer lines would be required and conclusion of this analysis would be speculative. However, it is reasonable to assume that some potential for environmental impacts would occur with an infrastructure upgrade that may be required to collect sewage from the La Brea Master Plan project in combination with other development projects that are developed within LASAN's service area; this impact is considered *potentially significant*.

UTL Impact 6 (Cumulative)
The project could result in contributions to cumulatively considerable impacts related to off-site upgrades to LASAN's sewage collection system. At this juncture, it is not known whether new or upgraded sewer lines would be required and the conclusion of this analysis would be speculative. However, it is reasonable to assume that some potential for environmental impacts would occur with an infrastructure upgrade that may be required to collect sewage from the La Brea Master Plan project in combination with other development projects that are developed within LASAN's service area.

UTL Impact 6 (Cumulative)
Mitigation Measures
Implement Mitigation Measures AES/mm-4.1; AQ/mm-3.1; BIO/mm-1.1, BIO/mm-2.1, BIO/mm-3.1, BIO/mm-5.1 and 5.2, and BIO/mm-6.1; CR-ARCH/mm-1.1 through 1.4; CR-HIST/mm-1.1 through 1.5; GEO/mm-3.1 and 3.2, GEO/mm-4.1, and GEO/mm-6.1 through 6.5; GHG/mm-1.1; HAZ/mm-1.1 through 1.2, and HAZ/mm-2.1 and 2.2; NOI/mm-1.1; TRA/mm-1.1 and TRA/mm-4.1 through 4.3; TCR/mm-1.1 through 1.4; and UTL/mm-1.1.
Impacts Following Mitigation
With implementation of the identified project mitigation measures, cumulative impacts related to utilities and service systems would be less than significant.

5.16 MANDATORY FINDINGS OF SIGNIFICANCE

This section provides consideration of the proposed La Brea Tar Pits Master Plan and the Mandatory Findings of Significance in response to the Environmental Checklist questions included in Appendix G Section XXI and Section 15065 of the State CEQA Guidelines. The information provided in this section is based on the data and analyses conducted for this EIR (see Chapter 5, Environmental Impact Analysis, Sections 5.1 through 5.15 for a more detailed discussion of project impacts related to each resource topic).

5.16.1 Environmental Evaluation

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As discussed in Section 5.3, Biological Resources, one candidate species for listing under the federal Endangered Species Act—monarch butterfly (*Danaus plexippus*)—has been recorded on the project site. No other candidate, sensitive, or special-status species of flora or fauna are expected to occur at the project site. While the project site does not support overwintering aggregations of monarch butterflies, the presence of non-native tropical milkweed (*A. curassavica*), a known nectar source and host plant and potentially harmful ecological trap for both resident and migratory monarchs, is documented to occur on-site. Project implementation could result in potentially significant impacts during the construction process on the federal candidate monarch butterfly, either directly or through habitat modifications (i.e., removal of milkweed plants). In addition, the project site may contain potential jurisdictional wetland/aquatic resources in and along Oil Creek and the Lake Pit, and project activities could directly and indirectly impact the associated riparian wetland habitat. The project could directly impact nesting birds during project construction and temporally impact nesting bird habitat through project implementation. Further, the project could potentially conflict with the County of Los Angeles Oak Tree Ordinance due to the removal, relocation, trimming, or replacement of the 11 oak trees on the project site. These impacts can be reduced to less-than-significant levels by implementing the project mitigation measures BIO/mm-1.1, BIO/mm-2.1, BIO/mm-3.1, BIO/mm-5.1, BIO/mm-5.2, BIO/mm-6.1, and BIO/mm-6.2, as detailed in Section 5.3.5, Environmental Impact Analysis. With implementation of these measures, the project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.

As discussed in Section 5.5, Cultural Resources – Historical Resources, the project's proposed alterations to the George C. Page Museum (Page Museum) would compromise its historic integrity to the point that the historical resource would no longer convey the reasons for its significance. In addition, the project implementation would result in a comprehensive redesign of Hancock Park, which would erode and interrupt the eclectic but cohesive character-defining features of this historic district such that it would no longer convey the reasons for its significance as a California Register of Historical Resources- and locally eligible historic district. The loss of eligibility for the resource represents material impairment and an impact on the environment. While implementation of the proposed mitigation measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5 would reduce impacts to the extent feasible, the project would alter these resources in such a way that they would no longer convey the reasons for their significance within the parameters of the design and key features envisioned in the Master Plan. There are no mitigation

measures that would reduce these impacts to less-than-significant levels while keeping the primary elements of the Master Plan; therefore, impacts of the project would remain *significant and unavoidable* after mitigation.

Table 5.16-1 provides a summary of impacts and significance after mitigation for biological resources and cultural historical resources.

Table 5.16-1. Summary of Impacts and Significance after Mitigation for Biological Resources and Cultural Historical Resources

Impact Threshold with Potentially Significant Impact	Impact Statement	Mitigation Measure Identification	Significance After Mitigation
Section 5.3 Biological Resources			
a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	The project could result in in significant effects during construction on one species, the federal candidate monarch butterfly, either directly or through habitat modifications. Impacts during project construction could be significant. During project operation, the project would not result in significant effects, either directly or through habitat modifications, on any identified candidate, sensitive, or special-status species. Impacts during project operation would be less than significant. (CEQA Checklist Appendix G Threshold IV. a)	BIO/mm-1.1	Less than Significant with Mitigation
b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	The project could directly and indirectly impact the riparian wetland habitat associated with Oil Creek during both construction and operation. A reconnaissance survey suggests there may be approximately 0.3 acre of regulated aquatic resources associated with Oil Creek. Impacts during project construction and operation could be significant. (CEQA Checklist Appendix G Threshold IV. b)	BIO/mm-2.1	Less than Significant with Mitigation
	The project could directly and indirectly impact the Lake Pit lakebed and its associated riparian habitat during both construction and operation. A reconnaissance survey suggests there may be approximately 1.2 acres of regulated aquatic resources associated with the Lake Pit. Impacts during project construction and operation could be significant. (CEQA Checklist Appendix G Threshold IV. b)	BIO/mm-3.1	Less than Significant with Mitigation
c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrologic interruption, or other means?	The project site may contain potential jurisdictional wetland/aquatic resources in and along Oil Creek and the Lake Pit. Project construction and operation may result in impacts to wetland habitat. Impacts during project construction and operation could be significant. (CEQA Checklist Appendix G Threshold IV. c)	BIO/mm-2.1 and BIO/mm-3.1	Less than Significant with Mitigation
d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	The project could directly impact nesting birds during project construction and temporally impact nesting bird habitat during project operation. Impacts during project construction and operation could be significant. (CEQA Checklist Appendix G Threshold IV. d)	BIO/mm-5.1 and BIO/mm-5.2	Less than Significant with Mitigation

Impact Threshold with Potentially Significant Impact	Impact Statement	Mitigation Measure Identification	Significance After Mitigation
e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Removal, relocation, trimming, or replacement of the 13 protected oak trees on the project site during project construction and operation could potentially conflict with the County of Los Angeles Oak Tree Ordinance. Impacts during project construction and operation could be significant. (CEQA Checklist Appendix G Threshold IV. e)	BIO/mm-6.1	Less than Significant with Mitigation
Section 5.5 Cultural Historical Resources			
a) Would the project cause a substantial adverse change in the significance of a Historical Resource Pursuant to Section 15064.5 of the State CEQA Guidelines?	Project construction would cause a substantial adverse change in the significance of a Historical Resource pursuant to Section 15064.5 of the State CEQA Guidelines. Specifically, the project would cause a substantial adverse change in the significance of two identified historical resources: La Brea Tar Pits Historic District and the George C. Page Museum. This impact would be significant. Project operation would not cause a substantial adverse change in the significance of historic resources pursuant to State CEQA Guidelines Section 15064.5. No operational impacts would occur. (CEQA Checklist Appendix G Threshold V. a)	CR-HIST/mm-1.1 through CR-HIST/mm-1.5	Significant and Unavoidable

Mandatory Findings Impact 1
The project does not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal. The project does have the potential to eliminate important examples of the major periods of California history or prehistory. The project would cause a substantial adverse change in the significance of two identified historical resources: the La Brea Tar Pits Historic District and the George C. Page Museum (CEQA Checklist Appendix G Threshold XXI. a).
Mitigation Measures
Implementation of Mitigation Measures CR-HIST/mm-1.1 through 1.5 shall be required.
Impacts Following Mitigation
With implementation of the identified mitigation measures, impacts to historical resources would remain significant and unavoidable.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Chapter 4, Environmental Setting, details the existing and reasonably foreseeable future development projects located in proximity to the project site. The related projects generally consist of infill development and redevelopment of existing uses, including mixed-use, residential, commercial, office, restaurant, retail, studio, museum, hotel, and combinations thereof. As well, the cumulative effects of the project have been analyzed for each environmental topic area included in this EIR and can be found following the impact analysis sections in Chapter 5, Environmental Impact Analysis. The project would result in cumulatively considerable impacts related to historical resources (Section 5.5.6) and inconsistencies with applicable land use plans and policies established to protect historical resources (Section 5.10.6). In addition, the project would result in a significant contribution to cumulative transportation impacts by resulting in a net increase in vehicle miles traveled (VMT) (Section 5.13.6). Although implementing the proposed mitigation measures would reduce project impacts, they would not mitigate them to less than cumulatively considerable contributions to potential cumulative impacts. Therefore, the project's impacts related to historical resources, inconsistencies with land use plans and policies established to protect historical resources, and the increase in VMT would remain *cumulatively considerable*.

Mandatory Findings Impact 2
The project would result in cumulatively considerable impacts related to the substantial alteration of designated historical resources; inconsistencies with applicable land use plans and policies established to protect historic resources; and the substantial increase in vehicle miles traveled. (CEQA Checklist Appendix G Threshold XXI. b)
Mitigation Measures
Implementation of Mitigation Measures CR-HIST/mm-1.1 through 1.5 and TRA/mm-1.1 shall be required.
Impacts Following Mitigation
Although implementation of Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5 and TRA/mm-1.1 would reduce project impacts related to the identified cumulative impacts (historical resources and vehicle miles traveled), they would not mitigate them to less-than-significant levels. Therefore, the project's impacts related to historical resources, inconsistencies with land use plans and policies established to protect historic resources, and the increase in vehicle miles traveled would be cumulatively considerable.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The potential for the project to result in adverse direct or indirect impacts on human beings was examined for each environmental topic area included in Chapter 5, Environmental Impact Analysis. For this project, environmental categories associated with indirect or direct effects on human beings would include aesthetics, air quality, geology and soils, greenhouse gas emissions, hazards and hazardous materials, and noise, which are addressed in Section 5.1, Aesthetics; Section 5.2, Air Quality; Section 5.6., Geology and Soils; Section 5.7, Greenhouse Gas Emissions; Section 5.8, Hazards and Hazardous Materials; and

Section 5.11, Noise and Vibration. As described in each of these sections, the project would result in potentially significant impacts in each of these environmental topics during construction and operation of the project; however, the project would implement mitigation measures to reduce impacts to less-than-significant levels. As such, after implementation of the identified mitigation measures, the project's environmental effects on human beings would be *less than significant*.

Mandatory Findings Impact 3
The project could result in significant adverse effects on human beings during project construction and operation. (CEQA Checklist Appendix G Threshold XXI c)
Mitigation Measures
Implementation of Mitigation Measures AES/mm-4.1 and 4.2; AQ/mm-3.1; GEO/mm-3.1 and 3.2, GEO/mm-4.1, and GEO/mm-6.1 through 6.4; GHG/mm-1.1; HAZ/mm-1.1, HAZ/mm-1.2., HAZ/mm-2.1, and HAZ/mm-2.2.; and NOI/mm-1.1 shall be required.
Impacts Following Mitigation
With implementation of the project mitigation measures listed above, the project would not result in significant adverse effects on human beings.

CHAPTER 6. ALTERNATIVES ANALYSIS

6.1 INTRODUCTION TO THE ALTERNATIVES ANALYSIS

Section 15126.6(a) of the State CEQA Guidelines requires an EIR to "describe a reasonable range of alternatives to a project, or to the location of a project, which could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." This chapter discusses a range of alternatives to the proposed La Brea Tar Pits Master Plan (Master Plan), including alternative designs and a No Project/No Build Alternative. The State CEQA Guidelines provide the following guidance and direction for the discussion of alternatives to the project:

- "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." (Section 15126.6(a))
- "Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." (Section 15126.6(b))
- "The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison." (Section 15126.6(d))
- "The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decisionmakers to compare the impacts of approving the project with the impacts of not approving the project." (Section 15126.6(e))
- "The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project." (Section 15126.6(f))
- "Only [alternative] locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR." (Section 15126.6(f)(2)(A))

CEQA does not prescribe fixed rules governing the type or number of alternatives to a project that should be analyzed in an EIR; the nature of alternatives varies depending on the context of the project being analyzed. As expressed by the California Supreme Court: "CEQA establishes no categorical legal imperative as to the scope of alternatives to be analyzed in an EIR. Each case must be evaluated on its facts, which in turn must be reviewed in light of the statutory purpose" (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564).

Under these principles, an EIR needs to describe and evaluate only those alternatives necessary to permit a reasonable choice and "to foster meaningful public participation and informed decision making" (State CEQA Guidelines Section 15126.6[f]). The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned

choice (State CEQA Guidelines Section 15126.6 [f]). An EIR need not consider every conceivable alternative to a project. Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the basic project objectives, are not feasible, and/or do not avoid or substantially lessen any significant environmental effects (State CEQA Guidelines Section 15126.6[c]).

CEQA does not require the alternatives to be evaluated at the same level of detail as the project. Rather, the discussion of alternatives must include sufficient information about each alternative to allow "meaningful evaluation, analysis, and comparison with the proposed project" (State CEQA Guidelines Section 15126.6[d]).

Given the CEQA mandates listed above, this section: 1) describes the alternatives selection process; 2) describes the range of reasonable alternatives to the project, including the No Project/No Build Alternative; 3) examines and evaluates resource issue areas where significant adverse environmental effects have been identified and compares the impacts of the alternatives to those of the project; and 4) identifies the Environmentally Superior Alternative.

6.2 ALTERNATIVES SELECTION

In accordance with the State CEQA Guidelines, appropriate alternatives for EIR analysis are those that meet most of the basic project objectives and avoid or substantially lessen any of the significant environmental effects of the project. Consequently, this section provides a summary of the project components, reviews the objectives that were identified for the project, and identifies the significant environmental impacts of the project.

6.2.1 Project Summary

As described in detail in Chapter 3, Project Description, the project would result in a reimagined site design, expansion, and upgrades for the La Brea Tar Pits complex and the 13-acre portion of Hancock Park, including renovations to the George C. Page Museum (Page Museum). Table 6-1 provides a summary of the project components.

Table 6-1. Project Components Summary

Project Component	Description
Page Museum Renovations	Renovate existing building within the same footprint (approximately 63,200 square feet).
New Museum Building	Construct a new two-story, 40,000-square foot (sf) museum building northwest of the Page Museum, including two new theaters. The construction of the new museum building would require the removal of vegetation in the footprint of the new building.
Wilshire Gateway	Renovate the existing entrance to La Brea Tar Pits at Wilshire Boulevard and South Curson Avenue with shaded canopy and new welcome pavilion.
6th Street Gateway	Renovate the existing entrance at the northwest corner of West 6th Street and the entrance to the LACMA service drive with shaded canopy and new welcome pavilion.
Tar Pit Renovations (Pits 3, 4, 9, 13, 61, 67, and 91; Project 23)	Renovate the existing facilities at all the tar pits in the northwestern portion of the project site. These renovations would require the removal and replacement of some vegetation, although the exact amount and nature of the vegetation removal and enhancements has not been determined at the time of this report.
Pedestrian Path and Recreation Areas	Reconfigure the existing pedestrian pathways on-site into a continuous paved pedestrian path linking existing features on the project site. Provide improvements to the Central Green. Establish a children's play area, picnic areas, and a possible future small dog park west of the 6th Street Gateway.

Project Component	Description
Circulation and Parking	Relocate the parking lot approximately 50 to 70 feet to the north. This would require removal and relocation of existing trees on-site. The size of the parking lot (63,000 square feet) and the number of parking spaces would not change. The shifting of the parking lot on the northern side of the project site may require removal or relocation of the trees between the existing parking lot and West 6th Street. If these trees need to be removed or relocated, they would be either moved to another location within the 13-acre project site or replaced elsewhere within the project site. Add new landscaping and vehicle access lanes to the parking lot. Establish a new school drop-off/loading area approximately 215 to 230 feet long on South Curson Avenue adjacent to the Wilshire Gateway picnic area.
Landscaping	Establish three distinct landscaping zones encircled by a looping pedestrian path. More than 330 trees are currently on the project site. The project would require removal and replacement and/or relocation of between 150 and 200 trees. The planting strategy includes the planting (introduction or relocation) of a similar number of trees as would be removed. It is preliminarily estimated that 10% of the 150 to 200 trees to be removed would be relocated rather than replaced. Create three biofiltration areas for stormwater management.

6.2.2 Project Objectives

As described in Chapter 3, Project Description, the Los Angeles County Museum of Natural History, as a departmental unit of the County of Los Angeles (County), and the Los Angeles County Museum of Natural History Foundation (Foundation) have identified the following objectives for the project:

1. Renovate and expand the existing museum structure to address deferred maintenance of the building envelope and systems, to meet modern seismic, electrical, building code standards, and universal design standards, and to meet sustainability goals consistent with the County's sustainability plan (County of Los Angeles 2019).
2. Provide expanded collections storage facilities that enable access for scientific research, and preserve, protect, and allow future growth of the museum's world-class collections.
3. Provide expanded state-of-the-art laboratory research facilities to accommodate internationally significant and advanced research in paleontology.
4. Provide state-of-the-art exhibition facilities and learning environments within the park and museum to enrich the visitor experience and to support active educational and public programming.
5. Improve access and entry for different visitor types, increase connections between the museum and the park, as well as support increased visitation, special events, and revenue-producing amenities within the park and museum.
6. Expand the museum exhibits, educational classrooms, collection spaces, offices, and laboratory research facilities in one unified, cohesive facility, with the fewest impacts to historical resources possible.
7. Create a central entrance to the museum facilities to enhance the visitor experience of the museum and Hancock Park.
8. Preserve and protect the National Natural Landmark—La Brea Tar Pits—to allow access for future research and excavation, support cultural and educational interpretation, and enable the ongoing natural processes of the asphaltic seeps.
9. Redesign and renovate the Hancock Park community park green space as an expression of the goals of the County of Los Angeles's General Plan Conservation and Natural Resources Element

and the City of Los Angeles's Open Space and Conservation Elements of the General Plan, to increase sustainable landscape and site design, to support passive recreational use, to increase the legibility of this important cultural destination, and to enhance connections to the quickly evolving Miracle Mile neighborhood.

6.2.3 Significant Impacts Resulting from the Project

Alternatives to be considered under CEQA are those that would avoid or substantially lessen one or more of the significant environmental effects identified during evaluation of the project. The environmental impact issue areas described in Chapter 5, Environmental Impact Analysis, were determined to be potentially significant but could be reduced to less than significant through the implementation of mitigation measures. Three impacts were found to be significant and unavoidable after implementation of the feasible mitigation measures. A summary of impacts identified for the project by issue area is provided in Table 6-2.

Table 6-2. Summary of Impacts Resulting from the Project

Environmental Resource	Significant and Unavoidable Impact	Less than Significant Impact with Mitigation	Less than Significant Impact
Aesthetics		X	
Agriculture and Forestry Resources*			X
Air Quality		X	
Biological Resources		X	
Cultural Resources – Archaeological Resources		X	
Cultural Resources – Historical Resources	X		
Energy*			X
Geology and Soils		X	
Greenhouse Gas Emissions		X	
Hazards and Hazardous Materials		X	
Hydrology and Water Quality		X	
Land Use and Planning	X		
Mineral Resources*			X
Noise and Vibration		X	
Population and Housing*			X
Public Services*			X
Recreation		X	
Transportation	X		
Tribal Cultural Resources		X	
Utilities and Service Systems		X	
Wildfire*			X

* Issues evaluated in Section 7.5, Environmental Effects Found Not to be Significant. Based on preliminary analysis and discussions with the Los Angeles County Museum of Natural History Foundation, it was determined that the project would not result in significant impacts related to agricultural and forestry resources, energy, mineral resources, population and housing, public services, and wildfire.

As mentioned, the project would result in significant and unavoidable impacts related to historical resources, land use and planning, and transportation. Each identified significant and unavoidable impact and the reason for the significance determination is provided in Table 6-3.

Table 6-3. Significant and Unavoidable Impacts Resulting from the Project

Environmental Issue Area	Impact	Reason for Significance Determination
Cultural Resources – Historical Resources	**CR-HIST Impact 1:** As a result of project construction, the project would cause a substantial adverse change in the significance of a Historical Resource pursuant to Section 15064.5 of the State CEQA Guidelines. Specifically, the project would cause a substantial adverse change in the significance of two identified historical resources: the La Brea Tar Pits Historic District and the George C. Page Museum. Construction impacts would be significant. Project operation would not cause a substantial adverse change in the significance of historic resources pursuant to State CEQA Guidelines Section 15064.5. No operational impacts would occur.	**Significant and unavoidable**. The proposed alterations to the Page Museum during project construction would compromise its historic integrity to the point that the historical resource would no longer convey the reasons for its significance. In addition, the project construction would result in a comprehensive redesign of Hancock Park, which would erode and interrupt the eclectic but cohesive character-defining features of this historic district such that it would no longer convey the reasons for its significance as a California Register of Historical Resources- and locally eligible historic district. The loss of eligibility for the resource represents material impairment and an impact on the environment. Construction impacts would be significant. While implementation of project Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5 would reduce impacts, the project would alter these resources in such a way that they would no longer convey the reasons for their significance within the parameters of the design and key features envisioned in the Master Plan. There are no mitigation measures that would reduce these impacts to less-than-significant levels while meeting the project objectives and keeping the primary elements of the Master Plan; therefore, construction impacts of the project would remain *significant and unavoidable* after mitigation.
Land Use and Planning	**LUP Impact 2:** Implementation of the project would result in the alteration of designated historical resources and would be potentially inconsistent with the objectives, goals, and policies of the County's General Plan Conservation and Natural Resources Element, the City's General Plan Conservation Element, and the Wilshire Community Plan as they pertain to the protection of designated historical resources.	**Significant and unavoidable**. The project would result in the alteration of designated historical resources, the La Brea Tar Pits Historic District and the Page Museum, which is inconsistent with the objectives, goals, and policies of the County's General Plan Conservation and Natural Resources Element, the City's Conservation Element, and the Wilshire Community Plan as they pertain to the protection of designated historical resources (County of Los Angeles 2015, City of Los Angeles 2001a, 2001b). While implementation of project Mitigation Measures CRHIST/mm-1.1 through CR-HIST/mm-1.5 would reduce impacts, the project would alter these resources in such a way that they would no longer convey the reasons for their significance within the parameters of the design and key features envisioned in the Master Plan. There are no mitigation measures that would reduce these impacts to less than significant while meeting the project objectives and keeping the primary elements of the Master Plan; therefore, impacts of the project would remain significant and unavoidable after implementation of the recommendations, creating inconsistencies with the applicable land use objectives, goals, and policies set forth in the County of Los Angeles General Plan, the City of Los Angeles General Plan, and the Wilshire Community Plan. Impacts would remain *significant and unavoidable*.

Environmental Issue Area	Impact	Reason for Significance Determination
Transportation	**TRA-Impact 2:** Operation of the project would result in a net increase in vehicle miles traveled (VMT) and would result in a substantial increase in VMT.	**Significant and unavoidable**. The project would result in an average visitor trip length that is higher than the average recreation trip length. Visitor travel trips to the museum are approximately 196% longer than the average recreation trip in Los Angeles and Orange Counties. Given that museum visitor trips are longer than regional recreation trip lengths, additional visitor trips to the project site due to implementation of the project would result in a net increase in total VMT. While the project's mitigation measure TRA/mm-1.1 would aim to reduce employee and visitor VMT and support multimodal connectivity, it may be insufficient to reduce VMT to less-than-significant levels and there are no additional feasible mitigation measures to reduce the impact. Therefore, operation of the project would result in a substantial increase in VMT and would remain *significant and unavoidable* after mitigation. after mitigation.

Note: The LUP Impact 2 is a consistency analysis of the applicable land use plans, policies, and regulations, and considers the holistic impacts associated with implementation of the project; it does not provide separate construction and operation analyses or conclusions.

As stated in Chapter 7, Other CEQA Considerations, the project would not result in significant impacts related to agricultural and forestry resources, energy, mineral resources, population and housing, public services, and wildfire based on preliminary analysis and discussions with the Los Angeles County Museum of Natural History Foundation. Therefore, the analysis of these issue areas is not presented in Chapter 5, Environmental Impact Analysis. All alternatives carried forward for analysis in this section would occur on the same project site and impacts on these resource areas would be similar or less than those of the project. Therefore, these resource topics are not discussed further in this alternatives analysis.

6.2.4 Alternatives Development and Analysis Process

In defining the feasibility of alternatives, the State CEQA Guidelines provide that: "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site." If an alternative was found to be infeasible, as defined above, then it was dropped from further consideration in this analysis.

In addition, State CEQA Guidelines Section 15126.6 states that alternatives should "…attain most of the basic objectives of the project…". As further explained by the California Supreme Court:

> *"[A]n EIR should not exclude an alternative from detailed consideration merely because it 'would impede to some degree the attainment of the project objectives.' But an EIR need not study in detail an alternative that is infeasible or that the lead agency has reasonably determined cannot achieve the project's underlying fundamental purpose . . .*
>
> *Although a lead agency may not give a project's purpose an artificially narrow definition, a lead agency may structure its EIR alternative analysis around a reasonable definition of underlying purpose and need not study alternatives that cannot achieve that basic goal." (In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings, 43 Cal.4th 1143, 1165-1166 [2008]).*

The alternatives analysis began with screening and evaluating a list of preliminary alternatives to determine which alternatives would be selected for further analysis in the EIR. To maximize the range of alternatives considered and provide flexibility during project approval, the EIR evaluated four variations of the project aimed at reducing the significant and unavoidable impacts related to historical resources and land use and planning. In addition, the explored alternatives were examined for their ability to reduce the project's significant but mitigated environmental impacts related to the following: aesthetics, air quality, biological resources, cultural archaeological resources, geology and soils, greenhouse gas (GHG) emissions, hazards and hazardous materials, noise and vibration, transportation, tribal cultural resources, and utilities and service systems.

Each of the identified alternatives was preliminarily assessed to determine which of the alternatives met the requirements of a viable alternative under CEQA by considering whether the alternative: 1) would be feasible, 2) would avoid or substantially lessen any of the significant effects of the project, and 3) could feasibly attain most of the basic objectives of the project.

The alternatives that met the three requirements of a viable alternative under CEQA (listed above) were carried forward for a more detailed review in the EIR.

6.3 ALTERNATIVES CONSIDERED BUT ELIMINATED

State CEQA Guidelines Section 15126.6(c) requires that an EIR disclose potential alternatives that were considered and eliminated along with a brief explanation of the reason for elimination. Factors used to eliminate alternatives from detailed consideration include: 1) failure to meet most of the basic project objectives, 2) infeasibility, and/or 3) inability to avoid significant environmental impacts.

The alternatives discussed in the following sections were considered but eliminated from further analysis.

6.3.1 Alternative Projects from the Design Competition

Three preliminary conceptual approaches to developing a master plan for La Brea Tar Pits were made public in August 2019. The concepts were presented at the end of a design competition process that started in early 2019. The designs were prepared by three multidisciplinary teams led by architectural firms. All three of the designs envisioned creating a more robust and engaging visitor experience while enhancing La Brea Tar Pits as a destination and cultural hub through expanded museum, research, and exhibition space; providing an integrated experience of the museum and Hancock Park; increasing community access; and developing more sustainable infrastructure.

The designs were evaluated through an open public process where the Museum of Natural History and the Foundation sought public input and response to the submitted designs. In addition, to support the selection process, a competition jury of leading figures from the fields of architecture, landscape architecture, design, science, natural history, and the arts was assembled to contribute to the decision-making process. The result was the selection of Weiss/Manfredi's design as the concept to further advance. The resulting Master Plan (Weiss/Manfredi 2023) is the proposed project evaluated in this EIR.

As evaluated in Section 5.5, Cultural Resources – Historical Resources, the Page Museum is a historical resource pursuant to CEQA. In accordance with State CEQA Guidelines and 14 California Code of Regulations (CCR) Section 15126.4(b)(1), projects that conform with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (*Secretary's Standards*; Weeks and Grimmer 2001) generally avoid significant impacts and material impairment to historical resources.

The two design concepts that were eliminated would have resulted in far more extreme impacts to the Page Museum than the design concept considered in the Master Plan, including the following major alterations and removal of key character-defining features of the Page Museum:

- Both designs that were eliminated from further consideration removed the existing berms on the west and north elevations of the museum site and replaced with other lawn features that are not consistent with the original lawn area design that currently integrates with the Page Museum structure and is a significant design feature of this portion of Hancock Park.
- The indoor-outdoor integration provided by the open roof, podium, and central atrium of the Page Museum was removed in both designs by adding a roof structure. While the designs integrated natural elements and landscaping (e.g., a rooftop garden), neither of the two eliminated designs maintained the open roof concept of the existing Page Museum.
- Both designs that were eliminated from further consideration either removed or enclosed the Pleistocene-era frieze in the museum building. Neither of the rejected designs retained the frieze as an outdoor element of the museum. The visual prominence of the frieze is one of the key character-defining features of the museum.
- In both eliminated designs, the existing Page Museum was largely replaced with a new, larger museum structure. While meeting the Museum of Natural History's and the Foundation's objective to expand the museum exhibits, collections, offices, and laboratory research facilities into one unified, cohesive facility, both designs did so with extensive impacts to the existing Page Museum, including modifications that could be seen as a full removal and/or replacement of the existing Page Museum. The replacement of the Page Museum with a new museum building would result in material impairment to the Page Museum through its demolition.

While the proposed Master Plan also impacts key character-defining features of the existing Page Museum, the degree of the significant impacts is not as extreme as the two designs that were eliminated. The two eliminated designs did not meet the project objectives to the same degree as the proposed project, nor would they avoid significant environmental impacts. On the contrary, the historical impacts of the two eliminated designs would be more significant than those of the proposed project. For these reasons, these two alternatives were removed from the environmental review process for the Master Plan.

6.3.2 Alternative Location

CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that can avoid or substantially lessen any significant effects on the project. The key question and first step in the analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR (State CEQA Guidelines Section 15126[5][B][1]). In addition, an alternative site need not be considered when implementation is "remote and speculative," such as when the alternative site is beyond the control of a project proponent.

La Brea Tar Pits, the Page Museum, and associated facilities have been in operation since 1977 and represent an established paleontological research site located within Hancock Park and the Miracle Mile neighborhood in the city of Los Angeles. The underlying purpose of the project is to renovate and expand the existing museum and associated facilities to provide enhanced space for fossil storage, laboratory research, exhibition and learning environments, and passive recreational opportunities, all of which are intended to preserve and protect the project site's National Natural Landmark designation (California State Parks 2022). The unique underlying geological features and history of the project site are what make the site scientifically valuable and justify the location of the Page Museum and associated scientific

facilities on-site; therefore, developing the project in an alternative location would not meet the basic project objectives. Further, there are no suitable alternate locations within control of the County or the Foundation, nor could other land be acquired that would contain the same unique environmental characteristics as those at the project site. It is possible that elements of the Master Plan could be recreated on a different site if one were available under the control of the County or the Foundation, and implementing the project in a different location could potentially lessen the project's significant and unavoidable impacts. However, given the nature of the project, the characteristics of the project site, and the intent of project objectives, it would be impractical and infeasible to propose an alternative location for the project. Therefore, consideration of an alternative location has not been further considered in the EIR.

