The Creek at Dominguez Hills Project
Draft Environmental Impact Report
State Clearinghouse No. 2018081078

Prepared for:

County of Los Angeles
Department of Public Works
Project Management Division II
900 S. Fremont Avenue, 5th Floor
Alhambra, CA 91803
Contact: Ryan Kristan

Prepared by:

DUDEK
605 Third Street
Encinitas, California 92024
Contact: Carey Fernandes

MAY 2019

Printed on 30% post-consumer recycled material.

TABLE OF CONTENTS

Section **Page No.**

ACRONYMS AND ABBREVIATIONS ACR-1

1 SUMMARY 1-1
1.1 Document Purpose 1-1
1.2 Document Organization 1-1
1.3 Significance Thresholds 1-3
1.4 Project Location 1-9
1.5 Project Description 1-10
1.6 Project Objectives 1-10
1.7 Project Design Features 1-11
1.8 Areas Of Controversy 1-13
1.9 Required Permits And Approvals 1-13
1.10 Summary of Environmental Impacts 1-15
1.11 Alternatives to the Proposed Project 1-47
1.11.1 Alternatives Evaluated 1-47
1.11.2 Environmentally Superior Alternative 1-49

2 INTRODUCTION 2-1
2.1 Summary Of The Proposed Project 2-1
2.2 The CEQA Environmental Process 2-2
2.3 Organization Of The Environmental impact report 2-5

3 PROJECT DESCRIPTION 3-1
3.1 Introduction 3-1
3.2 Environmental Setting 3-1
3.2.1 Project Location 3-1
3.2.2 Surrounding Land Uses 3-1
3.2.3 Existing General Plan and Zoning 3-2
3.3 Project Background 3-2
3.4 Project Objectives 3-5
3.5 Proposed Project 3-6
3.5.1 Project Elements 3-6
3.5.2 Landscaping and Open Space 3-29
3.5.3 Sustainability Design 3-30
3.5.4 Access, Circulation, and Parking 3-30
3.5.5 Infrastructure Improvements 3-31
3.6 Proposed Construction 3-33
3.7 Proposed Operation 3-33

3.8 Intended Uses of the Environmental Impact Report 3-34
3.9 Proposed Approvals 3-35
3.10 Related Projects 3-36
3.11 References 3-37

4 ENVIRONMENTAL IMPACT ANALYSIS 4-1
4.1 Aesthetics 4.1-1
4.1.1 Existing Conditions 4.1-3
4.1.2 Relevant Plans, Policies, and Ordinances 4.1-9
4.1.3 Thresholds of Significance 4.1-14
4.1.4 Impacts Analysis 4.1-15
4.1.5 Mitigation Measures 4.1-53
4.1.6 Level of Significance After Mitigation 4.1-53
4.1.7 Cumulative Impacts 4.1-53
4.1.8 References 4.1-55
4.2 Air Quality 4.2-1
4.2.1 Existing Conditions 4.2-1
4.2.2 Relevant Plans, Policies, and Ordinances 4.2-12
4.2.3 Thresholds of Significance 4.2-21
4.2.4 Impacts Analysis 4.2-25
4.2.5 Mitigation Measures 4.2-44
4.2.6 Level of Significance After Mitigation 4.2-48
4.2.7 Cumulative Impacts 4.2-49
4.2.8 References 4.2-50
4.3 Biological Resources 4.3-1
4.3.1 Existing Conditions 4.3-1
4.3.2 Relevant Plans, Policies, and Ordinances 4.3-27
4.3.3 Thresholds of Significance 4.3-34
4.3.4 Impacts Analysis 4.3-36
4.3.5 Mitigation Measures 4.3-49
4.3.6 Level of Significance After Mitigation 4.3-51
4.3.7 Cumulative Impacts 4.3-51
4.3.8 References 4.3-51
4.4 Cultural Resources 4.4-1
4.4.1 Existing Conditions 4.4-1
4.4.2 Relevant Plans, Policies, and Ordinances 4.4-5
4.4.3 Thresholds of Significance 4.4-12
4.4.4 Impacts Analysis 4.4-12
4.4.5 Mitigation Measures 4.4-16
4.4.6 Level of Significance After Mitigation 4.4-17

4.4.7 Cumulative Impacts....4.4-17
4.4.8 References....4.4-17
4.5 Geology and Soils.... 4.5-1
4.5.1 Existing Conditions.... 4.5-1
4.5.2 Relevant Plans, Policies, and Ordinances....4.5-12
4.5.3 Thresholds of Significance....4.5-16
4.5.4 Impacts Analysis....4.5-17
4.5.5 Mitigation Measures....4.5-22
4.5.6 Level of Significance After Mitigation....4.5-22
4.5.7 Cumulative Impacts....4.5-23
4.5.8 References....4.5-24
4.6 Greenhouse Gas Emissions.... 4.6-1
4.6.1 Existing Conditions.... 4.6-1
4.6.2 Relevant Plans, Policies, and Ordinances....4.6-11
4.6.3 Project Design Features....4.6-28
4.6.4 Thresholds of Significance....4.6-29
4.6.5 Impacts Analysis....4.6-30
4.6.6 Mitigation Measures....4.6-44
4.6.7 Level of Significance After Mitigation....4.6-44
4.6.8 Cumulative Impacts....4.6-44
4.6.9 References....4.6-45
4.7 Hazards and Hazardous Materials.... 4.7-1
4.7.1 Existing Conditions.... 4.7-1
4.7.2 Relevant Plans, Policies, and Ordinances....4.7-10
4.7.3 Thresholds of Significance....4.7-20
4.7.4 Impacts Analysis....4.7-21
4.7.5 Mitigation Measures....4.7-29
4.7.6 Level of Significance After Mitigation....4.7-30
4.7.7 Cumulative Impacts....4.7-30
4.7.8 References....4.7-31
4.8 Hydrology and Water Quality.... 4.8-1
4.8.1 Existing Conditions.... 4.8-1
4.8.2 Relevant Plans, Policies, and Ordinances....4.8-10
4.8.3 Thresholds of Significance....4.8-21
4.8.4 Impacts Analysis....4.8-22
4.8.5 Mitigation Measures....4.8-35
4.8.6 Level of Significance After Mitigation....4.8-35
4.8.7 Cumulative Impacts....4.8-35
4.8.8 References....4.8-37

4.9 Land Use and Planning 4.9-1
4.9.1 Existing Conditions 4.9-1
4.9.2 Relevant Plans, Policies, and Ordinances 4.9-3
4.9.3 Thresholds of Significance 4.9-14
4.9.4 Impacts Analysis 4.9-14
4.9.5 Mitigation Measures 4.9-31
4.9.6 Level of Significance After Mitigation 4.9-31
4.9.7 Cumulative Impacts 4.9-31
4.9.8 References 4.9-31
4.10 Noise 4.10-1
4.10.1 Existing Conditions 4.10-1
4.10.2 Relevant Plans, Policies, and Ordinances 4.10-6
4.10.3 Thresholds of Significance 4.10-10
4.10.4 Impacts Analysis 4.10-11
4.10.5 Mitigation Measures 4.10-18
4.10.6 Level of Significance After Mitigation 4.10-19
4.10.7 Cumulative Impacts 4.10-23
4.10.8 References 4.10-24
4.11 Population and Housing 4.11-1
4.11.1 Existing Conditions 4.11-1
4.11.2 Relevant Plans, Policies, and Ordinances 4.11-3
4.11.3 Thresholds of Significance 4.11-5
4.11.4 Impacts Analysis 4.11-5
4.11.5 Mitigation Measures 4.11-8
4.11.6 Level of Significance After Mitigation 4.11-8
4.11.7 Cumulative Impacts 4.11-8
4.11.8 References 4.11-8
4.12 Public Services 4.12-1
4.12.1 Existing Conditions 4.12-1
4.12.2 Relevant Plans, Policies, and Ordinances 4.12-5
4.12.3 Thresholds of Significance 4.12-9
4.12.4 Impacts Analysis 4.12-10
4.12.5 Mitigation Measures 4.12-17
4.12.6 Level of Significance After Mitigation 4.12-17
4.12.7 Cumulative Impacts 4.12-17
4.12.8 References 4.12-19
4.13 Recreation 4.13-1
4.13.1 Existing Conditions 4.13-1
4.13.2 Relevant Plans, Policies, and Ordinances 4.13-6

4.13.3 Thresholds of Significance 4.13-10
4.13.4 Impacts Analysis 4.13-11
4.13.5 Mitigation Measures 4.13-20
4.13.6 Level of Significance After Mitigation 4.13-20
4.13.7 Cumulative Impacts 4.13-20
4.13.8 References 4.13-21
4.14 Transportation 4.14-1
4.14.1 Existing Conditions 4.14-1
4.14.2 Relevant Plans, Policies, and Ordinances 4.14-16
4.14.3 Thresholds of Significance 4.14-22
4.14.4 Impacts Analysis 4.14-26
4.14.5 Mitigation Measures 4.14-57
4.14.6 Level of Significance After Mitigation 4.14-70
4.14.7 City of Carson Intersection Impact Thresholds 4.14-72
4.14.8 Cumulative Impacts 4.14-74
4.14.9 On-Site Project Parking 4.14-74
4.14.10 References 4.14-84
4.15 Tribal Cultural Resources 4.15-1
4.15.1 Existing Conditions 4.15-1
4.15.2 Relevant Plans, Policies, and Ordinances 4.15-5
4.15.3 Thresholds of Significance 4.15-13
4.15.4 Impacts Analysis 4.15-13
4.15.5 Mitigation Measures 4.15-15
4.15.6 Level of Significance After Mitigation 4.15-15
4.15.7 Cumulative Impacts 4.15-15
4.15.8 References 4.15-16
4.16 Utilities and Service Systems 4.16-1
4.16.1 Existing Conditions 4.16-1
4.16.2 Relevant Plans, Policies, and Ordinances 4.16-7
4.16.3 Thresholds of Significance 4.16-17
4.16.4 Impacts Analysis 4.16-17
4.16.5 Mitigation Measures 4.16-27
4.16.6 Level of Significance After Mitigation 4.16-27
4.16.7 Cumulative Impacts 4.16-27
4.16.8 References 4.16-30
4.17 Energy 4.17-1
4.17.1 Existing Conditions 4.17-1
4.17.2 Relevant Plans, Policies, and Ordinances 4.17-2
4.17.3 Thresholds of Significance 4.17-7

4.17.4 Impacts Analysis 4.17-8
4.17.5 Mitigation Measures 4.17-16
4.17.6 Level of Significance After Mitigation 4.17-16
4.17.7 Cumulative Impacts 4.17-16
4.17.8 References 4.17-17

5 OTHER CEQA CONSIDERATIONS 5-1
5.1 Significant Unavoidable Environmental Impacts 5-1
5.2 Effects Found not to Be Significant 5-3
5.2.1 Wildfire 5-3
5.3 Significant Irreversible Environmental Changes 5-5
5.4 Growth-inducement and Indirect Impacts 5-5
5.5 Potential Secondary Effects 5-7
5.6 References 5-13

6 ALTERNATIVES 6-1
6.1 Introduction 6-1
6.2 Selection of Alternatives 6-1
6.2.1 Project Summary 6-2
6.2.2 Project Objectives 6-3
6.2.3 Environmental Impacts of the Proposed Project 6-4
6.3 Alternatives Screening Criteria 6-4
6.3.1 Alternatives Considered but Rejected 6-5
6.4 Alternatives carried Forward for Consideration 6-6
6.4.1 Alternative 1: No Project Alternative 6-9
6.4.2 Alternative 2: Passive Use Park 6-15
6.4.3 Alternative 3: Alternate Land Use – Active Sports Complex 6-23
6.5 Environmentally superior alternative 6-33
6.6 References 6-34

7 LIST OF PREPARERS 7-1

APPENDICES

A Initial Study and Notice of Preparation
B Lighting Study
C Air Quality Models
D Biological Technical Report
E Cultural Technical Report
F Geotechnical Report
G Environmental Conditions Summary

H-1 Hydrological Report
H-2 LID Plan
I Noise Technical Appendix
J Traffic Impact Analysis
K Sewer Analysis

FIGURES

3-1 Project Location 3-3
3-2 Site Plan 3-11
3-3 Concept Plan 3-13
3-4 Proposed Zones 3-15
3-5 Conceptual Rendering of Proposed Structures on Pad 10 (R) and Pad 11 (L) 3-17
3-6 Conceptual Rendering of Proposed Community Park Open Space Area 3-19
3-8 Conceptual Rendering of Proposed Structure on Pad 1 3-23
3-9 Conceptual Rendering of Proposed Plaza 3-25
3-10 Related Projects 3-39
4.1-1 Existing Visual Conditions 4.1-5
4.1-2 Key Observation Points 4.1-23
4.1-3 KOP 1: Looking West Toward the Project Site from the Intersection of South Avalon Boulevard and Turmont Street 4.1-25
4.1-4 KOP 2: Looking Northwest Toward the Project Site from the Intersection of Del Amo Boulevard and Carson Plaza Drive 4.1-31
4.1-5 KOP 3: Looking North Toward the Project Site from Kay A. Calas Bridge on East Del Amo Boulevard, Above the Dominguez Channel 4.1-33
4.1-6 KOP 4: Looking East Toward the Project Site from the Western Project Boundary 4.1-37
4.3-1 Vegetation Communities and Soil Types 4.3-7
4.3-2 CNDDB and USFWS Critical Habitat Occurrence 4.3-16
4.3-3 Sensitive Biological Resources 4.3-22
4.3-4 Project Impacts 4.3-43
4.5-1 Regional Faults 4.5-7
4.5-2 Seismic Hazards 4.5-9
4.7-1 Potential Project Site Hazards 4.7-5
4.8-1 Existing Drainage Conditions 4.8-5
4.8-2 Flood Hazards 4.8-11
4.8-3 Levee Failure Flood Map 4.8-13
4.8-4 Proposed Drainage Conditions 4.8-27
4.9-1 City of Carson General Plan Land Use 4.9-5
4.9-2 City of Carson Zoning Designations 4.9-7

4.10-1 Noise Measurement Locations 4.10-7
4.10-2 Location of Required Temporary Barrier for Construction Noise Mitigation 4.10-21
4.14-1 Existing Geometries 4.14-3
4.14-2 Transit Routes 4.14-7
4.14-3 Existing Traffic Volumes 4.14-13
4.14-4 Cumulative Project Locations 4.14-17
4.14-5 Project Trip Distribution and Assignment 4.14-33
4.14-6 Existing Plus Project Traffic Volumes 4.14-35
4.14-7 Existing Plus Project Plus Cumulative Traffic Volumes 4.14-41

TABLES

1-1 Summary of Project Impacts 1-16
1-2 Comparison of Impacts from Alternatives to the Proposed Project 1-50
2-1 Summary of Scoping Comments Received 2-2
3-1 Summary of Project Facilities 3-6
3-2 Estimated Hours of Operation 3-33
3-3 Related Projects 3-37
4.1-1 Project Consistency with County General Plan 4.1-15
4.1-2 Building Lighting Trespass Illuminance (fc) – Calculated at Vertical Planes 4.1-47
4.1-3 Sign Light Trespass Illuminance (fc) – Calculated at Vertical Planes 4.1-48
4.1-4 Contrast Ratio: Comparison of Existing Measured Luminance to Project Building Lighting 4.1-49
4.1-5 Contrast Ratio: Comparison of Existing Measured Luminance to Project Sign Luminance 4.1-50
4.2-1 South Coast Air Basin Attainment Classification 4.2-9
4.2-2 Local Ambient Air Quality Data 4.2-11
4.2-3 Ambient Air Quality Standards 4.2-14
4.2-4 South Coast Air Quality Management District Air Quality Significance Thresholds 4.2-22
4.2-5 Localized Significance Thresholds for Source Receptor Area 4 (South Coastal LA County) 4.2-24
4.2-6 Construction Scenario Assumptions 4.2-28
4.2-7 Estimated Maximum Daily Construction Criteria Air Pollutant Emissions 4.2-30
4.2-8 Estimated Maximum Daily Operational Emissions 4.2-32
4.2-9 Localized Significance Thresholds Analysis for Project Construction 4.2-35
4.2-10 AERMOD Principal Parameters 4.2-37
4.2-11 Construction Activity Health Risk Assessment Results - Unmitigated 4.2-38
4.2-12 CALINE4 Predicted Carbon Monoxide Concentrations 4.2-41

4.2-13 Estimated Mitigated Maximum Daily Construction Criteria Air Pollutant Emissions 4.2-48
4.2-14 Construction Activity Health Risk Assessment Results - Mitigated....4.2-48
4.3-1 Vegetation Communities and Land Covers within the Study Area 4.3-4
4.3-2 Special-Status Plant Species with a Moderate to High Potential to Occur within the Study Area 4.3-14
4.3-3 Special-Status Wildlife Species with a Moderate to High Potential to Occur within the Study Area....4.3-19
4.3-4 Potential ACOE/RWQCB Aquatic Resources Within the Study Area 4.3-21
4.3-5 Potential CDFW Jurisdiction Within the Study Area....4.3-25
4.3-6 Impacts to Vegetation Communities and Land Covers within the Study Area 4.3-40
4.3-7 Impacts to Jurisdictional Waters 4.3-42
4.3-8 Summary of Tree Impacts....4.3-47
4.4-1 Previously Conducted Technical Studies Within 0.5 Miles of the Project Site....4.4-2
4.4-2 Previously Recorded Cultural Resources Within 0.5 Miles of the Project Site....4.4-2
4.4-3 Native American Heritage Commission-Listed Native American Contacts 4.4-3
4.6-1 Six Top Greenhouse Gas Producer Countries and the European Union 4.6-5
4.6-2 Greenhouse Gas Emissions Sources in California 4.6-6
4.6-3 Estimated Annual Construction GHG Emissions 4.6-31
4.6-4 Estimated Annual Operational GHG Emissions 4.6-33
4.6-5 Project Consistency with the SCAG 2016 RTP/SCS 4.6-36
4.6-6 Proposed Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies 4.6-39
4.9-1 Proposed Project's Consistency with Applicable Land Use Plans....4.9-16
4.9-2 Proposed Project's Consistency with Applicable City of Carson General Plan Policies 4.9-23
4.10-1 Typical Noise Levels Associated with Common Activities 4.10-1
4.10-2 Measured Noise Levels....4.10-5
4.10-3 Los Angeles County Community Noise Criteria 4.10-9
4.10-4 Construction Equipment Typical Noise Emission Levels 4.10-12
4.10-5 Construction Noise Model Results Summary 4.10-13
4.10-6 Mechanical Equipment Operation Noise Summary of Results....4.10-16
4.10-7 Off-Site Traffic Noise Modeling Results....4.10-17
4.10-8 Off-Site Traffic Cumulative Noise Modeling Results....4.10-24
4.11-1 Population, Housing, and Employment (SCAG) 4.11-2
4.11-2 Employment Generation 4.11-7
4.12-1 Parks Bureau Response Times 4.12-2
4.12-2 Carson Sheriff Station Response Times 4.12-3
4.13-1 Nearby Parks and Recreational Facilities 4.13-2

4.13-2 Project Recreational Facilities....4.13-5
4.13-3 Project Consistency with Applicable Parks and Recreation Policies....4.13-13
4.14-1 Level of Service Definitions for ICU Methodology....4.14-10
4.14-2 Level of Service Definitions for Intersections for HCM Methodology....4.14-10
4.14-3 Existing Intersection Level of Service....4.14-11
4.14-4 Cumulative Project Trip Generation....4.14-15
4.14-5 County of Los Angeles Traffic Impact Guidelines Significant Impact Criteria for Intersections....4.14-23
4.14-6 Level of Service for Freeway Mainline Segments....4.14-24
4.14-7 Project Trip Generation....4.14-27
4.14-8 Existing plus Project Intersection Level of Service Summary....4.14-31
4.14-9 Existing plus Project plus Cumulative (2020) Intersection Level of Service Summary....4.14-39
4.14-10 Caltrans Intersection LOS Summary – Existing plus Project....4.14-45
4.14-11 Caltrans Intersection LOS Summary – Cumulative plus Project....4.14-46
4.14-12 Existing Freeway Facilities Level of Service Summary....4.14-47
4.14-13 Cumulative (2020) Freeway Facilities Level of Service Summary....4.14-48
4.14-14 Avalon Boulevard Corridor HCM Operational Analysis....4.14-50
4.14-15 Saturday plus Project Intersection Level of Service Summary....4.14-53
4.14-16 Construction Trip Generation....4.14-56
4.14-17 Intersection Significant Impact, Fair Share, and Mitigation Summary....4.14-66
4.14-18 Summary of Project Elements....4.14-75
4.14-19 Los Angeles County Code Parking Requirements....4.14-76
4.14-20 Weekday Time-of-Day Parking Demand....4.14-78
4.14-21 Weekend Time-of-Day Parking Demand....4.14-79
4.15-1 Previously Conducted Technical Studies Within 0.5 Miles of the Project Site....4.15-2
4.15-2 Previously Recorded Cultural Resources Within 0.5 Miles of the Project Site....4.15-3
4.15-3 Native American Heritage Commission-Listed Native American Contacts....4.15-3
4.15-4 Assembly Bill 52 Native American Tribal Outreach Results....4.15-4
4.16-1 Anticipated Water Use....4.16-21
4.16-2 Anticipated Solid Waste Generation....4.16-25
4.17-1 Construction Equipment Diesel Demand....4.17-9
4.17-2 Construction Worker Gasoline Demand....4.17-10
4.17-3 Construction Vendor Diesel Demand....4.17-10
4.17-4 Construction Hauler Diesel Demand....4.17-10
4.17-5 Annual Mobile Source Gasoline Demand....4.17-13
4.17-6 Annual Mobile Source Diesel Demand....4.17-13
6-1 Summary of Project Facilities....6-3
6-2 Comparison of Impacts from Alternatives to the Proposed Project....6-8

ACRONYMS AND ABBREVIATIONS

Acronym or Abbreviation	Definition
AB	Assembly Bill
ACM	asbestos-containing material
ACOE	U.S. Army Corps of Engineers
ADT	average daily trips
AEC	Area of Elevated Concentration
AERMOD	American Meteorological Society/EPA Regulatory Model
AF	acre feet
AFY	acre-feet per year
AMSL	above mean sea level
ANSI	American National Standards Institute
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
BKK	Ben K. Kazarian
BMPs	best management practices
BPS	building protection system
BTU	British thermal units
CAAQS	California Ambient Air Quality Standards
CAC	Certified Asbestos Consultant
CAFE	Corporate Average Fuel Economy
Cal/OSHA	California Occupational Health and Safety Administration
CalARP	California Accidental Release Prevention
CALINE4	California LINE Source Dispersion Model
CARB	California Air Resources Board
CBC	California Building Code
CCAP	Community Climate Action Plan
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFCs	chlorofluorocarbons
CFG	California Fish and Game
CGP	Construction General Permit
CGS	California Geological Survey
CH_4	methane
CHRIS	California Historical Resources Inventory System
CIWM	California Integrated Waste Management
CIWMB	California Integrated Waste Management Board
CMP	Congestion Management Program

Acronym or Abbreviation	Definition
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
CO_2	carbon dioxide
COCs	contaminants of concern
COMM	Commercial and Sport Fishing
COPC	contaminants of potential concern
CPUC	California Public Utilities Commission
CRAs	Coastal Resource Areas
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CRRC	Cool Roof Rating Council
CSE	County-Wide Siting Element
CSMD	Consolidated Sewer Maintenance District
CWA	Clean Water Act
DDT	dichlorodiphenyltrichloroethane
DOGGR	Department of Oil, Gas, & Geothermal Resources
DPH	Department of Public Health
DPM	diesel particulate matter
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
DTSC-SLs	Department of Toxic Substances Control-modified screening levels
EB	eastbound
ECS	Environmental Conditions Summary
EIR	Environmental Impact Report
ELWRF	Edward C. Little Water Recycling Facility
ENA	Exclusive Negotiating Agreement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EST	Estuarine Habitat
EV	electric vehicle
FAA	Federal Aviation Administration
FARs	Federal Aviation Regulations
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FHSZ	fire hazard severity zones
FIRM	Flood Insurance Rate Map
FRAP	Fire and Resources Assessment Program
FTIP	Federal Transportation Improvement Program
GHG	greenhouse gas emissions
GSAs	Groundwater Sustainability Agencies
GWP	global warming potential
HAP	hazardous air pollutant

Acronym or Abbreviation	Definition
HCFCs	hydrochlorofluorocarbon
HCM	Highway Capacity Manual
HCPs	Habitat Conservation Plans
HERO	Human and Ecological Risk Office
HFC	hydrofluorocarbon
HHRA	Human Health Risk Assessment
HMCP	Hazardous Materials Contingency Plan
HRA	health risk assessment
HVAC	heating-ventilation-air-conditioning
I-	Interstate
ICU	Intersection Capacity Utilization
IESNA	Illuminating Engineering Society of North America
IFC	International Fire Code
IIPP	Illness and Injury Prevention Program
IPCC	Intergovernmental Panel on Climate Change
IRWMPs	integrated regional water management plans
ITE	Institute of Traffic Engineers
ITP	Incidental Take Permit
JWPCP	Joint Water Pollution Control Plant
LABC	Los Angeles Building Code
LACFCD	Los Angeles Flood Control District
LACFD	Los Angeles County Fire Department
LACM	Museum of Los Angeles County
LACSD	Sanitation Districts of Los Angeles County
LAC-UBC	Los Angeles County Uniform Building Code
LARWQCB	Los Angeles Regional Water Quality Control Board
LASD	Los Angeles County Sheriff's Department
LBP	lead-based paints
LEA	Local Enforcement Agency
LED	light-emitting diodes
LEED	Leadership in Energy and Environmental Design
LFG	landfill gas
LID	Low Impact Development
LOS	Level of service
LRAs	Local Responsibility Areas
LST	localized significance threshold
LUSTs	leaking underground storage tanks
MAR	Marine Habitat
MBTA	Migratory Bird Treaty Act
MIGR	Migration of Aquatic Organisms
MLD	most likely descendant
MM-	Mitigation Measure
MMT	million metric tons

Acronym or Abbreviation	Definition
MOU	Memorandum of Understanding
MPO	metropolitan planning organizations
MS4s	Municipal Separate Storm Sewer Systems
MT	metric ton
MUN	municipal and domestic supply
MWD	Metropolitan District of Southern California
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NB	northbound
NCCPs	Natural Community Conservation Plans
NEPA	National Environmental Protection Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NF_3	nitrogen trifluoride
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NIOSH	National Institute for Occupational Safety and Health
NO	nitric oxide
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
O_2	molecular oxygen
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OHWM	Ordinary High Water Mark
ONC	Office of Noise Control
OPR	Office of Planning and Research
ORL	Organic Refuse Landfill
OS	Open Space
OSHA	Occupational Safety and Health Administration
OU	Operable Units
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PCE	passenger car equivalent
PDF	project design features
PEIR	Program Environmental Impact Report
PFCs	perfluorocarbons
PGA	peak ground acceleration
PM_{10}	particulate matter less than or equal to 10 microns in diameter

Acronym or Abbreviation	Definition
$PM_{2.5}$	particulate matter less than or equal to 2.5 microns in diameter
PPV	peak particle velocity
PRC	Public Resources Code
PRGs	Preliminary Remediation Goals
PRIMP	Paleontological Resources Impact Mitigation Program
PW	Public Works
RAP	Remedial Action Plan
RARE	threatened or endangered species
RCNM	Roadway Construction Noise Model
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
RHNA	Regional Housing Needs Assessment
RIFS	Remedial Investigation Feasibility Study
RPS	Renewables Portfolio Standard
RPW	Relatively Permanent Water
RSLs	Regional Screening Levels
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Community Strategies
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel-Efficient
SARA	Superfund Amendments and Reauthorization Act
SB	southbound
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coast Information Center
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SCWC	Southern California Water Company
SEAs	Significant Ecological Areas
SEER	seasonal energy efficiency ratio
SEMS	Standardized Emergency Management System
SF_6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SLCPs	cutting short-lived climate pollutants
SLERA	Screening Level Ecological Risk Assessment
SLF	Sacred Lands File
SMBMI	San Manuel Band of Mission Indians
SO_2	sulfur dioxide
SPCC	spill prevention, control, and countermeasure
SPWN	Spawning, Reproduction, and/or Early Development
SQMP	stormwater quality management program
SR-	State Route

Acronym or Abbreviation	Definition
SRA	Source receptor area
SRI	solar reflective index
SSC	species of special concern
SVOCs	semivolatile organic compounds
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
TCR	tribal cultural resource
TIA	Traffic Impact Analysis
TMDLs	total maximum daily loads
TNW	Traditional Navigable Water
TPH	total petroleum hydrocarbons
ULI	Urban Land Institute
USC	United States Code
USGS	U.S. Geological Survey
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
VOC	volatile organic compound
WARM	warm freshwater habitat
WB	westbound
WBMWD	West Basin Municipal Water District
WDRs	waste discharge requirements
WILD	wildlife habitat
WMA	Watershed Management Area
ZEV	Zero Emissions Vehicle
ZNE	zero net energy

CHAPTER 1
SUMMARY

This section provides a summary for the Draft Environmental Impact Report (EIR) for The Creek at Dominguez Hills project (project or proposed project). In addition, this section provides a summary of the proposed project, areas of known controversy and issues to be resolved, a summary of project alternatives, and a summary of all project impacts, associated mitigation measures, and the level of significance after mitigation is applied.

1.1 DOCUMENT PURPOSE

This Draft EIR was prepared by the County of Los Angeles (County), as lead agency, to inform decision makers and the public of the potential significant environmental impacts associated with the proposed project. This Draft EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (California Public Resources Code, Section 21000 et seq.) and the Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines; 14 CCR 15000 et seq.) published by the Public Resources Agency of the State of California.

The purpose of this Draft EIR is to focus the discussion on those potential impacts on the environment of the project which the lead agency has determined may be significant. In addition, feasible mitigation measures are recommended, when applicable, that could reduce significant environmental impacts or avoid significant environmental impacts.

1.2 DOCUMENT ORGANIZATION

This EIR is organized as follows:

Chapter 1, Summary, of the EIR is provided at the beginning of this document. This summary outlines the conclusions of the environmental analysis and provides a summary of the proposed project and the project alternatives analyzed in the EIR. This section also includes a table summarizing all environmental impacts identified in this EIR along with the associated mitigation measures proposed to reduce or avoid each impact.

Chapter 2, Introduction, serves as a forward to this EIR, introducing the project, the applicable environmental procedures, and the organization of the EIR.

Chapter 3, Project Description, provides a thorough description of the proposed project elements, the purpose and need for the project, project objectives, and required discretionary approvals. This chapter also includes a description of the intended uses of the EIR and public agency actions.

Chapter 4, Environmental Analysis, describes the potential environmental impacts of the proposed project, as well as proposed mitigation measures to reduce or avoid any potentially significant impacts. The discussion in Chapter 4 is organized by 17 environmental issue areas as follows:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Energy

For each environmental issue area, the analysis and discussion are organized into seven subsections as described below:

- **Existing Conditions –** This subsection describes the physical environmental conditions in the vicinity of the proposed project at the time of publication of the Notice of Preparation. The environmental setting establishes the baseline conditions by which the County will determine whether specific project-related impacts are significant.
- **Relevant Plans, Policies, and Ordinances –** This subsection describes the regulatory setting applicable to the environmental issue area and the proposed project at the time of publication of the Notice of Preparation.
- **Thresholds of Significance –** This subsection identifies a set of thresholds by which the level of impact is determined. Thresholds that were eliminated from further review in the EIR as part of the Initial Study analysis will be identified here.

- **Impacts Analysis –** This subsection provides a detailed analysis regarding the environmental impacts of the proposed project, and whether the impacts of the proposed project would meet or exceed the established significance criteria.
- **Mitigation Measures –** This subsection identifies potentially feasible mitigation measures that would avoid or substantially reduce significant adverse project impacts.
- **Level of Significance After Mitigation –** This subsection discusses whether project-related impacts would be reduced to below a level of significance with implementation of the mitigation measures identified in the EIR. If applicable, this subsection also identifies any residual significant and unavoidable adverse impacts of the proposed project that would result even with implementation of mitigation measures.
- **Cumulative Impacts –** This subsection discusses the cumulative impacts of the project in combination with the impacts of other projects in the vicinity.

In addition to the subsections listed above, full citations for all documents referred to in each environmental issue area discussion are included at the end of each section or chapter.