Similarly, an alternative location for the Page Museum expansion—one that would avoid changes to the site design and berm surrounding the Page Museum—was rejected from further consideration. Among the project objectives are an expansion of the museum exhibits, collections, offices, and laboratory research facilities in one unified, cohesive facility, and the creation of a central entrance to the museum facilities to enhance the visitor experience of the museum and Hancock Park. A separate annex to the Page Museum would not meet these key project objectives, and therefore an alternative location was rejected for further consideration in this EIR.

6.4 ALTERNATIVES IMPACTS ANALYSIS

In this section, the environmental impacts of the alternatives carried forward for review in the EIR, including the No Project/No Build Alternative, are compared against the impacts of the project for each environmental issue discussed in Chapter 5, Environmental Impacts Analysis. Other than the No Project/No Build Alternative, only alternatives that can achieve the fundamental purpose and basic goals of the project are addressed in this section, consistent with relevant case law (*Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* [2008] 43 Cal.4th 1143, 1165).

The following project alternatives are considered and evaluated in this section:

- No Project/No Build Alternative
- Alternative 1: Renovate Page Museum Only
- Alternative 2: Maintain Central Atrium Pleistocene Garden
- Alternative 3: Adjust Footprint to Reduce Contact with Page Museum and Expand Central Green

Each of the project alternatives is described in further detail in this chapter. A description of each scenario, its ability to meet the project objectives, and analyses of impacts with regard to each environmental resource area are provided for each alternative.

In addition, a significance determination is made about each alternative for each issue area, and a basis for that determination is provided. The determination of comparative impacts used the following criteria:

- **Similar:** Impacts would be identical or would be of the same general extent and severity as the impacts associated with the project; therefore, the significance determination would be the same.
- **Increased:** New potentially significant impacts or a substantial increase in the severity of the impacts associated with the project would occur; therefore, the significance determination would be greater.

- **Decreased:** Potentially significant impacts would be avoided or a substantial reduction in the severity of the impacts associated with the project would occur; therefore, the significance determination would be reduced.

For the comparison of the alternatives to the project, the impact is considered prior to the application or implementation of the mitigation measures outlined in Chapter 5 of this EIR. All of the issue areas considered in Chapter 5 (e.g., aesthetics, air quality, biological resources) are considered in this chapter. In addition, several environmental effects that were scoped out of the detailed analysis in this EIR are addressed in Chapter 7 (e.g., agricultural and forestry resources, mineral resources). In consideration of the alternatives analysis, none of the alternatives discussed in this chapter would have a considerable impact to the environmental topics addressed in Chapter 7. This is either because these environmental resources addressed in Chapter 7 are not present on the site (i.e., forestry resources, mineral resources) or because the alternatives addressed in this section are either the same or a lesser density to the proposed project and/or would have similar project operations. For instance, none of the alternatives discussed in this chapter would measurably change effects to public services or energy when compared to the proposed project.

A comparison of the environmental impacts resulting from each considered alternative and the project is provided later in this chapter, along with the discussion of the Environmentally Superior Alternative.

6.4.1 No Project/No Build Alternative

Section 15126.6(e) of the State CEQA Guidelines requires analysis of the No Project/No Build Alternative. In accordance with the State CEQA Guidelines, the No Project/No Build Alternative for a development project on an identifiable property consists of the circumstance under which the project does not proceed as provided by Section 15126.6(e)(3)(B) of the State CEQA Guidelines. Section 15126.6(e)(3)(B) provides that, "In certain instances, the no project alternative means 'no build' wherein the existing environmental setting is maintained." As stated in Section 15126.6(e)(2), "The 'no project' analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services."

In the No Project/No Build Alternative, implementation of the project would not occur and the existing project site and its physical conditions would generally remain as they are in their current state. This includes the majority of Hancock Park and the structures within the project boundary, including the Page Museum; therefore, these features would resemble existing conditions. Ongoing maintenance and minor upgrades to address necessary improvements, as required, would continue to occur and are considered to be part of the existing operational conditions. Site elements including the surface parking lot, maintenance areas, amphitheater, landscaping, and pathways would all remain. Site access for visitors, loading, maintenance vehicles, and the fire department would remain in its current configuration.

6.4.1.1 Relationship to Project Objectives

The No Project/No Build Alternative would meet one of the project objectives. Table 6-4 outlines this alternative's ability to attain the basic project objectives outlined above and in Chapter 3, Project Description.

Table 6-4. Attainment of Project Objectives—No Project/No Build Alternative

Project Objective	Does the Alternative Attain the Project Objective?
Renovate and expand the existing museum structure to address deferred maintenance of the building envelope and systems, to meet modern seismic, electrical, building code standards, and universal design standards, and to meet sustainability goals consistent with the County's sustainability plan (County of Los Angeles 2019).	**No.** This alternative would not involve the renovation or expansion of the Page Museum. It would not address deferred maintenance, or the necessary upgrades required to bring the Page Museum up to current building code standards. This alternative would not result in any changes to the project site to further the sustainability goals of the County's sustainability plan.
Provide expanded collections storage facilities that enable access for scientific research, and preserve, protect, and allow future growth of the museum's world-class collections.	**No.** This alternative would maintain the existing fossil storage, maintenance, and service facilities along the northern boundary of the project site and would not expand or construct new fossil storage or support buildings on-site. The existing exhibition galleries and collections storage areas are largely inflexible which present programmatic and spatial limitations, challenging the museum's ability to adapt and allow for future growth in exhibition, education, research, and collections storage.
Provide expanded state-of-the-art laboratory research facilities to accommodate internationally significant and advanced research in paleontology.	**No.** This alternative would not include renovating or expanding the Page Museum to provide for expanded laboratory research facilities. These on-site facilities would remain as they are under current conditions.
Provide state-of-the-art exhibition facilities and learning environments within the park and museum to enrich the visitor experience and to support active educational and public programming.	**No.** This alternative would not include expanding the Page Museum to provide space for additional exhibitions, facilities, or enhanced learning environments. This alternative would not expand museum programming; it would remain as is under current conditions. In addition, museum-related exhibits and facilities located within Hancock Park (i.e., tar pits and viewing locations) would remain as they are under current conditions.
Improve access and entry for different visitor types, increase connections between the museum and the park, as well as support increased visitation, special events, and revenue-producing amenities within the park and museum.	**No.** This alternative would not alter the existing entrances to the project site, nor would this alternative modify any existing pathways or accessways. The Central Green would be maintained as is under current conditions.
Expand the museum exhibits, educational classrooms, collection spaces, offices, and laboratory research facilities in one unified, cohesive facility, with the fewest impacts to historical resources possible.	**No.** This alternative would retain the existing Page Museum as is under current conditions and would not include the addition of expanded museum facilities; however, this alternative would limit impacts to historical resources. Regardless, this alternative would not meet this objective of providing expanded museum facilities.
Create a central entrance to the museum facilities to enhance the visitor experience of the museum and Hancock Park.	**No.** In this alternative, the existing museum entrance would remain, and no additional museum facilities or buildings would be constructed.
Preserve and protect the National Natural Landmark—La Brea Tar Pits—to allow access for future research and excavation, support cultural and educational interpretation, and enable the ongoing natural processes of the asphaltic seeps.	**Yes**. The National Natural Landmarks program seeks to encourage the identification, study, designation, recognition, and preservation of nationally significant ecological and geological resources that reflect the nation's natural heritage (including paleontological/fossil-based resources). This alternative would not result in physical changes or modifications to the project that would change its scientific or historical value, nor impact the current research or programming occurring on the project site. As such, La Brea Tar Pits would continue to be recognized and protected as a National Natural Landmark.
Redesign and renovate the Hancock Park community park green space as an expression of the goals of the County of Los Angeles's General Plan Conservation and Natural Resources Element and the City of Los Angeles's Open Space and Conservation Elements of the General Plan, to increase sustainable landscape and site design, to support passive recreational use, to increase the legibility of this important cultural destination, and to enhance connections to the quickly evolving Miracle Mile neighborhood.	**No.** This alternative would maintain the Central Green as it is under current conditions and would continue to allow for passive recreational uses within this multi-purpose lawn area of Hancock Park; however, it would not include changes to the current landscaping scheme other than actively maintaining current conditions on-site nor would it involve enhancements that increase connections or further promote the importance of the project site as a cultural destination within the Miracle Mile neighborhood.

6.4.1.2 Comparison of Significant Effects of the Alternative to the Project

The No Project/No Build Alternative would not implement the project. No project-related construction activities would occur, and there would be no changes to the existing land use types or operational characteristics of the project site. Ongoing maintenance and minor upgrades to address necessary improvements, as required, would continue to occur as they do under existing conditions.

The No Project/No Build Alternative would not contribute to cumulative impacts for the environmental issue areas examined in this EIR as the project would not be implemented. Cumulative impacts are not discussed further for the No Project/No Build Alternative.

AESTHETICS

In the No Project/No Build Alternative, the project would not be implemented, and the existing museum building and associated facilities would remain as they are under current conditions. As such, views of, and from, the project site would remain unchanged. This alternative would not have a substantial effect on a scenic vista or damage scenic resources within a State Scenic Highway, as no such resources have been identified within the vicinity of the project site and no change to the existing visual character of the project site and surroundings would occur. This alternative would avoid the project's potential to result in changes to or the addition of new sources of light and glare on the project site and would not require the project's mitigation measures related to this topic.

Therefore, impacts of the No Project/No Build Alternative related to aesthetics would be *decreased* in comparison to the project.

AIR QUALITY

The No Project/No Build Alternative would not facilitate the renovation or redesign of the project site and no construction activities associated with these improvements would occur. In addition, there would be no changes to the operational characteristics of the project site in this alternative. Given this, this alternative would not conflict with an applicable air quality plan, generate short- or long-term criteria pollutant emissions in exceedance of the South Coast Air Quality Management District (SCAQMD) significance thresholds, expose sensitive receptors to substantial concentrations of pollutant emissions, or result in adverse odors or other emissions.

Therefore, impacts of the No Project/No Build Alternative related to air quality would be *decreased* in comparison to the project.

BIOLOGICAL RESOURCES

Under the No Project/No Build Alternative, the project site would remain unchanged, and all biological resources present on-site would remain as is under current conditions. This alternative would avoid the project's potential adverse effects during the construction process on one species, the federal candidate monarch butterfly, such that this alternative would not have a substantial effect on any species identified as a candidate, sensitive, or special-status species. This alternative would also avoid the project's impacts on the aquatic resources habitat associated with Oil Creek. As stated in Section 5.3, Biological Resources, Oil Creek may be subject to the jurisdiction of the California Regional Water Quality Control Board and the California Department of Fish and Wildlife and may also be regulated by the U.S. Army Corps of Engineers under the Clean Water Act (CWA). This alternative would not result in changes or site improvements that would impact Oil Creek, thereby avoiding impacts associated with aquatic resources

habitat. Since no construction activities would occur under this alternative, this alternative would also avoid direct and temporary impacts on nesting birds and nesting bird habitats. In addition, this alternative would not require removing or relocating the existing oak trees on-site and would not conflict with the County of Los Angeles Oak Tree Ordinance. Lastly, this alternative would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Therefore, impacts of the No Project/No Build Alternative related to biological resources would be *decreased* in comparison to the project.

CULTURAL RESOURCES – ARCHAEOLOGICAL RESOURCES

The No Project/No Build Alternative would not include any ground-disturbing activities and the project site would remain unchanged. As such, there would be no potential to disturb known or unknown archaeological resources, including human remains, outside of the existing research sites.

Therefore, impacts of the No Project/No Build Alternative related to archaeological resources would be *decreased* in comparison to the project.

CULTURAL RESOURCES – HISTORICAL RESOURCES

Under the No Project/No Build Alternative, the project site would remain unchanged, and no modifications would be made to the three identified historical resources within the project site footprint, i.e., the La Brea Tar Pits Historic District, Page Museum, and Observation Pit. While the project would not result in impacts to the Observation Pit, it would result in alterations to the La Brea Tar Pits Historic District and the Page Museum that would potentially compromise their historic integrity to the point that these historical resources would no longer convey the reasons for their significance. By leaving the existing buildings, structures, and site plan design features/landscaping on the project site unaltered, the No Project/No Build Alternative would preserve the character-defining features of the La Brea Tar Pits Historic District and the Page Museum and avoid the project's significant and unavoidable impacts related to alterations of these resources.

Therefore, impacts of the No Project/No Build Alternative related to historical resources would be *decreased* in comparison to the project.

GEOLOGY AND SOILS

The No Project/No Build Alternative would not facilitate the renovation or redesign of the project site and no construction activities, including grading or other earthwork activities, associated with these improvements would occur. Therefore, this alternative would not cause or accelerate seismic and geologic hazards including surface fault rupture, strong seismic ground motion, seismically induced settlement due to liquefaction or landslides, soil erosion, lateral spreading, subsidence, and expansive soils. Additionally, since grading and earthwork activities would not occur under this alternative, the potential to uncover subsurface paleontological resources outside of the existing research sites would not occur. However, it is important to also note that this alternative would not provide expanded space or improvement to existing research facilities for the existing and expanding paleontological resources collection at the project site. Given the current condition of the collection and research facilities at the Page Museum, the result of the No Project/No Build Alternative could be detrimental effects to the existing paleontological collections.

In consideration of the various effects, impacts of the No Project/No Build Alternative related to geology and soils would be *decreased* in comparison to the project overall because construction would not occur.

However, effects to the existing paleontological collections at the Page Museum could be negatively affected as a secondary effect.

GREENHOUSE GAS EMISSIONS

Under the No Project/No Build Alternative, no construction-related emissions or changes to the operational characteristics of the project site would occur. Therefore, this alternative would not generate new GHG emissions, either directly or indirectly, above the established SCAQMD thresholds that may have a significant impact on the environment. Given that the operation of the facilities at the project site would mirror existing conditions under this alternative, it would not conflict with an applicable plan, policy, or regulation adopted to reduce GHG emissions. However, unlike the project, this alternative would not include components that would further the GHG reduction targets set forth in the applicable plans, policies, regulations, or recommendations of an agency adopted to reduce GHG emissions (Section 5.7, Greenhouse Gas Emissions). Specifically, this alternative would not include components that would further the GHG reduction targets set forth in the Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) related to mobility and GHG reductions. The project's mitigation measure involving the development of a Transportation Demand Management (TDM) program for employee and visitor vehicle trips to increase alternative modes, such as walking, bicycling, public transit, and rideshare, would further consistency with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions. While the No Project/No Build Alternative would not result in impacts related to conflicts with applicable plans, it would also not include the project's mitigation measure to further GHG reduction targets.

Overall, impacts of the No Project/No Build Alternative related to GHG emissions would be *similar* in comparison to the project.

HAZARDS AND HAZARDOUS MATERIALS

Under the No Project/No Build Alternative, no new demolition or construction activities would occur, and the project would not be implemented. This alternative would not result in construction-related activities that would uncover subsurface hazards (i.e., subsurface methane gas produced from naturally occurring petroleum fields) or create a significant hazard to the public or environment through the routine transport, use or disposal of hazardous materials. Therefore, this alternative would not require the project's mitigation measures to address impacts associated with hazardous materials during construction. The project site would continue to be subject to the naturally occurring tar seeps and current strategies for managing this issue would remain in place (Section 5.8.1.4, Hazards and Hazardous Materials, Tar Seeps). Like the project, the existing high concentration of subsurface methane gas at the project site would require ongoing control measures to provide a barrier for hazardous vapors; however, because this alternative does not include modifications to the project site, no changes to the existing methane mitigation requirements would be needed. This alternative would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school, nor would it create a significant hazard to the public or the environment as the project site is not included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5. Further, and consistent with the project, this alternative would not be developed within 2 miles of a public airport or public-use airport and would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

Since the No Project/No Build Alternative would not result in project-related construction activities, impacts of the No Project/No Build Alternative related to hazards and hazardous materials would be *decreased* in comparison to the project.

HYDROLOGY AND WATER QUALITY

The No Project/No Build Alternative would not facilitate the renovation or redesign of the project site and no construction activities, including grading or other earthwork activities, associated with these improvements would occur. As such, no construction-related impacts would occur related to violating water quality standards and waste discharge requirements; decreasing groundwater supplies or interfering with groundwater recharge; altering drainage patterns, resulting in substantial erosion or siltation, flooding, and/or the creation of runoff water that would exceed the capacity of existing or planned stormwater drainage systems, or impede or redirect flood flows; risk releasing pollutants due to project inundation; and conflicting with or obstructing the implementation of a water quality control plan.

Under the No Project/No Build Alternative, existing buildings and features on-site would remain as they are under current conditions, there would be no changes to the amount of impervious or pervious surfaces on the project site, and no modifications to the existing drainage patterns would be made. This alternative would not implement the project's proposed Low Impact Development (LID) Best Management Practices (BMPs), including the project's three proposed biofiltration areas, or the project's related mitigation measure to further reduce the volume of runoff or improve the quality of runoff from the project site; however, even without the benefit of the project's LID BMPs and mitigation measure for non-structural BMPs, impacts from this alternative would be decreased when compared to those of the project.

Therefore, impacts of the No Project/No Build Alternative related to hydrology and water quality would be *decreased* in comparison to the project.

LAND USE AND PLANNING

Under the No Project/No Build Alternative, the project site would remain in its current condition and no modifications to the existing structures or features on-site would occur. Like the project, this alternative would not physically divide an established community. This alternative would, however, avoid the project's significant and unavoidable impacts related to inconsistencies with applicable policies pertaining to the alteration of designated historical resources (i.e., the La Brea Tar Pits Historic District and the Page Museum). Since this alternative would not result in physical changes to, or operational characteristics of, the existing project site, it would be consistent with the applicable policies related to the protection of designated historical resources and avoid the project's significant and unavoidable impacts related to this issue.

Therefore, impacts of the No Project/No Build Alternative related to land use and planning would be *decreased* in comparison to the project.

NOISE AND VIBRATION

Under the No Project/No Build Alternative, there would be no construction-related noise or changes to the operational characteristics of the project site. Thus, this alternative would not require the project's mitigation measure to reduce construction-related noise as it would not generate a substantial temporary or permanent increase in noise levels near the project site in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. In addition, the No Project/ No Build Alternative would not result in generating excessive ground-borne vibration or ground-borne noise levels. Similar to the project, this alternative would not be near a private airstrip or within the boundaries of an airport land use plan.

The No Project/No Build Alternative would avoid the project's construction-related impacts associated with increases in temporary and permanent noise levels in the vicinity of the project. Therefore, impacts of the No Project/No Build Alternative related to noise would be *decreased* in comparison to the project.

RECREATION

The No Project/No Build Alternative, similar to the project, would not result in a new or permanent population at the project site; therefore, it would not result in an associated increase in the use of nearby existing parks and recreational facilities such that substantial physical deterioration of any one facility would occur or be accelerated. Since the project site would remain under current conditions, this alternative would not result in any additional adverse physical effects on the environment. As with the project, this alternative would continue to provide publicly accessible open space areas within the project site.

Therefore, impacts of the No Project/No Build Alternative related to recreation would be *similar* in comparison to the project.

TRANSPORTATION

Under the No Project/No Build Alternative, there would be no construction-related trips or changes to the operational characteristics of the project site. This alternative would not result in any new conflict with a project plan, ordinance, or policy addressing the circulations system or an applicable congestion management program. This alternative would also avoid the project's estimated net increase in vehicle miles traveled (VMT) as no changes to current conditions would occur. This alternative would not substantially increase hazards due to a design feature and would not result in inadequate emergency access as existing conditions would remain.

While the No Project/No Build Alternative would result in transportation and circulation conditions that would look similar to existing conditions, it would not include components that would further the GHG reduction targets set forth in the SCAG 2020-2045 RTP/SCS related to mobility and GHG reductions, nor would it address the City of Los Angeles Municipal Code (LAMC) requirements for bicycle parking or the TDM Ordinance (Section 5.13.5, Transportation, Environmental Impact Analysis). However, this alternative would avoid the project's significant and unavoidable impacts related to increased VMT. This alternative would also avoid the project's potentially inadequate emergency access during construction and operation.

Therefore, impacts of the No Project/No Build Alternative related to transportation would be *decreased* in comparison to the project.

TRIBAL CULTURAL RESOURCES

The No Project/No Build Alternative would not include any ground-disturbing activities and the project site would remain unchanged. As such, there would be no potential to disturb known or unknown tribal cultural resources, including human remains, outside of the existing research sites.

Therefore, impacts of the No Project/No Build Alternative related to tribal cultural resources would be *decreased* in comparison to the project.

UTILITIES AND SERVICE SYSTEMS

In the No Project/No Build Alternative, the project would not be implemented, and the existing museum building and associated facilities would remain as they are under current conditions. Therefore, this

alternative would not require or result in relocating or constructing new or expanded water or wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities; affect the water supplies available to the project site; result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project; generate solid waste in excess of state or local standards; and oppose federal, state, or local management and solid waste reduction statutes and regulations.

The No Project/No Build Alternative would avoid the project's potential to require the construction of new or expanded sewer system facilities. Therefore, impacts of the No Project/No Build Alternative related to utilities and service systems would be *decreased* in comparison to the project.

6.4.2 Alternative 1: Renovate Page Museum Only

In Alternative 1, Renovate Page Museum Only, the exterior conditions of the La Brea Tar Pits Historic District and the Page Museum would be retained as is under existing conditions, while addressing some of the museum's deficiencies by way of an interior renovation only. The renovation work within the Page Museum would upgrade its existing facilities and systems while maintaining its current program, spatial organization, and room sizes (Figure 6-1). This alternative was considered as the renovation would retain or replace in kind the historic, character-defining features related to the museum's interior such as the central open-air atrium and the fishbowl-like lab space. This alternative would emphasize remedial work on the building structure and existing exhibits and would be performed from the museum interior as much as possible. This alternative scenario would, however, require further study to determine the feasibility of the renovation to also meet modern seismic standards since modifications to the building's exterior would be avoided under this alternative. In those instances, the identified areas would be repaired or replaced in kind and designed to resemble their current physical appearance to avoid impacting the historic, character-defining features on the museum's exterior. The remainder of the project site would also resemble existing conditions, and site access for visitors, loading, maintenance vehicles, and the fire department would remain in the current configuration in this alternative. Other museum-related facilities, as well as associated passive recreational areas and pathways around and within the project site, would remain as is under current conditions.

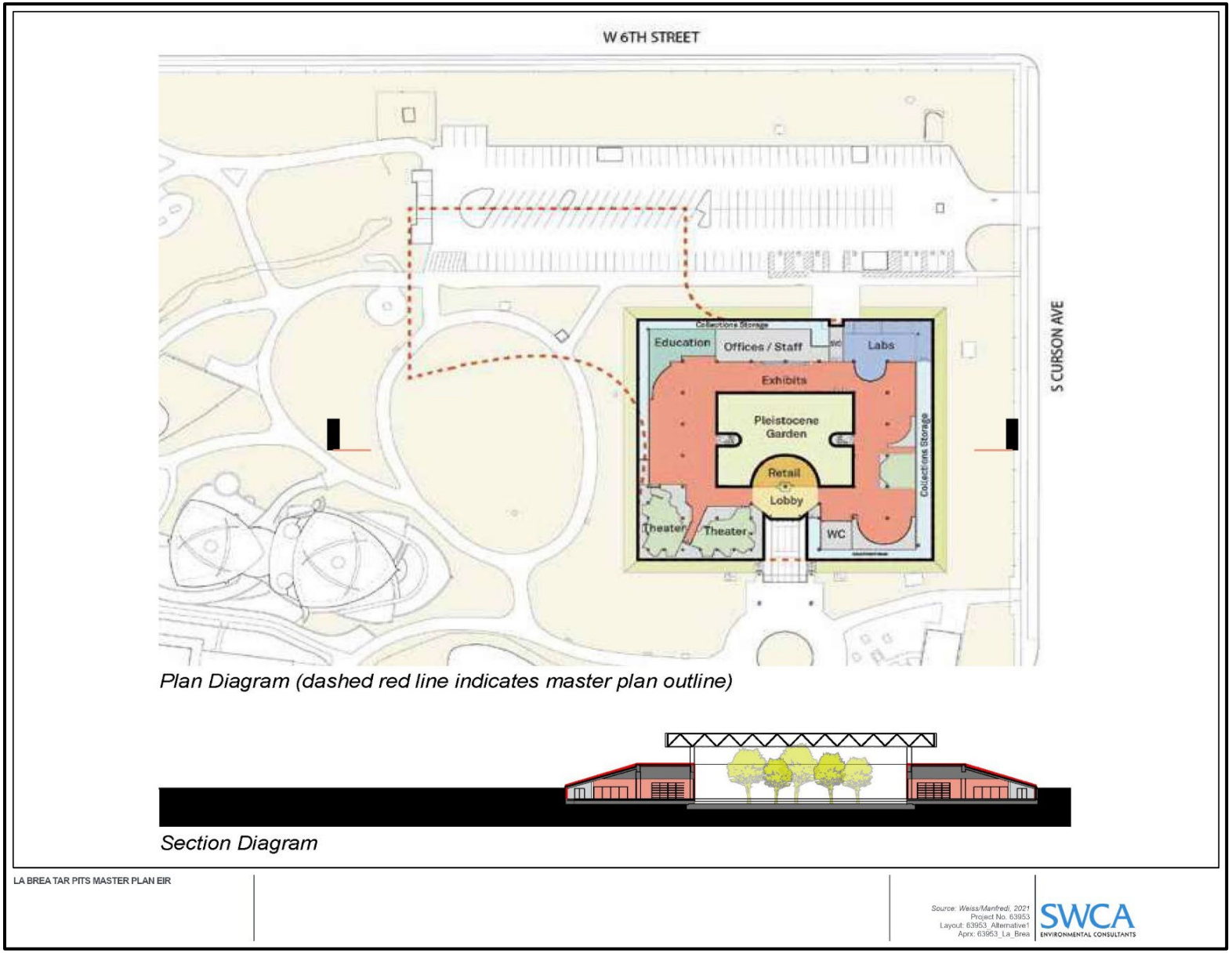


Figure 6-1. Alternative 1: Museum plan and section diagrams.

6.4.2.1 Relationship to Project Objectives

Alternative 1, Renovate Page Museum Only, would meet one of the project objectives, partially achieve two of the project objectives, and would not meet the remaining objectives. Table 6-5 outlines this alternative's ability to attain the basic project objectives outlined above and in Chapter 3, Project Description.

Table 6-5. Attainment of Project Objectives—Alternative 1 Renovate Page Museum Only

Project Objective	Does the Alternative Attain the Project Objective?
Renovate and expand the existing museum structure to address deferred maintenance of the building envelope and systems, to meet modern seismic, electrical, building code standards, and universal design standards, and to meet sustainability goals consistent with the County's sustainability plan (County of Los Angeles 2019).	**Partially**. This alternative would renovate the existing Page Museum to address the deferred maintenance of the building envelope and systems to meet modern electrical and building code standards; however, further study is required to determine the feasibility of the renovation to also meet modern seismic standards since modifications to the building's exterior would be avoided under this alternative. The roof terrace of the Page Museum would remain inaccessible under this alternative's accessibility and universal design standards. In addition, options for achievable sustainability goals to meet the County's sustainability plan would also be further limited because this alternative would avoid any work on the Page Museum exterior and the existing site conditions in Hancock Park.
Provide expanded collections storage facilities that enable access for scientific research, and preserve, protect, and allow future growth of the museum's world-class collections.	**No.** This alternative would maintain the existing fossil storage, maintenance, and service facilities along the northern boundary of the project site and would not expand or construct new fossil storage or support buildings on-site.
Provide expanded state-of-the-art laboratory research facilities to accommodate internationally significant and advanced research in paleontology.	**No**. This alternative would not include the expansion of the Page Museum that would be needed to provide for expanded laboratory research facilities. These on-site facilities would remain as they are under current conditions.
Provide state-of-the-art exhibition facilities and learning environments within the park and museum to enrich the visitor experience and to support active educational and public programming.	**Partially.** While this alternative could feasibly upgrade the exhibition facilities and learning environments within the Page Museum such that they may be considered state-of-the-art, this alternative would not address or involve improvements to exhibition facilities and learning environments outside of the Page Museum within Hancock Park to further enrich the visitor experience and to support active educational programming.
Improve access and entry for different visitor types, increase connections between the museum and the park, as well as support increased visitation, special events, and revenue-producing amenities within the park and museum.	**No.** This alternative would not alter the existing entrances to the project site, nor would this alternative modify any of the existing pathways or accessways. The Central Green would be maintained as is under current conditions.
Expand the museum exhibits, educational classrooms, collection spaces, offices, and laboratory research facilities in one unified, cohesive facility, with the fewest impacts to historical resources possible.	**No.** This alternative would retain the existing Page Museum within its existing footprint and would renovate the interior only. It would not include the addition of expanded museum facilities; however, this alternative would limit impacts to historical resources. Regardless, this alternative would not meet this objective of providing expanded museum space for additional exhibits, collections, offices, and laboratory research facilities.
Create a central entrance to the museum facilities to enhance the visitor experience of the museum and Hancock Park.	**No.** In this alternative, the existing museum entrance would remain, and no additional museum facilities or buildings would be constructed.

Project Objective	Does the Alternative Attain the Project Objective?
Preserve and protect the National Natural Landmark—La Brea Tar Pits—to allow access for future research and excavation, support cultural and educational interpretation, and enable the ongoing natural processes of the asphaltic seeps.	**Yes.** The National Natural Landmarks program seeks to encourage the identification, study, designation, recognition, and preservation of nationally significant ecological and geological resources that reflect the nation's natural heritage (including paleontological/fossil-based resources). This alternative would result in interior renovations to the existing Page Museum only and would not result in physical changes or modifications to the project that would change its scientific or historical value, nor impact the current research or programming occurring on the project site. As such, La Brea Tar Pits would continue to be recognized and protected as a National Natural Landmark.
Redesign and renovate the Hancock Park community park green space as an expression of the goals of the County of Los Angeles's General Plan Conservation and Natural Resources Element and the City of Los Angeles's Open Space and Conservation Elements of the General Plan, to increase sustainable landscape and site design, to support passive recreational use, to increase the legibility of this important cultural destination, and to enhance connections to the quickly evolving Miracle Mile neighborhood.	**No.** This alternative would maintain the Central Green as it is under current conditions and would continue to allow for passive recreational uses within this multi-purpose lawn area of Hancock Park; however, it would not include changes to the current landscaping scheme other than actively maintaining current conditions on-site nor would it involve enhancements that increase connections or further promote the importance of the project site as a cultural destination.

6.4.2.2 Comparison of Significant Effects of the Alternative to the Project

Alternative 1, Renovate Page Museum Only, would require construction activities associated with this alternative's proposed improvements; however, the type of construction activities and overall duration of construction activities would be reduced in comparison to the project since there would be no grading or other earthwork activities necessary, and no other structures would be constructed as a result of this alternative. Upon completing this alternative, there would be no changes to the existing land use types or operational characteristics of the project site.