Chapter 5, Other CEQA Considerations, addresses significant environmental impacts that cannot be avoided, the significant irreversible environmental changes that would result from implementation of the proposed project, and growth-inducing impacts associated with the proposed project, and potential secondary impacts of mitigation measures implemented to reduce the impacts of the proposed project.

Chapter 6, Alternatives, discusses alternatives to the proposed project, including a No Project Alternative. This subsection describes the rationale for selecting the range of alternatives discussed in the EIR and identifies the alternatives considered by the County that were rejected from further discussion as infeasible during the scoping process. Lastly, Chapter 6 includes a discussion of the environmental impacts of the alternatives that were carried forward for analysis and identifies the environmentally superior alternative.

Chapter 7, List of Preparers, gives names and contact information of those responsible for writing this EIR.

Appendices include various technical studies prepared for the proposed project, as listed in the Table of Contents.

1.3 SIGNIFICANCE THRESHOLDS

As discussed in CEQA Guidelines Section 15064.7, a threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental impact, non-compliance with which means the impact will normally be determined to be significant by the agency and

compliance with which means the effect normally will be determined to be less than significant. Each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental impacts. For purposes of the analysis included within this EIR, the County is utilizing the thresholds of significance included within Appendix G of the newly adopted CEQA Guidelines (December 2018).

Based upon the results of the Initial Study and EIR scoping process and the Appendix G thresholds, this EIR is evaluating project-specific impacts using the following thresholds of significance.

Aesthetics

AES-1 In non-urbanized areas, would the project substantially degrade the existing visual character or quality of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

AES-2 Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Air Quality

AQ-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

AQ-2 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?

AQ-3 Would the project expose sensitive receptors to substantial pollutant concentrations?

AQ-4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Biological Resources

BIO-1 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 Game or U.S. Fish and Wildlife Service?

BIO-2 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 Game or U.S. Fish and Wildlife Service?

BIO-3 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, hydrological interruption, or other means?

BIO-4 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?

BIO-5 Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Cultural Resources

CUL-1 Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?

CUL-2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

CUL-3 Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Geology and Soils

GEO-1 Would the project directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving:

i. Strong seismic ground shaking?

ii. Seismic-related ground failure, including liquefaction?

GEO-2 Would the project result in substantial soil erosion or the loss of topsoil?

GEO-3 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?

GEO-4 Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating direct or indirect risks to life or property?

GEO-5 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Greenhouse Gas Emissions

GHG-1 Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHG-2 Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Hazards and Hazardous Materials

HAZ-1 Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

HAZ-2 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?

HAZ-3 Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school?

HAZ-4 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 result, would it create a significant hazard to the public or the environment?

Hydrology and Water Quality

HYD-1 Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

HYD-2 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?

HYD-3 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:

a. Result in substantial erosion or siltation on- or off-site?

b. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

c. 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?

d. Impede or redirect flood flows?

HYD-4 Would the project in flood hazard zones, risk release of pollutants due to project inundation?

HYD-5 Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Land Use and Planning

LU-1 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?

Noise

NOI-1 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?

NOI-2 Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Population and Housing

POP-1 Would the project induce substantial 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)?

Public Services

PUB-1 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:

a. Fire protection?

b. Police protection?

c. Parks?

Recreation

REC-1 Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Transportation

TRAF-1 Would the project conflict with an applicable plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

TRAF-2 Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

TRAF-3 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)?

TRAF-4 Would the project result in inadequate emergency access?

Tribal Cultural Resources

TCR-1 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, 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:

ii. Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

iii. 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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Utilities and Service Systems

UTL-1 Would the project 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?

UTL-2 Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

UTL-3 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?

UTL-4 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?

UTL-5 Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Energy

ENG-1 Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?

ENG-2 Would the project conflict with existing or obstruct a state or local plan for renewable energy or energy efficiency?

1.4 PROJECT LOCATION

The project site is located at 340 Martin Luther King Jr. Street (formerly E. 192nd Street) in the City of Carson and consists of approximately 87 acres in the southwestern portion of the existing Links at Victoria Golf Course (Victoria Golf Course). The project site is generally located northwest of the intersection of East Del Amo Boulevard and South Avalon Boulevard, northeast of the Dominguez Channel, and east of the junction of Interstate (I-) 405 and I-110.

The Goodyear Blimp Airship Base is located to the northwest, the Dominguez Channel to the west, Del Amo Boulevard to the south, and Avalon Boulevard to the east. Directly south of the project site across from a storm drainage ditch is a small lot with a Mobil gas station and U-Haul dealer. One- to two-story single-family residential uses are located east of the project site across from South

Avalon Boulevard. Commercial uses exist south of the project site across East Del Amo Boulevard and east of South Avalon Boulevard, including the South Bay Pavilion commercial shopping center. The Dominguez Channel, I-405 freeway, and an undeveloped swath of land between I-405 and the golf course is located west of the project site. As stated above, land adjacent to and north of the project site is currently used by Victoria Golf Course.

1.5 PROJECT DESCRIPTION

Plenitude Holdings LLC (Plenitude) proposes to develop a new sports, recreation, fitness, and wellness destination on a portion of the approximately 170-acre Victoria Golf Course, located at 340 Martin Luther King Jr. Street in the City of Carson. The approximately 87-acre project site is located northwest of the intersection of East Del Amo Boulevard and South Avalon Boulevard, in the southwesterly area of the golf course, as shown in Figure 3-1, Project Location. The County is the owner of the proposed project site and has leased the site to Plenitude since September 2015. In January 2018, the County entered into an Exclusive Negotiating Agreement with Plenitude to explore potential future public recreational uses of a portion of Victoria Golf Course, and amended Plenitude's lease agreement to allow for the reconfiguration of the leased premises in the event that new or different public-purpose uses are approved by the County.

The proposed project would consist of the development of the project site with approximately 509,500 square feet of building area, including a multi-use indoor sports complex, youth learning experience facility, indoor skydiving facility, marketplace, clubhouse, recreation and dining center, restaurants (alternatively, a specialty grocery store may be developed in place of some of the restaurant uses), and a sports wellness center.

The proposed project would also provide ziplining facilities, a community park, open space areas, a putting green, and a jogging path. The enhanced driving range experience may also include additional amenities such as pitch and putt areas and other golf practice facilities. A proposed Sports Park use would be located in the northwestern portion of the site while the proposed Main Street Park would be located in the southeastern portion of the site. A summary of proposed project facilities is described in Table 3-1 of Chapter 3, Project Description.

1.6 PROJECT OBJECTIVES

The proposed project objectives include the following:

- Convert the underperforming golf course into a more accessible, economically viable recreational facility that would provide new active and passive recreational amenities, including a multipurpose indoor sports facility, enhanced driving range experience, park and community gathering areas, meeting rooms, along with complementary commercial

uses that would serve the public recreation facilities, located within a safe environment to better serve the surrounding community and region at large.

- Support high-quality sports training, instruction, and competition activities, as well as health and youth education, while simultaneously creating a destination for community gatherings and entertainment.
- Provide a balance between both passive and active recreational uses that meets the demands of the community and surrounding area.
- Provide the opportunity for a wider range of recreational amenities and activities for the community and surrounding area, compared to the current golf course use.
- Provide the opportunity for a healthier community through an increase of recreational facilities and the provision of an extensive trail system.
- Provide facilities where community gatherings and events can be held.
- Create a successful and significant regional sports and events venue that is economically viable and self-sustaining because of the complementary commercial uses.
- Maintain and enhance the economic vitality of the region by providing job opportunities.
- Preserve the sensitive riparian areas within the Dominguez Branch Channel that bisects the property, and provide viewing and interpretive opportunities as part of the overall project plan.
- Provide adequate traffic access into and through the project area.
- Provide adequate parking facilities within the project area.
- Provide for signage that supports and enhances the future success of the project.

1.7 PROJECT DESIGN FEATURES

The following Project Design Features (PDFs) are incorporated into the proposed project so as to reduce and avoid any potentially significant environmental impacts.

PDF-GHG-1. The project shall employ the following design features to reduce the demand for energy use and GHG emissions:

- All installed appliances (e.g., washer/dryers, refrigerators, dishwashers) shall be Energy Star rated or equivalent.
- Prior to the issuance of permits, the project applicant or its designee shall submit building plans that demonstrate that all outdoor lighting shall be light-emitting diodes (LED) or other high-efficiency lightbulbs.

- The applicant will provide information on energy efficiency, energy efficient lighting and lighting control systems, energy management, and existing energy incentive programs to building tenants.
- The proposed project shall provide electrical outlets at building exterior areas.
- Prior to the issuance of nonresidential building permits, the project applicant or its designee shall submit building plans illustrating nonresidential structures meet the U.S. Green Building Council standards for cool roofs. This is defined as achieving a 3-year solar reflective index (SRI) of 64 for a low-sloped roof and 32 for a high-sloped roof.
- Prior to the issuance of building permits, the project applicant or its designee shall submit building plans illustrating that outdoor pavement, such as walkways and patios, use paving materials with 3-year SRI of 0.28 or initial SRI of 0.33.
- The applicant will install duct insulation to a minimum level of R-6 and modestly enhanced window insulation (for a 5% improvement over the 2016 Title 24 requirement) consistent with County of Los Angeles criteria.
- The applicant will include the following design elements:
- Construction of modest cool roof, defined as Cool Roof Rating Council (CRRC) Rated 0.15 aged solar reflectance and 0.75 thermal emittance
- Use of HVAC equipment with a seasonal energy efficiency ratio (SEER) of 12 or higher
- Installation of water heaters with an energy factor of 0.92 or higher
- Include some form of daylighting (e.g., skylights, windows) in rooms with exterior walls that would normally be occupied
- Include high-efficiency artificial lighting in at least 50% of unit fixtures
- Include waterless urinals and high-efficiency faucets and toilets throughout the project

PDF-GHG-2: The project applicant shall consider the use of a solar photovoltaic rooftop system to reduce the electric demand from the local grid where feasible.

PDF-GHG-3: The project's landscape non-potable water system shall meet "purple" pipe standards.

1.8 AREAS OF CONTROVERSY

A public scoping meeting was held at the Victoria Community Regional Park on September 13, 2018. The purpose of this meeting was to seek input from public agencies and the general public regarding the environmental issues and concerns that may potentially result from the proposed project. Approximately 50 people attended the scoping meeting. Comment letters were also received in response to the Notice of Preparation (NOP) Study for the project. Copies of comment letters are available in Appendix A. The primary areas of controversy identified by the public and agencies included the following potential issues (the EIR section that addresses the issue raised is provided in parentheses):

- Potential impacts due to congestion and increased traffic in the project vicinity, including freeways and on- and off-ramps, especially in combination with events at the StubHub Center, resulting in a need for transit improvements, highway and road improvements, consistency with regional transportation plans, and reduction of vehicle miles traveled (VMT). (Section 4.14, Transportation).
- Potential impacts associated with increased need for services, including Public Works, Public Safety, County Sheriff's Department and County Fire Department response and safety approvals (Section 4.12, Public Services).
- Potential impacts associated with stormwater, impact on City services, groundwater, landfill liner, wastewater flow and treatment, and fees association with the sewer system connection, and modification to the Los Angeles Flood Control District (LACFCD) facilities, streams or channels, including flooding in the Dominguez Channel (Section 4.8 Hydrology and Water Quality; Section 4.16, Utilities and Service Systems).
- Potential impacts regarding chemicals and toxic substances on site (Section 4.7, Hazards and Hazardous Materials).
- Potential impacts associated with City land use and zoning compliance, EIR processing and permitting (Section 4.9, Land Use and Planning).

1.9 REQUIRED PERMITS AND APPROVALS

Approvals required for development of the Project may include, but would not necessarily be limited to, the following permits and approvals:

- County of Los Angeles
    - Approval of ground lease, related agreements and division of land to implement the proposed project – Board of Supervisors;
    - Site plan review – Department of Regional Planning;

- Approval of alcoholic beverage sales – Department of Regional Planning;
- Building permits, grading permits, and other construction-related permits such as stockpile, foundation, plumbing, mechanical, electrical, sewer, storm drain etc. necessary to implement the proposed project –Los Angeles County Public Works and Consolidated Sewer Maintenance District; and
- Encroachment Permit – Flood Control District

- City of Carson
  - Street improvements, encroachment and haul route permits, sewer connection permits, tree removal permits, etc.as applicable;
- State of California
  - Department of Alcoholic Beverage Control
    - Issuance of alcoholic beverage licenses;
  - Department of Fish and Wildlife
    - Issuance of permits under Section 1600 of the Fish and Game Code related to streambed alterations, as applicable;
  - California Department of Toxic Substances Control
    - Approval of an environmental design document and related plans and/or documents, including but not limited to a Soil Management Plan, Construction Quality Assurance Plan, Dust Control Plan, and Pile Driving Plan, prior to construction;
    - "No exception to issuance" letters for various primary reviewing agencies on items including, but not limited to, the grading plan, landscape plan, building protection system, and certificates of building occupancy;
  - Los Angeles Regional Water Quality Control Board
    - Issuance of Notice of Intent prior to construction operations related to National Pollutant Discharge Elimination System (NPDES) Construction Permit;
    - Issuance of water quality certification pursuant to Section 401 of the Clean Water Act (CWA) in connection with issuance of a Section 404 CWA permit, as applicable;
  - South Coast Air Quality Management District
    - Issuance of excavation permit under Rule 1150 (Excavation of Landfill Sites); approval of Site-Specific Mitigation Plan pursuant to Rule 1166 (Volatile Organic Compound Emissions from Decontamination of Soil); and notifications pursuant to Rule 1466 (Control of Particulate Emissions from Soils with Toxic Air Contaminants) prior to construction, as applicable;

    - Issuance of a Permit to Construct and Operate a landfill gas collection and control system pursuant to Rule 1150.1 (Control of Gaseous Emissions from Municipal Solid Waste Landfills), as applicable;
    - Compliance with other SCAQMD rules, as applicable;
- Federal Agencies
    - U.S. Army Corps of Engineers
        - Issuance of Section 404 permit under the CWA, as applicable;
- Additional Discretionary Actions
    - Any other discretionary actions or approvals that may be required to implement the proposed project.

1.10 SUMMARY OF ENVIRONMENTAL IMPACTS

This Draft EIR has been prepared to assess the potentially significant impacts on the environment that could result from implementation of the proposed project. For a detailed discussion regarding potential significant impacts, please see Chapter 4, Environmental Impact Analysis, of this EIR.

As required by CEQA, a summary of the proposed project's impacts is provided in Table 1-1, Summary of Project Impacts, below. Also provided in Table 1-1 is a list of the proposed mitigation measures that are recommended in response to the potentially significant impacts identified in the EIR, as well as a determination of the level of significance of the impacts after implementation of the recommended mitigation measures.