AESTHETICS

Alternative 1, Renovate Page Museum Only, would result in renovations and upgrades to the existing Page Museum building without altering its interior configuration to avoid impacting any of the character-defining features. This alternative would not result in alterations to the exterior appearance of the existing building or any of the associated museum-related facilities on-site. As such, views of, and from, the project site would remain unchanged. Like the project, this alternative would not have a substantial effect on a scenic vista or damage scenic resources within a State Scenic Highway, as no such resources have been identified near the project site and no change to the existing visual character of the project site and surroundings would occur. Therefore, this alternative would not adversely alter or degrade the existing visual character or scenic quality of the project site and would be consistent with the applicable policies that govern scenic quality in both County and City plans. This alternative would avoid the project's potential to result in changes to or the addition of new sources of light and glare on the project site and would not implement the project's mitigation measures related to this topic. In addition, this alternative would not contribute to cumulative impacts related to aesthetics.

Therefore, impacts of Alternative 1, Renovate Page Museum Only, related to aesthetics would be *decreased* in comparison to the project.

AIR QUALITY

Alternative 1, Renovate Page Museum Only, would result in upgrades to the interior Page Museum within the existing building footprint. Construction activities associated with this alternative would be reduced in comparison to the project since there would be no grading or other earthwork activities necessary, and no other structures would be constructed as a result of this alternative. Upon completion of this alternative, there would be no changes to the operational characteristics of the project site. Given this, daily construction emissions associated with this alternative would be reduced in comparison to the project and operational emissions would be similar to existing conditions, thereby reduced when compared to the project. This alternative would not conflict with an applicable air quality plan, generate short- or long-term criteria pollutant emissions exceeding an SCAQMD significance threshold, expose sensitive receptors to substantial concentrations of pollutant emissions, or result in adverse odors or other emissions. In addition, this alternative would not contribute to cumulative impacts related to air quality. Therefore, impacts of Alternative 1, Renovate Page Museum Only, related to air quality would be *decreased* in comparison to the project.

BIOLOGICAL RESOURCES

Alternative 1, Renovate Page Museum Only, would result in upgrades to the interior of the Page Museum, and all biological resources present on-site would remain as is under current conditions. This alternative would avoid the project's potential adverse effects during the construction process on one species, the federal candidate monarch butterfly, such that this alternative would not have a substantial effect on any species identified as a candidate, sensitive, or special-status species. This alternative would also avoid the project's impacts on the aquatic resources habitat associated with Oil Creek. As stated in Section 5.3, Biological Resources, Oil Creek may be subject to the jurisdiction of the California Regional Water Quality Control Board and the California Department of Fish and Wildlife and may also be regulated by the U.S. Army Corps of Engineers under the CWA. This alternative would not result in changes or site improvements that would impact Oil Creek, thereby avoiding impacts associated with aquatic resources habitat. While construction activities would be limited under this alternative, the project's mitigation measure to address impacts on nesting birds and nesting bird habitats would be implemented to avoid direct and temporary impacts. This alternative would not include removing or relocating the existing oak trees on-site and would not conflict with the County of Los Angeles Oak Tree Ordinance. Lastly, this alternative would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. In addition, this alternative would not contribute to cumulative impacts related to biological resources. Therefore, impacts of Alternative 1, Renovate Page Museum Only, related to biological resources would be *decreased* in comparison to the project.

CULTURAL RESOURCES – ARCHAEOLOGICAL RESOURCES

Alternative 1, Renovate Page Museum Only, would not include grading or excavation activities, and construction activities would be isolated to the existing footprint of the Page Museum. The remainder of the project site would remain unchanged. As such, there would be no potential to disturb known or unknown archaeological resources, including human remains, outside of the existing research sites. In addition, this alternative would not contribute to cumulative impacts related to archaeological resources.

Therefore, impacts of Alternative 1, Renovate Page Museum Only, related to archaeological resources would be *decreased* in comparison to the project.

CULTURAL RESOURCES – HISTORICAL RESOURCES

Alternative 1, Renovate Page Museum Only, was designed with the intention of avoiding the project's significant and unavoidable impacts on two of the identified historical resources within the project site, i.e., the La Brea Tar Pits Historic District and the Page Museum. This alternative would accomplish upgrades to the Page Museum building within its existing footprint and without altering its interior configuration and would preserve the Museum's character-defining features (Section 5.5, Cultural Resources – Historical Resources), including the following:

- Oversized one-story mass/height
- Prominent fiberglass frieze with bas relief Pleistocene scenes
- Fishbowl-like laboratory space in museum interior
- Burial mound-like site with sharply raised berms with turf plantings on each side, pyramidal massing, and a square plan
- Symmetrical design composition, building and site
- Descending entrance progression on the south elevation into the center of the building, flanked by mirror stairways leading to the upper podium at the second floor
- Indoor-outdoor integration, open-air roof, and open configuration at the podium level overlooking the atrium
- Open central atrium with landscaping
- Visual primacy as the principal built-environment feature of the historic district

In addition, the site design for the remainder of the project site would remain unaltered, also preserving the character-defining features of the La Brea Tar Pits Historic District, including the following:

- Oversized, sparsely developed parcel, with large swaths of open park space
- Lake Pit
- Mature trees framing Hancock Park, with concentrations along the north and east boundaries
- Page Museum and its site, with pyramidal massing, square plan, and sharply raised berms, along with the visual prominence of Page Museum
- Observation Pit
- Corner entrance with diagonal entry path at Wilshire Boulevard
- Circulation corridors/pathways, including east-west pathways leading from the parking lot and north-south pathway northwest from Central Green
- Remnants of 1930s stone walls in the northwestern portion of the site
- Significant paleontological resources on-site, including various dig and studies sites

By isolating the upgrades to the Page Museum to retain the interior configuration without any exterior modifications to the existing structures or the remainder of the project site within Hancock Park, Alternative 1, Renovate Page Museum Only, would preserve the character-defining features of the La Brea Tar Pits Historic District and the Page Museum and avoid the project's significant and unavoidable impacts related to alterations of those resources. In addition, unlike the project, this alternative would not contribute to cumulative impacts related to historical resources.

Therefore, impacts of Alternative 1, Renovate Page Museum Only, related to historical resources would be *decreased* in comparison to the project. In comparison to the proposed La Brea Master Plan, the decrease would be significant enough to fully avoid the project's significant and unavoidable impacts in the issue area of historical resources.

GEOLOGY AND SOILS

Alternative 1, Renovate Page Museum Only, would result in limited construction activities focused on the renovation and upgrades to an existing building and would not include grading or other earthwork activities. This alternative would address some of the deferred maintenance issues and upgrades and, like the project, would be subject to all applicable regulations, including the applicable provisions in the Alquist-Priolo Earthquake Fault Zoning Act, Seismic Safety Act, Seismic Hazards Mapping Act, the California Building Code, and the 2020 County of Los Angeles Building Code. Given that earthwork activities would not occur, this alternative would not cause or accelerate seismic and geologic hazards including surface fault rupture, strong seismic ground motion, seismically induced settlement due to liquefaction or landslides, soil erosion, lateral spreading, subsidence, and expansive soils. Additionally, this alternative would avoid the project's potential to uncover subsurface paleontological resources outside of the existing research sites. In addition, this alternative would not contribute to cumulative impacts related to geology and soils resources.

Therefore, impacts of Alternative 1, Renovate Page Museum Only, related to geology and soils would be *decreased* in comparison to the project.

GREENHOUSE GAS EMISSIONS

Under Alternative 1, Renovate Page Museum Only, construction-related emissions would be limited to the interior upgrades of the Page Museum. While this alternative would include construction activities associated with these improvements, the type of construction activities and overall duration of construction activities would be reduced in comparison to the project since there would be no grading or other earthwork activities necessary, and no other structures would be constructed as a result of this alternative. This alternative would incorporate the project's mitigation measure related to eliminating natural gas infrastructure and increasing electric vehicle charging stations. Thus, this alternative would not generate, either directly or indirectly, substantial new GHG emissions above the established SCAQMD thresholds that may have a significant impact on the environment.

Given that the operation of the facilities at the project site would be similar to the project under this alternative, it would not conflict with any applicable plan, policy, or regulation adopted to reduce GHG emissions. Like the project, this alternative would include components that would further the GHG reduction targets set forth in the applicable plans, policies, regulations, or recommendations of an agency adopted to reduce GHG emissions (see Section 5.7, Greenhouse Gas Emissions). Specifically, this alternative would include components that would further the GHG reduction targets set forth in the SCAG 2020-2045 RTP/SCS related to mobility and GHG reductions. The project's mitigation measure involving the development of a TDM program for employee and visitor vehicle trips to increase alternative modes, such as walking, bicycling, public transit, and rideshare, would further consistency with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs. In addition, with incorporation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to GHG emissions.

Overall, impacts of Alternative 1, Renovate Page Museum Only, related to GHG emissions would be *similar* in comparison to the project.

HAZARDS AND HAZARDOUS MATERIALS

Under Alternative 1, Renovate Page Museum Only, construction activities would be limited to the existing footprint of the Page Museum and would not include grading, excavation, or other earthwork activities. Thus, this alternative would not result in construction-related activities that would create a

significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials. Under this alternative, the project site would continue to be subject to the naturally occurring tar seeps, and current strategies for managing this issue would remain in place (see Section 5.8.1.4, Hazards and Hazardous Materials, Tar Seeps). Like the project, the existing high concentration of subsurface methane gas at the project site would require ongoing control measures to ensure a properly designed methane mitigation system would provide a barrier for hazardous vapors. Due to the high potential for elevated concentrations of methane gas at the project site, operational impacts of this alternative related to the release of hazardous materials into the environment would be similar to the project and would include the project's operational mitigation measure to address this impact. This alternative could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school and would include the project's mitigation measures to address construction and operational impacts associated with this issue. This alternative would not create a significant hazard to public or the environment as the project site is not included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5. Further, and consistent with the project, this alternative would not be developed within 2 miles of a public airport or public-use airport and would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. In addition, this alternative would not contribute to cumulative impacts related to hazards and hazardous materials.

Therefore, the impacts of Alternative 1, Renovate Page Museum Only, related to hazards and hazardous materials would be *similar* in comparison to the project.

HYDROLOGY AND WATER QUALITY

Alternative 1, Renovate Page Museum Only, would result in construction activities that would be limited to the existing footprint of the Page Museum and would not include grading, excavation, or other earthwork activities. Since existing buildings and features on-site would remain as they are under current conditions, there would be no changes to the amount of pervious or impervious surfaces on the project site, and no modifications to the existing drainage patterns would be made. Given this, this alternative would not violate any water quality standards and waste discharge requirements; decrease groundwater supplies or interfere with groundwater recharge; alter drainage patterns that would result in substantial erosion or siltation, flooding, and/or the creation of runoff water that would exceed the capacity of existing or planned stormwater drainage systems, or impede or redirect flood flows.

Regarding water quality, because only interior renovations of the Page Museum would occur, unlike the proposed project, it is not anticipated that there would be the potential for water quality impacts during construction. However, as part of the project design, this alternative would also not implement the Master Plan's proposed LID BMPs, including the project's three proposed biofiltration areas. Thus, this alternative would not provide for the beneficial water quality effect of the Master Plan's proposed biofiltration features. Because the alternative would not implement the beneficial water quality features of the proposed project but it would, conversely, avoid the construction-period effect to water quality that would be anticipated under the proposed project, the net effect to water quality is considered similar.

Therefore, impacts of the Alternative 1, Renovate Page Museum Only related to hydrology and water quality would be *similar* in comparison to the project.

LAND USE AND PLANNING

Alternative 1, Renovate Page Museum Only, would result in improvements to the Page Museum only within the existing building footprint while the remainder of the project site would remain unchanged. Like the project, this alternative would not physically divide an established community given no new

structures would be introduced, and the site design of the project site would reflect current conditions. This alternative would, however, avoid the project's significant and unavoidable impacts related to inconsistencies with applicable policies pertaining to the alteration of designated historical resources (i.e., the La Brea Tar Pits Historic District and the Page Museum). While this alternative would result in physical changes to the Page Museum, these changes would upgrade the building without altering its interior configuration to avoid impacting any of the character-defining features. Given the nature of the focused upgrades within this alternative, it would be consistent with the applicable plans and policies related to the protection of designated historical resources. In addition, unlike the project, this alternative would not contribute to cumulative impacts related to land use and planning.

Therefore, impacts of Alternative 1, Renovate Page Museum Only, related to land use and planning would be *decreased* in comparison to the project. In comparison to the proposed La Brea Master Plan, the decrease would be significant enough to fully avoid the project's significant and unavoidable impacts related to inconsistencies with applicable policies pertaining to the alteration of designated historical resources.

NOISE AND VIBRATION

Under Alternative 1, Renovate Page Museum Only, project improvements would be limited to the Page Museum. While this alternative would include construction activities associated with these improvements, the type of construction activities and equipment, as well as the overall duration of construction activities, would be reduced in comparison to the project since there would be no grading or other earthwork activities necessary, and no other structures would be constructed as a result of this alternative. Both the duration and intensity of construction-related noise would be reduced for this alternative when compared to the project. Given this, this alternative would not include the project's mitigation measure to reduce construction-related noise as it would not generate a substantial temporary or permanent increase in noise levels near the project site in excess of the standards established in the local general plan or noise ordinance, or applicable standards of other agencies. In addition, this alternative would not result in the generation of excessive ground-borne vibration or ground-borne noise levels. Similar to the project, this alternative would not result in noise-related impacts on the operational characteristics of the project site. In addition and similar to the project, this alternative would not be located within the vicinity of a private airstrip or an airport land use plan, so no impacts related to airport noise would occur. In addition, this alternative would not contribute to cumulative impacts related to noise.

Alternative 1, Renovate Page Museum Only, would avoid the project's construction-related impacts associated with increases in temporary and permanent noise levels in the vicinity of the project. Therefore, impacts of Alternative 1, Renovate Page Museum Only related to noise would be *decreased* in comparison to the project.

RECREATION

Alternative 1, Renovate Page Museum Only, similar to the project, would not result in a new or permanent population to the project site; therefore, it would not result in an associated increase in the use of nearby existing parks and recreational facilities such that substantial physical deterioration of any one facility would occur or be accelerated. Since the project site would remain under current conditions, this alternative would not result in any additional adverse physical effects on the environment. As with the project, this alternative would continue to provide publicly accessible open space areas within the project site. In addition, this alternative would not contribute to cumulative impacts related to recreation.

Therefore, impacts of Alternative 1, Renovate Page Museum Only, related to recreation would be *similar* in comparison to the project.

TRANSPORTATION

Under Alternative 1, Renovate Page Museum Only, construction-related trips would be reduced when compared to the project as the scope and duration of the project would be significantly reduced in comparison. After completing the Page Museum renovations for this alternative, no changes to the operational characteristics of the project site would occur that would substantially increase the VMT to and from the project site. Thus, this alternative would avoid the project's estimated net increase in VMT and avoid the project's significant and unavoidable impact related to increased VMT. While this alternative would result in transportation and circulation conditions that would look similar to existing conditions, it would not include components that would further the GHG reduction targets set forth in the SCAG 2020-2045 RTP/SCS related to mobility and GHG reductions, nor would it address the LAMC requirements for bicycle parking or the TDM Ordinance (see Section 5.13.5, Transportation, Environmental Impact Analysis). Similar to the project, this alternative could result in a significant impact related to ensuring consistency with transportation plans, programs, ordinances, or policies. In addition, and similar to the project, this alternative would not include components that would substantially increase hazards due to a design feature. Lastly, this alternative would avoid the project's potential impacts to inadequate emergency access during construction and operation and would not contribute to cumulative impacts related to transportation.

While this alternative would not include components that would further the GHG reduction targets, it would avoid the project's operational traffic impacts related to increased VMT and inadequate emergency access during construction and operation. Therefore, impacts of Alternative 1, Renovate Page Museum Only, related to transportation would be *decreased* in comparison to the project. In comparison to the proposed La Brea Master Plan, the decrease would be significant enough to fully avoid the project's significant and unavoidable impacts in the issue area of transportation, which are related to increases in VMT. Increases in VMT would not be expected with the implementation of Alternative 1.

TRIBAL CULTURAL RESOURCES

Alternative 1, Renovate Page Museum Only, would not include grading or excavation activities, and construction activities would be isolated to the existing footprint of the Page Museum. The remainder of the project site would remain unchanged. As such, there would be no potential to disturb known or unknown tribal cultural resources, including human remains, outside of the existing research sites. In addition, this alternative would not contribute to cumulative impacts related to tribal cultural resources.

Therefore, impacts of Alternative 1, Renovate Page Museum Only, related to tribal cultural resources would be *decreased* in comparison to the project.

UTILITIES AND SERVICE SYSTEMS

Alternative 1, Renovate Page Museum Only, would result in improvements to the Page Museum only within the existing building footprint while the remainder of the project site would remain unchanged. As such, this alternative would not include or result in relocating or constructing new or expanded water or wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities; affect the water supplies available to the project site; result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project; generate solid waste in excess of state or local standards; and oppose federal, state, or local management and solid waste reduction statutes and regulations. In addition, this alternative would not contribute to cumulative impacts related to utilities and service systems.

Therefore, impacts of Alternative 1, Renovate Page Museum Only related to utilities and service systems would be *decreased* in comparison to the project.

6.4.3 Alternative 2: Maintain Central Atrium Pleistocene Garden

Alternative 2, Maintain Central Atrium Pleistocene Garden, would include renovating the existing Page Museum to maintain the central atrium with the Pleistocene Garden in place while also providing the same expanded museum facilities and programming as proposed by the project. To maintain the central atrium footprint while providing the proposed laboratory, classroom, and multi-purpose educational spaces, Alternative 2 would include expanding the new museum space by approximately 15,000 square feet above what is proposed by the project. In addition, the character of the open-air roof would remain intact.

As shown in Figure 6-2, this increased square footage would include expansion to the north and west of the existing Page Museum. This alternative would slightly reconfigure the surface parking lot, like the project, extending it west of the new museum building footprint. Reconfiguration of the parking lot would include the removal or relocation of the existing ornamental trees bordering the northern portion of the project site along 6th Street, like the project.

This alternative would adjust the project's triple-loop pedestrian path adjacent to the proposed new museum building to accommodate the larger building footprint. The landscaping improvements and overall landscape design of the project site in Alternative 2 would be similar to the project, except for the reconfigured northern portion of the project site, the reduced open space area, as well as the adjustment to the pedestrian path.

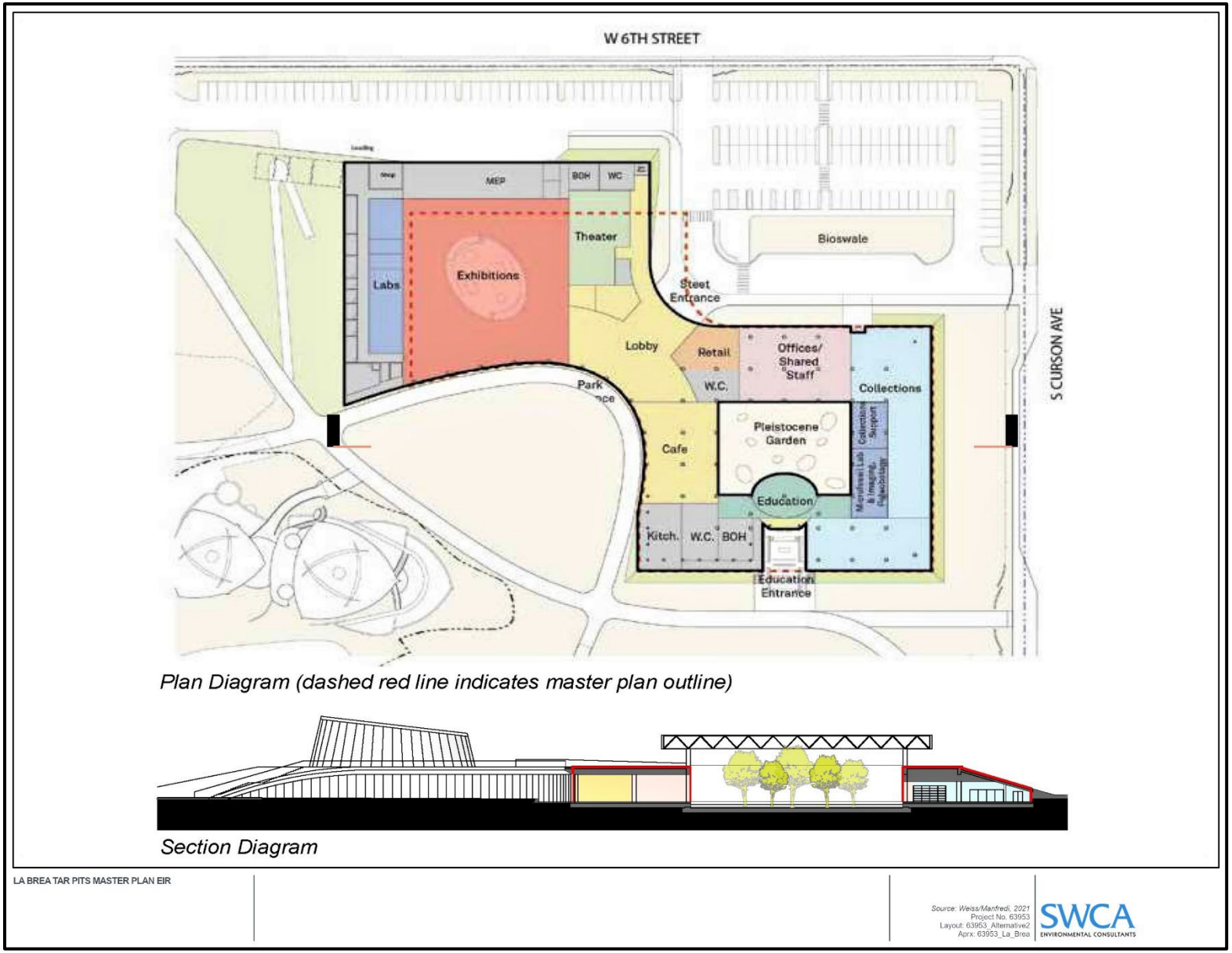


Figure 6-2. Alternative 2: Museum plan and section diagrams.

Aside from the modifications discussed above, Alternative 2 would be similar to the project, as outlined in Chapter 3, Project Description, and Table 6-1. Table 6-6 provides a summary of the project components of Alternative 2 that are different from the project.

Table 6-6. Overview of Alternative 2 Project Components Different from the Project

Project Component	Description
Page Museum Renovations	Renovate the existing building in the same footprint (approximately 63,200 square feet) while maintaining the central atrium with Pleistocene Garden in place.
New Museum Building	Construct a new two-story 55,000-gsf museum building northwest of the Page Museum The footprint of the new museum building in this alternative would increase by 15,000 gsf over the new museum footprint proposed by the project.
Pedestrian Path and Recreation Areas	Reconfigure the geometry of the pedestrian pathways adjacent to the new museum building to accommodate for the expanded footprint.
Circulation and Parking	Reconfigure the parking lot, extending it west of the new museum building footprint. This would require removing and/or relocating existing trees on-site.

6.4.3.1 Relationship to Project Objectives

Alternative 2, Maintain Central Atrium Pleistocene Garden, would meet seven of the project objectives, partially meet two of project objectives. Table 6-7 outlines this alternative's ability to attain the basic project objectives outlined above and in Chapter 3, Project Description.

Table 6-7. Attainment of Project Objectives—Alternative 2, Maintain Central Atrium Pleistocene Garden

Project Objective	Does the Alternative Attain the Project Objective?
Renovate and expand the existing museum structure to address deferred maintenance of the building envelope and systems, to meet modern seismic, electrical, building code standards, and universal design standards, and to meet sustainability goals consistent with the County's sustainability plan (County of Los Angeles 2019).	**Partially.** This alternative would allow for renovating the Page Museum to address the deferred maintenance of the building envelope and systems to meet modern electrical and building code standards as well as seismic standards. This alternative would also include sustainability strategies designed to improve stormwater management, reduce the heat island effect, provide more shade, and reduce light pollution to further the sustainability of the County's sustainability plan. However, this alternative would reduce the amount of open space on-site and would not be consistent with the County's sustainability plan.
Provide expanded collections storage facilities that enable access for scientific research, and preserve, protect, and allow future growth of the museum's world-class collections.	**Yes.** This alternative would include constructing an additional 2,000-square-foot satellite maintenance and support building dedicated to fossil storage, maintenance, and service facilities along the northern boundary of the project site.
Provide expanded state-of-the-art laboratory research facilities to accommodate internationally significant and advanced research in paleontology.	**Yes.** This alternative would allow for renovating the Page Museum and constructing a new museum building that would add 55,000 square feet of museum space to support expanding the laboratory research facilities.
Provide state-of-the-art exhibition facilities and learning environments within the park and museum to enrich the visitor experience and to support active educational and public programming.	**Yes.** This alternative would include renovating the Page Museum and constructing a new museum building that would add 55,000 square feet of museum space to provide space for additional exhibition facilities or enhanced learning environments. In addition, this alternative would allow for renovating the existing facilities at all the tar pit locations throughout the project site to allow for improved interpretive signage and viewing areas to further enrich the visitor experience and to support active educational programming.

Project Objective	Does the Alternative Attain the Project Objective?
Improve access and entry for different visitor types, increase connections between the museum and the park, as well as support increased visitation, special events, and revenue-producing amenities within the park and museum.	**Yes.** This alternative would provide for enhanced entrances to the project site at the Wilshire and 6th Street Gateways and would also reconfigure the existing pedestrian pathways on-site into a continuous paved pedestrian path linking all the existing elements of the park. A pedestrian walking path would be constructed across the project site with interpretive signage and explanations related to the former industrial heritage of the site. The project site is currently served by a complete network of sidewalks around the project site block and adjacent street network, with signalized intersections and crosswalks. This alternative would also establish a new school drop-off/loading area on South Curson Avenue adjacent to the Wilshire Gateway picnic area.
Expand the museum exhibits, educational classrooms, collection spaces, offices, and laboratory research facilities in one unified, cohesive facility, with the fewest impacts to historical resources possible.	**Yes.** This alternative would expand museum facilities through the construction of the new museum building, while retaining the Page Museum's central atrium Pleistocene garden and open-air roof line, thereby decreasing impacts to historical resources. The renovated Page Museum and new museum building would be connected via a central lobby area and an integrated organization of exhibits and collections, helping to create connection and cohesion between the two museum spaces.
Create a central entrance to the museum facilities to enhance the visitor experience of the museum and Hancock Park.	**Yes.** This alternative would result in a renovated Page Museum and new museum building with a central entry point accessible from the project's parking lot as well as from the Central Green. The central entrance would lead to the museum lobby, which would provide a space for visitors to circulate and become familiar with organization of the museum's exhibits and collections both inside the museum spaces as well as the outdoor spaces within Hancock Park.
Preserve and protect the National Natural Landmark—La Brea Tar Pits—to allow access for future research and excavation, support cultural and educational interpretation, and enable the ongoing natural processes of the asphaltic seeps.	**Yes.** This alternative would allow for renovating and expanding the existing Page Museum and the remainder of the project site within Hancock Park in a way that would further the fundamental mission of La Brea Tar Pits as a site and facility dedicated to research, education, and exhibition. Under this alternative, the project site would continue to be recognized and protected as a National Natural Landmark.
Redesign and renovate the Hancock Park community park green space as an expression of the goals of the County of Los Angeles's General Plan Conservation and Natural Resources Element and the City of Los Angeles's Open Space and Conservation Elements of the General Plan, to increase sustainable landscape and site design, to support passive recreational use, to increase the legibility of this important cultural destination, and to enhance connections to the quickly evolving Miracle Mile neighborhood.	**Partially.** This alternative would reduce the amount of dedicated open space on-site due to the expanded footprint of the new museum building. However, this alternative would also redesign and renovate the Hancock Park community park green space to include a landscape design and planting scheme that would aim to ease water consumption and ensure appropriate maintenance. This alternative would include improvements to the existing multi-purpose grass lawn, the Central Green, which would provide a setting for community activities, passive recreational uses, events, and public gatherings. This alternative would also install a new welcome pavilion with a canopy and shade trees at Wilshire Gateway, and a shaded welcome area at the 6th Street Gateway to increase the project site's notability within the Miracle Mile neighborhood.

6.4.3.2 Comparison of Significant Effects of the Alternative to the Project

Alternative 2, Maintain Central Atrium Pleistocene Garden, would result in similar types of construction activities, duration, and equipment as the project. Upon project completion, this alternative would result in similar land uses and operational activities as proposed by the project.

AESTHETICS

Alternative 2, Maintain Central Atrium Pleistocene Garden, would result in changes to the site design and some of the visual characteristics of the project site when compared to the project. Like the project, this alternative's changes in site design would be visible directly from adjacent off-site locations, including high-rise residential and commercial buildings. However, due to the topography of the project site and the relative lack of buildings on the site compared with the surrounding dense urban development, view changes would typically occur at limited vantage points, as opposed to along extensive roadway segments or from entire large geographic areas. While this alternative would result in an expanded footprint for the new museum building, it would still be two stories in height, as proposed by the project. Like the project, this alternative would not have a substantial effect on a scenic vista or damage scenic resources within a State Scenic Highway, as no such resources have been identified near the project site and changes to the existing visual character of the project site would integrate with the surrounding urban development along Wilshire Boulevard and the park setting of Hancock Park. Like the project, implementation of this alternative would change the overall project site design and result in modifications to the visual characteristics of the project site, but not in such a way that it would adversely alter or degrade the existing visual character or scenic quality of the project site, and would be consistent with the applicable policies that govern scenic quality in both County and City plans. This alternative would create new sources of light and glare, similar to the project, and would include the same mitigation measures as the project to address potential issues related to this issue. In addition, with implementation of the project's mitigation measures to address light and glare, this alternative would not contribute to cumulative impacts related to aesthetics.

Therefore, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to aesthetics would be *similar* in comparison to the project.

AIR QUALITY

Alternative 2, Maintain Central Atrium Pleistocene Garden, would result in similar types of construction activities, duration, and equipment as the project. Upon project operation, this alternative would result in similar land uses as proposed by the project, except for the larger museum footprint. Like the project, this alternative would be subject to consistency with the air quality standards and the land use assumptions identified in the SCAQMD's Air Quality Management Plan (AQMP) and SCAG's regional plans and policies. As identified for the project, this alternative would also implement mitigation measures to reduce construction-related air pollutant emissions. Operational emissions may vary slightly when compared to the project given the expanded footprint of the museum building; however, as shown in Section 5.2, Air Quality, the project is significantly below SCAQMD's established significance thresholds. This alternative would not result in a considerable change from the anticipated uses within the project's site plan that would increase daily operations in such a manner to exceed the maximum daily operational emissions set forth by SCAQMD's significance thresholds. In addition, this alternative would implement the project's mitigation measure which incorporates a number of key control measures identified by the SCAQMD to ensure this alternative does not conflict with an applicable air quality plan, generate short- or long-term criteria pollutant emissions in exceedance of SCAQMD significance thresholds, expose sensitive receptors to substantial concentrations of pollutant emissions, or result in adverse odors or other emissions. In addition, with implementation of the project's mitigation measure to reduce construction-related air pollutant emissions, this alternative would not contribute to cumulative impacts related to air quality. Therefore, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to air quality would be *similar* in comparison to the project.

BIOLOGICAL RESOURCES

Alternative 2, Maintain Central Atrium Pleistocene Garden, would allow for modifications to the project's site plan and would result in similar types of construction activities, duration, and equipment as the project. The overall area of ground disturbance during the construction of this alternative would be similar to that of the project. Future operational conditions under this alternative would result in similar land uses as proposed by the project; however, this alternative would result in the loss of 10,000 square feet of open space area over what is proposed by the project due to the increase in the floor area of the new museum.

Thus, this alternative, like the project, could result in adverse effects during the construction process on one species, the federal candidate monarch butterfly, either directly or through habitat modifications. In addition, this alternative could result in impacts to regulated aquatic resources habitat associated with Oil Creek and could also result in the removal or relocation of the existing oak trees on-site, thereby conflicting with the County of Los Angeles Oak Tree Ordinance. Like the project, this alternative would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Given the similar nature of ground disturbance, construction activities, and future operational conditions, this alternative would implement the same mitigation measures to address potential impacts as the project. In addition, with implementation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to biological resources.

Therefore, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to biological resources would be *similar* in comparison to the project.

CULTURAL RESOURCES – ARCHAEOLOGICAL RESOURCES

Alternative 2, Maintain Central Atrium Pleistocene Garden, would include grading, excavation, and other earthwork activities, similar to the extent proposed by the project, throughout most of the project site. As such, there would be similar potential to disturb known or unknown archaeological resources, including human remains, within the project site. This alternative would implement the same project mitigation measures to reduce this alternative's potential impacts to less-than-significant levels. In addition, with implementation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to archaeological resources.

Therefore, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to archaeological resources would be *similar* in comparison to the project.

CULTURAL RESOURCES – HISTORICAL RESOURCES

Alternative 2, Maintain Central Atrium Pleistocene Garden, was designed with the intention of eliminating impacts to the Page Museum by maintaining the following three primary, character-defining features of this historical resource:

- Prominent fiberglass frieze with bas relief Pleistocene scenes
- Indoor-outdoor integration, open-air roof, and open configuration at the podium level overlooking the atrium
- Open central atrium with landscaping

Alterations to the berm surrounding the Page Museum, which is a character-defining feature, would be largely the same in this alternative as in the project. Retention of the open-air roof line of the Page Museum would remain intact, which would decrease impacts to the Page Museum.

By altering the project to retain the central atrium Pleistocene garden, as conceived by Alternative 2, this alternative would result in an increased footprint, with expansion occurring to the north and west of the Page Museum. Although this alternative would avoid impacting the three bulleted character-defining features of the Page Museum, an identified historical resource, the increase in size of the expansion footprint could result in a *greater* impact on the following four primary character-defining features of the historical resources of the Page Museum and La Brea Tar Pits Historic District:

- Page Museum
  - Fishbowl-like laboratory space in museum interior
  - Burial mound-like site with sharply raised berms with turf plantings on each side, pyramidal massing, and a square plan
  - Visual primacy as the principal built-environment feature of historic district
- La Brea Tar Pits Historic District:
  - Oversized, sparsely developed parcel, with large swaths of open park space

For these reasons, Alternative 2, Maintain Central Atrium Pleistocene Garden, would preserve the character-defining features of the La Brea Tar Pits Historic District and the Page Museum and avoid the project's significant and unavoidable impacts related to alterations of those resources. However, as a result of the increased footprint of Alternative 2 as compared to the proposed Master Plan, this alternative would also result in additional impacts to historical resources by resulting in a greater loss of character-defining open space in the La Brea Tar Pits Historic District. With respect to cumulative impacts, this alternative would contribute to cumulative impacts related to historical resources, like the project.

When the impacts to the various character-defining features are considered in combination, the benefits of avoiding the impacts to the Page Museum's three character-defining features (frieze, indoor-outdoor integration and open-air roof, and open central atrium) do not outweigh the additional impacts to character-defining features Alternative 2 would create. Therefore, impacts of Alternative 2 related to historical resources would be roughly *similar* in comparison to the project. Impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to historical resources would remain significant and unavoidable and would occur to a similar degree as compared to the project, although they would change in severity depending upon the historical resources character-defining feature under consideration.

GEOLOGY AND SOILS

Alternative 2, Maintain Central Atrium Pleistocene Garden, would include grading, excavation, and other earthwork activities at a similar extent to that proposed by the project throughout most of the project site except for the expansion of the new museum building. Like the project, this alternative would be subject to all applicable regulations, including the applicable provisions in the Alquist-Priolo Earthquake Fault Zoning Act, Seismic Safety Act, Seismic Hazards Mapping Act, the California Building Code, and the 2020 County of Los Angeles Building Code. As with the project, this alternative would include construction activities on soils with existing artificial fill that may not be suitable to support foundations, slabs on grade, paving, or new compacted fills and could cause geologic instability at the project site related to subsidence (i.e., compressible and collapsible soils) and expansive soils. This alternative would implement the same project mitigation measures to reduce potential impacts related to subsidence, as well as compressible, collapsible, and expansive soils, to less-than-significant levels. In addition, this alternative would not contribute to cumulative geotechnical or soils-related hazards.

Similar to the project, all ground-disturbing activities associated with the construction of this alternative have the potential to impact subsurface paleontological resources given the high paleontological sensitivity of the project site. Paleontological resources may be impacted by the construction or implementation of this alternative regardless of the depth of grading and/or excavation activities. Any fossils encountered during ground-disturbing activities could be at risk for damage or destruction from such activities depending on the nature of the fossil encountered. This alternative would require implementing the same project mitigation measures to reduce potential impacts on paleontological resources to less-than-significant levels. With implementation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to paleontological resources. Therefore, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to geology and soils would be *similar* in comparison to the project.

GREENHOUSE GAS EMISSIONS

Alternative 2, Maintain Central Atrium Pleistocene Garden, would result in similar types of construction activities, duration, and equipment as the project. Upon project operation, this alternative would result in similar land uses as proposed by the project. Given that this alternative would result in a similar construction and operational conditions as the project, this alternative would likely generate similar GHG emissions. This alternative would also incorporate the project's mitigation measure related to eliminating natural gas infrastructure and increasing electric vehicle charging stations. Like the project, this alternative would not generate GHG emissions above the established SCAQMD thresholds.

Given that the operation of the facilities at the project site would be similar to the project under this alternative, it would not conflict with any applicable plan, policy, or regulation adopted to reduce GHG emissions. Like the project, this alternative would include components that would further the GHG reduction targets set forth in the applicable plans, policies, regulations, or recommendations of an agency adopted to reduce GHG emissions (see Section 5.7, Greenhouse Gas Emissions). Specifically, this alternative would include components that would further the GHG reduction targets set forth in the SCAG 2020-2045 RTP/SCS related to mobility and GHG reductions. The project's mitigation measure involving the development of a TDM program for employee and visitor vehicle trips to increase alternative modes such as walking, bicycling, public transit, and rideshare would further consistency with applicable plans, policies and regulations adopted for the purpose of reducing the emissions of GHGs. In addition, with incorporation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to GHG emissions.

Therefore, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to GHG emissions would be *similar* in comparison to the project.

HAZARDS AND HAZARDOUS MATERIALS

Alternative 2, Maintain Central Atrium Pleistocene Garden, would include grading, excavation, and other earthwork activities at a similar extent to that proposed by the project throughout most of the project site except for the reconfigured site design of the northeastern portion of the project site. When compared to the project, this alternative has similar potential for construction-related activities to uncover subsurface hazards (i.e., subsurface methane gas produced from naturally occurring petroleum fields) or create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials.

Therefore, this alternative would include the project's mitigation measures to address impacts associated with hazardous materials during construction. Under this alternative, like the project, the project site would continue to be subject to the naturally occurring tar seeps, and current strategies for managing this

issue would remain in place (see Section 5.8.1.4, Hazards and Hazardous Materials, Tar Seeps). In addition, the existing high concentration of subsurface methane gas at the project site would require ongoing control measures to ensure a properly designed methane mitigation system would provide a barrier for hazardous vapors. Due to the high potential for elevated concentrations of methane gas at the project site, the operational impacts of this alternative related to the release of hazardous materials into the environment would be similar to the project and would include the project's operational mitigation measure to address this impact. Like the project, this alternative could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school and would include the project's mitigation measures to address construction and operational impacts associated with this issue. This alternative would not create a significant hazard to the public or the environment on a site which is included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5. Further, and consistent with the project, this alternative would not be developed within 2 miles of a public airport or public-use airport and would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Additionally, with implementation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to hazardous materials.

Therefore, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to hazards and hazardous materials would be *similar* in comparison to the project.

HYDROLOGY AND WATER QUALITY

Alternative 2, Maintain Central Atrium Pleistocene Garden, would include grading, excavation, and other earthwork activities at a similar extent to that proposed by the project throughout most of the project site except for the expansion of the new museum building. While this alternative would result in an expanded building footprint and reconfigured surface parking lot, it would also result in converting approximately 10,000 square feet of open space pervious surface area to impervious surfaces. Overall, the area of pervious surfaces in this alternative would be slightly decreased when compared to the project.

Like the project, this alternative would result in earthwork activities that would require soil to be excavated and transported off-site and similar dewatering practices as the project would occur under this alternative due to the presence of naturally occurring tar (petroleum) in the subsurface soils. Like the project, compliance with the requirements of the Los Angeles Regional Water Quality Control Board (LARWQCB) (CWA National Pollutant Discharge Elimination System [NPDES] Program and Porter-Cologne Act waste discharge requirements), Construction General Permit, and County stormwater regulations would be sufficient to address the potential for the buildout of the project to violate water quality standards or waste discharge requirements during construction activities. This alternative would implement the three LID BMPs in accordance with the Los Angeles County LID Standards Manual (Los Angeles County Department of Public Works 2014), as outlined in Section 5.9, Hydrology and Water Quality.

This alternative would implement the project's proposed LID BMPs, including the project's three proposed biofiltration areas, and the project's related mitigation measure for non-structural BMPs to further reduce the volume of runoff or improve the quality of runoff from the project site and maximize the percolation of rainfall into the groundwater basin and proposed permeable landscape areas. Similar to the project buildout, this alternative would not adversely affect local groundwater levels or deplete groundwater supplies. While the modifications to the northeastern corner of the project site would occur under this alternative, it would result in a similar overall area of impervious surfaces when compared to the project and, like the project, would be designed to capture, filter, and reduce the volume of any additional runoff from the project's proposed impervious surfaces in a way that mimics, as well as improves, existing drainage patterns. The project site is not in a flood hazard zone or tsunami zone and

the risk of a seiche is low. Therefore, there would be no risk of releasing pollutants due to project inundation by these hazards, similar to the project. Lastly, given that this alternative would be subject to compliance with existing applicable regulatory requirements and would implement the project's LID BMPs, this alternative would not conflict with or obstruct implementing a water quality control plan or sustainable groundwater management plan. Additionally, with implementation of the project's LID BMPs and mitigation measure, this alternative would not contribute to cumulative impacts related to hydrology and water quality.

Therefore, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to hydrology and water quality would be *similar* in comparison to the project.

LAND USE AND PLANNING

Alternative 2, Maintain Central Atrium Pleistocene Garden, would include renovations to the Page Museum aimed at preserving some of the identified character-defining features while also providing the expanded museum facilities and the same programming proposed by the project. Like the project, this alternative would not physically divide an established community as all project activities would occur within the existing boundary of the project site and would not introduce features that would implement barriers or divide the established uses within the project site or the greater area of Hancock Park and the surrounding neighborhood. Like the project, this alternative would also result in significant and unavoidable impacts related to inconsistencies with applicable policies pertaining to the alteration of designated historical resources (i.e., the La Brea Tar Pits Historic District and the Page Museum). While this alternative aims to preserve some of the identified character-defining historic features of the Page Museum and the La Brea Tar Pits Historic District, it would result in significant physical changes, partial demolition, and new construction affecting the two designated historical resources within the project site in such a way that they may no longer convey the reasons for their significance, depending upon the historical resources character-defining feature under consideration. Implementation of project mitigation measures aims to avoid, minimize, rectify, reduce, or compensate for the significance of the impacts to the degree feasible; however, they would not mitigate impacts below the level of significance. Therefore, like the project, this alternative would be inconsistent with the applicable land use objectives, goals, and policies set forth in the County of Los Angeles General Plan, the City of Los Angeles General Plan, and the Wilshire Community Plan related to the alteration and preservation of historical resources (County of Los Angeles 2015, City of Los Angeles 2001a, 2001b).

In addition, and like the project, this alternative would contribute incrementally toward cumulative impacts on historical resources and related land use policies protecting these resources (i.e., County of Los Angeles General Plan, the City of Los Angeles General Plan, and the Wilshire Community Plan) even with implementation of the project's mitigation measures aimed at reducing impacts to historical resources.

In comparison to the proposed La Brea Master Plan, this alternative would not avoid the project's significant and unavoidable impacts related to inconsistencies with applicable policies pertaining to the alteration of designated historical resources. Therefore, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to land use and planning would be *similar* in comparison to the project.

NOISE AND VIBRATION

Alternative 2, Maintain Central Atrium Pleistocene Garden, would include similar types of construction activities and equipment as the project. This alternative could generate a substantial increase in ambient 2015 noise levels in the vicinity of the project, which could affect noise-sensitive land uses. The project's mitigation measures would be included to reduce construction-related noise for the duration of the

construction phase of this alternative, like the project. Once operational, this alternative, like the project, would establish stationary on-site noise sources at the project site as well as contribute to off-site roadway traffic noise. This alternative would include new stationary noise sources similar to the project, including parking lot facility noise, mechanical equipment (i.e., dry coolers and emergency generators), loading and waste compacting activities, and activities associated with the use of outdoor spaces (e.g., outdoor café located on the center terrace on the west side of the Page Museum; Pit 91 outdoor classroom), and roadway traffic noise sources. Given that the project would result in similar museum-related uses, operational noise from this alternative would be similar to the project. Like the project, this alternative would not result in generating excessive ground-borne vibration or ground-borne noise levels. Given that the project site is not near a private airstrip or within the boundaries of an airport land use plan, this alternative would have similar impacts related to airport noise as the project. Like the project, this alternative would not contribute considerably to cumulative noise and/or vibration impacts.

Therefore, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to noise would be *similar* in comparison to the project.

RECREATION

Alternative 2, Maintain Central Atrium Pleistocene Garden, similar to the project, would not result in a new or permanent population (including employees and visitors) that would use the project site for recreation or increase the use of nearby parks or recreational facilities; therefore, it would not result in an associated increase in the use of nearby existing parks and recreational facilities such that substantial physical deterioration of any one facility would occur or be accelerated. Since this alternative would result in the same improvements and enhancements to the existing passive recreational uses and outdoor spaces as the project, this alternative would result in similar physical effects on the environment during construction and would implement the project's mitigation measures to reduce construction impacts. As with the project, this alternative would continue to provide publicly accessible open space areas within the project site. Like the project, with implementation of the project's mitigation measures to address construction impacts associated with adverse physical effects on the environment, this alternative would not contribute to cumulative impacts related to recreation.

Therefore, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden related to recreation would be *similar* in comparison to the project.

TRANSPORTATION

Alternative 2, Maintain Central Atrium Pleistocene Garden, would result in an expanded footprint of the new museum building. Given the museum square footage was used, in part, to estimate the net increase in project-generated trips along with the average visitor trip length (see Section 5.13, Transportation), this alternative would likely result in an increase in estimated regional VMT above that estimated for the project. While the project's mitigation measure to reduce employee and visitor VMT and support multimodal connectivity would be included for this alternative, like the project, it may be insufficient to reduce VMT to less-than-significant levels. Thus, this alternative would not address the project's significant and unavoidable impact related to increased VMT, and the impacts of this alternative would be similar to the project for this issue.

Similar to the project, this alternative could result in an impact related to consistency with transportation plans, programs, ordinances, or policies as they relate to the LAMC ordinances for vehicle parking supply, bicycle parking supply, and TDM. This alternative would result in similar inconsistencies as the project related to the GHG reduction targets set forth in the SCAG 2020-2045 RTP/SCS. The project's mitigation measure to implement a TDM program would also be included in this alternative to reduce

museum employee and visitor vehicle trips and increase the use of alternative modes of transportation such as walking, bicycling, public transit, and rideshare.

Similar to the project, this alternative would not include components that would substantially increase hazards due to a design feature. Lastly, this alternative would result in similar impacts related to inadequate emergency access during construction and operation and would include implementing the project's mitigation measures to reduce impacts. With respect to cumulative impacts, this alternative would result in increased VMT and would contribute to cumulative transportation impacts, like the project.

Therefore, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to transportation resources would be *similar* in comparison to the project. Impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to transportation, specifically the increase in regional VMT associated with the alternative, would remain significant and unavoidable and would occur to a similar degree as compared to the project.

TRIBAL CULTURAL RESOURCES

Alternative 2, Maintain Central Atrium Pleistocene Garden, would include grading, excavation, and other earthwork activities at a similar extent to that proposed by the project. As such, there would be similar potential to disturb known or unknown cultural resources, including human remains, within the project site. This alternative would include implementing the same project mitigation measures to reduce this alternative's potential impacts to less-than-significant levels. In addition, with implementation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to tribal cultural resources.

Therefore, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to tribal cultural resources would be *similar* in comparison to the project.

UTILITIES AND SERVICE SYSTEMS

Alternative 2, Maintain Central Atrium Pleistocene Garden, would result in a similar project site design as the project, except for the expanded footprint of the new museum. This increase in square footage for the new museum is necessary to retain the Central Atrium and would represent similar usable square footage for the buildings as the project. As such, this alternative would result in similar demand for utilities and service systems as the project. Since project impacts related to utilities identified the potential to include construction of new or expanded sewer system facilities, and this alternative proposes similar building sizes and an overall similar site design as the project, it would implement the same project mitigation to address the potential need for constructing new or expanded sewer system facilities. Like the project, this alternative would conform to the demographic projections from SCAG's 2020-2045 RTP/SCS. Since the project site is currently located in the City's service area, it is considered to have been included in the LADWP's water supply planning efforts. Thus, the impacts of this alternative related to the water supply would be similar to the project. This alternative would result in similar generation of solid waste due to the similar building square footages associated with this alternative and, like the project, would be consistent with the applicable regulations associated with solid waste and would promote compliance with the Integrated Waste Management Act, Assembly Bill 939; Mandatory Commercial and Multi-Family Recycling, Assembly Bill 341; and California Integrated Waste Management Act of 1989, Assembly Bill 1826. In addition, with implementation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to utilities and service systems.

Overall, impacts of Alternative 2, Maintain Central Atrium Pleistocene Garden, related to utilities and service systems would be *similar* in comparison to the project.

6.4.4 Alternative 3: Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would include the renovation of the Page Museum within the existing building footprint, similar to the project, but would incorporate a series of design refinements to reduce impacts on certain primary character-defining features of the Page Museum, including refining the materiality and size of the expansion atrium pop-up to better compliment the frieze, preserving a larger portion of the existing berm on the west side of the Page Museum, and detailing the second-floor glass enclosure underneath the Page Museum frieze to be as transparent as possible. This alternative would also include constructing a new museum building of approximately 40,000 square feet, similar to the project, but would adjust the building footprint to the north and west of the project's proposed footprint (Figure 6-3). This adjustment would allow for more separation of the new museum from the existing Page Museum by narrowing the transition area connection between the two buildings. Adjusting the footprint of the new museum to the north would also allow for approximately 4,000 square feet of open space to be added to the Central Green. In this alternative, the on-site surface parking would be reconfigured to complement the adjusted building footprint, extending west of the new museum building as with the project, but this alternative would maintain the number of parking spaces that currently exist on-site and would not add additional parking spaces.

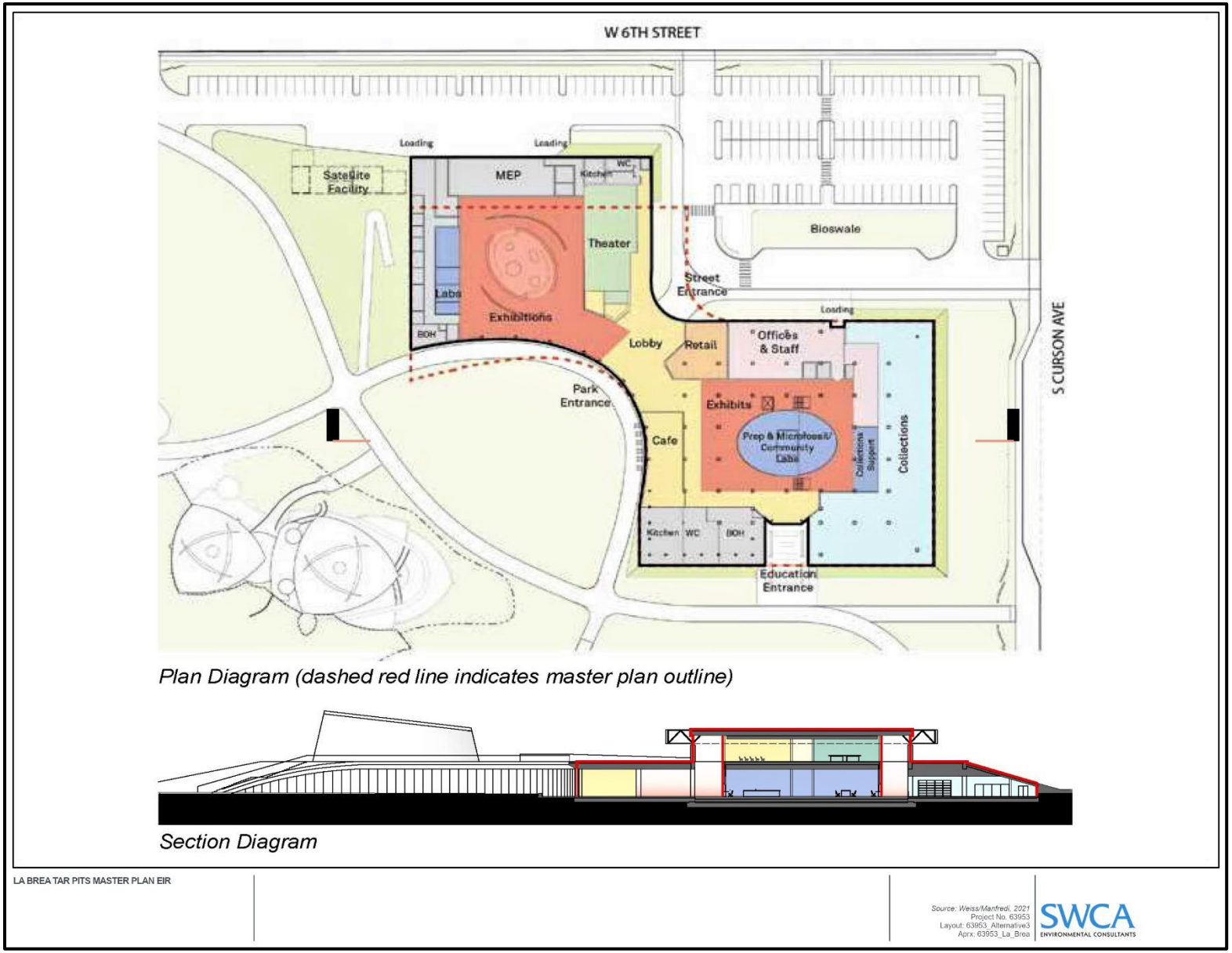


Figure 6-3. Alternative 3: Museum plan and section diagrams.

Aside from the modifications discussed above, Alternative 3 would be similar to the project, as outlined in Chapter 3, Project Description, and Table 6-1. Table 6-8 provides a summary of the project components of Alternative 3 that are different from the project.

Table 6-8. Overview of Alternative 3 Project Components Different from the Project

Project Component	Description
Page Museum Renovations	Renovate the existing building in the same footprint (approximately 63,200 square feet) while incorporating a series of design refinements to reduce impacts on certain primary character-defining features.
New Museum Building	Construct a new two-story 40,000-gsf museum building with a slightly adjusted footprint to the north and west while narrowing the transition area connection to the Page Museum.
Pedestrian Path and Recreation Areas	Expand the Central Green area by approximately 4,000 square feet due to the adjusted footprint of the new museum building.
Circulation and Parking	Reconfigure parking lot, extending it west of the new museum building footprint while maintaining the existing number of on-site parking spaces. This would require removing and relocating existing trees on-site.

6.4.4.1 Relationship to Project Objectives

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would meet all of the project objectives. Table 6-9 outlines this alternative's ability to attain the basic project objectives outlined above and in Chapter 3, Project Description.

Table 6-9. Attainment of Project Objectives—Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green

Project Objective	Does the Alternative Attain the Project Objective?
Renovate and expand the existing museum structure to address deferred maintenance of the building envelope and systems, to meet modern seismic, electrical, building code standards, and universal design standards, and to meet sustainability goals consistent with the County's sustainability plan (County of Los Angeles 2019).	**Yes.** This alternative would allow for renovating the Page Museum to address the deferred maintenance of the building envelope and systems to meet modern electrical and building code standards as well as seismic standards. This alternative would also include sustainability strategies designed to improve stormwater management, reduce heat island effect, provide more shade, and reduce light pollution to further the sustainability of the County's sustainability plan.
Provide expanded collections storage facilities that enable access for scientific research, and preserve, protect, and allow future growth of the museum's world-class collections.	**Yes.** This alternative would include constructing an additional 2,000 square-foot satellite maintenance and support building dedicated to fossil storage, maintenance, and service facilities along the northern boundary of the project site.
Provide expanded state-of-the-art laboratory research facilities to accommodate internationally significant and advanced research in paleontology.	**Yes.** This alternative would allow for renovating the Page Museum and constructing a new museum building, adding an additional 40,000 square feet of museum space to support expanded laboratory research facilities.
Provide state-of-the-art exhibition facilities and learning environments within the park and museum to enrich the visitor experience and to support active educational and public programming.	**Yes.** This alternative would include renovating the Page Museum and constructing a new museum building, adding an additional 40,000 square feet of museum space to provide space for additional exhibitions, facilities, or enhanced learning environments. In addition, this alternative would allow for renovating the existing facilities at all the tar pit locations throughout the project site to allow for improved interpretive signage and viewing areas to further enrich the visitor experience and to support active educational programming.

Project Objective	Does the Alternative Attain the Project Objective?
Improve access and entry for different visitor types, increase connections between the museum and the park, as well as support increased visitation, special events, and revenue-producing amenities within the park and museum.	**Yes.** This alternative would include enhanced entrances to the project site at the Wilshire and 6th Street Gateways and would also reconfigure the existing pedestrian pathways on-site into a continuous paved pedestrian path linking all the existing elements of the park. A pedestrian walking path would be constructed across the project site with interpretive signage and explanations related to the former industrial heritage of the site. The project site is currently served by a complete network of sidewalks around the project site block and adjacent street network, with signalized intersections and crosswalks. This alternative would also establish a new school drop-off/loading area on South Curson Avenue adjacent to the Wilshire Gateway picnic area.
Expand the museum exhibits, educational classrooms, collection spaces, offices, and laboratory research facilities in one unified, cohesive facility, with the fewest impacts to historical resources possible.	**Yes.** This alternative would expand museum facilities through the construction of the new museum building. The renovated Page Museum and new museum building would be connected via a central lobby area and an integrated organization of exhibits and collections, helping to create connection and cohesion between the two museum spaces. The design refinements presented in this alternative would lessen certain impacts to character-defining features to both the Page Museum and the La Brea Tar Pits Historic District in such a way that decreases the overall severity of the significant and unavoidable historical resources impacts.
Create a central entrance to the museum facilities to enhance the visitor experience of the museum and Hancock Park.	**Yes.** This alternative would result in a renovated Page Museum and new museum building with a central entry point accessible from the project's parking lot as well as from the Central Green. The central entrance would lead to the museum lobby, which would provide a space for visitors to circulate and become familiar with organization of the museum's exhibits and collections both inside the museum spaces as well as the outdoor spaces within Hancock Park.
Preserve and protect the National Natural Landmark—La Brea Tar Pits—to allow access for future research and excavation, support cultural and educational interpretation, and enable the ongoing natural processes of the asphaltic seeps.	**Yes.** This alternative would allow for renovating and expanding the existing Page Museum and the remainder of the project site within Hancock Park in a way that would further the fundamental mission of La Brea Tar Pits as a site and facility dedicated to research, education, and exhibition. Under this alternative, the project site would continue to be recognized and protected as a National Natural Landmark.
Redesign and renovate the Hancock Park community park green space as an expression of the goals of the County of Los Angeles's General Plan Conservation and Natural Resources Element and the City of Los Angeles's Open Space and Conservation Elements of the General Plan, to increase sustainable landscape and site design, to support passive recreational use, to increase the legibility of this important cultural destination, and to enhance connections to the quickly evolving Miracle Mile neighborhood.	**Yes.** This alternative, like the project, would redesign and renovate the Hancock Park community park green space to include a landscape design and planting scheme that would address the realities of Los Angeles's current and projected climate and aim to ease water consumption and ensure appropriate maintenance. This alternative would include a 4,000-square-foot expansion of, and improvements to, the existing multi-purpose grass lawn, the Central Green, which would provide a setting for community activities, passive recreational uses, events, and public gatherings. This alternative would also install a new welcome pavilion with a canopy and shade trees at Wilshire Gateway, and a shaded welcome area at the 6th Street Gateway to increase the legibility within the Miracle Mile neighborhood.

6.4.4.2 Comparison of Significant Effects of the Alternative to the Project

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would result in similar types of construction activities, duration, and equipment as the project. Upon project completion, this alternative would result in similar land uses and operational activities as proposed by the project.

AESTHETICS

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would result in changes to the building footprints, adjustments to the site design in the northeastern portion of the project site, and would slightly modify some of the visual characteristics of the museum buildings on the project site when compared to the project. Like the project, this alternative's changes in site design would be visible directly from adjacent off-site locations, including high-rise residential and commercial buildings. However, due to the topography of the project site and relative lack of buildings on the site compared with the surrounding dense urban development, view changes would typically occur at limited vantage points, as opposed to along extensive roadway segments or from entire large geographic areas. This alternative would adjust the footprint for the new museum building, shifting it further north allowing for more space and a narrower transition connection between the Page Museum and the new museum building. This refinement would reduce the visual competition between the two buildings and would preserve more of the existing berm along the western side of the Page Museum. While the new museum footprint would be adjusted, it would still be two stories in height, as proposed by the project. This alternative would also adjust the materiality of the new museum atrium feature to ensure that it complements the materiality of the Page Museum.

Like the project, this alternative would not have a substantial effect on a scenic vista or damage scenic resources within a State Scenic Highway, as no such resources have been identified near the project site and changes to the existing visual character of the project site would integrate with the surrounding urban development along Wilshire Boulevard and the park setting of Hancock Park. Like the project, implementation of this alternative would change the overall project site design and result in modifications to the visual characteristics of the project site, but not in such a way that it would adversely alter or degrade the existing visual character or scenic quality of the project site and would be consistent with the applicable policies that govern scenic quality in both County and City plans. This alternative would create new sources of light and glare, similar to the project, and would include the same mitigation measures as the project to address potential issues related to this issue. In addition, with implementation of the project's mitigation measures to address light and glare, this alternative would not contribute to cumulative impacts related to aesthetics.

Therefore, impacts of Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to aesthetics would be *similar* in comparison to the project.