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Aesthetics			
Except as provided in Public Resources Code Section 21099,			
AES-1. Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less than significant	None	Less than significant
AES-2. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Potentially significant	**MM-AES-1:** Project sign lighting facing Interstate (I-) 405 along the exterior of the multi-use indoor sports complex building on Pad 1 shall conform to a maximum luminance of 500 candelas per square meter (cd/m^2) for the period beginning 20 minutes prior to sunset until 20 minutes after sunrise, when ambient luminance levels reach minimum levels in order to avoid high contrast conditions. As specified in the project Lighting Study, conducted by Francis Krahe & Associates Inc., sign lighting shall be controlled by a photocell and time clock to transition smoothly from daytime conditions to the maximum nighttime luminance of 500 cd/m^2. As detailed in the Lighting Study, a maximum luminance of 500 cd/m^2 for the project sign during nighttime hours would reduce the contrast ratio to a level below the 30:1 threshold at all Monitoring Sites and nearby sensitive receptors.	Less than significant
Air Quality			
AQ-1. Would the project conflict with or obstruct implementation of the applicable air quality plan?	Potentially significant	**MM-AQ-1:** To reduce the potential for health risks, and mass emissions VOCs, CO, and NO_x as a result of the construction of the project, the applicant shall do the following: • Equip heavy-duty diesel-powered construction equipment with Tier 4 Final or better diesel engines, except where Tier 4 Final or better engines are not available for specific construction equipment. The	Significant and unavoidable

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		County of Los Angeles shall verify and approve all pieces within the construction fleet that would not meet Tier 4 Final standards. • Minimize simultaneous operation of multiple construction equipment units. During construction, vehicles in loading and unloading queues shall not idle for more than 5 minutes, and shall turn their engines off when not in use to reduce vehicle emissions. • Properly tune and maintain all construction equipment in accordance with manufacturer's specifications; • Where feasible, employ the use of electrical or natural gas-powered construction equipment, including forklifts and other comparable equipment types. • To reduce the need for electric generators and other fuel-powered equipment, provide on-site electrical hookups for the use of hand tools such as saws, drills, and compressors used for building construction. • Develop a Construction Traffic Control Plan to ensure construction traffic and equipment use is minimized to the extent practicable. The Construction Traffic Control Plan shall include measures to reduce the number of large pieces of equipment operating simultaneously during peak construction periods, minimize scheduling of vendor and haul truck trips to occur during non-peak hours where feasible, establish dedicated construction parking areas to encourage carpooling and efficiently accommodate construction vehicles, identify alternative routes to reduce traffic congestion during peak activities, and increase construction employee carpooling. **MM-AQ-2:** Prior to the County's approval of any grading permits, and during project construction, a Fugitive Dust Plan shall be prepared demonstrating compliance with SCAQMD Rule 403, to the satisfaction of the County. The project applicant or its designee shall require implementation of the following fugitive dust measures to minimize PM_{10} and $PM_{2.5}$ emissions as part of the Fugitive Dust Plan. All measures shall	

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		be designated on grading and improvement plans. Measures shall include but are not limited to the following: • Prior to construction activities, the project applicant shall employ a construction relations officer who will address community concerns regarding on-site construction activity. The applicant shall provide public notification in the form of a visible sign containing the contact information of the construction relations officer who will document complaints and concerns regarding on-site construction activity. The sign shall be placed in easily accessible locations along South Avalon Boulevard and noted on grading and improvement plans. • Water, or utilize another SCAQMD-approved dust control non-toxic agent, on the grading areas at least three times daily to minimize fugitive dust. • All permanent roads and roadway improvements shall be constructed and paved as early as possible in the construction process to reduce construction vehicle travel on unpaved roads. To reduce fugitive dust from earth-moving operations, building pads shall be finalized as soon as possible following site preparation and grading activities. • Stabilize grading areas as quickly as possible to minimize fugitive dust. • Apply chemical stabilizer, install a gravel pad, or pave the last 100 feet of internal travel path within the construction site prior to public road entry. • Remove any visible track-out into traveled public streets with the use of sweepers, water trucks, or similar method as soon as possible. • Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads. Unpaved construction site egress points shall be graveled to prevent track-out.	

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		• Wet wash the construction access point at the end of the workday if any vehicle travel on unpaved surfaces has occurred. • Cover haul trucks or maintain at least 2 feet of freeboard to reduce blow-off during hauling. • Evaluate potential for reduction in dust generating activity if winds exceed 25 miles per hour. • Apply chemical soil stabilizer to on-site stockpiles of excavated material. • Enforce a 15-mile-per-hour speed limit on unpaved surfaces. • Pave permanent roads as quickly as possible to minimize dust. • Provide haul truck staging areas for the loading and unloading of soil and materials. Staging areas shall be located away from sensitive receptors, at the furthest feasible distance. • Construction Traffic Control Plans shall route delivery and haul trucks required during construction away from sensitive receptor locations and congested intersections, to the extent feasible. Construction Traffic Control plans shall be finalized and approved prior to issuance of grading permits. **MM-AQ-3:** The construction contractor shall be required to utilize Super-Compliant VOC interior and exterior paints, which are defined by SCAQMD as meeting the "super-compliant" VOC standard of 10 grams per liter (g/L), during construction and long-term operations. **MM-AQ-4:** The applicant shall include the following transit-oriented development design features into the project to reduce the use of single-occupancy vehicles and vehicle miles traveled: • Bus pull-ins shall be constructed throughout the proposed project area. • The proposed project shall include improved design elements to enhance walkability and connectivity.	

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		• The proposed project design shall include a network that connects the proposed project uses to the existing off-site facilities through connecting with off-site Class I bike paths or Class II bike lanes. • The proposed project shall provide a pedestrian access network that internally links all uses and connects to all existing or planned external streets and pedestrian facilities contiguous with the proposed project area. The proposed project shall minimize barriers to pedestrian access and interconnectivity. Physical barriers, such as walls or landscaping, that impede pedestrian circulation shall be eliminated. • Proposed project design shall include pedestrian/bicycle safety and traffic calming measures in excess of jurisdiction requirements. Roadways shall be designed to reduce motor vehicle speeds and encourage pedestrian and bicycle trips with traffic calming features. Traffic calming features may include: marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers, and others. • The proposed project shall promote ridesharing programs through a multi-faceted approach, such as designating a certain percentage of parking spaces for ridesharing vehicles; designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles; or providing a website or message board for coordinating rides. • The proposed project shall implement marketing strategies to reduce commute trips. Information sharing and marketing are important components to successful commute trip-reduction strategies. Implementing commute trip-reduction strategies without a complementary marketing strategy would result in lower VMT reductions. Marketing strategies may include: new employee	

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		orientation of trip reduction and alternative mode options; event promotions; or publications. • One percent (1%) of vehicle/employee parking spaces shall be reserved for preferential spaces for car pools and van pools. • The proposed project shall provide short-term bicycle parking facilities to meet peak season maximum demand (one bike rack space per 20 vehicle/employee parking spaces). • The proposed project shall promote the adjacent park-and-ride lots to employees to support carpooling. • The proposed project shall implement a demand-responsive shuttle service that provides access throughout the project site, to the park-and-ride lots, and to the nearby transit centers. • The proposed project shall coordinate with the Southern California Association of Governments (SCAG) for carpool, vanpool, and rideshare programs that are specific to the project's employees. • The proposed project shall coordinate with SCAG on the future siting of transit stops/stations at the adjacent park-and-ride lots. **MM-AQ-5:** The proposed project shall provide circuitry and capacity for installation of electric vehicle (EV) charging stations consistent with the County of Los Angeles criteria. The proposed project shall develop up to 2% of the available parking spaces on site as EV charging stations.	
AQ-2. 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?	Potentially significant	**MM-AQ-1** through **MM-AQ-5**	Significant and unavoidable
AQ-3. Would the project expose sensitive receptors to substantial pollutant concentrations?	Potentially significant	**MM-AQ-1** through **MM-AQ-5**	Significant and unavoidable
AQ-4. Would the project result in other emissions (such as those leading to odors)	Less than significant	None	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
adversely affecting a substantial number of people?			
Biological Resources			
BIO-1. 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 Game or U.S. Fish and Wildlife Service?	Potential significant	**MM-BIO-1:** Prior to construction, a qualified biologist shall conduct a preconstruction survey sweep within areas of suitable habitat for special-status species, specifically the bank swallow. The biologist shall look for special-status species that may be located within or immediately adjacent to project work areas (within 500 feet). If bank swallows or other special-status species are found, the biologist shall identify their location for avoidance, and establish a buffer of up to 500 feet depending on sensitivity of the species and proximity to disturbance areas. The buffer would remain in place for as long as work activities take place in proximity to the species, or until the species has completed nesting and left the nest, or until the species can be allowed to move to off-site areas. If bank swallow is found and cannot be avoided by the project, additional mitigation will be required to comply with the California Endangered Species Act such as applying for an Incidental Take Permit (ITP) under Section 2081 of California Fish and Game Code. An ITP would require coordination with the California Department of Fish and Wildlife, payment of the application fee, and demonstration of measures to minimize and fully mitigate for proposed impacts. Additionally, impacts to occupied habitat for either species will require compensatory habitat-based mitigation through the purchase of mitigation credits at a minimum 1:1 ratio from an approved mitigation bank. The ITP process may take an additional month to complete, but mitigation can be finalized after the project has started. **MM-BIO-2:** Construction activities should avoid the migratory bird nesting season (typically February 1 through August 31), to reduce any potential significant impact to birds that may be nesting on the study area. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the project site and	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		contiguous habitat within 500 feet of all impact areas must be conducted for protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act (16 USC 703–712) and California Fish and Game Code, Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans along with an appropriate no disturbance buffer, which will be determined by the biologist based on the species' sensitivity to disturbance (typically 300 feet for passerines and 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing.	
BIO-2. 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 Game or U.S. Fish and Wildlife Service?	Potentially significant	**MM-BIO-3:** Direct impacts to jurisdictional waters shall be addressed through the regulatory application process to implement Section 1602 of the California Fish and Game Code. Direct temporary impacts resulting from temporary shoring of the Dominguez Branch Channel during construction of the new vehicle bridges includes 0.10 acre of non-wetland waters under California Department of Fish and Wildlife (CDFW) jurisdiction and shall be mitigated through the purchase of off-site mitigation credits. Additionally, direct permanent impacts resulting from construction of the storm drain outlets within the Dominguez Branch Channel and the Dominguez Channel up to 0.08 acre of non-wetland waters under CDFW jurisdiction shall also be mitigated through the purchase of off-site mitigation credits. Lastly, 3.31 acres of indirect permanent impacts to freshwater marsh habitat within the Dominguez Branch Channel resulting from increased shading impacts from construction of the proposed bridges shall also be mitigated through the purchase of off-site mitigation credits.	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		The project applicant shall purchase credits through an agency-approved mitigation bank, in-lieu fee program, or other agreement, such as the Soquel Canyon Mitigation Bank. A minimum ratio of 1:1 for establishment or reestablishment credits shall be required for impacts to jurisdictional wetland and non-wetland CDFW waters consisting of freshwater marsh habitat. The compensatory mitigation ratio is based on the existing relatively low-quality aquatic resources that occur on the project site. However, the final mitigation ratio required will be determined through consultation with the regulatory resource agencies during the permitting process.	
BIO-3. 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, hydrological interruption, or other means?	Potentially significant	**MM-BIO-3**	Less than significant
BIO-4. 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?	Less than significant	None	Less than significant
BIO-5. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially significant	**MM-BIO-4:** To offset the loss of 21 City-protected trees, the project's landscape plan shall incorporate a minimum of 21 trees into the newly designed landscape. The replacement of 21 impacted City-protected trees with 21 trees shall result in a replacement ratio of 1:1. The 21 trees shall be replaced within the City's parkway along Avalon Boulevard. Should it be found that all 21 City-protected trees cannot be replaced in the parkway, they shall be planted in other locations as determined by the City of Carson. Additionally, the project's landscape plan is proposing to plant more than 21 trees within the project site for aesthetic purposes. Therefore, the project's proposed minimum replacement standards for the existing trees on the project site (both	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		protected and unprotected trees) would exceed the amount typically required for replacement of protected trees.	
Cultural Resources			
CUL-1. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?	Less than significant	None	Less than significant
CUL-2. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	Potentially significant	**MM-CUL-1:** If archaeological resources (i.e., sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted. The archaeologist shall be empowered to temporarily stop or redirect grading activities to allow removal of abundant or large artifacts. Depending upon the significance of the find under the California Environmental Quality Act (CEQA) (14 CCR 15064.5(f); PRC, Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan and data recovery, may be warranted. The archaeologist shall also be required to curate specimens in a repository with permanent retrievable storage and submit a written report to the lead agency for review and approval prior to occupancy of the first building on the site. Once approved, the final report will be filed with the South Central Coast Information Center (SCCIC). Once artifact analysis is completed, a final written report detailing the results of all research procedures and interpretation of the site shall be submitted to the lead agency for review and approval prior to occupancy of the first building on the site.	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
CUL-3. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	Potentially significant	**MM-CUL-2:** In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found within the project site, the county coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the county coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the county coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant (MLD) of the deceased Native American. The MLD shall complete his/her inspection within 48 hours of being granted access to the site. The designated MLD would then determine, in consultation with the property owner, the disposition of the human remains.	Less than significant
Geology and Soils			
GEO-1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			
a. Strong seismic ground shaking?	Potentially significant	**MM-GEO-1:** During final design, grading, and construction, the Applicant shall implement all recommendations provided in the site-specific geotechnical investigation, *Geotechnical Investigation and Grading Plan Review, The Creek at Dominguez Hills Project, 340 Martin Luther King, Jr. Street, Carson, California*, prepared by Carl Kim Geotechnical Inc.	Less than significant
b. Seismic related ground failure including liquefaction?	Potentially significant	**MM-GEO-1**	Less than significant
GEO-2. Would the project result in substantial soil erosion or the loss of topsoil?	Less than significant	None	Less than significant
GEO-3. Would the project be located on a geologic unit or soil that is unstable, or that	Potentially significant	**MM-GEO-1**	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			
GEO-4. Would the project 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?	Potentially significant	**MM-GEO-1**	Less than significant
GEO-5. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially significant	**MM-GEO-2:** Prior to commencement of any grading activity on site, the applicant shall retain a qualified paleontologist acceptable to the County. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed project. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP 2010). The qualified paleontologist shall attend the preconstruction meeting and be on site during all rough grading and other significant ground-disturbing activities in previously undisturbed older Quaternary alluvial deposits (including old lagoonal deposits). These deposits may be encountered at depths as shallow as 5-10 feet below ground surface. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontology monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find. If determined to be significant, the paleontological resources shall be stabilized, labeled, and prepared to the point of identification before accessioning into an appropriate paleontological repository with retrievable storage. Following the paleontological monitoring program, a final monitoring report shall be submitted to the lead agency for review and approval. The report should summarize the monitoring program and include geological observations	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		and any paleontological resources recovered during paleontological monitoring for the proposed project.	
Greenhouse Gas Emissions			
GHG-1. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than significant	**PDF-GHG-1.** The project shall employ the following design features to reduce the demand for energy use and GHG emissions: • All installed appliances (e.g., washer/dryers, refrigerators, dishwashers) shall be Energy Star rated or equivalent. • Prior to the issuance of permits, the project applicant or its designee shall submit building plans that demonstrate that all outdoor lighting shall be light-emitting diodes (LED) or other high-efficiency lightbulbs. • The applicant will provide information on energy efficiency, energy efficient lighting and lighting control systems, energy management, and existing energy incentive programs to building tenants. • The proposed project shall provide electrical outlets at building exterior areas. • Prior to the issuance of nonresidential building permits, the project applicant or its designee shall submit building plans illustrating nonresidential structures meet the U.S. Green Building Council standards for cool roofs. This is defined as achieving a 3-year solar reflective index (SRI) of 64 for a low-sloped roof and 32 for a high-sloped roof. • Prior to the issuance of building permits, the project applicant or its designee shall submit building plans illustrating that outdoor pavement, such as walkways and patios, use paving materials with 3-year SRI of 0.28 or initial SRI of 0.33.	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		• The applicant will install duct insulation to a minimum level of R-6 and modestly enhanced window insulation (for a 5% improvement over the 2016 Title 24 requirement) consistent with County of Los Angeles criteria. • The applicant will include the following design elements: • Construction of modest cool roof, defined as Cool Roof Rating Council (CRRC) Rated 0.15 aged solar reflectance and 0.75 thermal emittance • Use of HVAC equipment with a seasonal energy efficiency ratio (SEER) of 12 or higher • Installation of water heaters with an energy factor of 0.92 or higher • Include some form of daylighting (e.g., skylights, windows) in rooms with exterior walls that would normally be occupied • Include high-efficiency artificial lighting in at least 50% of unit fixtures • Include waterless urinals and high-efficiency faucets and toilets throughout the project **PDF-GHG-2:** The project applicant shall consider the use of a solar photovoltaic rooftop system to reduce the electric demand from the local grid where feasible. **PDF-GHG-3:** The project's landscape non-potable water system shall meet "purple" pipe standards.	
GHG-2. Would the project conflict with an applicable plan, policy, or regulation adopted for	Less than significant	**PDF-GHG-1.** The project shall employ the following design features to reduce the demand for energy use and GHG emissions:	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
the purpose of reducing the emissions of greenhouse gases?		• All installed appliances (e.g., washer/dryers, refrigerators, dishwashers) shall be Energy Star rated or equivalent. • Prior to the issuance of permits, the project applicant or its designee shall submit building plans that demonstrate that all outdoor lighting shall be light-emitting diodes (LED) or other high-efficiency lightbulbs. • The applicant will provide information on energy efficiency, energy efficient lighting and lighting control systems, energy management, and existing energy incentive programs to building tenants. • The proposed project shall provide electrical outlets at building exterior areas. • Prior to the issuance of nonresidential building permits, the project applicant or its designee shall submit building plans illustrating nonresidential structures meet the U.S. Green Building Council standards for cool roofs. This is defined as achieving a 3-year solar reflective index (SRI) of 64 for a low-sloped roof and 32 for a high-sloped roof. • Prior to the issuance of building permits, the project applicant or its designee shall submit building plans illustrating that outdoor pavement, such as walkways and patios, use paving materials with 3-year SRI of 0.28 or initial SRI of 0.33. • The applicant will install duct insulation to a minimum level of R-6 and modestly enhanced window insulation (for a 5% improvement over the 2016 Title 24 requirement) consistent with County of Los Angeles criteria. • The applicant will include the following design elements:	