AIR QUALITY

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would result in similar types of construction activities, duration, and equipment as the project. Upon project operation, this alternative would result in similar land uses as proposed by the project. Like the project, this alternative would be subject to consistency with the air quality standards and the land use assumptions identified in the SCAQMD's AQMP and SCAG's regional plans and policies. As identified for the project, this alternative would also implement mitigation to reduce construction-related air pollutant emissions. Operational emissions may vary slightly when compared to the project given the expanded footprint of the museum building; however, as shown in Section 5.2, Air Quality, the project is significantly below the established SCAQMD's significance thresholds, and this alternative would not result in a considerable change from the anticipated uses within the project's site plan that would increase daily operations in such a manner to exceed the maximum daily operational emissions set forth by SCAQMD's significance thresholds. In addition, this alternative would implement the project's mitigation measure which incorporates a number of key control measures identified by the SCAQMD to ensure this alternative would not conflict with an applicable air quality plan, generate short- or long-term criteria pollutant emissions in exceedance of SCAQMD significance thresholds, expose sensitive

receptors to substantial concentrations of pollutant emissions, or result in adverse odors or other emissions. In addition, with implementation of the project's mitigation measure to reduce construction-related air pollutant emissions, this alternative would not contribute to cumulative impacts related to air quality.

Therefore, impacts of Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to air quality would be *similar* in comparison to the project.

BIOLOGICAL RESOURCES

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would allow for modifications to the project's site plan, resulting in similar types of construction activities, duration, and equipment as the project. The overall area of ground disturbance during the construction of this alternative would be similar to that of the project. Future operational conditions under this alternative would result in similar land uses as proposed by the project; however, this alternative would result in the gain of 4,000 square feet of open space area to be added to the Central Green over what is proposed by the project.

This alternative, like the project, could result in adverse effects during the construction process on one species, the federal candidate monarch butterfly, either directly or through habitat modifications. In addition, this alternative could result in impacts to regulated aquatic resources habitat associated with Oil Creek and could also result in removing or relocating the oak trees on-site, thereby conflicting with the County of Los Angeles Oak Tree Ordinance. Like the project, this alternative would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Given the similar nature of ground disturbance, construction activities, and future operational conditions, this alternative would implement the same mitigation measures to address potential impacts as the project. In addition, with implementation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to biological resources.

Therefore, impacts of Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to biological resources would be *similar* in comparison to the project.

CULTURAL RESOURCES – ARCHAEOLOGICAL RESOURCES

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would include grading, excavation, and other earthwork activities similar to the extent proposed by the project throughout most of the project site. As such, there would be similar potential to disturb known or unknown archaeological resources, including human remains, within the project site. This alternative would implement the same project mitigation measures to reduce this alternative's potential impacts to less-than-significant levels. In addition, with implementation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to archaeological resources.

Therefore, impacts of Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to archaeological resources would be *similar* in comparison to the project.

CULTURAL RESOURCES – HISTORICAL RESOURCES

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would refine and decrease some of the changes to character-defining features to both the Page Museum and La Brea Tar Pits Historic District. Adjusting the building footprint to the north and west of the project's proposed footprint would allow for a greater separation of the new museum from the existing

Page Museum, which would contribute to retaining the visual primacy of the Page Museum in the context of the La Brea Tar Pits Historic District.

Further, by narrowing the transition area connection between the two buildings, less of the character-defining berm would be removed from the Page Museum site, which would contribute in a small degree to lessening the impact to both the Page Museum and the La Brea Tar Pits Historic District.

In addition, design refinements to the materiality and size of the expansion atrium pop-up, aimed at better complimenting the frieze, and detailing the second-floor glass enclosure underneath the Page Museum frieze to be as transparent as possible, would reduce impacts on certain primary character-defining features of the Page Museum.

With these changes, the design refinements presented in Alternative 3 would lessen certain impacts to character-defining features to both the Page Museum and the La Brea Tar Pits Historic District. However, the character-defining berm around the Page Museum would still largely be removed and the new museum annexed to it. Considered in combination, the removal of the character-defining berm around the Page Museum, along with the other site plan changes, would continue to result in a significant and unavoidable impact to historical resources. However, the overall severity of the significant and unavoidable historical resources impacts would be reduced because of the narrowing the transition area connection between the two buildings and the design refinements to the materiality and size of the expansion atrium pop-up, aimed at better complimenting the frieze. With respect to cumulative impacts, this alternative would contribute to cumulative impacts related to historical resources, like the project, although cumulative impacts would be decreased in overall severity.

When the changes in effect to the various character-defining features of the two historical resources are considered in combination, impacts of Alternative 3 related to historical resources would be *decreased* in comparison to the project. Although impacts would be decreased in overall severity, Alternative 2, Maintain Central Atrium Pleistocene Garden, would continue to result in significant and unavoidable impacts to the historic resources of the Page Museum and the La Brea Tar Pits Historic District.

GEOLOGY AND SOILS

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would include grading, excavation, and other earthwork activities similar to the extent proposed by the project throughout most of the project site. Like the project, this alternative would be subject to all applicable regulations, including the applicable provisions in the Alquist-Priolo Earthquake Fault Zoning Act, Seismic Safety Act, Seismic Hazards Mapping Act, the California Building Code, and the 2020 County of Los Angeles Building Code. As with the project, this alternative would include construction activities on soils with existing artificial fill that may not be suitable to support foundations, slabs on grade, paving, or new compacted fills and could cause geologic instability at the project site related to subsidence (i.e., compressible and collapsible soils) and expansive soils. This alternative would implement the same project mitigation measures to reduce potential impacts related to subsidence, as well as compressible, collapsible, and expansive soils, to less-than-significant levels. In addition, this alternative would not contribute to cumulative geotechnical or soils-related hazards.

Similar to the project, all ground-disturbing activities associated with the construction of this alternative have the potential to impact subsurface paleontological resources given the high paleontological sensitivity of the project site. Paleontological resources may be impacted by the construction or implementation of this alternative regardless of the depth of grading and/or excavation activities. Any fossils encountered during ground-disturbing activities could be at risk for damage or destruction from such activities depending on the nature of the fossil encountered. This alternative would require

implementing the same project mitigation measures to reduce potential impacts on paleontological resources to less-than-significant levels. With implementation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to paleontological resources.

Therefore, impacts of Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to geology and soils would be *similar* in comparison to the project.

GREENHOUSE GAS EMISSIONS

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would result in similar types of construction activities, duration, and equipment as the project. Upon project operation, this alternative would result in similar land uses as proposed by the project. Given that this alternative would result in similar construction and operational conditions as the project, this alternative would likely generate similar GHG emissions. This alternative would also incorporate the project's mitigation measure related to eliminating natural gas infrastructure and increasing electric vehicle charging stations. Like the project, this alternative would not generate GHG emissions above established SCAQMD thresholds.

Given that the operation of the facilities at the project site would be similar to the project under this alternative, it would not conflict with any applicable plan, policy, or regulation adopted to reduce GHG emissions. Like the project, this alternative would include components that would further the GHG reduction targets set forth in the applicable plans, policies, regulations, or recommendations of an agency adopted to reduce GHG emissions (see Section 5.7, Greenhouse Gas Emissions). Specifically, this alternative would include components that would further the GHG reduction targets set forth in the SCAG 2020-2045 RTP/SCS related to mobility and GHG reductions. The project's mitigation measure involving the development of a TDM program for employee and visitor vehicle trips to increase alternative modes of transportation, such as walking, bicycling, public transit, and rideshare, would further consistency with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions. In addition, within implementation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to GHG emissions.

Therefore, impacts of Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to GHG emissions would be *similar* in comparison to the project.

HAZARDS AND HAZARDOUS MATERIALS

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would include grading, excavation, and other earthwork activities similar to the extent proposed by the project throughout most of the project site. When compared to the project, this alternative has similar potential for construction-related activities to uncover subsurface hazards (i.e., subsurface methane gas produced from naturally occurring petroleum fields) or create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials.

Under this alternative, like the project, the project site would continue to be subject to the naturally occurring tar seeps, and current strategies for managing this issue would remain in place (see Section 5.8.1.4, Hazards and Hazardous Materials, Tar Seeps). In addition, the existing high concentration of subsurface methane gas at the project site would require ongoing control measures to ensure a properly designed methane mitigation system would provide a barrier for hazardous vapors. Due to the high potential for elevated concentrations of methane gas at the project site, operational impacts of this alternative related to the release of hazardous materials into the environment would be similar to the project and would include the project's operational mitigation measure to address this impact. Like the

project, this alternative could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school and would include the project's mitigation measures to address construction and operational impacts associated with this issue. This alternative would not create a significant hazard to the public or the environment on a site which is included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5. Further, and consistent with the project, this alternative would not be developed within 2 miles of a public airport or public-use airport and would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Additionally, with implementation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to hazardous materials. Therefore, impacts of Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to hazards and hazardous materials would be *similar* in comparison to the project.

HYDROLOGY AND WATER QUALITY

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would include grading, excavation, and other earthwork activities similar to the extent proposed by the project throughout most of the project site. While this alternative would adjust the building footprint for the new museum, it would be the same size as proposed by the project (40,000 square feet). The shifting of the building north would allow for approximately 4,000 square feet of open space area to be added to the Central Green. Overall, the area of pervious surfaces in this alternative would be slightly increased when compared to the project due to this gain of open space area. This increase in pervious surfaces is negligible and would not result in substantial changes or improvements to drainage patterns or runoff rates when compared to the project.

Like the project, this alternative would result in earthwork activities that would require soil to be excavated and transported off-site and similar dewatering practices as the project would occur under this alternative due to the presence of naturally occurring tar (petroleum) in the subsurface soils. Like the project, compliance with the requirements of the LARWQCB (CWA NPDES Program and Porter-Cologne Act waste discharge requirements), Construction General Permit, and County stormwater regulations would be sufficient to address the potential for the buildout of the project to violate water quality standards or waste discharge requirements during construction activities. This alternative would implement the three LID BMPs in accordance with the Los Angeles County LID Standards Manual (Los Angeles County Department of Public Works 2014), as outlined in Section 5.9, Hydrology and Water Quality.

This alternative would implement the project's proposed LID BMPs, including the project's three proposed biofiltration areas, and the project's related mitigation measure for non-structural BMPs to further reduce the volume of runoff or improve the quality of runoff from the project site and maximize the percolation of rainfall into the groundwater basin and proposed permeable landscape areas. Similar to the project buildout, this alternative would not adversely affect local groundwater levels or deplete groundwater supplies. While the modifications to the northeastern corner of the project site would occur under this alternative, it would result in a similar overall area of impervious surfaces when compared to the project and, like the project, would be designed to capture, filter, and reduce the volume of any additional runoff from the project's proposed impervious surfaces in a way that mimics, as well as improves, existing drainage patterns. The project site is not in a flood hazard zone or tsunami zone and the risk of a seiche is low. Therefore, there would be no risk of releasing pollutants due to project inundation by these hazards, similar to the project. Lastly, given that this alternative would be subject to compliance with existing applicable regulatory requirements and would implement the project's LID BMPs, this alternative would not conflict with or obstruct the implementation of a water quality control plan or a sustainable groundwater management plan. Additionally, with implementation of the project's

LID BMPs and mitigation measure, this alternative would not contribute to cumulative impacts related to hydrology and water quality.

Therefore, impacts of Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to hydrology and water quality would be *similar* in comparison to the project.

LAND USE AND PLANNING

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would include renovations to the Page Museum aimed at preserving some of the identified character-defining features while also providing the expanded new museum facilities and the same programming proposed by the project. Like the project, this alternative would not physically divide an established community as all project activities would occur within the existing boundary of the project site and would not introduce features that would implement barriers or divide the established uses within the project site or the greater area of Hancock Park and the surrounding neighborhood. Like the project, this alternative would also result in the project's significant and unavoidable impacts related to inconsistencies with applicable policies pertaining to the alteration of designated historical resources (i.e., the La Brea Tar Pits Historic District and the Page Museum). However, this alternative includes design refinements that would lessen certain impacts to character-defining features to both the Page Museum and the La Brea Tar Pits Historic District. These refinements would reduce the overall severity of the project's impacts to historical resources, serving to further support applicable land use objectives, goals, and policies set forth in the County of Los Angeles General Plan, the City of Los Angeles General Plan, and the Wilshire Community Plan (County of Los Angeles 2015, City of Los Angeles 2001a, 2001b). However, because impacts to historical resources would continue to be significant and unavoidable, a full consistency determination with these applicable land use policies may not be achieved in this alternative. In addition, and like the project, this alternative would also contribute incrementally toward cumulative impacts on historical resources and related land use policies protecting these resources (i.e., County of Los Angeles General Plan, the City of Los Angeles General Plan, and the Wilshire Community Plan).

Therefore, Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to land use and planning would be *decreased* in comparison to the project; however, this alternative would not fully avoid the project's significant and unavoidable impacts related to inconsistencies with applicable land use plans and policies as they pertain to the alteration and preservation of designated historical resources.

NOISE AND VIBRATION

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would include similar types of construction activities and equipment as the project. This alternative could generate a substantial increase in ambient noise levels near the project, which could affect noise-sensitive land uses. The project's mitigation measures would be included to reduce construction-related noise for the duration of the construction phase of this alternative, like the project. Once operational, this alternative, like the project, would establish stationary on-site noise sources at the project site as well as contribute to off-site roadway traffic noise. This alternative would include new stationary noise sources similar to the project, including parking lot facility noise, mechanical equipment (i.e., dry coolers and emergency generators), loading and waste compacting activities, and activities associated with the use of outdoor spaces (e.g., outdoor café located on the center terrace on the west side of the Page Museum Page Museum; Pit 91 outdoor classroom), and roadway traffic noise sources. Given that the project would result in similar museum-related uses, operational noise from this alternative would be similar to the project. Like the project, this alternative would not result in generating excessive ground-borne vibration

or ground-borne noise levels. Given that the project site is not near a private airstrip or within the boundaries of an airport land use plan, this alternative would have similar impacts related to airport noise as the project. Like the project, this alternative would not contribute considerably to cumulative noise and/or vibration impacts.

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to noise would be *similar* in comparison to the project.

RECREATION

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would result in an increase of approximately 4,000 square feet of open space area added to the Central Green. Similar to the project, this alternative would not result in a new or permanent population (including employees and visitors) that would use the site for recreation or increase the use of nearby parks or recreational facilities; therefore, it would not result in an associated increase in the use of nearby existing parks and recreational facilities such that substantial physical deterioration of any one facility would occur or be accelerated. Since this alternative would result in the same improvements and enhancements to the existing passive recreational uses and outdoor spaces as the project, this alternative would result in similar physical effects on the environment during construction and would implement the project's mitigation measures to reduce construction impacts. As with the project, this alternative would continue to provide publicly accessible open space areas within the project site. Like the project, with implementation of the project's mitigation measures to address construction impacts associated with adverse physical effects on the environment, this alternative would not contribute to cumulative impacts related to recreation.

Therefore, impacts of Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to recreation would be *similar* in comparison to the project.

TRANSPORTATION

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would result in an adjusted footprint of the new museum building with the same square footage as proposed by the project. Given the museum square footage was used, in part, to estimate the net increase in project-generated trips along with the average visitor trip length (see Section 5.13, Transportation), this alternative would likely result in similar estimated regional VMT as that estimated for the project. While the project's mitigation measure to reduce employee and visitor VMT and support multimodal connectivity would be included for this alternative, like the project, it may be insufficient to reduce VMT to less-than-significant levels. Thus, this alternative would not address the project's significant and unavoidable impact related to increased VMT, and the impacts of this alternative would be similar to the project for this issue.

Similar to the project, this alternative could result in an impact related to consistency with transportation plans, programs, ordinances, or policies as they relate to LAMC ordinances for vehicle parking supply, bicycle parking supply, and TDM. This alternative would result in similar inconsistencies as the project related to the GHG reduction targets set forth in the SCAG 2020-2045 RTP/SCS. The project's mitigation measure to implement a TDM program would also be included in this alternative to reduce museum employee and visitor vehicle trips and increase the use of alternative modes of transportation, such as walking, bicycling, public transit, and rideshare.

Similar to the project, this alternative would not include components that would substantially increase hazards due to a design feature. Lastly, this alternative would result in similar impacts related to

inadequate emergency access during construction and operation and would include implementing the project's mitigation measures to reduce impacts. With respect to cumulative impacts, this alternative would result in increased VMT and would contribute to cumulative transportation impacts, like the project. Therefore, impacts of Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to transportation resources would be *similar* in comparison to the project. Impacts of Alternative 3 related to transportation, specifically the increase in regional VMT associated with the alternative, would remain significant and unavoidable and would occur to a similar degree as compared to the proposed project,

TRIBAL CULTURAL RESOURCES

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would include grading, excavation, and other earthwork activities similar to the extent proposed by the project. As such, there would be similar potential to disturb known or unknown cultural resources, including human remains, within the project site. This alternative would include implementation of the same project mitigation measures to reduce this alternative's potential impacts to less-than-significant levels. In addition, with implementation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to tribal cultural resources.

Therefore, impacts of Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to tribal cultural resources would be *similar* in comparison to the project.

UTILITIES AND SERVICE SYSTEMS

Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, would result in a similar project site design as the project, except for the adjusted footprint for the new museum building. While the footprint would be adjusted in this alternative, it would be the same size as the building proposed by the project. As such, this alternative would result in similar demand for utilities and service systems as the project. Since project impacts related to utilities identified the potential to include construction of new or expanded sewer system facilities, and this alternative proposes similar building sizes and an overall similar site design as the project, it would implement the same project mitigation to address the potential need for constructing new or expanded sewer system facilities. Like the project, this alternative would conform to the demographic projections from SCAG's 2020-2045 RTP/SCS. Since the project site is currently located in the City's service area, it is considered to have been included in the LADWP's water supply planning efforts. Thus, the impacts of this alternative related to the water supply would be similar to the project. This alternative would result in similar generation of solid waste due to the similar building square footages associated with this alternative and, like the project, would be consistent with the applicable regulations associated with solid waste and would promote compliance with the Integrated Waste Management Act, Assembly Bill 939; Mandatory Commercial and Multi-Family Recycling, Assembly Bill 341; and California Integrated Waste Management Act of 1989, Assembly Bill 1826. In addition, with implementation of the project's mitigation measures, this alternative would not contribute to cumulative impacts related to utilities and service systems. Overall, impacts of Alternative 3, Adjusted Footprint to Reduce Contact with Page Museum and Expand Central Green, related to utilities and service systems would be *similar* in comparison to the project.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The State CEQA Guidelines require an analysis of alternatives to identify an Environmentally Superior Alternative among the alternatives evaluated in the EIR. The Environmentally Superior Alternative is the alternative that would minimize adverse impacts on the environment. Based on the evaluation of the

alternatives in this chapter and the comparison of impacts, as summarized in Table 6-10, both the No Project/No Build Alternative and Alternative 1, Renovate the Page Museum Only, would minimize the project's adverse impacts on the environment in the same manner. As directed by the State CEQA Guidelines Section 15126.6(e)(2):

- "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

Therefore, Alternative 1, Renovate the Page Museum Only, would be the Environmentally Superior Alternative because it would be the built alternative that minimizes the project's adverse impacts on the environment. In addition, Alternative 1 would meet one of the project objectives and partially achieve two of the project objectives. However, it would not achieve most of the nine identified project objectives.

Table 6-10. Comparison of Impacts Among Alternatives

Issue Area	No Project/ No Build Alternative	Alternative 1: Renovate Page Museum Only	Alternative 2: Maintain Central Atrium Pleistocene Garden	Alternative 3: Adjust Footprint to Reduce Contact with Page Museum and Expand Central Green
Aesthetics	Decreased	Decreased	Similar	Similar
Air Quality	Decreased	Decreased	Similar	Similar
Biological Resources	Decreased	Decreased	Similar	Similar
Cultural Resources – Archaeological Resources	Decreased	Decreased	Similar	Similar
Cultural Resources – Historical Resources	Decreased; would avoid the project's significant and unavoidable impact	Decreased; would avoid the project's significant and unavoidable impact	Similar; impacts would continue to be significant and unavoidable*	Decreased; impacts would continue to be significant and unavoidable†
Geology and Soils	Decreased	Decreased	Similar	Similar
Greenhouse Gas Emissions	Similar	Similar	Similar	Similar
Hazards and Hazardous Materials	Decreased	Similar	Similar	Similar
Hydrology and Water Quality	Decreased	Similar	Similar	Similar
Land Use and Planning	Decreased; would avoid the project's significant and unavoidable impact	Decreased; would avoid the project's significant and unavoidable impact	Similar; impacts would continue to be significant and unavoidable	Decreased; impacts would continue to be significant and unavoidable.
Noise and Vibration	Decreased	Decreased	Similar	Similar
Recreation	Similar	Similar	Similar	Similar
Transportation	Decreased; would avoid the project's significant and unavoidable impact	Decreased; would avoid the project's significant and unavoidable impact	Similar; impacts would continue to be significant and unavoidable	Similar; impacts would continue to be significant and unavoidable
Tribal Cultural Resources	Decreased	Decreased	Similar	Similar
Utilities and Service Systems	Decreased	Decreased	Similar	Similar
Meets Project Objectives?	Partially	Partially	Partially	Yes

* The benefits of avoiding the impacts to the Page Museum's character-defining features do not outweigh the additional impacts to the character-defining features of the La Brea Tar Pits Historic District and would not avoid the project's significant and unavoidable impacts related to alterations of historical resources.

† Impacts to certain character-defining features are lessened to both the Page Museum and the La Brea Tar Pits Historic District, thereby reducing the overall severity of the impacts to historical resources; however, it would not avoid the project's significant and unavoidable impacts.

Alternative 1 would avoid the project's significant and unavoidable impact to historical resources as it would result in renovations to the interior of the Page Museum only, while retaining the character-defining features of both the Page Museum and the La Brea Tar Pits Historic District that qualify them as historical resources. Because Alternative 1 would avoid impacts to historical resources, it would also avoid the project's inconsistencies with applicable land use plans and policies. In addition, Alternative 1 would also avoid the project's significant and unavoidable impact related to transportation as it would not result in the project's substantial increase in regional VMT. Alternative 1 would also result in decreased impacts to a majority of the other environmental issues areas listed in Table 6-10 as no grading or other earthwork activities would be necessary, and no other structures would be constructed as a result of this alternative. Further, upon completing this alternative, there would be no changes to the existing land use types or operational characteristics of the project site. As described in Table 6-5, Alternative 1 would meet one of the project objectives related to preserving and protecting the National Natural Landmark—La Brea Tar Pits. Alternative 1 would partially meet two other project objectives related to addressing the deferred maintenance and meeting modern building code standards of Page Museum as well as partially meeting the project objective related to providing state-of-the-art exhibition facilities and learning environments within the museum. While it would not meet most of the project objectives, Alternative 1 is the alternative scenario that reduces the most environmental impacts when compared to the project.

For comparison, Alternative 2, Maintain Central Atrium Pleistocene Garden, would preserve most of the character-defining features of the Page Museum, but it would result in the loss of a greater amount of open space in the La Brea Tar Pits Historic District due to the increased footprint of the project. As such, the benefits of avoiding the impacts to the Page Museum's character-defining features do not outweigh the additional impacts to character-defining features to the La Brea Tar Pits Historic District and this alternative would not avoid the project's significant and unavoidable impacts related to alterations of historical resources. Since Alternative 2 would not avoid the project's significant and unavoidable impacts to historical resources, it would also result in the project's inconsistencies with applicable land use plans and policies. In addition, Alternative 2 would not avoid the project's substantial increase in regional VMT and would still result in significant and unavoidable impacts related to this issue. Alternative 2 would also result in similar impacts as the project to the other environmental issues areas listed in Table 6-10 as this alternative would result in similar types of construction activities and operational uses as proposed by the project. As described in Table 6-7, Alternative 2 would meet seven project objectives and partially meet the remaining two objectives due to the loss of open space as a result of the expanded museum footprint.

Alternative 3, Adjust Footprint to Reduce Contact with Page Museum and Expand Central Green, would result in similar environmental impacts as the project for each issue area analyzed in this EIR, as shown in Table 6-10, with the exception of historical resources and land use and planning. While Alternative 3 would lessen certain impacts to character-defining features to both the Page Museum and the La Brea Tar Pits Historic District thereby reducing the overall severity of the impacts to historical resources; however, it would not avoid the project's significant and unavoidable impacts. Similarly, the design refinements in this alternative would help to further support the land uses plans and policies applicable to the project as they relate to the protection and alternation of historical resources, but not in such a way to avoid the project's related significant and unavoidable impacts. This alternative would also result in the project's significant and unavoidable impacts related to increased regional VMT. However, Alternative 3 is the alternative that meets all project objectives by providing an adjusted museum footprint and incorporating a series of design refinements that would support the basic objectives of the project.

Based strictly on an analysis of the relative environmental impacts, Alternative 1, Renovate the Page Museum Only, is considered the Environmentally Superior Alternative. The Foundation and the Museum of Natural History, as a departmental unit of the County, will consider the whole of the record when considering the project including, but not limited to, public comment and testimony related to the size and

design of the residence. The Foundation and the Museum of Natural History may select the project as proposed, an alternative, or a specified combination of particular elements identified in the alternatives, as the approved project. In all scenarios, the Mitigation Monitoring and Reporting Program (MMRP) would be applied to the approved project.

CHAPTER 7. OTHER CEQA CONSIDERATIONS

This chapter discusses other potential environmental effects for which CEQA requires analysis, in addition to the specific issue areas evaluated in Chapter 5, Environmental Impact Analysis. These additional effects include the potential for the project to result in growth-inducing impacts, significant irreversible environmental changes, significant and unavoidable environmental impacts, and effects found not to be significant.

7.1 GROWTH-INDUCING IMPACTS

State CEQA Guidelines Section 15126.2(e) requires that an EIR provide a discussion of the potential growth-inducing impacts of the proposed project. Growth-inducing impacts could be caused by projects that foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth-inducing impacts can also be caused by removing obstacles to population growth, by population increases that require the construction of new community services facilities, or by introducing population or other growth in an isolated area. In addition, pursuant to this section, growth in any area must not be assumed as necessarily beneficial, detrimental, or of little significance to the environment.

Projects that physically remove obstacles to growth, or projects that indirectly induce growth, are those that may provide a catalyst for future unrelated development in an area. However, the project would not involve development of infrastructure or roadways that could indirectly lead to population growth. Although site access improvements and landscaping along Wilshire Boulevard, West 6th Street, and South Curson Avenue are planned as part of the project, the project would not extend an existing roadway facility into an area that is not currently provided vehicular access. As a result, the project would not result in indirect population growth by providing vehicular access to an area presently lacking such access.

During project construction, a temporary workforce would be needed to construct the new and renovated museum buildings and related on-site improvements. The project would create temporary construction-related work. However, the work requirements of most construction projects are highly specialized such that construction workers remain at a job site only for the time in which their specific skills are needed to complete a particular phase of the construction process, and the number of construction workers needed during any given period would largely depend on the specific stage of construction. As such, construction workers would not be expected to relocate to the project vicinity as a direct consequence of working on the project, as these short-term positions are anticipated to be filled primarily by construction workers who reside in the project vicinity. Therefore, the project would not be considered to be growth-inducing from a short-term employment perspective. Currently, the staff at the site is 25 employees. The proposed expansion would increase the Page Museum square footage by approximately 67%, so it is estimated that the employees at the site would increase by a similar percentage. Thus, once the project is operational, the project is estimated to result in an increase of approximately 20 employees; however, this increase in employees is well within local and regional growth projections for population (see Chapter 4, Environmental Setting). In addition, the project would not directly result in the addition of new residents to the area because the project would not involve residential development.

The project site is located within an urban area that is currently served by existing utilities and infrastructure. The project would include necessary infrastructure improvements as discussed in Section 5.15, Utilities and Service Systems, including the replacement of existing water piping within the project site and the installation of two 6-inch sewer lines to be installed at the southeast corner of the site—one beneath the George C. Page Museum entrance and one just east of Lake Pit (KPFF Consulting Engineers

2021). Both sewer lines would connect to the existing sewer main along South Curson Avenue. While the project would require local infrastructure to connect the project site to the mainlines, such improvements would be limited to serving project-related demand and would not necessitate major local or regional utility infrastructure improvements that have not otherwise been accounted for and planned for on a regional level.

The project would not remove obstacles to population growth and would not cause an increase in population such that new community facilities or infrastructure would be required outside of the project site. Finally, the project is not expected to encourage or facilitate other activities that could significantly affect the environment. For these reasons, the project would not be significantly growth inducing.

7.2 SIGNIFICANT AND UNAVOIDABLE IMPACTS

State CEQA Guidelines Section 15126.2(c) requires an EIR to describe any significant impact, including those which can be mitigated but not reduced to a less-than-significant level. The section also requires that where there are impacts that cannot be alleviated without imposing an alternative design, their implications, and the reasons why the project is being proposed, notwithstanding their effect, should be described. Table 7-1 provides a summary of the impacts associated with the project that were concluded to be significant and unavoidable. These impacts are also described in detail in Chapter 5, Environmental Impact Analysis, of this EIR.

Table 7-1. Significant and Unavoidable Impacts Resulting from the Project

Environmental Issue Area	Impact	Reason for Significance Determination
Cultural Resources – Historical Resources	**CR-HIST Impact 1:** As a result of project construction, the project would cause a substantial adverse change in the significance of a Historical Resource pursuant to Section 15064.5 of the State CEQA Guidelines. Specifically, the project would cause a substantial adverse change in the significance of two identified historical resources: the La Brea Tar Pits Historic District and the George C. Page Museum. Construction impacts would be significant. Project operation would not cause a substantial adverse change in the significance of historic resources pursuant to State CEQA Guidelines Section 15064.5. No operational impacts would occur.	**Significant and unavoidable**. The proposed alterations to the Page Museum during project construction would compromise its historic integrity to the point that the historical resource would no longer convey the reasons for its significance. In addition, the project construction would result in a comprehensive redesign of Hancock Park, which would erode and interrupt the eclectic but cohesive character-defining features of this historic district such that it would no longer convey the reasons for its significance as a California Register of Historical Resources- and locally eligible historic district. The loss of eligibility for the resource represents material impairment and an impact on the environment. Construction impacts would be significant. While implementation of project Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5 would reduce impacts, the project would alter these resources in such a way that they would no longer convey the reasons for their significance within the parameters of the design and key features envisioned in the Master Plan. There are no mitigation measures that would reduce these impacts to less-than-significant levels while meeting the project objectives and keeping the primary elements of the Master Plan; therefore, construction impacts of the project would remain *significant and unavoidable* after mitigation.

Environmental Issue Area	Impact	Reason for Significance Determination
Land Use and Planning	**LUP Impact 2:** Implementation of the project would result in the alteration of designated historical resources and would be potentially inconsistent with the objectives, goals, and policies of the County's General Plan Conservation and Natural Resources Element, the City's General Plan Conservation Element, and the Wilshire Community Plan as they pertain to the protection of designated historical resources.	**Significant and unavoidable**. The project would result in the alteration of designated historical resources, the La Brea Tar Pits Historic District and the Page Museum, which is inconsistent with the objectives, goals, and policies of the County's General Plan Conservation and Natural Resources Element, the City's Conservation Element, and the Wilshire Community Plan as they pertain to the protection of designated historical resources (County of Los Angeles 2015, City of Los Angeles 2001a, 2001b). While implementation of project Mitigation Measures CR-HIST/mm-1.1 through CR-HIST/mm-1.5 would reduce impacts, the project would alter these resources in such a way that they would no longer convey the reasons for their significance within the parameters of the design and key features envisioned in the Master Plan. There are no mitigation measures that would reduce these impacts to less than significant while meeting the project objectives and keeping the primary elements of the Master Plan; therefore, impacts of the project would remain significant and unavoidable after implementation of the recommendations, creating inconsistencies with the applicable land use objectives, goals, and policies set forth in the County of Los Angeles General Plan, the City of Los Angeles General Plan, and the Wilshire Community Plan. Impacts would remain *significant and unavoidable*.
Transportation	**TRA-Impact 2:** Operation of the project would result in a net increase in vehicle miles traveled (VMT) and would result in a substantial increase in VMT.	**Significant and unavoidable**. The project would result in an average visitor trip length that is higher than the average recreation trip length. Visitor travel trips to the museum are approximately 196% longer than the average recreation trip in Los Angeles and Orange Counties. Given that museum visitor trips are longer than regional recreation trip lengths, additional visitor trips to the project site due to implementation of the project would result in a net increase in total VMT. While the project's mitigation measure TRA/mm-1.1 would aim to reduce employee and visitor VMT and support multimodal connectivity, it may be insufficient to reduce VMT to less-than-significant levels and there are no additional feasible mitigation measures to reduce the impact. Therefore, operation of the project would result in a substantial increase in VMT and would remain *significant and unavoidable* after mitigation.