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		• Construction of modest cool roof, defined as Cool Roof Rating Council (CRRC) Rated 0.15 aged solar reflectance and 0.75 thermal emittance • Use of HVAC equipment with a seasonal energy efficiency ratio (SEER) of 12 or higher • Installation of water heaters with an energy factor of 0.92 or higher • Include some form of daylighting (e.g., skylights, windows) in rooms with exterior walls that would normally be occupied • Include high-efficiency artificial lighting in at least 50% of unit fixtures • Include waterless urinals and high-efficiency faucets and toilets throughout the project **PDF-GHG-2:** The project applicant shall consider the use of a solar photovoltaic rooftop system to reduce the electric demand from the local grid where feasible. **PDF-GHG-3:** The project's landscape non-potable water system shall meet "purple" pipe standards	
Hazards and Hazardous Materials			
HAZ-1. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Potentially significant	**MM-HAZ-1:** Prior to construction, a site-specific Hazardous Materials Contingency Plan (HMCP) shall be developed by the project applicant and followed during demolition, excavation, and construction activities for the project. The HMCP shall identify known areas of impacts, include training procedures for identification of contaminated media, as well as the proper handling and notification procedures should contaminated media be encountered. Contaminated media may include soil, groundwater, surface water, and solid waste. Contaminated media shall be managed in accordance	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		with local and state regulations. The HMCP shall include health and safety measures for workers and the general public, including procedures for limiting access for properly trained personnel to contaminated areas.	
HAZ-2. 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?	Potentially significant	**See MM-HAZ-1** **MM-HAZ-2:** Prior to demolition or renovation of project site structures that were built before 1980, a lead-based paint and asbestos survey shall be conducted by a California Department of Public Health (DPH) Certified Asbestos Consultant and/or Certified Site Surveillance Technician and a California DPH Certified Lead Inspector/Risk Assessor or Sampling Technician. A report documenting material types, conditions and general quantities will be provided, along with photos of positive materials and diagrams. Demolition or renovation plans and contract specifications shall incorporate any abatement procedures for the removal of material containing asbestos or lead-based paint. All abatement work shall be done in accordance with federal, state, and local regulations, including those of the Environmental Protection Agency (which regulates disposal), Occupational Safety and Health Administration, U.S. Department of Housing and Urban Development, California Occupational Safety and Health Administration (which regulates employee exposure), and the South Coast Air Quality Management District. **MM-HAZ-3:** Specified programs are recommended in the Remedial Action Plan (RAP) and approved by the California Department of Toxic Substances Control, which are designed to minimize potential impacts to public and employee health and safety and the environment, including institutional controls, Operations, Monitoring & Maintenance plans, and perimeter monitoring. The County of Los Angeles and other responsible parties of OU-2 have been and will continue to be responsible for implementing the RAP as approved by DTSC. Construction and operation shall occur in such a way as to not interfere with the implementation of the RAP. **MM-HAZ-4:** Due to past uses as a shooting range, prior to grading permit issuance, soil shall be sampled and analyzed for lead in areas where	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		grading and subsurface excavation are expected to occur within the former footprint of the shooting range. As previous localized surface sampling has confirmed the presence of contamination in surface soils less than 10 feet below ground surface, sampling shall be conducted in accordance with California Department of Toxic Substances Control guidance documents. The soil testing will confirm the presence or absence of localized contamination associated with past uses on the project site. Any soils qualifying as hazardous waste shall be managed in accordance with the Hazardous Materials Contingency Plan.	
HAZ-3. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Potentially significant	**MM-HAZ-1** through **MM-HAZ-4**	Less than significant
HAZ-4. 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 result, would is create a significant hazard to the public or the environment?	Potentially significant	**MM-HAZ-1, MM-HAZ-3**	Less than significant
Hydrology and Water Quality			
HYD-1. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less than significant	None	Less than significant
HYD-2. 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?	Less than significant	None	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
HYD-3. 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?	Less than significant	None	Less than significant
HYD-4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Less than significant	None	Less than significant
HYD-5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less than significant	None	Less than significant
Land Use and Planning			
LU-1. 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?	Less than significant	None	Less than significant
Noise			
NOI-1. Would the project result in generation of a substantial permanent or temporary increase	Potentially significant	**MM-NOI-1:** The following measure shall be incorporated into the project contract specifications. Prior to commencement of construction activities	Significant and unavoidable

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
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?		involving heavy equipment, temporary construction noise barriers shall be constructed in the locations shown in Figure 4.10-2, Location of Required Temporary Barrier for Construction Noise Mitigation. The noise barriers shall be 8 feet in height, must have a surface density of at least four pounds per square foot, and be free of openings and cracks (with the exception of expansion joints gaps and other construction techniques, which could create an opening or crack). **MM-NOI-2:** Construction activities shall take place during the permitted time and day per Section 12.08.440 of the County of Los Angeles Code of Ordinances. The applicant shall ensure that construction activities for the proposed project are limited to the hours of 7 a.m. to 7 p.m. Monday through Saturday, and not at all during other hours or on Sundays. **MM-NOI-3:** The County of Los Angeles shall require the contractor to adhere to the following measures as a condition of granting a grading permit to the contractor: • All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers. • Construction noise reduction methods such as shutting off idling equipment, construction of a temporary noise barrier, maximizing the distance between construction equipment staging areas and adjacent residences, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible. • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from or shielded from sensitive receptors. • Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow surrounding property owners to contact the job superintendent regarding any potential noise complaint.	

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
NOI-2. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Less than significant	None	Less than significant
Population and Housing			
POP-1. Would the project 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)?	Less than significant	None	Less than significant
Public Services			
PUB-1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:			
a. Fire protection?	Less than significant	None	Less than significant
b. Police protection?	Less than significant	None	Less than significant
c. Parks?	Less than significant	None	Less than significant
Recreation			
REC-1. Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	Potentially significant	• Aesthetics**: MM-AES-1** • Air Quality**: MM-AQ-1** through **MM-AQ-5** • Biological Resources**: MM-BIO-1** through **MM-BIO-4** • Cultural Resources**: MM-CUL-1, MM-CUL-2,** • Geography and Soils**: MM-GEO-1, MM-GEO-2** • Greenhouse Gas Emissions**: PDF-GHG-1, PDF-GHG-2, PDF-GHG-3** • Hazards and Hazardous Materials**: MM-HAZ-1** through **MM-HAZ-4** • Noise**: MM-NOI-1, MM-NOI-2, MM-NOI-3** • Transportation**: MM-TRA-1 through MM-TRA-17** • Tribal Cultural Resources**: MM-TCR-1**	Significant and unavoidable

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
REC-2. Would the project, when viewed in conjunction with other projects in the area, result in the deterioration of parks and recreational facilities due to increased usage or necessitate the construction of new parks or recreational facilities?	Less than significant	• Air Quality**: MM-AQ-1** through **MM-AQ-5** • Greenhouse Gas Emissions**: PDF-GHG-1, PDF-GHG-2, PDF-GHG-3** • Transportation**: MM-TRAF-2, MM-TRAF-4, MM-TRAF-5, MM-TRAF-7,** and **MM-TRAF-9** through **MM-TRAF-13**	Significant and unavoidable
Transportation			
TRAF-1. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	Potentially significant	**MM-TRAF-1** The proposed project shall implement the following improvements at Main Street/Martin Luther King Jr. Street: • Reconfigure the westbound approach to provide a left-turn, shared left/right-turn, and right-turn lanes; • Add new northbound right-turn lane. **MM-TRAF-2:** The proposed project shall implement the following improvements at Main Street/Del Amo Boulevard: • Add new second (dual) westbound left-turn lane; OR, • Add new northbound right-turn lane; AND • Add new eastbound right-turn lane • Widening of respective approaches will be required **MM-TRAF-3**: The proposed project shall implement the following improvements at Avalon Boulevard/Albertoni Street: • Restripe existing (cross-hatched) pavement on the northbound approach to a second (dual) northbound left-turn lane. This improvement could be accomplished within the existing right-of-way. • Modify signal left-turn lead-lag phasing for the northbound and southbound approaches (for opposing left-turn clearance purposes). **MM-TRAF-4:** The proposed project shall implement the following improvements at Avalon Boulevard/Del Amo Boulevard: • Add new southbound right-turn lane. This improvement could be accomplished within the existing right-of-way.	MM-TRAF-2, MM-TRAF-12, MM-TRAF-13, and MM-TRAF-15 would reduce impacts to less-than-significant levels if approved by the City of Carson; however, the improvements would be in conflict with Carson General Plan Policies. Therefore, these impacts would remain significant and unavoidable unless the City of Carson amends the General Plan and subsequently approves these improvements.

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-TRAF-5: The proposed project shall implement the following improvements at Main Street/Albertoni Street: • Add new eastbound right-turn lane. This improvement could be accomplished within the existing right-of-way, but would require the removal of approximately 5 -street parking spaces approximately 100 feet west of the intersection. **MM-TRAF-6:**, The proposed project shall implement the following improvements at Main Street/Victoria Street: • Add new eastbound right-turn lane. This improvement could be accomplished within the existing right-of-way, but would require the removal of approximately 5 on-street parking spaces approximately 100 feet west of the intersection. **MM-TRAF-7:** The proposed project shall implement the following improvements at Hamilton Avenue/Del Amo Boulevard: • Modify signal head for protected-permitted phasing for the westbound approach (in order to prevent left-turn queue from blocking a westbound through lane) **MM-TRAF-8:** The proposed project shall implement the following improvements at Hamilton Avenue/I-110 southbound ramps: • Restripe the southbound approach to provide an exclusive left-turn lane and a shared through-left lane. This improvement could be accomplished within the existing right-of-way. **MM-TRAF-9:** The proposed project shall implement the following improvements at Figueroa Street/Del Amo Boulevard: • Restripe the westbound approach to provide two left-turn lanes, a through lane, and a shared through-right lane. • Modify the traffic signal to provide an overlap phase for the northbound right turn and overlap phase for the southbound right-turn	The remaining mitigation measures would reduce impacts to less-than-significant levels; however, the improvements require approval by other agencies, and these impacts would remain significant and unavoidable unless approved by those agencies.

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-TRAF-10: The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following improvements at Main Street/I-405 southbound ramps: • Convert the eastbound left-turn lane to a shared through-left-turn lane (onto the I-405 on-ramp). **MM-TRAF-11:** The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following improvements at Main Street/Del Amo Boulevard: • Add new second (dual) westbound left-turn lane; • Add new northbound right-turn lane; • Widening of the westbound approach will be required. **MM-TRAF-12**: The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following physical improvements at Avalon Boulevard/Victoria Street: • On the eastbound approach, restripe the right-turn lane into a shared through/right-turn lane • On the eastbound departure, restripe to provide three through lanes	

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		Although the physical improvement described above could be accomplished through restriping, the geometric limitations of the eastbound departure lanes beyond the immediate vicinity of the intersection could result in the improvement being determined infeasible. Pursuant to County Department of Public Works policy, however, when an intersection is projected to exceed the significance criteria but still operate at a satisfactory LOS (LOS D or better), the County may direct that operational, rather than physical, improvements be implemented for the intersection. As previously detailed, Intersection No. 8 is projected to operate at LOS C under the Cumulative Future with Project conditions. As such, per County of Public Works direction, Intersection No. 8 was evaluated for operational deficiencies by comparing the projected turning lane queue lengths under Cumulative Future with Project conditions to the existing turning lane storage capacity at the intersection. Based on the results of the evaluation, no operational deficiencies were identified and, thus, no operational improvements were required. **MM-TRAF-13:** The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following physical improvements at Avalon Boulevard/University Avenue: • On the westbound approach, reconfigure to provide two left-turn lanes and one right-turn lane; this is anticipated to require some modification to the existing medians located on Avalon Boulevard and University Avenue • Reclassify a section of the existing dedicated westbound bicycle lane as a shared lane	

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		Although the physical improvement described above could be accomplished through modifications to the existing medians, the physical requirements for the existing KV transmission tower within the Avalon Boulevard median could result in the improvement being determined infeasible. Pursuant to County Department of Public Works policy, however, when an intersection is projected to exceed the significance criteria but still operate at a satisfactory LOS (LOS D or better), the County may direct that operational, rather than physical, improvements be implemented for the intersection. As previously detailed, Intersection No. 10 is projected to operate at LOS C under the Cumulative Future with Project conditions. As such, per County of Public Works direction, Intersection No. 10 was evaluated for operational deficiencies by comparing the projected turning lane queue lengths under Cumulative Future with Project conditions to the existing turning lane storage capacity at the intersection. Based on the results of the evaluation, no operational deficiencies were identified and, thus, no operational improvements were required. **MM-TRAF-14:** The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following improvements at Avalon Boulevard/Del Amo Boulevard: • Add second (dual) northbound left-turn lane. • Reconfigure southbound approach to provide a right-turn lane. • Reconfigure eastbound right-turn lane into a shared through/right-turn lane. **MM-TRAF-15:** The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following physical improvements at I-110 southbound ramps/190th Street:	

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		• Provide an additional eastbound lane for a total of three through lanes by reducing the width of the existing painted median on 190th Street to accommodate the additional eastbound lane. Although the physical improvement described above could be accomplished through restriping, the physical requirements for the corresponding advance warning signage and the existing physical constraints could result in the improvement being determined infeasible. Pursuant to County Department of Public Works policy, however, when an intersection is projected to exceed the significance criteria but still operate at a satisfactory LOS (LOS D or better), the County may direct that operational, rather than physical, improvements be implemented for the intersection. As previously detailed, Intersection No. 22 is projected to operate at LOS D under the Cumulative Future with Project conditions. As such, per County of Public Works direction, Intersection No. 22 was evaluated for operational deficiencies by comparing the projected turning lane queue lengths under Cumulative Future with Project conditions to the existing turning lane storage capacity at the intersection. Based on the results of the evaluation, no operational deficiencies were identified and, thus, no operational improvements were required. **MM-TRAF-16:** The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following improvements at Hamilton Avenue/Del Amo Boulevard: • Convert the second northbound through lane to a dedicated right-turn lane. • Modify the traffic signal to provide an overlap phase for the northbound right-turn and add protected-permitted phasing for the westbound left-turn movements.	

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		This measure is able to mitigate the cumulative impact to a less than significant level. Implementation of this mitigation will require review and approval by the County of Los Angeles Public Works. **MM-TRAF-17:** The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following improvements at Figueroa Street/Del Amo Boulevard: • Restripe the westbound approach to provide two left-turn lanes, a through lane, and a shared through-right lane. • Restripe the eastbound approach to provide a left-turn lane, two through lanes, and a shared through-right turn lane. • Modify the traffic signal to provide an overlap phase for the northbound and southbound right-turns. **MM-TRAF-18:** Prior to receiving a Certificate of Occupancy, the proposed project shall optimize signal timings along the Avalon Boulevard corridor within the project study area.	
TRAF-2. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)?	Less than significant	None	Less than significant
TRAF-3. 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)?	Potentially significant	**MM-TRAF-19:** Prior to receiving a Certificate of Occupancy for the multi-use indoor sports complex on Pad 1 or the clubhouse on Pad 7, or the commencement of special events within the community park that are anticipated to be attended by a large number of people, the proposed project shall develop a Traffic Management Plan for Special Events and submit to the County of Los Angeles for review and approval. Special events may require special event permits and traffic management plans as part of event planning. Examples of traffic management techniques that could be included in these plans include but are not limited to paid parking, traffic control at internal intersections, lane management, and wayfinding. These traffic management plan elements could improve the internal flow of traffic during special events.	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-TRAF-20: Prior to issuance of a grading permit, the proposed project shall develop a Construction Traffic Management Plan for construction activities that would impact public streets and submit to the County of Los Angeles for review and approval. As such, the County of Los Angeles shall ensure that temporary signage is posted and detour routes are identified to facilitate movement of traffic flow, including emergency vehicles, during project construction. A Construction Traffic Management Plan shall be implemented prior to construction of these improvements to minimize impacts throughout the duration of construction activities.	
TRAF-4. Would the project result in inadequate emergency access?	Potentially significant	**MM-TRAF-20**	Less than significant
Tribal Cultural Resources			
TCR-1. 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, 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 Public Resources Code section 5020.1(k), or	Less than significant	None	Less than significant
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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Potentially significant	**MM-TRC-1:** While no tribal cultural resources (TCRs) have been identified that may be affected by the project, the following approach for the unanticipated discovery of TCRs has been prepared to reduce potential impacts to unanticipated resources. Should a potential TCR be encountered, construction activities near the potential TCR shall be temporarily halted within 50 feet of the potential TCR and the County of Los Angeles (County) notified. The County will notify Native American tribes that have been identified by the Native American Heritage Commission (NAHC) to be traditionally and culturally affiliated with the geographic area of the project. If the unanticipated resource is archaeological in nature, appropriate management requirements shall be implemented as outlined in Mitigation Measure (MM-) CUL-1 (see	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		Section 4.4.5, Mitigation Measures). If the County determines that the potential resource is a TCR (as defined by Public Resources Code, Section 21074), tribes consulting under AB 52 would be provided a reasonable period of time, typically five days from the date a new discovery is made, to conduct a site visit and make recommendations regarding future ground disturbance activities as well as the treatment and disposition of any discovered TCRs. A qualified archaeologist shall implement a plan for the treatment and disposition of any discovered TCRs based on the nature of the resource and considering the recommendations of the tribe(s). All activities shall be conducted in accordance with regulatory requirements. If human remains are found within the project site, management recommendations as outlined in MM-CUL-3 (see Section 4.4.5) should be implemented.	
Utilities and Service Systems			
UTL-1. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less than significant	None	Less than significant
UTL-2. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	Less than significant	None	Less than significant

Table 1-1
Summary of Project Impacts

Environmental Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
UTL-3. 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?	Less than significant	None	Less than significant
UTL-4. Would the project generate solid waste in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less than significant	None	Less than significant
UTL-5. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less than significant	None	Less than significant
Energy			
ENG-1. Would the project result in wasteful, inefficient, or unnecessary consumption of energy?	Less than significant	None	Less than significant
ENG-2. Would the project conflict with existing energy standards and regulations?	Less than significant	None	Less than significant
ENG-3. Would the project place a significant demand on local and regional energy supplies or require a substantial amount of additional capacity?	Less than significant	None	Less than significant

1.11 ALTERNATIVES TO THE PROPOSED PROJECT

The CEQA Guidelines Section 15126.6 requires consideration and discussion of alternatives to the proposed project in an EIR. Several alternatives, including alternate sites, were considered but rejected from consideration in this EIR. A review of those alternatives and the reasons for rejecting them is provided in Chapter 6, Alternatives, of this document. This section summarizes the alternatives to the project that were analyzed in detail as required under CEQA.

1.11.1 Alternatives Evaluated

The following alternatives to the proposed project were considered and are evaluated in Chapter 6 of this EIR:

Alternative 1: No Project Alternative

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate the specific alternative of "no project" along with its impact. As stated in this section of the CEQA Guidelines, the purpose of describing and analyzing a No Project Alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. As specified in Section 15126.6(e)(3)(B) of the CEQA Guidelines, the "no project" alternative for a development project consists of the circumstance under which a proposed project does not proceed. Section 15126.6(e)(3)(B) further states that "in certain instances, the no project alternative means 'no build' wherein the existing environmental setting is maintained." Accordingly, Alternative 1: No Project Alternative assumes the proposed project would not proceed, no new permanent development or land uses would be introduced within the project site, and the existing environment would be maintained. Under Alternative 1, the existing golf course would continue to operate and the proposed project would not be developed.

Alternative 2: Passive Use Park

Alternative 2 would result in the closure of the existing golf course and conversion of the property into a passive use recreational park. Features associated with the golf course, such as sand traps, would be removed and the land would be re-contoured to establish a more natural setting. Duration to complete demolition and re-contouring would be estimated at 2 to 4 months and with noise-generating activity conducted in accordance with the County's Noise Control Ordinance. Construction equipment similar to the proposed project (e.g., excavators, backhoes, bulldozers) would be used; however, less equipment would be necessary due to the smaller scope of construction required for Alternative 2. Grading depth would not exceed 3 feet below existing grade and minimal compaction would be required for site improvements like playgrounds. Standard erosion control measures and best management practices would be implemented during grading and work done in accordance with California Building Code requirements. Construction-

related hazardous materials (e.g., oils, lubricants) and hazardous waste would be stored and disposed of in compliance with manufacturer's specifications and applicable laws and regulations. Disturbed areas would be planted with drought-tolerant landscaping and would require minimal irrigation to establish the vegetation. The existing golf course parking lot would remain to provide parking for visitors to the site. Minimal security lighting would be incorporated. Passive uses would be similar to some of the improvements in the proposed project, such as a jogging trail, open lawn areas, flexible event space, a picnic grove, a playground, natural reflection spaces, and shaded terraces. However, no active uses such as sports fields would be included. The passive use under Alternative 2 would not be anticipated to generate revenue sufficient to offset maintenance cost. Additionally, limited job opportunities would be created by Alternative 2.

Alternative 3: Alternate Land Use – Active Sports Complex

Alternative 3 would result in the closure of the existing golf course and conversion of the property into an active sports complex including all recreational uses under the proposed project without any complementary commercial uses, except for the clubhouse building. Facilities would include multiuse indoor sports complex, youth learning experience, indoor skydiving, driving range, zipline, community park, putting green, and jogging/walking paths. The clubhouse building would be suitable for community-serving uses and include a full kitchen/prep area to support catering and food service, storage space, support facilities (restrooms, administrative and mechanical space, etc.), and a rooftop deck. The community park would be expanded to replace the buildings on Pads 5, 6, and 8–11, along with most of the surface parking areas surrounding those buildings. The overall structural development would be reduced from 509,500 square feet to 351,500 square feet (roughly 68% of the project's square footage), a change of 158,000 square feet. Consequently, construction duration would be reduced to approximately 13 months instead of 18 months. Grading would also be reduced to 136,000 cubic yards (68% of the 200,000 cubic yards proposed by the project). The equipment operating daily during site preparation and grading activities would be substantially similar to the project. However due to the smaller building square footage proposed under this alternative, total construction equipment would be less than the project during building construction. Standard erosion control measures and best management practices would be implemented during grading and work done in accordance with California Building Code requirements. Noise-generating activity conducted in accordance with the County's Noise Control Ordinance. Construction-related hazardous materials (e.g., oils, lubricants) and hazardous waste would be stored and disposed of in compliance with manufacturer's specifications and applicable laws and regulations. Revenue from rental of the facilities would not cover the costs of the building improvements and would be anticipated to be less than maintenance costs but not significantly less.

1.11.2 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) indicates that an analysis of alternatives to a project shall identify an Environmentally Superior Alternative among the alternatives evaluated in an EIR. The CEQA Guidelines also state that should it be determined that the No Project Alternative is the Environmentally Superior Alternative, the EIR shall identify another Environmentally Superior Alternative among the remaining alternatives.

Based on the comparative analysis of the project alternatives, and as shown in Table 1-2, Alternative 2 – Passive Use Park is considered the Environmentally Superior Alternative because it reduces the potential project impacts in every issue area. However, Alternative 2 does not meet the stated project objectives and likely would not be economically self-sustaining over the long term.

Table 1-2
Comparison of Impacts from Alternatives to the Proposed Project

Environmental Topic Area	Proposed Project Level of Impact	Impact Compared to Proposed Project		
		Alternative 1: No Project	*Alternative 2: Passive Use Park*	*Alternative 3: Alternative Land Use – Active Sports Complex*
Aesthetics	Less than significant with mitigation	Less	Less	Similar
Air Quality	Significant unavoidable	Less	Less	Similar (construction) Less (operation)
Biological Resources	Less than significant with mitigation	Less	Less	Similar
Cultural Resources	Less than significant with mitigation	Less (construction) Similar (operation)	Similar	Similar
Geology and Soils	Less than significant with mitigation	Less	Less	Similar (construction) Less (operation)
Greenhouse Gas Emissions	Less than significant	Less	Less	Less
Hazards/Hazardous Materials	Less than significant with mitigation	Less (construction) Similar (operation)	Less (construction) Similar (operation)	Less
Hydrology & Water Quality	Less than significant	Less	Less	Similar (construction) Less (operation)
Land Use and Planning	Less than significant	Less	Less	Similar (construction) Less (operation)
Noise	Significant unavoidable	Less	Less	Similar
Population and Housing	Less than significant	Less	Less	Less
Public Services	Less than Significant	Less	Less	Less
Recreation	Significant unavoidable	Less	Less	Similar
Transportation	Significant unavoidable	Less	Less	Less
Tribal Cultural Resources	Less than significant with mitigation	Less (construction) Similar (operation)	Similar	Similar
Utilities and Service Systems	Less than significant	Less	Less	Similar (construction) Less (operation)
Energy	Less than significant	Less	Less	Less

CHAPTER 2
INTRODUCTION

2.1 SUMMARY OF THE PROPOSED PROJECT

This Environmental Impact Report (EIR) has been prepared by the County of Los Angeles (County) to evaluate potential environmental effects that would result from development of the Creek at Dominguez Hills project (proposed project) on a portion of the County's Links at Victoria Golf Course (Victoria Golf Course), located in the City of Carson, California. This EIR has been prepared in conformance with the California Environmental Quality Act of 1970 (CEQA) statutes (California Public Resources Code, Section 21000 et. seq., as amended) and implementing guidelines (14 CCR 15000 et seq.). The County is the owner of the proposed project site and has leased the site to Plenitude, LLC, the current operator of the golf course, since September 2015. In January 2018, the County entered into an Exclusive Negotiating Agreement with Plenitude to explore potential future public recreational uses of a portion of Victoria Golf Course, and amended Plenitude's lease agreement to allow for the reconfiguration of the leased premises in the event that new or different public-purpose uses are approved by the County. As owner of the project site, the County is responsible for all of the proprietary decisions regarding any proposed development of the project site, and will act as the permitting authority for any such development pursuant to its sovereign immunity from local zoning and permitting. See Section 4.9, Land Use and Planning, for further discussion.

CEQA Guidelines section 15051 identifies the criteria for determining which of two or more public agencies with involvement in a project should be the lead agency, noting that "[i]f the project will be carried out by a public agency, that agency shall be the lead agency even if the project would be located within the jurisdiction of another public agency." If elements of the project may be carried out by a nongovernmental person or entity, then pursuant to section 15051(b) of the CEQA Guidelines, the lead agency shall be the public agency with the greatest responsibility for supervising or approving the project as a whole. The County is the public agency that will have the greatest responsibility for supervising and approving the proposed project, and therefore, the County is the lead agency under CEQA.

Plenitude Holdings LLC (Plenitude) proposes to develop a new sports, recreation, fitness, and wellness destination (project or proposed project) on a portion of the approximately 170-acre Victoria Golf Course, located at 340 Martin Luther King, Jr. Street (formerly E. 192nd Street) in the City of Carson.[1] The approximately 87-acre project site is located northwest of the intersection of East Del Amo Boulevard and South Avalon Boulevard, in the southwesterly area of the golf course.

[1] The net area is approximately 167 acres.

2.2 THE CEQA ENVIRONMENTAL PROCESS

CEQA requires preparation of an EIR when there is substantial evidence supporting a fair argument that a proposed project may have a significant effect on the environment. The purpose of an EIR is to provide decision makers, public agencies, and the general public with an objective and informational document that fully discloses the environmental effects of the proposed project. The EIR process is intended to facilitate the objective evaluation of potentially significant direct, indirect, and cumulative impacts of the proposed project, and to identify feasible mitigation measures and alternatives that would reduce or avoid the proposed project's significant effects. In addition, CEQA specifically requires that an EIR identify those adverse impacts determined to be significant after mitigation.

In accordance with the CEQA Guidelines, an Initial Study was prepared and a Notice of Preparation distributed on August 28, 2018, to public agencies and organizations. The purpose of the Notice of Preparation was to provide notification that the County plans to prepare an EIR and to solicit input on the scope and content of the EIR. Approximately 2,000 copies of the Notice of Preparation were distributed and 13 written comment letters were received from various agencies, organizations, and individuals. These letters and the Notice of Preparation are included in Appendix A, Initial Study and Notice of Preparation.

A public agency scoping meeting was held at the Victoria Community Regional Park on September 13, 2018. The purpose of this meeting was to seek input from public agencies and the general public regarding the environmental issues and concerns that may potentially result from the proposed project. Approximately 50 people attended the scoping meeting. Table 2-1 summarizes NOP comments letters received from agencies, groups, and individuals during the scoping period.

Table 2-1
Summary of Scoping Comments Received

Commenting Agency or Property Owner	Date	Written or Verbal Comment	Issues Raised
NOP Letters			
Regional Agencies			
Caltrans	9/27/18	Written	Requests for additional analysis in Traffic Impact Analysis, including impacts within the project vicinity, I-405 and I-110. Requests a 95th percentile queue length analysis for the following ramps: NB-110 and SB-110 off-ramps to Torrance/Del Amo Boulevard, SB-110 off-ramp to Carson Street, NB-110 off-ramp to 220th St./Figueroa St., SB-110 off-ramp to 190th Street, NB-405 off-ramp to Main Street, NB-405 and SB-405 off-ramps to Avalon Boulevard. Transit improvements, highway and road improvements, expanded use of bike and pedestrian facilities, and reduction of vehicle miles traveled (VMT). Expressed concern regarding storm water run off.

Table 2-1
Summary of Scoping Comments Received

Commenting Agency or Property Owner	Date	Written or Verbal Comment	Issues Raised
SCAG	9/27/18	Written	Consistency with SCAG's Regional Transportation Plan/Sustainable Community Strategies (RTP/SCS) goals and align with RTP/SCS policies.
Local Agencies			
Los Angeles County Sheriff's Department	9/27/18	Written	Traffic congestion in the project vicinity, especially in combination with events at the StubHub Center. Increased need for police responses.
City of Carson	9/27/18	Written	Requests for additional details in Project Description, additional analyses in EIR chapters, jurisdictional issues.
Los Angeles County Sanitation District	9/24/18	Written	Project's expected wastewater flow and treatment plan, the capital facilities fee associated with connecting to the Districts' sewerage system, and the intention to provide service to the project up to the levels permitted.
Los Angeles County Fire Department	9/21/18	Written	Provided general building requirements and information regarding required approvals by the Fire Department.
Los Angeles County Public Works	9/27/18	Written	Modification to any Los Angeles County Flood Control District (LACFCD) facilities, streams or channels, and specified regulations and permits that would be required. Flooding, levee deficiency of the Dominguez Channel to adequately convey flood waters in the event of a 100-year flood.
CT Corporation System	9/1/18	Written	Indicates that CT Corporation System is not the registered agent for 3M Company.
Scoping Meeting Comments			
Alice and Tony Harris	9/13/18	Written	Other amenities and features added to the project including a bowling alley, football fields, STEM activities in the academic center, physical wellness center, and traffic associated with the project access points and parking in surrounding neighborhoods.
Barry Spradling	9/13/18	Written	Request for football fields.
Ramona Pimentel	9/13/18	Written	Request for indoor pool.
Devin Kushi	9/13/18	Written	Need for a local golf practice facility for youth and learning the game.
Ron Wicks	9/13/18	Written	Public transportation, and hours of operation of the proposed café and food services.
Vincent Goshi	9/13/18	Written	Impacts to existing recreational facilities and the golfers who use the existing facility, especially senior golfers. Expressed concern regarding chemical and toxic substances on site.

Source: Appendix A.
Notes: Caltrans = California Department of Transportation; SCAG = Southern California Association of Governments.

This EIR focuses on the environmental impacts identified as potentially significant during the Initial Study process, including the comments received in response to the Notice of Preparation. The issue areas analyzed in detail in this EIR include aesthetics, air quality, biological resources, cultural resources, tribal cultural resources, geology and soils, greenhouse gas emissions, hazards and

hazardous materials, hydrology and water quality, land use, noise, population and housing, public services, recreation, transportation, and utilities and service systems. Effects found to be not significant in the Initial Study include Population and Housing, Agriculture and Forestry Resources, and Mineral Resources and are addressed in the Initial Study (Appendix A) of this EIR.