Note: The LUP Impact 2 is a consistency analysis of the applicable land use plans, policies, and regulations, and considers the holistic impacts associated with implementation of the project; it does not provide separate construction and operation analyses or conclusions.

7.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

State CEQA Guidelines Section 15126.2(d) identifies significant irreversible environmental changes as the use of nonrenewable resources during the initial and continued phases of a proposed project that may be irreversible, since a large commitment of these resources makes removal or nonuse thereafter unlikely. Irreversible environmental changes may also result from environmental accidents associated with the project. In accordance with this section of the State CEQA Guidelines, this section of the EIR evaluates whether the project would result in the irretrievable commitment of resources or would cause irreversible changes in the environment.

The project would necessarily consume a limited amount of slowly renewable and non-renewable resources that could result in irreversible environmental changes. This consumption would occur during construction of the project and would continue throughout its operational lifetime. The development of the project would require a commitment of resources that would include: 1) building materials and

associated solid waste disposal effects on landfills; 2) water; and 3) energy resources (e.g., fossil fuels) for electricity, natural gas, and transportation. As demonstrated below, the project would consume a limited commitment of natural resources and would not result in significant irreversible environmental changes.

7.3.1 Commitment to Resources

The project would result in expansion and upgrades for the La Brea Tar Pits complex and the 13-acre portion of Hancock Park, including renovations to the Page Museum. Construction of the project would irreversibly commit construction materials and non-renewable energy resources (e.g., fossil fuels, wood, etc.). Non-renewable resources used during the construction of development within the project site could no longer be used for other purposes. Consumption of building materials and energy is associated with all development projects in the region, and these commitments of resources are not unique or unusual to the project. Construction of residential and commercial structures would be subject to the California Building Code (CBC), which regulates the method of use, properties, performance, and types of building materials used in construction. Construction equipment would be subject to state and local fuel efficiency standards and idling restrictions.

An important consideration for this analysis is that La Brea Tar Pits, including the Page Museum, are current County facilities that consume environmental resources under baseline conditions. After new facilities are constructed, the project would continue to rely on similar resources as pre-project conditions. This reliance on resources would occur with or without project construction during normal operations of La Brea Tar Pits and the Page Museum.

7.3.1.1 Solid Waste

The project's impacts regarding solid waste are discussed in Section 5.15, Utilities and Service Systems. As discussed therein, pursuant to Senate Bill 1374, during construction of the project, the project would implement a construction waste management plan to recycle and/or salvage a minimum of 75% of non-hazardous demolition and construction debris. Thus, the consumption of nonrenewable building materials such as lumber, aggregate materials, and plastics would be reduced. The project would also comply with Assembly Bill (AB) 939, AB 341, AB 1826, and City of Los Angeles (City) waste diversion goals, as applicable, by providing clearly marked, source-sorted receptacles to facilitate recycling.

7.3.1.2 Water

Consumption of water during construction and operation of the project is also addressed in Section 5.15, Utilities and Service Systems. As evaluated therein, given the temporary nature of construction activities, the short-term and intermittent water use during construction of the project would be less than the proposed water consumption at the project site, and the project's temporary and intermittent demand for water during construction would be met by Los Angeles Department of Water and Power's (LADWP's) available supplies during each year of project construction. While operation of project would result in an increase in long-term water demand for consumption, operational uses, maintenance, and other activities on the project site, the project would be consistent with the City's existing land use designation; therefore, the water demand associated with the project was considered in the demand anticipated by LADWP's 2020 Urban Water Management Plan. As confirmed in a letter provided by LADWP dated October 28, 2022, LADWP expects to have adequate water supplies to meet all its demands until at least 2045, including those of the proposed project (LADWP 2022).

7.3.1.3 Energy Resources

Project operation would continue to expend nonrenewable resources that are currently consumed within Los Angeles County. These include energy resources such as electricity and natural gas, petroleum-based fuels required for vehicle trips, fossil fuels, and water. Fossil fuels would represent the primary energy source associated with both construction and ongoing operation of the project, and the existing, finite supplies of these natural resources would be incrementally reduced.

The project has been designed and would be constructed to incorporate environmentally sustainable building features and construction protocols required by the California Green Building Standards Code (CALGreen). These standards would minimize energy and water usage and waste and, thereby, reduce associated greenhouse gas (GHG) emissions and help minimize the impact on natural resources and infrastructure. The project would include energy-saving measures, including enhanced daylighting; rainwater collection leading to bioswales; a sloped green roof; rooftop solar photovoltaic panels; heating, ventilation, and air conditioning (HVAC) systems that would be sized and designed in compliance with CALGreen to maximize energy efficiency caused by heat loss and heat gain; and new and existing tree canopies to protect building walls from sun exposure and provide shade for the ground area. Daylighting is the controlled admission of natural light, direct sunlight, and diffused skylight into a building to reduce electric lighting and save energy. By providing a direct link to the dynamic and perpetually evolving patterns of outdoor illumination, daylighting helps create a visually stimulating and productive environment for building occupants, while reducing as much as one-third of total building energy costs. These measures were generally accounted for based on compliance with 2019 Title 24 standards. Furthermore, the project would incorporate design features, such as solar photovoltaic panels, to reduce the amount of electricity demand from City utilities. The project would include water sustainability features, which would include, but not be limited to, the installation of low-flow toilets, low-flow faucets, low-flow showers, and other energy and resource conservation measures. In addition, the project would provide sustainability features, such as stormwater capture and reuse system and drought-tolerant landscaping, to reduce the project's outdoor water demand, thereby reducing the project's GHG emissions associated with water conveyance and wastewater treatment.

The project would introduce strategies that would reduce reliance on private automobiles and vehicle miles traveled (VMT) through implementation of mitigation measure TRA/mm-1.1 which would require the development and implementation a Transportation Demand Management Program to reduce museum employee and visitor vehicle trips and increase alternative modes such as walking, bicycling, public transit, and rideshare. Furthermore, the project would comply with the California Air Resources Board (CARB) Climate Change Scoping Plan, the Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), Title 24 Building Energy Efficiency Standards and CALGreen, the County of Los Angeles General Plan, and the City's Green New Deal.

7.3.2 Environmental Accidents

The project's impacts related to hazards and hazardous materials are discussed in Section 5.8, Hazards and Hazardous Materials. Construction of the proposed project would also result in the short-term use of construction-related hazardous substances (e.g., gasoline, fuels, solvents, paints, oils, etc.) during the estimated 36-month construction phase of the project. The use of these substances could lead to upset conditions as a result of accidental spill or release. Any hazardous substances used during project construction would be required to be used, transported, and disposed of in accordance with Occupational Safety and Health Administration (OSHA) Process Safety Management Standard (California Code of Regulations [CCR] 29.1910.119) and CCR Title 22 Division 4.5. Adherence to existing state

requirements would minimize the potential for the project to result in upset or accident conditions related to construction-related hazardous substance use.

7.3.3 Conclusion

Based on the above, project construction and operation would require the irretrievable commitment of limited, slowly renewable, and nonrenewable resources, which would limit the availability of these resources and the project site for future generations or for other uses. However, the consumption of such resources would not be considered substantial and would be consistent with regional and local growth forecasts and development goals for the area. The loss of such resources would not be highly accelerated when compared to existing conditions and such resources would not be used in a wasteful manner. Therefore, although irreversible environmental changes would result from the project, such changes are concluded to be less than significant, and the limited use of nonrenewable resources that would be required by project construction and operation is justified.

7.4 ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

State CEQA Guidelines Section 15128 requires an EIR to contain a statement briefly indicating the reasons that various potential significant effects of a project were determined not to be significant and, therefore, were not further discussed in the EIR. Based on preliminary analysis and discussions with the Los Angeles County Museum of Natural History Foundation, it was determined that the project would not result in significant impacts related to agricultural and forestry resources, energy, mineral resources, population and housing, public services, and wildfire. Therefore, the analysis of these issue areas is not as intensive in this EIR as that described for other resources included in Chapter 5, Environmental Impact Analysis. In accordance with State CEQA Guidelines Section 15128, the following sections include a brief evaluation and substantiation of why these impacts have been found not to be significant.

7.4.1 Agricultural and Forestry Resources

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d) Result in the loss of forest land or conversion of forest land to non-forest use?

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The project site is located in an urban area within the city of Los Angeles. It is currently developed with uses that benefit the public, including the Page Museum and other associated buildings, facilities, recreation areas, and a surface parking area. While the project site is owned by the County of Los Angeles

(County), it is located within the jurisdictional boundaries of the City of Los Angeles, and as such, it is identified in the City General Plan and the Wilshire Community Plan with a land use designation of Public Facilities (PF) and an associated zoning designation of Public Facilities, Height District 1, Development Limitation (PF-1D).

No agricultural uses or operations occur on-site or within the vicinity of the project site. Neither the project site nor the surrounding area is zoned for agricultural or forest uses, and no agricultural or forest lands occur within or in the vicinity of the project site. Therefore, the project would not convert designated farmland pursuant to the Farmland Mapping and Monitoring Program to non-agricultural use; conflict with existing zoning for agricultural use, or a Williamson Act contract; conflict with existing zoning for, or cause rezoning of, forest land, timberland or timberland zoned Timberland Production; result in the loss of forest land or conversion of forest land to non-forest use; or involve other changes in the existing environment which could result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use. *No impacts* related to agricultural and forestry resources would occur.

Since the project would not result in impacts related to agricultural and forestry resources, it could not contribute to cumulative impacts related to these resources. No cumulative impacts related to agricultural and forestry resources would occur.

7.4.2 Energy

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The analysis provided in this section is based on the *Energy Analysis Report for the La Brea Tar Pits Master Plan*, prepared by SWCA Environmental Consultants (SWCA) dated October 2022 and included as Appendix L. The Energy Analysis Report estimated energy consumption calculations using CalEEMod Version 2022.1. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operation of a variety of land use projects. Details regarding CalEEMod assumptions for the project are presented in the Energy Analysis Report and in the *La Brea Tar Pits Master Plan Air Quality and Greenhouse Gas Technical Report* (SWCA 2022a, 2022b; see Appendices L and C, respectively). This analysis addresses the requirements of the State CEQA Guidelines Appendix F (Energy Conservation).

CONSUMPTION OF ENERGY RESOURCES

Construction

During construction of the project, electricity would be consumed, on a limited basis, to power lighting, electric equipment, and supply and convey water for dust control and for an on-site construction trailer. Electricity would be supplied to the project site by LADWP and would be obtained from the existing electrical lines that connect to the project site. The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed and would cease

upon completion of construction. Electricity use from construction would be short term, limited to working hours, used for necessary construction-related activities, and would represent a small fraction of the project's net annual operational electricity. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. Furthermore, the electricity used for off-road light construction equipment would have the co-benefit of reducing construction-related air pollution and GHG emissions from more traditional construction-related energy in the form of diesel fuel.

During project construction, on- and off-road vehicles would consume an estimated annual average of approximately 142,095 gallons of gasoline and 272,696 gallons of diesel (SWCA 2022a). Project construction activities would last for approximately 4 years. Construction of the project would use fuel-efficient equipment consistent with state and federal regulations, such as fuel efficiency regulations in accordance with the CARB Pavley Phase II standards, the anti-idling regulation in accordance with Section 2485 in 13 CCR, and fuel requirements in accordance with 17 CCR Section 93115. The project would benefit from fuel and automotive manufacturers' compliance with Corporate Average Fuel Economy (CAFE) standards, which would result in more efficient use of transportation fuels (lower consumption). As such, the project would indirectly comply with regulatory measures to reduce the inefficient, wasteful, and unnecessary consumption of energy, such as petroleum-based transportation fuels. While these regulations are intended to reduce construction emissions, compliance with the anti-idling and emissions regulations discussed above would also result in fuel savings from the use of more fuel-efficient engines.

In addition, the project would divert mixed construction and demolition debris to City-certified construction and demolition waste processors using City-certified waste haulers, consistent with the Los Angeles City Council approved Ordinance No. 181519 (City of Los Angeles Municipal Code Chapter VI, Article 6, Section 66.32 6.32.5). Diversion of mixed construction and demolition debris would reduce truck trips to landfills, which are typically located some distance away from city centers and would increase the amount of waste recovered (e.g., recycled, reused, etc.) at material recovery facilities, thereby further reducing transportation fuel consumption.

Based on the analysis above, construction would use energy only for necessary on-site activities and to transport construction materials and demolition debris to and from the project site. As discussed above, idling restrictions and the use of cleaner, energy-efficient equipment and fuels would result in less fuel combustion and energy consumption, and thus minimize the project's construction-related energy use.

Operation

During operation of the project, energy would be consumed for multiple purposes, including, but not limited to, HVAC, refrigeration, lighting, and the use of electronics, equipment, and machinery. Energy would also be consumed during project operations related to water usage, solid waste disposal, and vehicle trips. Development of the project would result in an annual estimated energy demand of 1,082,928 kilowatt-hours (kWh) per year and require 155,576 gallons of gasoline and 4,493 gallons of diesel per year (SWCA 2022a).

The project would be designed to meet the State and County green building requirements and include the installation of additional features to reduce energy use throughout the buildings. The project includes the incorporation of several energy-efficient features to the Page Museum. The features include enhanced daylighting, rainwater collection leading to bioswales, a sloped green roof, and incorporation of rooftop solar photovoltaic panels onto the buildings, where possible. Daylighting is the controlled admission of natural light, direct sunlight, and diffused-skylight into a building to reduce electric lighting and save energy. By providing a direct link to the dynamic and perpetually evolving patterns of outdoor illumination, daylighting helps create a visually stimulating and productive environment for building

occupants, while reducing as much as one-third of total building energy costs. Water conservation measures could include the use of drought-tolerant planting, installation of dual plumbing in order to use reclaimed water for toilet flushing, use of restaurant faucets of a self-closing design, and stormwater retention through a biofiltration flow-through system to treat the first flush of stormwater runoff before it is captured in below grade cisterns, and used on-site for toilets, urinals, and landscape irrigation. These features would further maximum energy efficiency.

With compliance with Title 24 standards and applicable CALGreen requirements, at buildout, the project would result in a projected net increase in the on-site annual demand for electricity totaling 1,082,928 kWh for the project (SWCA 2022a). The project would include energy-saving measures, including natural light to be harvested for the main spaces using large expanses of glass and skylights; daylighting systems to coordinate the levels of artificial lighting; HVAC systems that would be sized and designed in compliance with CALGreen to maximize energy efficiency caused by heat loss and heat gain; and new and existing tree canopies to be used to protect building walls from sun exposure and provide shade for the ground area. These measures were generally accounted for based on compliance with Title 24 standards. In addition to compliance with CALGreen, the project would also incorporate rooftop solar photovoltaic panels onto the buildings, where possible.

Further, it is important to note that the total net project energy demand does not reflect the fact that project operational-related energy would likely be lower, as the project would provide sustainability features that would reduce the project's indoor and outdoor water demand. These measures include rainwater collection leading to bioswales and drought-tolerant landscaping, resulting in a reduction in water demand and less use of pesticides. These measures were conservatively not accounted for since a specific outdoor water reduction value could not conclusively be calculated.

Based on the LADWP 2017 Power Strategic Long-Term Resource Plan, LADWP forecasts that its total energy sales in the 2028–2029 fiscal year (the project's buildout year) will be 24,341 gigawatt hours (GWh) of electricity (LADWP 2017). Thus the project-related annual electricity consumption of 1.13 GWh per year would be less than 0.005% of LADWP's projected sales in 2028. As previously described, the project incorporates a variety of energy and water conservation measures and features to reduce energy usage and minimize energy demand. Therefore, with the incorporation of these measures and features, operation of the project would not result in the wasteful, inefficient, or unnecessary consumption of electricity.

The project would increase the demand for natural gas resources. With compliance with Title 24 standards and applicable CALGreen requirements, at buildout, the project is projected to generate a net increase in the on-site annual demand for natural gas totaling 3,745,669 cubic feet. Southern California Gas Company (SoCalGas) accounts for anticipated regional demand based on various factors, including growth in employment by economic sector, growth in housing and population, and increasingly demanding State goals for reducing GHG emissions. SoCalGas accounts for an increase in employment and housing between 2018 to 2035. The project forecasted annual consumption would fall within SoCalGas' projected consumption for the area and would be consistent with SoCalGas' anticipated regional demand from population or economic growth (SWCA 2022a). As would be the case with electricity, the project would comply with the applicable provisions of Title 24 and CALGreen in effect at the time of building permit issuance to minimize natural gas demand. As such, the project would minimize energy demand. Therefore, with the incorporation of these measures and features, operation of the project would not result in the wasteful, inefficient, or unnecessary consumption of natural gas.

During operations, project-related traffic would result in the consumption of petroleum-based fuels related to vehicular travel to and from the project site. A majority of the vehicle fleet that would be used by project visitors and employees would consist of light-duty automobiles and light-duty trucks, which

are subject to fuel efficiency standards. The project's estimated annual net increase in petroleum-based fuel usage would be 155,576 gallons of gasoline and 4,493 gallons of diesel for the project (SWCA 2022a). Based on the California Energy Commission's (CEC's) California Retail Fuel Outlet Annual Reporting (CEC 2022), Los Angeles County consumed 3,559,000,000 gallons of gasoline and 563,265,306 gallons of diesel fuel in 2019.

The project would support statewide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles for the reasons provided below. The project would not conflict with the SCAG 2020-2045 RTP/SCS goals and benefits intended to improve mobility and access to diverse destinations, provide better "placemaking," provide more transportation choices, and reduce vehicular demand and associated emissions. The project would support these strategies by creating a community serving recreational development comprising recreational uses (including a museum, park, and café) that offer employment and other community-serving opportunities. The project supports the development of a balanced mixed of uses by co-locating complementary land uses on an infill project site that is in close proximity to existing off-site commercial and residential uses, being located within 0.25 mile of off-site commercial and residential uses, and located within an identified high-quality transit area (HQTA) in a highly walkable area well-served by public transportation (refer to the Air Quality and Greenhouse Gas Technical Report [SWCA 2022b] for additional information regarding the SCAG 2020-2045 RTP/SCS). The project would concentrate recreational and athletic facility uses within an HQTA in an urban infill location in proximity to multiple public transit stops. There would be pedestrian entry gates along the perimeter of the project site that would provide access to the park, museum, and landscaped areas. The project would minimize vehicle trips and VMT by virtue of being in a location that has existing high-quality public transit (with access to existing regional bus and rail service), employment opportunities, restaurants and entertainment, all within walking distance—and by including features that support and encourage increase transit use, pedestrian activity, and other non-vehicular transportation.

Additionally, the project design would provide for the installation of the conduit and panel capacity to accommodate electric vehicle charging stations for a minimum of 10% of the parking spaces pursuant to CALGreen. Based on the above, the project would minimize operational transportation fuel demand consistent with state, regional, and city goals.

Conclusion

As demonstrated by the previous analysis, the project would not cause wasteful, inefficient, or unnecessary consumption of energy during construction or operation. The project's energy usage during peak and base periods would also not conflict with electricity, natural gas, and transportation fuel future projections for the region. During operations, the project would comply with and exceed existing minimum energy-efficiency requirements, such as the Title 24 standards and CALGreen. In summary, the project's energy demands would not significantly affect available energy supplies and would comply with existing energy efficiency standards. Therefore, the project would not cause wasteful, inefficient, and unnecessary consumption of energy and impacts related to energy use during construction and operation would be *less than significant*.

Since the project would result in less than significant impacts related to energy use during construction and operation, it could not contribute to cumulative impacts related to wasteful, inefficient, or unnecessary consumption of energy resources. No cumulative impacts to energy would occur.

CONFLICTS WITH PLANS FOR ENERGY EFFICIENCY

The analysis for the project's consistency with appliable plans for energy efficiency considers the project holistically. This approach is consistent with the plans and policies, which also consider the project holistically (i.e., the plans and policies generally do not segregate impacts by construction and operation). The project's consistency analysis with appliable plans for energy efficiency is described below.

The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. A detailed discussion of the project's comparison with the applicable actions and strategies in the City's Green New Deal is provided in the Air Quality and Greenhouse Gas Technical Report (SWCA 2022b). The project is designed in a manner that is consistent with and not in conflict with relevant energy conservation plans that are intended to encourage development that results in the efficient use of energy resources. The project would comply with applicable regulatory requirements for the design of new buildings, including the provisions set forth in the Title 24 standards and CALGreen. Electricity and natural gas usage during project operations would be minimized through incorporation of applicable Title 24 standards and applicable CALGreen requirements. Furthermore, the project incorporates energy-conservation measures beyond regulatory requirements, including solar panels that would offset some of its overall energy usage with on-site renewable electricity. The project would also provide sustainability features that would reduce the project's indoor and outdoor water demand. The project would also be consistent with and not conflict with regional planning strategies that address energy conservation. As part of the approach, the SCAG 2020-2045 RTP/SCS focus on reducing fossil fuel use by decreasing VMT, encouraging the reduction of building energy use, and increasing use of renewable sources would be followed. The project's design and its location on an infill site within an HQTA in proximity to transit; its proximity to existing off-site retail, restaurant, entertainment, commercial, and job destinations; and its walkable environment would achieve a reduction in VMT.

Conclusion

In addition, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The project would implement project design features and incorporate water conservation, energy conservation, landscaping, and other features consistent with applicable actions and strategies in the City's Green New Deal. The project would also be consistent with and not conflict with regional planning strategies that address energy conservation. As part of the approach, the SCAG 2020-2045 RTP/SCS focus on reducing fossil fuel use by decreasing VMT, encouraging the reduction of building energy use, and increasing use of renewable sources would be followed. The project's design would comply with existing energy standards and incorporate project design features to reduce energy consumption. Therefore, the project would not conflict with energy conservation plans and impacts would be *less than significant*.

Since the project would result in less than significant impacts related to conflicts with energy conservation plans, it could not contribute to cumulative impacts related to this issue. No cumulative impacts related to conflicts with energy conservation plans would occur.

7.4.3 Mineral Resources

Would the project:

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The project site is located within an urban area that has been previously disturbed by development, and no mineral extraction operations currently occur on the project site. While the project site is owned by the County, it has a City zoning designation of Public Facilities, Height District 1 (PF-1D). The project site is not located within a County- or City-designated Mineral Resource Zone where significant mineral deposits are known to be present, or within a mineral producing area as classified by the California Geologic Survey (City of Los Angeles 2001). The project site is also not located within a City-designated oil field or oil drilling area. Thus, the project would not result in the loss of availability of a mineral resource that would be of value to the region or the state. The project would also not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, there would be *no impacts* related to mineral resources.

Since the project would not result in impacts related to mineral resources, it could not contribute to cumulative impacts related to these resources. No cumulative impacts related to mineral resources would occur.

7.4.4 Population and Housing

Would the project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The project does not include housing and thus would not directly introduce a new residential population that would contribute to population growth in the vicinity of the project site. While construction of the project would create temporary construction-related jobs, the work requirements of most construction projects are highly specialized such that construction workers remain at a job site only for the time during which their specific skills are needed to complete a particular phase of the construction process. The project would draw from the existing regional pool of construction workers who typically move from project to project as work is available. Project-related construction workers would not be anticipated to relocate their household's permanent place of residence as a consequence of working on the project and, therefore, no new permanent residents are expected to be generated during construction of the project. In addition, the project involves the development of a new museum building, which would add approximately 20 new employment opportunities to the area; however, this increase in employees is well within local and regional growth projections for population (see Chapter 4, Environmental Setting). In addition, the project would be in a generally developed area with an established network of roads and other urban infrastructure and would not require the extension of such infrastructure in a manner that

would indirectly induce substantial population growth. Thus, the project would not induce population growth and *no impact* would occur.

The project site does not contain any residential structures and no people live on the site under existing conditions. The project does not include the addition of a residential component and, as such, no changes to existing conditions related to housing would occur. Therefore, implementation of the project would not displace substantial numbers of existing housing or people and would not necessitate the construction of replacement housing elsewhere; *no impacts* would occur.

Since the project would not result in impacts related to population and housing, it could not contribute to cumulative impacts related to population growth or the displacement of substantial numbers of existing housing or people. No cumulative impacts related to population and housing would occur.

7.4.5 Public Services

Would the project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

i. Fire protection

ii. Police protection

iii. Schools

iv. Parks

v. Other public facilities

The project is not expected to induce population growth as it would not include residential uses, therefore it is expected that there would be no net increase in population growth. The project does not include direct or indirect construction of housing, public services, or schools. The project would not require the provision of new or additional public services, as discussed below.

FIRE PROTECTION

The Los Angeles Fire Department (LAFD) is responsible for providing fire protection services to the project site. The nearest LAFD fire station serving the project site is Fire Station 61, located at 5821 West 3rd Street, approximately 0.8 mile northeast of the project site. The project does not involve the development of residential uses, which typically generate a greater demand for public services compared to non-residential uses. The proposed museum building may temporarily increase the daytime population when the project is initially complete and temporarily generate an increased demand for fire protection and emergency medical services. However, the daytime population would be expected to stabilize over time such that the demand for fire protection and emergency medical services is comparable to existing conditions. The project would be designed to incorporate all County Fire Code and Building Code requirements as applicable, regarding structural design, building materials, site access, fire flow, storage and management of hazardous materials, and alarm and communications systems, etc. Compliance with applicable County Fire Code and Building Code requirements, along with compliance with

recommendations from the County Fire Department and LAFD, would ensure that adequate fire prevention features would be provided that would reduce any potential increased demand for fire protection and emergency medical services.

Regarding emergency access and response times during operation, the project would maintain the existing circulation adjacent to the project site and would not include the permanent closure of any adjacent roads or install barriers along adjacent roads which could impede emergency access. Furthermore, while the project could temporarily generate additional traffic in the vicinity of the project, pursuant to Section 21806 of the California Vehicle Code, the drivers of emergency vehicles have a variety of options for avoiding traffic, such as using their sirens and flashing lights to clear a path of travel or driving in the lanes of opposing traffic. The project-related traffic is not anticipated to impair the LAFD from responding to emergencies at the project site or the surrounding area. Thus, *no impacts* to fire protection services would occur.

Since the project would not result in impacts related to fire protection services, it could not contribute to cumulative impacts related to this issue. No cumulative impacts related to fire protection services would occur.

POLICE PROTECTION

The Los Angeles Police Department (LAPD) is responsible for providing police protection services to the project site. The nearest LAPD police station serving the project site is the Wilshire Community Police Station, located at 4861 Venice Boulevard, approximately 2 miles southeast of the project site. The project does not involve the development of residential uses, which typically generate a greater demand for public services compared to non-residential uses.

During construction, construction sites can be sources of nuisances and hazards and invite theft and vandalism. Given the existing project site operations and in accordance with standard construction industry practices, the potential for theft of construction equipment and building materials would be minimized using security fencing, lighting, locked entry, and security patrol of the project site and construction areas. Upon project completion, the project may temporarily increase the daytime population within the Wilshire Community Police Station's service area when the project is initially complete. The temporary daytime population projected to be generated by the project could contribute to an increase in the demand for police protection services as provided by the Wilshire Community Police Station. However, the daytime population and associated demand for police protection services is expected to drop back to average attendance over time. In addition, the project does not include any residential uses, which typically have a higher direct demand on police protection services. Therefore, the project would not directly affect the existing officer-to-resident ratio or the crimes-per-resident ratio citywide or within the Wilshire Community Police Station service area. Nevertheless, to help reduce any on-site increase in demand for police services, the project would implement comprehensive safety and security features to enhance public safety and reduce the demand for police services.

Regarding emergency access and response times during operation, the project would maintain the existing circulation adjacent to the project site and would not include the permanent closure of any adjacent roads or install barriers along adjacent roads which could impede emergency access. Furthermore, while the project could temporarily generate additional traffic in the vicinity of the project, pursuant to Section 21806 of the California Vehicle Code, the drivers of emergency vehicles have a variety of options for avoiding traffic, such as using their sirens and flashing lights to clear a path of travel or driving in the lanes of opposing traffic. The project-related traffic is not anticipated to impair the LAPD from responding to emergencies at the project site or the surrounding area. Thus, *no impacts* to police protection services would occur.

Since the project would not result in impacts related to police protection services, it could not contribute to cumulative impacts related to this issue. No cumulative impacts related to police protection services would occur.

SCHOOLS

Implementation of the project would not create a direct demand for public school services as the subject property would contain non-residential uses and would not generate any school-aged children requiring public education. Furthermore, implementation of the project would improve the educational experience for school visits by the Los Angeles Unified School District and other educational organizations. Thus, the project would not result in the need for new or altered school facilities. Thus, *no impacts* to schools would occur.

Since the project would not result in impacts related to schools, it could not contribute to cumulative impacts related to this issue. No cumulative impacts related to schools would occur.

PARKS

Parks and recreational facilities in the vicinity of the project site are primarily operated and maintained by the Los Angeles Department of Recreation and Parks. Nearby public parks and recreational facilities and the anticipated impacts of the project are discussed in Section 5.12, Recreation. While the project site provides existing uses that benefit the public and passive recreational opportunities including open space, it is not designated as parkland and is not managed by the respective parks and/or recreation departments of either the County or the City. Implementation of the project would allow for the continued provision of passive outdoor space at Hancock Park, including Central Green, plazas/welcome pavilions, and a pedestrian bridge and walking path. The project would not include residential uses and implementation of the project would not generate a new residential population that would regularly use nearby parks and recreational facilities. As such, the project would not impact or contribute to the County's or the City's parkland ratios. *No impacts* to parkland ratios would occur.

Since the project would not result in impacts related to parkland ratios, it could not contribute to cumulative impacts related to this issue. No cumulative impacts related to parkland ratios would occur.

OTHER PUBLIC FACILITIES

The closest public library serving the project site is the Fairfax Branch Library located at 161 South Gardner Street, approximately one mile north of the project site. The project would introduce a new museum building and employees to the project site, which could result in an incremental increase in demand for other public facilities, such as library services. However, it is not anticipated to require or result in the construction of new or physically altered public facilities such as libraries. Furthermore, the project does not propose the development of residential uses; therefore, implementation of the project would not result in a direct increase in the number of residents within the service area of the Fairfax Branch Library. Thus, *no impacts* to libraries would occur.

Since the project would not result in impacts related to libraries, it could not contribute to cumulative impacts related to this issue. No cumulative impacts related to libraries would occur.

7.4.6 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project site is surrounded by a variety of urban land uses and is not classified by the California Department of Forestry and Fire Protection (CAL FIRE) as located within a Very High Fire Hazard Severity Zone in a State Responsibility Area or Local Responsibility Area (CAL FIRE 2022). Therefore, the project would not interfere with emergency response or evacuation plans during wildfires, exacerbate wildfire risks, require the installation of wildfire prevention infrastructure, or expose people or structures to post-fire flooding or landslides. Therefore, the project would have *no impacts* related to wildfire and this issue area was not further evaluated in this EIR.

Since the project would not result in impacts related to wildfire, it could not contribute to cumulative impacts related to this issue. No cumulative impacts related to wildfire would occur.

CHAPTER 8. REFERENCES AND REPORT PREPARATION

8.1 GENERAL REFERENCES

California Department of Forestry and Fire Protection (CAL FIRE). 2022. Fire Hazard Severity Zones in State Responsibility Area. Available at: https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=4466cf1d2b9947bea1d4269997e86553. Accessed January 2023.

California Energy Commission (CEC). 2022. *2021 Integrated Energy Policy Report*. February. Available at: https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report. Accessed September 2022.

California State Parks. 2022. Hancock Park La Brea: Historical Landmark. Available at: https://ohp.parks.ca.gov/ListedResources/Detail/170. Accessed September 2022.

City of Beverly Hills. 2022. Current Development Activity Projects List. September 12, 2022. Available at: https://www.beverlyhills.org/departments/communitydevelopment/planning/currentplanninganddevelopment/Accessed September 2022.

City of Los Angeles. 2001. *Conservation Element of the City of Los Angeles General Plan*. Available at: https://planning.lacity.org/odocument/28af7e21-ffdd-4f26-84e6-dfa967b2a1ee/Conservation_Element.pdf. Accessed January 2023.

———. 2022a. Cumulative Project Verification. Email correspondence, William Lamborn, Senior City Planner, with Bobbette Biddulph, Senior Environmental Planner, SWCA Environmental Consultants on August 23, 2022, and October 18, 2022. On file, SWCA Environmental Consultants, Pasadena, California.

———. 2022b. Los Angeles City Planning. Published Documents. Available at: https://planning.lacity.org/development-services/environmental-review/published-documents. Accessed September 2022.

City of West Hollywood. 2022. Interactive Project Information Map: Current Planning Projects. Available at: https://www.weho.org/city-government/city-departments/community-development-department/infomap-interactive-project-information-map Accessed September 2022.

County of Los Angeles. 2019. *Our County. Los Angeles Countywide Sustainability Plan.* Available at: https://ourcountyla.lacounty.gov/wp-content/uploads/2019/07/OurCounty-Final-Plan_For-Web.pdf.Accessed September 2022.

County of Los Angeles Department of Public Works (County Public Works). 2014. *Low Impact Development Standards Manual*. Available at: https://pw.lacounty.gov/ldd/lddservices/docs/Los%20Angeles%20County%20Low%20Impact%20Development%20(LID)%20Manual.pdf. Accessed December 2022.

Kittelson and Associates, Inc. 2022. *La Brea Tar Pits Master Plan Final Transportation Assessment*. Prepared for SWCA Environmental Consultants. August 2022. On file, SWCA Environmental Consultants, Pasadena, California.

KPFF Consulting Engineers. 2021. *La Brea Tar Pits Master Plan: Preliminary Civil Engineering Narrative*. Los Angeles, California. On file, SWCA Environmental Consultants, Pasadena, California.

———. 2023a. *Low Impact Development (LID) and Hydrology Report. La Brea Tar Pits Design and Renovation.* June 2023. On file, SWCA Environmental Consultants, Pasadena, California.

———. 2023b. Email correspondence related to earthwork estimates from Kristen Sharer, PE, KPFF to Bobbette Biddulph, Senior Environmental Planner, SWCA Environmental Consultants, on January 18, 2023. On file with SWCA Environmental Consultants, Pasadena, California.

Los Angeles County Metropolitan Transportation Authority (Metro). 2022. Purple (D Line) Extension Transit Project – Section 1. Available at: https://www.metro.net/projects/purple-section1/. Accessed September 2022.

Los Angeles Department of Transportation (LADOT). 2020. *Transportation Assessment Guidelines.* July. Available at: https://ladot.lacity.org/sites/default/files/documents/ta_guidelines_allsections_2020.07.04_attachments.pdf. Accessed October 2022.

Los Angeles Department of Water and Power (LADWP). 2017. *Power Strategic Long-Term Resource Plan*. Available at: https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-power/a-p-pastandpresent?_adf.ctrl-state=dzvfabw4g_4&_afrLoop=1416707747487806. Accessed September 2022.

———. 2022. Water and Electricity Connection Service Request for the La Brea Tar Pits Master Plan Project. Written Correspondence from Nadia Parker for Charles C. Holloway, Manager of Environmental Planning and Assessment, LADWP to Jesse Rocha, Associate Project Manager, Operations, Natural History Museums of Los Angeles County. October 28, 2022. On file, SWCA Environmental Consultants, Pasadena, California.

Los Angeles Sanitation and Environment (LASAN). 2022. La Brea Tar Pits Master Plan Project – Request for Wastewater Service. Written Correspondence from Rowena Lau, Division Manager, LASAN to Richard Hayden, Assistance Deputy Director, Natural History Museums of Los Angeles County. November 22, 2022. On file, SWCA Environmental Consultants, Pasadena, California.

Natural History Museums of Los Angeles County. 2022. La Brea Tar Pits History. Available at: https://tarpits.org/la-brea-tar-pits-history. Accessed September 2022.

Southern California Association of Governments (SCAG). 2020. Current Context, Demographics and Growth Forecast Technical Report. Available at: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf?1606001579. Accessed September 2022.

SWCA Environmental Consultants (SWCA). 2022a. *Energy Analysis Report for the La Brea Tar Pits Master Plan.* Prepared for Los Angeles County Museum of Natural History Foundation. October. On file, SWCA Environmental Consultants, Pasadena, California.

———. 2023. *Air Quality and Greenhouse Gas Technical Report for the La Brea Tar Pits Master Plan*. Prepared for Los Angeles County Museum of Natural History Foundation. August. On file, SWCA Environmental Consultants, Pasadena, California.

United States Census Bureau. 2021. QuickFacts, Los Angeles County, California, Population Estimates. Available at: https://www.census.gov/quickfacts/losangelescountycalifornia. Accessed September 2022.

Weeks, K.D., and A.E. Grimmer. 2001. *Secretary of the Interior's Standards for the Treatment of Historic Properties, with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*. U.S. Department of the Interior, National Park Service, Washington, D.C. Available at: http://www.nps.gov/tps/standards/rehabilitation/rehabilitation-guidelines.pdf. Accessed July 2022.

Weiss, M., and M.A. Manfredi. 2023. *La Brea Tar Pits Loops and Lenses, Master Plan and Concept Design*. Prepared for the Natural History Museums of Los Angeles County. March 2023. On file, SWCA Environmental Consultants, Pasadena, California.

8.2 RESOURCE AREA REFERENCES

8.2.1 Aesthetics

California Department of Transportation (Caltrans). 2015. Officially Designated County Scenic Highways. Available at: https://dot.ca.gov/-/media/dot-media/programs/design/documents/od-county-scenic-hwys-2015-a11y.pdf. Accessed October 2022.

———. 2018. California State Scenic Highway System Map. Available at: https://caltrans.maps.arcgis.com/. Accessed October 2022.

City of Los Angeles. 2001. *Wilshire Community Plan*. Available at: https://planning.lacity.org/plans-policies/community-plan-area/wilshire. Accessed October 2022.

———. 2016. *Mobility Plan 2035.* Adopted September 7, 2016. Available at: https://planning.lacity.org/odocument/523f2a95-9d72-41d7-aba5-1972f84c1d36/Mobility_Plan_2035.pdf. Accessed October 2022.

County of Los Angeles. 2015. *Los Angeles County General Plan 2035*. *Chapter 9: Conservation and Natural Resources Element*. Available at: https://planning.lacounty.gov/wp-content/uploads/2022/11/9.0_gp_final-general-plan-ch9.pdf. October 2015. Accessed October 2022.

———. 2017. *LACMA Building for the Permanent Collection Draft Environmental Impact Report.* Los Angeles, California. Available at: https://ceo.lacounty.gov/draft-environmental-impact-report/. Accessed November 2022.

———. 2022. Department of Public Works, Best Practices: Design Excellence. Available at: https://dpw.lacounty.gov/landing/pb/designExcellence.cfm. Accessed October 2022.

Los Angeles County Museum of Art (LACMA). 2023. Building LACMA. Available at: https://www.lacma.org/support/building-lacma#building-facts. Accessed March 2023.

Millington, C., and J. Dietler. 2023. *Archaeological and Tribal Cultural Resources Assessment for the La Brea Tar Pits Master Plan Environmental Impact Report, Los Angeles, California*. SWCA Cultural Resources Report No. 23-47. SWCA Environmental Consultants, Pasadena, California.

8.2.2 Air Quality

California Air Pollution Control Officers Association (CAPCOA). 2022. *California Emissions Estimator Model (CalEEMod) and User Guide*. Version 2022.1.1.17. Available at: http://www.caleemod.com/. Accessed August 2023.

California Air Resources Board (CARB). 1998. *Report to the Air Resources Board on the Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant, Part A Exposure Assessment (as approved by the Scientific Review Panel).* Available at: https://ww2.arb.ca.gov/sites/default/files/classic/toxics/dieseltac/part_a.pdf. Accessed November 2022.

———. 2000a. *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos*. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/toxics/asbestos/ofr_2000-019.pdf. Accessed November 2022.

———. 2000b. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* Available at: https://ww2.arb.ca.gov/sites/default/files/classic/diesel/documents/rrpfinal.pdf. Accessed November 2022.

———. 2011. CARB Toxic Air Contaminant Identification List. Available at: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants. Accessed November 2022.

———. 2016. Ambient Air Quality Standards Chart. Available at: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf. Accessed November 2022.

———. 2017. Maps of State and Federal Area Designations, Area Designation Maps. Available at: https://www.arb.ca.gov/desig/adm/adm.htm. Accessed November 2022.

———. 2018. NASA satellite helps collect 15 years of Southern California air pollution data; results show air pollution controls working. Available at: https://ww2.arb.ca.gov/news/nasa-satellite-helps-collect-15-years-southern-california-air-pollution-data-results-show-air. Accessed November 2022.

County of Los Angeles. 2015. *Los Angeles County General Plan 2035*. Available at: https://planning.lacounty.gov/long-range-planning/general-plan/. October 2015. Accessed November 2022.

Deane, R.T., D. Pradel, and C.A. Robertson. 2018. Characterizing the Strength of Tar Sands in Los Angeles, A Case History. In *Recent Developments in Geotechnical Engineering Practice*, edited by A. Lemnitzer, A.W. Steudlein, and M.T. Suleiman, pp. 458–469.

IFCEE. 2018. Orlando, Florida Proceedings: Reston, Va., American Society of Civil Engineers, Geotechnical Practice Publication No. 11. Accessed November 2022.

Kittelson and Associates, Inc. 2022. *La Brea Tar Pits Master Plan Final Transportation Assessment*. Prepared for SWCA Environmental Consultants. August 8, 2022. On file, SWCA Environmental Consultants, Pasadena, California.

Office of Environmental Health Hazard Assessment (OEHHA). 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments 2015*. Available at: http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf. Accessed November 2022.

South Coast Air Quality Management District (SCAQMD). 2003. *Potential Control Strategies to Address Cumulative Impacts from Air Pollution White Paper*. Appendix A. Available at: www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf?sfvrsn=4. Accessed November 2022.

———. 2005. *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning.* Available at: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf. Accessed November 2022.

———. 2007. Asbestos Demolition & Removal. Available at: https://www.aqmd.gov/home/rules-compliance/compliance/asbestos-demolition-removal. Accessed November 2022.

———. 2009. LST Methodology Appendix C-Mass Rates LST Look-Up Table. Available at: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds. Accessed November 2022.

———. 2015. Rule 403. Fugitive Dust. Available at: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4. Accessed November 2022.

———. 2019. South Coast AQMD Significance Thresholds. Available at: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds. Accessed November 2022.

———. 2021a. *MATES V Multiple Air Toxics Exposure Study in the South Coast AQMD*. Available at: www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report-9-24-21.pdf?sfvrsn=6. Accessed September 2022.

———. 2021b. MATES Data Visualization. Available at: https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23/page/Main-Page/?data_id=dataSource_112-7c8f2a4db79b4a918d46b4e8985a112b%3A19309%2CdataSource_105-a5ba9580e3aa43508a793fac819a5a4d%3A34&views=Cancer-Risk%2CClick-the-map-to-see-data. Accessed September 2022.

———. 2022a. *Air Quality Analysis Handbook*. Available at: www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook. Accessed September 2022.

———. 2022b. Ambient Monitoring Data. Available at: https://xappp.aqmd.gov/aqdetail/AirQuality/HistoricalData. Accessed November 2022.

SWCA Environmental Consultants (SWCA). 2023. *Air Quality and Greenhouse Gas Technical Report for the La Brea Tar Pits Master Plan. Los Angeles, California*. Prepared for Los Angeles County Museum of Natural History Foundation. August. On file, SWCA Environmental Consultants, Pasadena, California.

U.S. Environmental Protection Agency (EPA). 2022a. Criteria Air Pollutants. Available at: https://www.epa.gov/criteria-air-pollutants. Accessed November 2022.

———. 2022b. Green Book. California Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. Available at: https://www3.epa.gov/airquality/greenbook/anayo_ca.html. Data current as of September 30, 2022. Accessed November 2022.

Van Gosen, B.S., and J.P. Clinkenbeard. 2011. *Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California, 2011*. Open-File Report 2011-1188. Denver, Colorado: U.S. Geological Survey and Sacramento: California Geological Survey. Available at: https://pubs.usgs.gov/of/2011/1188/. Accessed November 2022.

8.2.3 Biological Resources

California Department of Fish and Wildlife (CDFW). 2015. *California State Wildlife Action Plan, 2015 UPDATE, A Conservation Legacy for California*, Volume II: Appendices. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=110402&inline. Accessed February 2023.

———. 2021. Frequently Asked Questions: Monarch Butterfly Handling in California. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=194943. Accessed February 2023

———. 2022a. California Natural Diversity Database. RAREFIND 5 database ver.5.2.14. Sacramento, California. Available at: www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed March 2022.

———. 2022b. *Special Vascular Plants, Bryophytes, and Lichens List*. State of California, Natural Resources Agency, Department of Fish and Wildlife, Biogeographic Data Branch, California Natural Diversity Data Base. January. Accessed March 2022.

———. 2022c. *Special Animals*. State of California, Natural Resources Agency, Department of Fish and Wildlife, Biogeographic Data Branch, California Natural Diversity Data Base. January. Accessed March 2022.

———. 2023. California Wildlife Habitat Relationships System. Available at: https://wildlife.ca.gov/Data/CWHR/Wildlife-Habitats. Accessed February 2023.

California Native Plant Society (CNPS). 2022. *Inventory of Rare, Threatened, and Endangered Plants of California*. Available at: www.rareplants.cnps.org/. Accessed March 2022.

———. 2023. *A Manual of California Vegetation*, Online Edition. Sacramento: California Native Plant Society. Available at: http://vegetation.cnps.org/. Accessed February 2023.

City of Los Angeles. 2001. *Conservation Element of the City of Los Angeles General Plan*. City Plan Case No. 2001-0413-GPA, Council File No. 01-1094. Available at: https://planning.lacity.org/odocument/28af7e21-ffdd-4f26-84e6-dfa967b2a1ee/Conservation_Element.pdf. Accessed February 2023.

County of Los Angeles. 1980. *General Plan Conservation and Open Space Element.* Available at: https://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf. Accessed February 2023.

———. 2011. *Los Angeles County Oak Woodlands Conservation Management Plan*. Available at: https://planning.lacounty.gov/assets/upl/project/oakwoodlands_conservation-management-plan.pdf. Accessed February 2023.

———. 2014. *Los Angeles County Oak Woodlands Conservation Management Plan Guide*. Available at: https://planning.lacounty.gov/assets/upl/project/oakwoodlands_conservation-management-plan-guide-20141204.pdf. Accessed February 2023.

———. 2023. Los Angeles County Planning and Zoning Code. Title 22, Chapter 22.174 – Oak Tree Permits. Available at: https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT22PLZO_DIV8PERELEAC_CH22.174OATRPE. Accessed February 2023.

eBird. 2022. Online database of bird distribution and abundance. Ithaca, New York: Cornell Lab of Ornithology. Available at: http://www.ebird.org. Accessed March 2022.

Google Earth. 2023. Los Angeles, California 34°0'45.7992"N, 118°22'4.6668"W. V7.3.3. DigitalGlobe. Dated March 2022. Available at: http://www.earth.google.com. Accessed February 2023.

iNaturalist. 2017. La Brea Tar Pits Wildlife Survey. Available at: www.inaturalist.org/projects/la-brea-tar-pits-wildlife-survey. Accessed March 2022.

———. 2022. Online database. Available at: https://www.inaturalist.org/. Accessed March 2022.

Los Angeles Audubon Society. 2009. *Los Angeles County's Sensitive Bird Species*. County Sensitive Bird Species Working Group (Allen, L.W., M. Carmona-Freeman, D.S. Cooper, J. Feenstra, K.L. Garrett, G. George, M. Loquvam, E. Osgood, T. Ryan, M. San Miguel, and S. Vigallon). *Western Tanager* 75(3):1–11. Available at: https://planning.lacounty.gov/site/sea/wp-content/uploads/2018/08/LA-Countys-Sensitive-Bird-Species.pdf.

South Coast Wildlands. 2008. *South Coast Missing Linkages: A Wildland Network for the South Coast Ecoregion*. Available at: http://www.scwildlands.org/reports/scmlregionalreport.pdf. Accessed March 2022.

Western Monarch Count. 2022. Find an Overwintering Site. Interactive map. Available at: https://www.westernmonarchcount.org/find-an-overwintering-site-near-you/. Accessed March 2022.

Xerces Society for Invertebrate Conservation. 2022. Website. Available at: www.xerces.org. Accessed March 2022.

8.2.4 Cultural Resources – Archaeological Resources

Architectural Resources Group (ARG). 2015a. *SurveyLA, Los Angeles Historic Resources Survey: Historic Resources Survey Report, Wilshire Community Plan Area*. Prepared for City of Los Angeles, Department of City Planning, Office of Historic Resources. Pasadena, California: Architectural Resources Group, Inc. Available at: https://planning.lacity.org/preservation-design/survey-la-results-wilshire. Accessed October 2022.

———. 2015b. *SurveyLA, Los Angeles Historic Resources Survey: Wilshire, Historic Districts, Planning Districts and Multi-Property Resources*. Prepared for City of Los Angeles, Department of City Planning, Office of Historic Resources. Pasadena, California: Architectural Resources Group, Inc. Available at: https://planning.lacity.org/preservation-design/survey-la-results-wilshire. Accessed October 2022.

City of Los Angeles. 2001. *Conservation Element of the City of Los Angeles General Plan*. City Plan Case No. 2001-0413-GPA, Council File No. 01-1094. Available at: https://planning.lacity.org/odocument/28af7e21-ffdd-4f26-84e6-dfa967b2a1ee/Conservation_Element.pdf. Accessed October 2022.

County of Los Angeles. 2015. *Los Angeles County General Plan 2035*. *Chapter 9: Conservation and Natural Resources Element*. Available at: https://planning.lacounty.gov/generalplan. October 2015. Accessed October 2022.

Millington, C., and J. Dietler. 2023. *Archaeological and Tribal Cultural Resources Assessment for the La Brea Tar Pits Master Plan Environmental Impact Report, Los Angeles, California*. SWCA Cultural Resources Report No. 23-47. SWCA Environmental Consultants, Pasadena, California.

Native American Heritage Commission (NAHC). 2022. La Brea Tar Pits Master Plan EIR Project, Los Angeles County.

South Central Coastal Information Center (SCCIC). 2022. Records Search Results for the La Brea Tar Pits Master Plan EIR Project. Records Search File No. 23477.9545.

Wallace, W.J. 1955. A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11(3):214–230.

8.2.5 Cultural Resources – Historical Resources

Architectural Resources Group, Inc. 2015a. *SurveyLA: Historic Resources Survey Report – Wilshire Community Plan Area*. Prepared for City of Los Angeles, Department of City Planning, Office of Historic Resources. Pasadena, California. Available at: https://planning.lacity.org/preservation-design/survey-la-results-wilshire. Accessed November 2022.

———. 2015b. Appendix C: Historic Districts, Planning Districts and Multi-Property Resources. In *Survey LA: Historic Resources Survey Report – Wilshire Community Plan Area*. Prepared for City of Los Angeles Office of Historic Resources. Pasadena, California. Available at: https://planning.lacity.org/odocument/1ef16593-9784-40c6-a60e-652e3aa508f3/Wilshire_District_Resources.pdf. Accessed November 2022.

———. 2015c. Appendix A: Individual Resources. In *Survey LA: Historic Resources Survey Report – Wilshire Community Plan Area*, p. 164. Prepared for the City of Los Angeles Office of Historic Resources. Pasadena, California. Available at: https://planning.lacity.org/odocument/a4ef4ac0-b50f-4238-a52d-cb6c739765cd/Wilshire_CPA_Individual_Resources_2.pdf. Accessed November 2022.

Grimmer, A.E. 2017. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstruction Historic Buildings*. U.S. Department of the Interior, National Park Service, Technical Preservation Services, Washington, D.C.

Hanna/Olin, Ltd. 1994. *Hancock Park Master Plan*. Prepared for Los Angeles County Museum of Art. Philadelphia, Pennsylvania. On file with the Natural History Museums of Los Angeles County.

Holliday, K. 1972. "Bay Tar Preserved – The Bones of Contention." *Los Angeles Times*. July 30, 1972. ProQuest Historical Newspapers. Available at: https://www.proquest.com/latimes/index. Accessed November 2022.

Hollywood Citizen News. 1961a. "Master Plan for Hancock Park in Board Approval," April 12, 1961. Available at: Newspapers.com. Accessed November 2022.

———. 1961b. "Museum of Tar Pit Fossils Proposed," January 11, 1961. Available at: Newspapers.com. Accessed November 2022.

———. 1961c. "Fossil Museum for Tar Pits Gains Backing," May 10, 1961. Available at: Newspapers.com. Accessed November 2022.

Kegley, H. 1940. "Something Bigger Than Barnum: A Monument to Monsters." Los Angeles Times. March 10, 1940. ProQuest Historical Newspapers. Available at: https://www.proquest.com/latimes/index. Accessed November 2022.

Los Angeles Times. 1923. "Hancock Park to County." December 12, 1923. ProQuest Historical Newspapers. Available at: https://www.proquest.com/latimes/index. Accessed November 2022.

———. 1960. "Art Museum Assured on Hancock Park Site." July 1, 1960. ProQuest Historical Newspapers. Available at: https://www.proquest.com/latimes/index. Accessed November 2022.

———. 1968. "18-foot High Mammoth – First of 52 'Beasts' Put in La Brea Pits." May 30, 1968. ProQuest Historical Newspapers. Available at: https://www.proquest.com/latimes/index. Accessed November 2022.

National Park Service (NPS). 1990. *National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation*. Washington, D.C.: U.S. Department of the Interior.

SWCA Environmental Consultants (SWCA). 2023. *Historic Resources Technical Report, La Brea Tar Pits Master Plan, Los Angeles, California*. Prepared for Los Angeles County Museum of Natural History Foundation. SWCA Environmental Consultants, Pasadena, California. January.

Weeks, K.D., and A.E. Grimmer. 2001. *Secretary of the Interior's Standards for the Treatment of Historic Properties, with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*. U.S. Department of the Interior, National Park Service, Washington, D.C. Available at: http://www.nps.gov/tps/standards/rehabilitation/rehabilitation-guidelines.pdf. Accessed July 2022.

8.2.6 Geology and Soils

AECOM. 2016a. *Cultural and Paleontological Resources Technical Report for the New LACMA Building Project, Los Angeles, California*. Prepared for the Museum Associates, dba Los Angeles County Museum of Art. Los Angeles, California.

———. 2016b. *Preliminary Geotechnical Evaluation Report: LACMA Building for the Permanent Collection Project, Los Angeles County Museum of Art, Los Angeles, California*. Los Angeles, California.

———. 2017. *Cultural and Paleontological Resources Technical Report for the New LACMA Building Project Los Angeles, California*. Prepared for the Museum Associates, dba Los Angeles County Museum of Art. Los Angeles, California.

ArchaeoPaleo Resource Management, Inc. 2014. *Paleontological Resources Phase I Assessment for the Academy Museum of Motion Pictures*. Los Angeles, California.

Arnold, D., and R. Arnold. 1902. The marine Pliocene and Pleistocene stratigraphy of the coast of southern California. *Journal of Geology* 10:117–138.

California Geological Survey (CGS), Department of Conservation. 2018. Special Publication 42. *Earthquake Fault Zones: A Guide for Government Agencies, Property Owners / Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California*. Available at: https://www.conservation.ca.gov/cgs/documents/publications/special-publications/SP_042-a11y.pdf. Accessed September 2022.

Campbell, R.H., C.J. Wills, P.J. Irvine, and B.J. Swanson. 2014. Preliminary geologic map of the Los Angeles 30' x 60' Quadrangle, California, Version 2.1. California Geological Survey, scale 1:100,000.

Clarke, M., J.E. Fitch, T. Kristensen, and T. Kubodera. 1980. Statoliths of one fossil and four living squids (Gonatidae: Cephalopoda). *Journal of the Marine Biological Association of the United Kingdom* 60:329–347.

County of Los Angeles. 2015. *Los Angeles County General Plan 2035*. *Chapter 9: Conservation and Natural Resources Element*. Available at: https://planning.lacounty.gov/generalplan. October 2015. Accessed March 2021.

Dibblee, T.W., Jr., and H.E. Ehrenspeck. 1991. Geologic map of the Hollywood and Burbank (south 1/2) quadrangles, Los Angeles, California. Dibblee Geologic Foundation map DF-30, scale 1:24,000.

Dunn, R. 2022. Personal communication, Response to comments on the draft Paleontological Resources Technical Report from Dr. Regan Dunn, Assistant Curator at the La Brea Tar Pits and George C. Page Museum to Mathew Carson, Project Manager and Lead Paleontologist, SWCA Environmental Consultants. December 22, 2022. SWCA Environmental Consultants, Pasadena, California.

Environmental Science Associates (ESA). 2020. *Wilshire-Curson Project, Los Angeles, California: Archaeological and Paleontological Monitoring Report*. August. Irvine, California.

Fitch, J.E. 1967. The marine fish fauna, based primarily on otoliths, of a lower Pleistocene deposit at San Pedro, California (LACMIP 332, San Pedro Sand). *Contributions in Science* 128:1–23.

Groves, L. 1992. California cowries (Cypraeacea): past and present, with notes on recent tropical eastern Pacific species. *The Festivus* 24(9):101–107.

Howard, H. 1948. Later Cenozoic avian fossils from near Newport Bay, Orange County, California. *Abstracts with Programs, Geological Society of America* 59:1372–1373.

Huddleston, R.W., and G.T. Takeuchi. 2006. A new Late Miocene species of Sciaenid fish, based primarily on an in situ otolith from California. *Bulletin of the Southern California Academy of Sciences* 105:30–42.

Jefferson, G.T. 1991a. *A Catalogue of Late Quaternary Vertebrates from California: Part One, Nonmarine Lower Vertebrate and Avian Taxa*. Technical Reports No. 5. Los Angeles, California: Natural History Museum of Los Angeles County.

———. 1991b. *A Catalogue of Late Quaternary Vertebrates from California: Part Two, Mammals.* Technical Reports No. 7. Los Angeles, California: Natural History Museum of Los Angeles County.

Jordan, D.S., and H. Hannibal. 1923. Fossil sharks and rays of the Pacific slope of North America. *Southern California Academy of Science Bulletin* 22:27–68.

Lamar, D.L. 1970. *Geology of the Elysian Park-Repetto Hills area, Los Angeles County, California*. California Division of Mines and Geology Special Report 101.

McDonald, H.G., and G.T. Jefferson. 2008. Distribution of Pleistocene Nothrotheriops (*Xenartha, Nothrotheridae*) in North America. In *Geology and Vertebrate Paleontology of Western and Southern North America*, edited by X. Wang and L. Barnes, pp. 313–331. Science Series 41. Los Angeles, California: Natural History Museum of Los Angeles County.

Miller, L. 1930. Further bird remains from the upper San Pedro Pleistocene. *The Condor* 32:116–118.

Miller, W.E. 1971. Pleistocene vertebrates of the Los Angeles Basin and vicinity: Exclusive of Rancho La Brea. Bulletin of the Los Angeles County Museum of Natural History 10.

Millington, C., and J. Dietler. 2023. *Archaeological and Tribal Cultural Resources Assessment for the La Brea Tar Pits Master Plan Environmental Impact Report, Los Angeles, California*. SWCA Cultural Resources Report No. 23-47. SWCA Environmental Consultants, Pasadena, California.

Morris, P.A. 1976. Middle Pliocene temperature implications based on the bryozoa Hippothoa (Cheilostomata-Ascophora). *Journal of Paleontology* 50:1143–1149.

Natural History Museum of Los Angeles County (Natural History Museum). 2022. Paleontological Resources for the La Brea Tar Pits Master Plan Project, Los Angeles, California (#00063953). Letter report submitted to SWCA Environmental Consultants on February 5, 2022. On file with SWCA Environmental Consultants, Pasadena, California.

Oldroyd, T.S. 1924. The fossils of the lower San Pedro fauna of the Nob Hill cut, San Pedro, California. *Proceedings of the National Museum* 65(22).

Paleobiology Database. 2022. The Paleobiology Database. Available at: https://paleobiodb.org/#/. Accessed September 22, 2022.

Reynolds, R.E., and R.L. Reynolds. 1991. The Pleistocene beneath our feet: Near-surface Pleistocene fossils in inland southern California basins. In *Inland Southern California: The Last 70 Million Years,* edited by M.O. Woodburne, R.E. Reynolds, and D.P. Whistler, pp. 41–43. San Bernardino County Museum Special Publication 38 (3 and 4).

Schoellhamer, J.E., J.G. Vedder, R.F. Yerkes, and D.M. Kinney. 1981. Geology of the northern Santa Ana Mountains, California. U.S. Geological Survey Professional Paper 420-D.

Shannon and Wilson. 2023. Geology and Soil Discipline Report, Revision 2: La Brea Tar Pits Museum Master Plan Project, 5801 Wilshire Boulevard, Los Angeles, California. Report No. 109748-001. Prepared for Natural History Museums of Los Angeles County. Burbank, California: Shannon and Wilson. January 27, 2023. On file, SWCA Environmental Consultants, Pasadena, California.

Society of Vertebrate Paleontology (SVP). 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources.* Available at: https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines.pdf. Accessed August 15, 2021.

Springer, K., E. Scott, J.C. Sagebiel, and L.K. Murray. 2009. The Diamond Valley Lake local fauna: late Pleistocene vertebrates from inland southern California. In *Papers on Geology, Vertebrate Paleontology, and Biostratigraphy in Honor of Michael O. Woodburne*, edited by L.B. Albright III, pp. 217–236. Museum of Northern Arizona Bulletin 65.

Stock, C., and J.M. Harris. 2007. *Rancho La Brea: A record of Pleistocene life in California*. 7th ed. Natural History Museum of Los Angeles County Science Series No. 37.

SWCA Environmental Consultants (SWCA). 2023. *Paleontological Resources Technical Report: La Brea Tar Pits Master Plan, Los Angeles, California*. Prepared for Natural History Museums of Los Angeles County. January 23, 2023. On file, SWCA Environmental Consultants, Pasadena, California.