This Draft EIR is being circulated for 45 days for public review and comment. The timeframe of the public review period is May 15 through July 1, 2019. During this period, comments from the general public, organizations, and agencies regarding environmental issues analyzed in the Draft EIR and the Draft EIR's accuracy and completeness may be submitted to the lead agency at the following address:

Ryan Kristan
County of Los Angeles
Department of Public Works
Project Management Division II
900 S. Fremont Avenue, 5th Floor
Alhambra, California 91803
Email: rkristan@dpw.lacounty.gov

General questions about this EIR and the EIR process should also be directed to the email address above. The County will prepare written responses to all comments pertaining to environmental issues raised in the Draft EIR if they are submitted in writing and postmarked by the last day of the public review period identified in the Notice of Availability. The Draft EIR is available for review at http://parks.lacounty.gov/environmental-documents/.

A hard copy of the Draft EIR is available for viewing at the following locations:

- By appointment only at Los Angeles County Department of Public Works, Project Management Division II, 900 South Fremont Avenue, 5th Floor, Alhambra, CA 91803. Appointment requests should be made to Ryan Kristan at rkristan@dpw.lacounty.gov or at (626) 300-3271.
- Dr. Martin Luther King, Jr. Library, 17906 S. Avalon Boulevard, Carson, CA 90746. The Draft EIR will be available for review during normal library hours of operation.

Prior to approval of the proposed project, the County, as the lead agency and decision-making entity, is required to certify that this EIR has been completed in accordance with CEQA, that the proposed project has been reviewed and the information in this EIR has been considered, and that this EIR reflects the independent judgment of the County. CEQA also requires the County to adopt "findings" with respect to each significant environmental effect identified in the EIR) (California

Public Resources Code, Section 21081; 14 CCR 15091). For each significant effect, CEQA requires the approving agency to make one or more of the following findings:

- The proposed project has been altered to avoid or substantially lessen significant impacts identified in the Final EIR.
- The responsibility to carry out such changes or alterations is under the jurisdiction of another agency.
- Specific economic, legal, social, technological, or other considerations, which make infeasible the mitigation measures or alternatives identified in the Final EIR.

If the County concludes that the proposed project will result in significant effects that cannot be substantially lessened or avoided by feasible mitigation measures and alternatives, the County must adopt a "statement of overriding considerations" prior to approval of the proposed project (California Public Resources Code, Section 21081 (b)). Such statements are intended under CEQA to provide a written means by which the lead agency balances in writing the benefits of the proposed project and the significant and unavoidable environmental impacts. Where the lead agency concludes that the economic, legal, social, technological, or other benefits outweigh the unavoidable environmental impacts, the lead agency may find such impacts "acceptable" and approve the proposed project.

In addition, public agencies, when approving a project, must also adopt a Mitigation Monitoring and Reporting Program describing the changes that were incorporated into the proposed project or made a condition of project approval in order to mitigate or avoid significant effects on the environment (California Public Resources Code, Section 21081.6). The Mitigation Monitoring and Reporting Program is adopted at the time of project approval and is designed to ensure compliance during project implementation. Upon approval of the proposed project, the County will be responsible for implementation of the proposed project's Mitigation Monitoring and Reporting Program. This document will be attached to the Final EIR.

2.3 ORGANIZATION OF THE ENVIRONMENTAL IMPACT REPORT

This EIR is organized as follows:

Chapter 1, Summary, of the EIR is provided at the beginning of this document. This summary outlines the conclusions of the environmental analysis and provides a summary of the proposed project and the project alternatives analyzed in the EIR. This section also includes a table summarizing all environmental impacts identified in this EIR along with the associated mitigation measures proposed to reduce or avoid each impact.

Chapter 2, Introduction, serves as a forward to this EIR, introducing the project, the applicable environmental procedures, and the organization of the EIR.

Chapter 3, Project Description, provides a thorough description of the proposed project elements, the purpose and need for the project, project objectives, and required discretionary approvals. This chapter also includes a description of the intended uses of the EIR and public agency actions.

Chapter 4, Environmental Analysis, describes the potential environmental effects of the proposed project, as well as proposed mitigation measures to reduce or avoid any potentially significant impacts. The discussion in Chapter 4.0 is organized by 17 environmental issue areas as follows:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Energy

For each environmental issue area, the analysis and discussion are organized into seven subsections as described below:

- **Existing Conditions –** This subsection describes the physical environmental conditions in the vicinity of the proposed project at the time of publication of the Notice of Preparation. The environmental setting establishes the baseline conditions by which the County will determine whether specific Project-related impacts are significant.

- **Relevant Plans, Policies, and Ordinances –** This subsection describes the regulatory setting applicable to the environmental issue area and the proposed project at the time of publication of the Notice of Preparation.
- **Thresholds of Significance –** This subsection identifies a set of thresholds by which the level of impact is determined. Thresholds that were eliminated from further review in the EIR as part of the Initial Study analysis will be identified here.
- **Impacts Analysis –** This subsection provides a detailed analysis regarding the environmental effects of the proposed project, and whether the impacts of the proposed project would meet or exceed the established significance criteria.
- **Mitigation Measures –** This subsection identifies potentially feasible mitigation measures that would avoid or substantially reduce significant adverse project impacts.
- **Level of Significance After Mitigation –** This subsection discusses whether project-related impacts would be reduced to below a level of significance with implementation of the mitigation measures identified in the EIR. If applicable, this subsection also identifies any residual significant and unavoidable adverse effects of the proposed project that would result even with implementation of mitigation measures.
- **Cumulative Impacts –** This subsection discusses the cumulative effects of the project in combination with the effects of other projects in the vicinity.

In addition to the subsections listed above, full citations for all documents referred to in each environmental issue area discussion are included at the end of each section or chapter.

Chapter 5, Other CEQA Considerations, addresses significant environmental effects that cannot be avoided, the significant irreversible environmental changes that would result from implementation of the proposed project, and growth-inducing impacts associated with the proposed project.

Chapter 6, Alternatives, discusses alternatives to the proposed project, including a No Project Alternative. This subsection describes the rationale for selecting the range of alternatives discussed in the EIR and identifies the alternatives considered by the County that were rejected from further discussion as infeasible during the scoping process. Lastly, Chapter 6 includes a discussion of the environmental effects of the alternatives that were carried forward for analysis and identifies the environmentally superior alternative.

Chapter 7, List of Preparers, gives names and contact information of those responsible for writing this EIR.

Appendices include various technical studies prepared for the proposed project, as listed in the Table of Contents.

The County, as the designated lead agency for the proposed project, is responsible for enforcing and verifying that each mitigation measure is implemented as required; however, the project applicants/developers shall be responsible for implementing the mitigation measures as required by the proposed project. As part of the Final EIR process, a mitigation monitoring and reporting program will be prepared.

CHAPTER 3
PROJECT DESCRIPTION

3.1 INTRODUCTION

This chapter describes the Creek at Dominguez Hills project (project or proposed project). It includes a description of the project location, an overview of the existing environmental setting, and a discussion of the project objectives, project elements, and construction schedule. A list of related projects is also provided.

3.2 ENVIRONMENTAL SETTING

3.2.1 Project Location

The project site is located at 340 Martin Luther King Jr. Street (formerly E. 192nd Street) in the City of Carson and consists of approximately 87 acres in the southwestern portion of the existing Links at Victoria Golf Course (Victoria Golf Course). The project site is generally located northwest of the intersection of East Del Amo Boulevard and South Avalon Boulevard, northeast of the Dominguez Channel, and east of the junction of Interstate (I-) 405 and I-110.

3.2.2 Surrounding Land Uses

The project site encompasses approximately 87 acres owned by the County of Los Angeles (County) in a developed area that supports a variety of land uses. Specifically, land uses located in the area surrounding the project site include recreational (golf), channel, residential, retail, commercial, and airbase-related uses. The Goodyear Blimp Airship Base is located to the northwest, the Dominguez Channel to the west, Del Amo Boulevard to the south, and Avalon Boulevard to the east. Directly south of the project site across from a storm drainage ditch is a small lot with a Mobil gas station and U-Haul dealer. One- to two-story single-family residential uses are located east of the project site across from South Avalon Boulevard. Commercial uses exist south of the project site across East Del Amo Boulevard and east of South Avalon Boulevard, including the South Bay Pavilion commercial shopping center. The Dominguez Channel, I-405 freeway, and an undeveloped swatch of land between I-405 and the golf course are located west of the project site. As stated above, land adjacent to and north of the project site is currently used by Victoria Golf Course.

A separate project, the Carol Kimmelman Athletic and Academic Campus Project, is proposed by the Carol Kimmelman Center LLC (Kimmelman) for the northerly portion of the existing Victoria Golf Course. As currently proposed, the Kimmelman project would consist of redeveloping a portion of the golf course with new recreation uses, including a new sports and academic campus. The Kimmelman project will be included as a related project in this environmental impact report (EIR).

3.2.3 Existing General Plan and Zoning

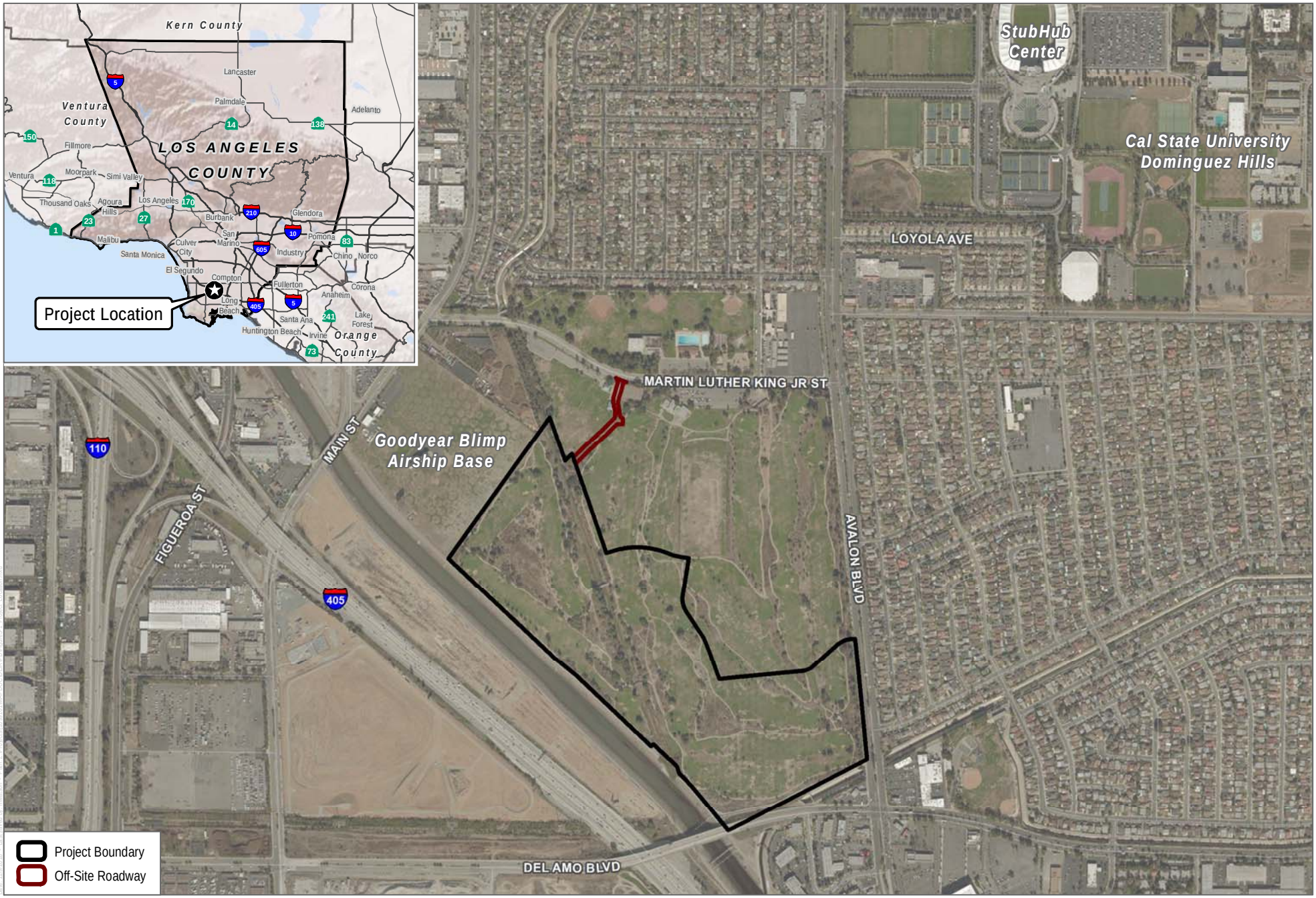
The project site, located in the City of Carson, is located on land owned by the County; therefore, all land use decisions pertaining to the proposed project fall under the jurisdiction of the County. However, any off-site improvements required under the proposed project would be subject to City regulations; therefore, both County of Los Angeles and City of Carson land use and zoning information is included. See Section 4.9, Land Use and Planning, for further discussion.

The County General Plan Parks and Recreation Element designates the site as a "Special Use Facility."[1] The project site has a general plan land use designation of Recreational Open Space, per the City of Carson General Plan (City of Carson 2004), and a zoning designation of OS-ORL, Open Space–Organic Refuse Landfill, per the City of Carson Zoning Code (Section 9151.12). The Carson Vision Plan, adopted by the City of Carson in 2016, identifies an opportunity to reposition the property as an amenity for both Carson residents and the South Bay community.

3.3 PROJECT BACKGROUND

Plenitude Holdings LLC (Plenitude) proposes to develop a new sports, recreation, fitness, and wellness destination on a portion of the approximately 170-acre Victoria Golf Course, located at 340 Martin Luther King Jr. Street (formerly E. 192nd Street) in the City of Carson. The approximately 87-acre project site is located northwest of the intersection of East Del Amo Boulevard and South Avalon Boulevard, in the southwesterly area of the golf course, as shown in Figure 3-1, Project Location. The County is the owner of the proposed project site and has leased the site to Plenitude since September 2015. In January 2018, the County entered into an Exclusive Negotiating Agreement with Plenitude to explore potential future public recreational uses of a portion of Victoria Golf Course, and amended Plenitude's lease agreement to allow for the reconfiguration of the leased premises in the event that new or different public-purpose uses are approved by the County.

[1] Special use facilities are generally single-purpose facilities that serve greater regional recreational or cultural needs.



SOURCE: Bing Maps 2018

DUDEK

0 500 1,000 Feet

FIGURE 3-1

Project Location

The Creek at Dominguez Hills Project

INTENTIONALLY LEFT BLANK

The Victoria Golf Course has operated on the site since 1966 under lease with the County. The existing Victoria Golf Course includes an 18-hole golf course, driving range, pro shop building, and related surface parking. Plenitude is the current tenant and operator of the Victoria Golf Course. The golf course includes 9 full-time and 5 part-time employees for maintenance and 4 full-time and 13-part-time employees for operation (Logan, pers. comm. 2018). The proposed project would remove existing golf course improvements and replace them with a variety of public recreational facilities, along with ancillary uses that would serve the recreation facilities.

Prior to the Victoria Golf Course's current use as a County golf course, it was the site of a portion of the former Ben K. Kazarian (BKK) landfill, which operated as a Class II municipal solid waste landfill from 1948 to 1959. The California Department of Toxic Substances Control is overseeing the former landfill's remediation. The entire former landfill site is divided into Operable Units (OU) focused on two separate remediation operations, of which the Victoria Golf Course site is OU-2. Remediation activities at the site began in December 2006 and are ongoing. The Final Remedial Investigation/Feasibility Study Report for soil and landfill gas media was completed in 2014 and the Remedial Action Plan was completed in 2016. Groundwater contamination will be addressed separately as another OU for the entire former landfill and will be subject to its own Remedial Investigation/Feasibility Study and Remedial Action Plan. See Section 4.7, Hazards and Hazardous Materials, and Section 4.8, Hydrology and Water Quality, for further discussion.