University of California Museum of Paleontology. 2022. Fossil Locality Database. Available at: https://ucmp.berkeley.edu/collections/databases/. Accessed September 22, 2022.

Woodring, W.P. 1938. Lower Pliocene mollusks and echinoids from the Los Angeles Basin, California. U.S. Geological Survey Professional Paper 190.

Woodring, W.P., M.N. Bramlette, and W.S. Kew. 1946. Geology and Paleontology of Palos Verdes Hills, California. Geological Survey Professional Paper 207. Washington, D.C.: United States Government Printing Office.

Yerkes, R.F., and S. Graham. 1997. Preliminary geologic map of the Hollywood 7.5-minute quadrangle, Southern California. U.S. Geological Survey, Open-File Report 97-255, scale 1:24,000.

Yerkes, R.F., T.H. McCulloh, J.E. Schoellhamer, and J.G. Vedder. 1965. Geology of the Los Angeles Basin – an Introduction. Geological Survey Professional Paper 420-A.

8.2.7 Greenhouse Gas Emissions

Bay Area Air Quality Management District. 2022. *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans*. Available at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en. Accessed November 2022.

California Air Pollution Control Officers Association (CAPCOA). 2008. *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act.* January 2008.

California Air Resources Board (CARB). 2008. *Climate Change Scoping Plan*. December. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed November 2022.

———. 2014. *First Update to the Climate Change Scoping Plan*. May. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf. Accessed November 2022.

———. 2017. *California's 2017 Climate Change Scoping Plan*. November. Available at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2017-scoping-plan-documents. Accessed November 2022.

———. 2018. Climate pollutants fall below 1990 levels for first time. Available at: https://ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time. Accessed November 2022.

———. 2021. Current California GHG Emission Inventory Data. 2000-2019 GHG Inventory (2021 Edition). Available at: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed November 2022.

———. 2022a. GHG 1990 Emissions Level & 2020 Limit. Available at: https://ww2.arb.ca.gov/ghg-2020-limit. Accessed November 2022.

_____. 2022b. California Cap-and-Trade Program Joint Auction Summary. Available at: https://ww2.arb.ca.gov/our-work/programs/cap-and-trade-program/auction-information. Accessed May 2023.

———. 2022c. *Draft 2022 Scoping Plan Update*. Available at: https://ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp.pdf. Accessed November 2022.

California Energy Commission (CEC), Energy Research and Development Division. 2018. *Final Project Report, Deep Decarbonization in a High Renewables Future Updated Results from the California PATHWAYS Model*. Available at: https://www.ethree.com/wp-content/uploads/2018/06/Deep_Decarbonization_in_a_High_Renewables_Future_CEC-500-2018-012-1.pdf#:~:text=Deep%20Decarbonization%20in%20a%20High%20Renewables%20Future%3A%20Updated,conducted%20by%20Energy%20and%20Environmental%20Economics%2C%20Inc.%20%28E3%29. Accessed November 2022.

———. 2021. California Building Decarbonization Assessment. Available at: https://www.energy.ca.gov/publications/2021/california-building-decarbonization-assessment. Accessed November 2022.

California Natural Resources Agency. 2009. *Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB 97*. December 2009.

City of Los Angeles Bureau of Sanitation (LASAN). 2013. *Zero Waste Progress Report*. Available at: https://clkrep.lacity.org/onlinedocs/2013/13-1532_RPT_BPW_10-30-13-2.pdf. Accessed November 2022.

Cleveland National Forest Foundation v. San Diego Association of Governments. 2017. Case documents. Available at: http://climatecasechart.com/case/cleveland-national-forest-foundation-v-san-diego-association-of-governments/. July 13, 2017. Accessed November 2022.

County of Los Angeles. 2019. OurCounty – Los Angeles Countywide Sustainability Plan. Available at: https://ourcountyla.lacounty.gov/. Accessed May 2023.

———.2021. Staying Power – Los Angeles County. Chief Executive Office Website. Available at: https://ceo.lacounty.gov/2021/12/07/sustainability/staying-power/. Accessed May 2023.

———. 2023a. 2045 *Climate Action Plan, Recirculated Draft Program Environmental Impact Report, March 2023.* Available at: https://files.ceqanet.opr.ca.gov/275040-3/attachment/Plj6w2S--oim2ufCSvjj7_N26CnsMzgjwh2de9RQNLVCYbPaYXMBtzwdswqOS9_JUAmkmQfo-gof1gBH0. Accessed November 2022.

———. 2023b. Title 31 – Green Building Standards Code. Available at: https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT31GRBUSTCO. Accessed November 2022.

Friedlingstein, P., M.W. Jones, M. O'Sullivan, R.M. Andrew, D.C.E. Bakker, J. Hauck, C. Le Quéré, G.P. Peters, W. Peters, J. Pongratz, et al. 2022. *Global Carbon Budget 2021*. Available at: https://essd.copernicus.org/articles/14/1917/2022/essd-14-1917-2022.pdf. Accessed October 2022.

Intergovernmental Panel on Climate Change (IPCC). 2007. *IPCC Fourth Assessment Report: Climate Change 2007 (AR4): The Physical Science Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Table 2.14. Available at: https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-chapter2-1.pdf. Accessed November 2022.

———. 2013. *IPCC Fifth Assessment Report: Climate Change 2013 (AR5): The Physical Science Basis*. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Available at: https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_all_final.pdf. Accessed November 2022.

———. 2022. *IPCC Sixth Assessment Report: IPCC Sixth Assessment Report Mitigation of Climate Change*. Available at: https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_FullReport.pdf. Accessed November 2022.

Los Angeles Department of Water and Power (LADWP). 2021. 2021 Power Content Label. Available at: https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-power/a-p-powercontentlabel;jsessionid=Td6Bj18LpNt6P981NLlnvzJnGRyw48Jy1tCDgy3nhmM4DmZGJvt1!1445120317?_afrWindowId=null&_afrLoop=1383444693629890&_afrWindowMode=0&_adf.ctrl-state=yxx4b1w16_4#%40%3F_afrWindowId%3Dnull%26_afrLoop%3D1383444693629890%26_afrWindowMode%3D0%26_adf.ctrl-state%3Dm6p6m2dpk_4. Accessed November 2022.

Sacramento Metropolitan Air Quality Management District. 2020. *Greenhouse Gas Thresholds for Sacramento County*. Available at: https://www.airquality.org/LandUseTransportation/Documents/SMAQMDGHGThresholds2020-03-04v2.pdf. Accessed November 2022.

South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook*. On file, SWCA Environmental Consultants, Pasadena, California.

———. 2008. *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold.* October. Available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf. Accessed November 2022.

———. 2023. Air Quality Analysis Handbook. Available at: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook. Accessed November 2022.

Southern California Association of Governments (SCAG). 2007. *The State of the Region 2007 – Measuring Regional Progress*. Available at: https://scag.ca.gov/post/state-region. Accessed November 2022.

SWCA Environmental Consultants (SWCA). 2023. *Air Quality and Greenhouse Gas Technical Report for the La Brea Tar Pits Master Plan.* Pasadena, California. August. On file, SWCA Environmental Consultants, Pasadena, California.

U.S. Environmental Protection Agency (EPA). 2022. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2020*. EPA 430-R-22-003. Available at: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2020. Accessed November 2022.

8.2.8 Hazards and Hazardous Materials

California Department of Forestry and Fire Protection (CAL FIRE). 2022. Fire Hazard Severity Zones in State Responsibility Area. Available at: https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=4466cf1d2b9947bea1d4269997e86553. Accessed January 2023.

California Environmental Protection Agency (CalEPA). 2023. Cortese List Background, History, and Data Resources. Available at: https://calepa.ca.gov/SiteCleanup/CorteseList/. Accessed June 2022.

City of Los Angeles. 2022. Department of City Planning, ZIMAS, Parcel Profile Report for APN 5508016902. Available at: http://zimas.lacity.org. Accessed December 2022.

County of Los Angeles. 2015. *Los Angeles County General Plan 2035*. Available at: http://planning.lacounty.gov/generalplan. October 2015. Accessed December 2022.

Department of Toxic Substances Control (DTSC). 2022. EnviroStor. Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed June 2022.

Environmental Data Resources, Inc. (EDR). 2022. The EDR Radius Map Report. 63953.06.01 La Brea Tar Pits. July 21, 2022. On file, SWCA Environmental Consultants, Pasadena, California.

KPFF Consulting Engineers (KPFF). 2021. *La Brea Tar Pits Master Plan Preliminary Civil Engineering Narrative*. Los Angeles, California. March 4, 2021. On file, SWCA Environmental Consultants, Pasadena, California.

Leighton Consulting, Inc. 2023. *Methane Survey Report for the La Brea Tar Pits Site Master Plan.* Irvine, California. January 12, 2023. On file, SWCA Environmental Consultants, Pasadena, California.

Los Angeles County Department of Public Works (County Public Works). 2022. Disaster Routes. City of Los Angeles Central. Available at: https://dpw.lacounty.gov/dsg/DisasterRoutes/map/Los%20Angeles%20Central%20Area.pdf. Accessed January 2022.

Los Angeles County Museum of Natural History Foundation (Foundation). 2022. Hazardous Materials Safety Data Sheets. March 8, 2022. On file, SWCA Environmental Consultants, Pasadena, California.

———. 2023.Methods for Tar Removal at the La Brea Tar Pits. Email Correspondence between Leslie Negritto, Chief Financial and Operating Officer, Natural History Museums of Los Angeles County Foundation and Bobbette Biddulph, Senior Environmental Planner, SWCA Environmental Consultants. On file, SWCA Environmental Consultants, Pasadena, California.

State Water Resources Control Board (SWRCB). 2022. GeoTracker. Available at: https://geotracker.waterboards.ca.gov/. Accessed June 2022.

U.S. Environmental Protection Agency (EPA). 2022a. Resource Conservation and Recovery Act (RCRA) Overview. Available at: https://www.epa.gov/rcra/resource-conservation-and-recovery-act-rcra-overview. Accessed June 2022.

———. 2022b. Toxic Substances Control Act. Available at: https://www.epa.gov/laws-regulations/summary-toxic-substances-control-act. Accessed June 2022.

8.2.9 Hydrology and Water Quality

California Department of Conservation. 2019. Los Angeles County Tsunami Hazard Areas. Available at: https://www.conservation.ca.gov/cgs/tsunami/maps/los-angeles. Accessed November 2022.

California Department of Water Resources (DWR). 2004. California's Groundwater Bulletin 118. Coastal Plain of Los Angeles Groundwater Basin, Hollywood Subbasin. Available at: https://water.ca.gov/-Amedia/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/4_011_04_CentralSubbasin.pdf. Accessed December 2022.

———. 2022. Dam Breach Inundation Map Web Publisher. Available at: https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2. Accessed August 2022.

County of Los Angeles. 2015. *Los Angeles County General Plan 2035*. Available at: http://planning.lacounty.gov/generalplan. October 2015. Accessed December 2022.

Federal Emergency Management Agency (FEMA). 2008. FEMA Flood Map Service Center FIRM No. 06037C1605F. Available at: https://msc.fema.gov/portal/home. Accessed December 2022

KPFF Consulting Engineers (KPFF). 2021. *Preliminary Civil Engineering Narrative La Brea Tar Pits Master Plan*. Los Angeles, California. March 2021. On file with SWCA Environmental Consultants. Pasadena, California.

———. 2023a. Email correspondence related to earthwork estimates from Kristen Sharer, PE, KPFF to Bobbette Biddulph, Senior Environmental Planner, SWCA Environmental Consultants, on January 18, 2023. On file with SWCA Environmental Consultants, Pasadena, California.

_____. 2023b. *Low Impact Development (LID) and Hydrology Report. La Brea Tar Pits Design and Renovation*. June 2023. On file, SWCA Environmental Consultants, Pasadena, California.

Los Angeles Bureau of Sanitation (LASAN). 2016. *Planning and Land Development Handbook for Low Impact Development.* Part B Planning Activities, 5th Edition. May 9, 2016. Available at: https://www.lacitysan.org/cs/groups/sg_sw/documents/document/y250/mde3/~edisp/cnt017152.pdf. Accessed February 2023.

Los Angeles County Department of Public Works (County Public Works). 2006. *Los Angeles County Hydrology Manual*. Available at: https://dpw.lacounty.gov/wrd/publication/engineering/2006_Hydrology_Manual.pdf. Accessed February 2023.

_____. 2014. *Low Impact Development Standards Manual*. Available at: https://pw.lacounty.gov/ldd/lddservices/docs/Los%20Angeles%20County%20Low%20Impact%20Development%20(LID)%20Manual.pdf. Accessed December 2022.

———. 2021. *Hydrologic Report 2020-2021*. Available at: https://dpw.lacounty.gov/wrd/report/acrobat/Hydrologic%20Report%202020-2021.pdf. Accessed December 2022.

———. 2022. Watershed Management Webpage. Ballona Creek Watershed. Available at: https://dpw.lacounty.gov/wmd/watershed/bc/. Accessed December 2022.

Los Angeles Regional Water Quality Control Board (LARWQCB). 2014. *Water Quality Control Plan. Los Angeles Region Basin Plan*. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html. Accessed December 2022.

———. 2022. Santa Monica Bay Watershed Impaired Waters. 303(d) Listed Waters. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/Water_Quality_and_Watersheds/santa_monica_bay/303.shtml. Accessed December 2022.

Shannon and Wilson. 2023. *Geology and Soil Discipline Report*, *Revision 2: La Brea Tar Pits Museum Master Plan Project, 5801 Wilshire Boulevard, Los Angeles, California*. Report No. 109748-001. Prepared for Natural History Museums of Los Angeles County. Burbank, California: Shannon and Wilson. January 27, 2023. On file, SWCA Environmental Consultants, Pasadena, California.

8.2.10 Land Use

City of Los Angeles. 2001a. *The Citywide General Plan Framework: An Element of The City of Los Angeles General Plan*. Available at: https://planning.lacity.org/odocument/513c3139-81df-4c82-9787-78f677da1561/Framework_Element.pdf. August 8, 2001. Accessed November 2022.

———. 2001b. *Wilshire Community Plan*. Available at: https://planning.lacity.org/odocument/3333424a-21b9-4f7b-86db-064926b9dcb9/Wilshire_Community_Plan.pdf. September 19, 2001. Accessed November 2022.

———. 2020. Generalized Summary of Zoning Regulations. Department of City Planning. Available at: https://planning.lacity.org/odocument/eadcb225-a16b-4ce6-bc94-c915408c2b04/Zoning_Code_Summary.pdf. Accessed November 2022.

———. 2022. City of Los Angeles Municipal Code. Available at: https://codelibrary.amlegal.com/codes/los_angeles/latest/lamc/0-0-0-107408. Accessed November 2022.

County of Los Angeles. 2015. *Los Angeles County General Plan 2035*. Available at: http://planning.lacounty.gov/generalplan. October 2015. Accessed November 2022.

Southern California Association of Governments (SCAG). 2019. Profiles of Los Angeles County, Local Profiles Report. May 2019. Available at: https://scag.ca.gov/sites/main/files/file-attachments/losangelescountylp.pdf?1605653130. Accessed November 2022.

———. 2020. *Connect SoCal: 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy*. Available at: https://scag.ca.gov/read-plan-adopted-final-connect-socal-2020. Accessed November 2022.

8.2.11 Noise and Vibration

California Department of Transportation. 2020. *Transportation and Construction Vibration Guidance Manual*. Sacramento: California Department of Transportation, Division of Environmental Analysis, Environmental Engineering, Hazardous Waste, Air, Noise, & Paleontology Office. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf. Accessed November 2022.

———. 2022. Introduction to the Environmental Document Annotated Outlines. Rev. June 2022. Available at: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fdot.ca.gov%2F-%2Fmedia%2Fdot-media%2Fprograms%2Fenvironmental-analysis%2Fdocuments%2Fser%2Feir-ea-ao.docx&wdOrigin=BROWSELINK. Accessed October 2022.

City of Los Angeles. 1999. *Noise Element of the Los Angeles City General Plan*. Los Angeles, California: City of Los Angeles, Department of City Planning. Available at: https://planning.lacity.org/odocument/b49a8631-19b2-4477-8c7f-08b48093cddd/Noise_Element.pdf. Accessed November 2022.

———. 2006. *L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles*. Los Angeles, California: City of Los Angeles, Department of City Planning. Available at: https://planning.lacity.org/eir/CrossroadsHwd/deir/files/references/A07.pdf. Accessed November 2022.

County of Los Angeles. 2017. *LACMA Building for the Permanent Collection Draft Environmental Impact Report.* Los Angeles, California. Available at: https://ceo.lacounty.gov/draft-environmental-impact-report/. Accessed November 2022.

Federal Highway Administration (FHWA). 2004. Traffic Noise Model, Version 2.5. Washington, D.C.: Office of Environment and Planning.

———. 2011. Roadway Construction Noise Model (RCNM). Software Version 1.1.

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. FTA Report No. 0123. Washington, D.C.: U.S. Department of Transportation, Federal Transit Administration, Office of Planning and Environment.

Governor's Office of Planning and Research (OPR). 2017. *State of California General Plan Guidelines*. Available at: https://www.opr.ca.gov/planning/general-plan/guidelines.html. Accessed November 2022.

SWCA Environmental Consultants (SWCA). 2022. *Noise and Ground Vibration Technical Report for the La Brea Tar Pits Master Plan.* Prepared for the Los Angeles County Museum of Natural History Foundation. November 2022. On file, SWCA Environmental Consultants, Pasadena, California.

U.S. Environmental Protection Agency (EPA). 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. 550-74-004. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi/2000L3LN.PDF?Dockey=2000L3LN.PDF. Accessed November 2022.

8.2.12 Recreation

City of Beverly Hills. 2022. City of Beverly Hills Community Services Webpage. Public Parks. Available at: https://www.beverlyhills.org/departments/communityservices/cityparks/. Accessed November 2022.

City of Los Angeles. 1980. Public Recreation Plan, a component of the General Plan Public Facilities and Services Element. Available at: https://planning.lacity.org/odocument/43319adf-80e9-4080-8d1d-ed7b3d3e2607/Public%20Facilities.pdf. Accessed November 2022.

———. 2001. *Wilshire Community Plan. Recreation and Public Facilities Goals and Policies*. Available at: https://planning.lacity.org/odocument/3333424a-21b9-4f7b-86db-064926b9dcb9/Wilshire_Community_Plan.pdf. Accessed November 2022.

———. 2016. City Council Resolution Ordinance Number 184505. Available at: https://clkrep.lacity.org/onlinedocs/2016/16-0529_ord_184505_9-13-16.pdf. Accessed November 2022.

———. 2022. Los Angeles City Planning Webpage. Wilshire Community Plan: Community Planning App. Parks. Available at: https://planning.lacity.org/plans-policies/community-plan-area/wilshire. Accessed November 2022.

City of Los Angeles Department of Recreation and Parks (City RAP). 2009. *Citywide Community Needs Assessment*. Available at: https://www.laparks.org/sites/default/files/projects/2009%20Community%20Needs%20Assessment%20-%20Final.pdf. Accessed November 2022.

City of West Hollywood. 2022. City of West Hollywood Recreation Services Webpage. Parks and Facilities. Available at: https://www.weho.org/community/recreation-services/parks-and-facilities. Accessed November 2022.

County of Los Angeles. 2015. *Los Angeles County General Plan 2035*. Available at: http://planning.lacounty.gov/generalplan. October 2015. Accessed November 2022.

Los Angeles County Department of Parks and Recreation (LA County Parks). 2016. *Comprehensive Parks & Recreation Needs Assessment*. Available at: https://lacountyparkneeds.org/pna-home/. Accessed November 2022.

———. 2021. *Department Operations Plan*. Available at: http://file.lacounty.gov/SDSInter/dpr/1108547_DPROperationsPlan2021-22_06102021_Final.pdf. Accessed November 2022.

8.2.13 Transportation

California Air Pollution Control Officers Association (CAPCOA). 2022. *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*. Available at: https://www.caleemod.com/handbook/index.html. Accessed October 2022.

City of Los Angeles. 2016. *Mobility Plan 2035: An Element of the General Plan*. Available at: https://ladot.lacity.org/sites/default/files/documents/mobility-plan-la-city-planning.pdf. Accessed October 2022.

Code Consultants, Inc. (CCI). 2021. La Brea Tar Pits Master Plan, Los Angeles, CA, Preliminary Basis of Design Narrative (CCI Project No. 200241.20.000). Prepared for Bryan Kelly, Project Architect, Weiss/Manfredi. January 22, 2021. On file, SWCA Environmental Consultants, Pasadena, California.

County Department of Public Works. 2020. *Los Angeles County Public Works Transportation Impact Analysis Guidelines.* July 23, 2020. Available at: https://pw.lacounty.gov/traffic/docs/Transportation-Impact-Analysis-Guidelines-July-2020-v1.1.pdf. Accessed June 29, 2023.

Kittelson and Associates, Inc. 2022. *La Brea Tar Pits Master Plan Final Transportation Assessment*. Prepared for SWCA Environmental Consultants. August 8, 2022. On file, SWCA Environmental Consultants, Pasadena, California.

Los Angeles Department of Transportation (LADOT). 2020. *Transportation Assessment Guidelines.* July. Available at: https://ladot.lacity.org/sites/default/files/documents/ta_guidelines_allsections_2020.07.04_attachments.pdf. Accessed October 2022.

8.2.14 Tribal Cultural Resources

Millington, C., and J. Dietler. 2023. *Archaeological and Tribal Cultural Resources Assessment for the La Brea Tar Pits Master Plan Environmental Impact Report, Los Angeles, California*. SWCA Cultural Resources Report No. 23-47. SWCA Environmental Consultants, Pasadena, California.

8.2.15 Utilities

California Department of Resources Recycling and Recovery (CalRecycle). 2012. SWIS Facility/Site Activity Details Azusa Land Reclamation Company Landfill (19-AA-0013). Available at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3532?siteID=1001. Accessed October 2022.

———. 2022. Estimated Solid Waste Generation Rates. Available at: https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates. Accessed October 2022.

_____. 2023. SWIS Facility/Site Activity Details. Azusa Land Reclamation Co. Landfill (19-AA-0013). Available at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3532?siteID=1001. Accessed October 2022.

California Department of Water Resources (DWR). 2020. Statewide Map of Current SGMA Basin Prioritization. May 1, 2020. Available at: https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization. Accessed March 2023.

California Green Building Standards Code (CALGreen). 2023. Title 24, Part 11 with January Errata. Matrix Adoption Table. Chapter 5 – Nonresidential Mandatory Measures. Division 5.1 – Planning and Design. January 2023. Available at: https://codes.iccsafe.org/content/CAGBC2022P2/chapter-5-nonresidential-mandatory-measures. Accessed June 2023.

City of Los Angeles. 1986. *Storm Drain Design Manual – Part G*. Available at: https://eng2.lacity.org/techdocs/stormdr/Index.htm. Accessed October 2022.

County of Los Angeles. 2015. *Los Angeles County General Plan 2035*. Available at: http://planning.lacounty.gov/generalplan. October 2015. Accessed October 2022

_____. 2023. Code of Ordinances. Supplement 135 Update 2. Online content updated on April 19, 2023. Codified through Ordinance No. 2022-0066, passed December 20, 2022. (Supp. No. 135, Update 2) Chapter 22.132. Storage Enclosure Requirements for Recycling and Solid Waste. Available at: https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=16274. Accessed May 2023.

KPFF Consulting Engineers (KPFF). 2021. *La Brea Tar Pits Master Plan Preliminary Civil Engineering Narrative*. March 4, 2021. On file, SWCA Environmental Consultants, Pasadena, California.

_____. 2023. *Low Impact Development (LID) and Hydrology Report. La Brea Tar Pits Design and Renovation*. June 2023. On file, SWCA Environmental Consultants, Pasadena, California.

Los Angeles Bureau of Sanitation (LASAN). 2019. *Sewer System Management Plan*. Available at: https://www.lacitysan.org/san/faces/wcnav_externalId/s-lsh-wwd-cw-s-ssmp?_adf.ctrl-state=18i2u2bhmf_5&_afrLoop=5466185687115105#!. Accessed January 2023.

———. 2022. La Brea Tar Pits Master Plan Project – Request for Wastewater Service. Written Correspondence from Rowena Lau, Division Manager, LASAN to Richard Hayden, Assistance Deputy Director, Natural History Museums of Los Angeles County. November 2022. On file, SWCA Environmental Consultants, Pasadena, California.

Los Angeles County Museum of Natural History Foundation (Foundation). 2022. Waste Generation and Pick Up. Email correspondence from Bobbette Biddulph, Senior Environmental Planner, SWCA Environmental Consultants, to Jesse Rocha, Associate Project Manager, Operations, Los Angeles County Museum of Natural History Foundation. August 15, 2022. On file, SWCA Environmental Consultants, Pasadena, California.

_____. 2023. Water Usage for the La Brea Tar Pits. Email correspondence from Marilyn A. Bello, Director of Finance, Natural History Museum of Los Angeles County and Leslie Negritto ,Chief Financial and Operating Officer, Natural History Museums of Los Angeles County Foundation and Bobbette Biddulph, Senior Environmental Planner, SWCA Environmental Consultants. On file, SWCA Environmental Consultants, Pasadena, California.

Los Angeles County Public Works (County Public Works). 2021. *Countywide Integrated Waste Management Plan. 2020 Annual Report*. Available at: https://pw.lacounty.gov/epd/swims/ShowDoc.aspx?id=16231&hp=yes&type=PDF. Accessed October 2022.

Los Angeles Department of Water and Power (LADWP). 2020. *Urban Water Management Plan*. Available at: https://www.ladwp.com/cs/groups/ladwp/documents/pdf/mdaw/nzyy/~edisp/opladwpccb762836.pdf. Accessed January 2023.

———. 2022. Water and Electricity Connection Service Request for the La Brea Tar Pits Master Plan Project. Written Correspondence from Nadia Parker for Charles C. Holloway, Manager of Environmental Planning and Assessment, LADWP to Jesse Rocha, Associate Project Manager, Operations, Natural History Museums of Los Angeles County. October 28, 2022. On file, SWCA Environmental Consultants, Pasadena, California.

U.S. Environmental Protection Agency (EPA). 1998. *Characterization of Building-Related Construction and Demolition Debris in the United States*. Available at: https://www.epa.gov/sites/default/files/2016-03/documents/charact_bulding_related_cd.pdf. Accessed October 2022.

8.3 REPORT PREPARATION

8.3.1 CEQA Lead Agency

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

Leslie Negritto, Chief Operating Officer
Dawn McDivitt, Consultant (Prior Chief Deputy Director)

8.3.2 Consultant Support

This EIR has been prepared by SWCA Environmental Consultants (SWCA), in association with the Los Angeles County Museum of Natural History Foundation, under the oversight and on behalf of the County of Los Angeles as the CEQA Lead Agency.

SWCA Environmental Consultants
320 North Halstead Street, Suite 120
Pasadena, CA 91107

Resumes of key staff involved in the preparation of this EIR are included in Appendix M. Other contributors include Shannon and Wilson, Inc.; Leighton Consulting, Inc.; Terra Petra Environmental Engineering; KPFF Consulting Engineers; and Kittelson and Associates.

The following is a list of individuals responsible for preparation of the EIR. Table 8-1 provides a summary of the consultant personnel that contributed to the Draft EIR.

Table 8-1. Consultant Personnel Involved in EIR Preparation

Responsibilities	EIR Preparer
Summary Introduction Project Description Environmental Setting Environmental Impact Analysis Alternatives Analysis Other CEQA Considerations References and Report Preparation	Bobbette Biddulph, Senior Environmental Planner, SWCA John Dietler, Ph.D., RPA, Principal-in-Charge, SWCA Shannon Pagan, Project Environmental Planner, SWCA Danielle Desruisseaux, Project Technical Editor, SWCA Kelly Royce, Associate Project Technical Editor, SWCA Kimberly Proa, Project Formatting Specialist, SWCA
Aesthetics	Bobbette Biddulph, Senior Environmental Planner, SWCA Shannon Pagan, Project Environmental Planner, SWCA Kara Laurenson-Wright, Project Environmental Planner, SWCA
Air Quality	Erin Wielenga, Air Quality and Greenhouse Gas Specialist, SWCA Annika Kiemm, Environmental Planner, SWCA
Biological Resources	Robert MacAller, Natural Resources Director, SWCA Jacqueline Worden, Natural Resources Project Manager, SWCA
Cultural Resources – Archaeological Resources	John Dietler, Ph.D., RPA, Principal-in-Charge, SWCA Chris Millington, M.A., RPA, Senior Archaeologist, SWCA

Responsibilities	EIR Preparer
Cultural Resources – Historical Resources	Debi Howell-Ardila, Senior Architectural Historian, SWCA Susan Zamudio-Gurrola, Architectural Historian, SWCA Dan Herrick, Architectural Historian, SWCA Garret Root, Architectural Historian, SWCA Leslie Heumann, Architectural Historian and Senior Advisor, SWCA
Geology and Soils	Shannon Pagan, Project Environmental Planner, SWCA Mathew Carson, Lead Paleontologist, SWCA Bill Henry, AICP, Quality Assurance/Quality Control, SWCA
Greenhouse Gas Emissions	Erin Wielenga, Air Quality and Greenhouse Gas Specialist, SWCA Brad Sohm, Senior Air Quality and Noise Specialist, SWCA Annika Kiemm, Environmental Planner, SWCA
Hazards and Hazardous Materials	Bobbette Biddulph, Senior Environmental Planner, SWCA Shannon Pagan, Project Environmental Planner, SWCA Brynn McCulloch, Principal Geologist, Leighton Bahar Amoli, Ph.D., P.E., Senior Environmental Engineer, Terra Petra Justin R. Conaway, Vice President, Terra Petra
Hydrology and Water Quality	Shannon Pagan, Project Environmental Planner, SWCA Bill Henry, AICP, Quality Assurance/Quality Control, SWCA Kristen Sharer PE, Associate, KPFF Brian Powers, PE, Principal, KPFF
Land Use and Planning	Bobbette Biddulph, Senior Environmental Planner, SWCA Shannon Pagan, Project Environmental Planner, SWCA
Noise and Vibration	Bobbette Biddulph, Senior Environmental Planner, SWCA Carlos M. Ituarte-Villarreal, Noise Specialist, SWCA Brad Sohm, Senior Air Quality and Noise Specialist, SWCA
Recreation	Shannon Pagan, Project Environmental Planner, SWCA Kara Laurenson-Wright, Project Environmental Planner, SWCA
Transportation	Bobbette Biddulph, Senior Environmental Planner, SWCA Mychal Loomis, PE, Associate Engineer, Kittelson and Associates Michael Sahimi, AICP, Senior Planner, Kittelson and Associates
Tribal Cultural Resources	John Dietler, Ph.D., RPA, Principal-in-Charge, SWCA Chris Millington, M.A., RPA, Senior Archaeologist, SWCA
Utilities and Service Systems	Bobbette Biddulph, Senior Environmental Planner, SWCA Bill Henry, AICP, Quality Assurance/Quality Control, SWCA Shannon Pagan, Project Environmental Planner, SWCA
Graphics and Mapping	Matthew DeFreese, Geospatial Scientist, SWCA Katie Bonser, Geospatial Scientist, SWCA
Technical Editing and Document Production	Danielle Desruisseaux, Project Technical Editor, SWCA Kelly Royce, Associate Project Technical Editor, SWCA Kimberly Proa, Project Formatting Specialist, SWCA