3.4 PROJECT OBJECTIVES

The objectives of the proposed project are to:

- Convert the underperforming golf course into a more accessible economically viable recreational facility that would provide new active and passive recreational amenities, including a multipurpose indoor sports facility, enhanced driving range experience, park and community gathering areas, meeting rooms, along with complementary commercial uses that would serve the public recreation facilities, located within a safe environment to better serve the surrounding community and region at large;
- Support high-quality sports training, instruction, and competition activities, as well as health and youth education, while simultaneously creating a destination for community gatherings and entertainment;
- Provide a balance between both passive and active recreational uses that meets the demands of the community and surrounding area;
- Provide the opportunity for a wider range of recreational amenities and activities for the community and surrounding area, compared to the current golf course use;
- Provide the opportunity for a healthier community through an increase of recreational facilities and the provision of an extensive trail system;

- Provide facilities where community gatherings and events can be held;
- Create a successful and significant regional sports and events venue that is economically viable and self-sustaining because of the complementary commercial uses;
- Maintain and enhance the economic vitality of the region by providing job opportunities;
- Preserve the sensitive riparian areas within the Dominguez Branch Channel that bisects the property, and provide viewing and interpretive opportunities as part of the overall project plan;
- Provide adequate traffic access into and through the project area;
- Provide adequate parking facilities within the project area; and
- Provide for signage that supports and enhances the future success of the project.

3.5 PROPOSED PROJECT

3.5.1 Project Elements

The proposed project would consist of the development of the project site with approximately 509,500 square feet of buildings, including a multi-use indoor sports complex, enhanced driving range experience, youth learning experience facility, indoor skydiving facility, marketplace, clubhouse, recreation and dining center, restaurants (alternatively, a specialty grocery store may be developed in place of some of the restaurant uses), and a sports wellness center, as shown on Figure 3-2, Site Plan. The proposed project would also provide ziplining and outdoor activity facilities, a community park, open space areas, a putting green, and a jogging path. Table 3-1 summarizes the building area of proposed project facilities. A conceptual rendering of the project is shown on Figure 3-3, Concept Plan. As shown in Figure 3-4, Proposed Zones, the proposed Sports Park uses would be located in the northwestern portion of the site while the proposed Main Street Park would be located in the southeastern portion of the site. Conceptual renderings of certain proposed structures and open space areas are included in Figure 3-5, Conceptual Rendering of Proposed Structures on Pad 10 (R) and Pad 11 (L), and Figure 3-6, Conceptual Rendering of Proposed Community Park Open Space Area. Figures 3-7 and 3-8 include conceptual renderings of proposed structures on Pads 9 and 1, and Figure 3-9 shows conceptual renderings of the proposed plaza.

Table 3-1
Summary of Project Facilities

	Use	Building Area (square feet)	Parking (number of spaces)
Pad 1	Multi-use indoor sports complex	199,000	749[1]
Pad 2	Youth learning experience	30,000	
Pad 3	Indoor skydiving building	7,500	
Pad 4	Enhanced driving range experience	75,000	429

Table 3-1
Summary of Project Facilities

	Use	Building Area (square feet)	Parking (number of spaces)
Pad 5	Marketplace	54,000	408[2]
Pad 6	Marketplace	17,000	
Pad 7	Clubhouse	40,000	469
Pad 8	Recreation and dining facility	26,000	
Pad 9 & 11	Restaurants[3]	25,000	
Pad 10	Sports wellness building	36,000	
Pad 12	Zipline and adventure course	—	—
Pad 13	Community park	—	—
Pad 14	Putting green	—	—
Pad 15	Jogging/walking path	—	—
		Street Parking	58
	Total	**509,500**	**2,113**

1 Includes overflow parking.
2 Includes parking for 36,000 square feet of sports wellness use located on the north side of the Turmont Street access road.
3 Alternatively, a 30,000-square-foot specialty grocery store may be developed on Pad 11 in place of the 28,600 square feet of restaurant uses.

Multi-Use Indoor Sports Complex (Pad 1)

The centerpiece of the project would be a one-story (with interior mezzanine level), approximately 50-foot-high multi-use indoor sports complex measuring approximately 199,000 square feet, which would be designed with maximum flexibility to accommodate a large variety of sports and events. This facility would have two primary purposes: the first is to provide a practice and competition venue for local sports groups and community use and programming, and the second is to host athletic tournaments. The complex would primarily be intended for midweek team practices (youth and elite), adult leagues, corporate leagues for local and regional businesses, and private training. In addition, certain areas within the complex would be suitable for children's birthdays and general play areas.

The complex would include numerous areas for different sports and activities, including but not limited to:

- A flexible court configuration that would accommodate between 8 and 16 sports courts for basketball or volleyball, measuring a total of approximately 66,000 square feet;
- Two approximately 14,000-square-foot synthetic turf fields (for a total area of approximately 28,000 square feet), which could alternatively be used as six batting cages/pitching tunnels, for predominantly youth baseball and softball practice and training usage;
- A sports performance area, including a sprint track and specialized training area for youth and elite athletes, measuring a total of approximately 4,000 square feet;

- A "kids zone" providing a play area with rope climbing course, laser tag, and redemption arcade, measuring a total of approximately 14,000 square feet;
- A café area providing food and beverage service for youths, families, and adults, measuring a total of approximately 2,500 square feet. The on-site consumption of alcoholic beverages would be permitted within the café;
- Ancillary and administrative space, including the lobby, offices, kitchen, restrooms, team and referee rooms, etc., measuring a total of approximately 18,000 square feet;
- Common area, stairs, and circulation measuring approximately 13,000 square feet; and
- Mechanical, electrical, and storage areas, measuring approximately 13,000 square feet.

An approximately 2-acre outdoor recreation field would adjoin the southeast side of the multi-use indoor sports complex. The field would be illuminated for nighttime play by approximately ten poles with lighting fixtures. The poles would be up to approximately 60 to 80 feet in height, and each lighting fixture would be individually aimed to optimize light on the field of play while at the same time minimizing light spill and glare.

Youth Learning Experience (Pad 2)

The youth learning experience would be within a one- to two-story, approximately 50-foot-high building measuring approximately 30,000 square feet. This facility would offer experiential learning activities in which children and teens acquire knowledge by doing and through reflecting on their experiences by offering a hands-on "discovery" experience. In addition to the children's discovery activity areas, the facility would include a gathering place for parents and guardians to observe children undertaking the various activities. This area would include limited food and beverage offerings.

Indoor Skydiving (Pad 3)

The indoor skydiving building would be a state-of-the-art facility that allows participants to experience free-fall conditions in a vertical wind tunnel. The building would be approximately 7,500 square feet and approximately 65 feet high. The facility would be available for individual users, as well as for educational, social, and corporate events. For educational programs, trained STEM (Science, Technology, Engineering, and Math) educators would guide students through an interactive presentation, hands-on creative student experiments, and in-depth flight training and flight experience. The facility would also be capable of hosting other events, including youth group visits, Boy Scout and Girl Scout outings, fundraising events, birthday parties, and corporate and team-building events.

Enhanced Driving Range Experience (Pad 4)

The project includes replacing the existing driving range with a three-story, approximately 55-foot-high public golf practice, instruction, and recreation facility measuring approximately 75,000 square feet. This facility would be centrally located within the project site, to the north of the community park. The facility would provide a social and interactive experience for both golfers and non-golfers, and would be used by individuals and groups. The facility would also offer the ability to host special events, such as birthday parties and corporate gatherings, and could also host tournaments and fundraisers for educational, community, and other charitable organizations.

The new facility would include a climate-controlled seating and waiting area with approximately 100 hitting bays. From the hitting bays, players would hit balls into an open outdoor area that would be surrounded by netting and support poles of up to approximately 170 feet in height, which are designed to contain all golf balls within the limits of the facility. The facility would also include the following components: restaurant/bar area; meeting and event space; administrative office space; lobby space; and storage, circulation and miscellaneous space (e.g., restrooms, mechanical). The on-site consumption of alcoholic beverages would be permitted within the facility.

The approximately 4.5-acre outdoor driving range area would be surfaced with a high-quality, natural-looking synthetic turf. The outdoor driving range would be illuminated by approximately 10- to 15-foot-high lighting standards mounted on the roof of the building that would illuminate the back of golf balls as they come off the tee line, allowing the players to track their golf balls. Each lighting fixture would be individually aimed to optimize light on the driving range while at the same time minimizing light spill and glare. The outfield ground would include internally illuminated round target areas located at ground level, with different colors denoting levels of difficulty.

The enhanced driving range experience may also include additional amenities such as pitch and putt areas and other golf practice facilities.

Marketplace (Pads 5 and 6)

The marketplace would be within one or more one- to two-story, up to approximately 35-foot-high buildings, measuring a total of approximately 71,000 square feet. The marketplace would offer multi-tenant usage for a variety of fitness and recreational and related uses, such as yoga, Pilates, and spinning. In addition, the marketplace would include numerous food and beverage options showcasing a variety of cuisines and prepared foods, meats and seafood, produce, and baked goods. The food and beverage outlets would generally consist of an eclectic mix of eateries and food artisans offering fare for consumption within the project site and to take home. The Marketplace would feature outdoor landscaped areas adjoining the buildings, including outdoor furniture where patrons would be able to eat and gather in a relaxed outdoor environment.

Clubhouse (Pad 7)

The clubhouse would be a three-story, approximately 45-foot-high building measuring approximately 40,000 square feet. This building would be suitable for community-serving uses, meetings and forums, such as mommy and me and CPR certification classes, book clubs and other social gatherings, health fairs, etc. The clubhouse would also be available for County-sponsored meetings and County department functions. In addition, the clubhouse could hold special events (e.g., proms, weddings, corporate rentals, etc.). The on-site consumption of alcoholic beverages would be permitted within the facility.

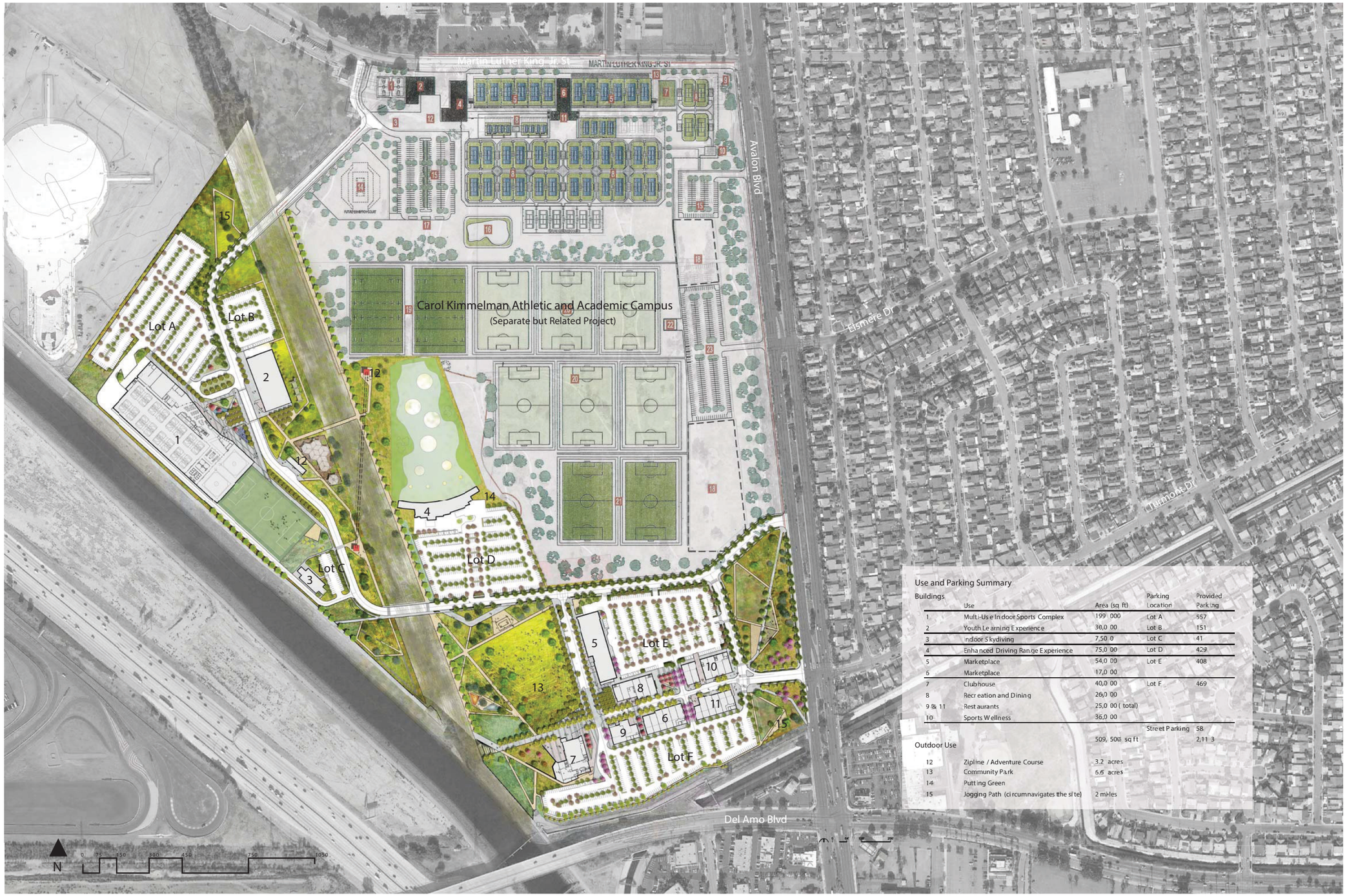
The building would contain rooms that could be divided so several uses could occur simultaneously or be combined into larger event spaces. The building would include approximately 4,000 square feet of full kitchen/prep area to support catering and food service, approximately 2,000 square feet of storage space, and support facilities (restrooms, administrative and mechanical space, etc.). The building would also include an approximately 9,000-square-foot rooftop deck that would be used for open-air functions and events.

Recreation and Dining Facility (Pad 8)

The recreation and dining facility would be a two-story, approximately 40-foot-high building measuring approximately 26,000 square feet. This facility would offer a variety of activities that could include bowling, ping-pong, and pool, and includes a restaurant area with full food and beverage service. The on-site consumption of alcoholic beverages would be permitted within the facility. The building would also include an approximately 7,500-square-foot rooftop deck that would be used for functions and events.

Restaurants (Pads 9 and 11)

The restaurants would be located within two one-story, approximately 25-foot-high buildings measuring approximately 25,000 square feet in total. These buildings would include at least two restaurants, both offering full food and beverage service. Alternatively, an approximately 30,000-square-foot specialty grocery store may be developed on the restaurant pad located closest to Avalon Boulevard (Pad 11), in place of the 28,600 square feet of restaurant uses that would be reduced elsewhere in the project. The on-site consumption of alcoholic beverages would be permitted within the restaurants. If a grocery store is developed instead, alcoholic beverages would be available for purchase for off-site consumption.



Use and Parking Summary

Buildings

	Use	Area (sq ft)	Parking Location	Provided Parking
1	Multi-Use Indoor Sports Complex	199,000	Lot A	557
2	Youth Learning Experience	30,000	Lot B	151
3	Indoor Skydiving	7,500	Lot C	41
4	Enhanced Driving Range Experience	75,000	Lot D	429
5	Marketplace	54,000	Lot E	408
6	Marketplace	17,000		
7	Clubhouse	40,000	Lot F	469
8	Recreation and Dining	26,000		
9 & 11	Restaurants	25,000 (total)		
10	Sports Wellness	36,000		
			Street Parking	58
		509,500 sq ft		2,113

Outdoor Use

12	Zipline / Adventure Course	3.2 acres
13	Community Park	6.6 acres
14	Putting Green	
15	Jogging Path (circumnavigates the site)	2 miles

SOURCE: Perkins and Will 2018

Conceptual and Subject to Change

FIGURE 3-2

Site Plan

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

SOURCE: Perkins and Will 2018

Conceptual and Subject to Change

FIGURE 3-3

Concept Plan

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

Use and Parking Summary

Buildings

	Use	Area (sq ft)	Parking Location	Provided Parking
1	Multi-Use Indoor Sports Complex	199,000	Lot A	557
2	Youth Learning Experience	30,000	Lot B	151
3	Indoor Skydiving	7,500	Lot C	41
4	Enhanced Driving Range Experience	75,000	Lot D	429
5	Marketplace	54,000	Lot E	408
6	Marketplace	17,000		
7	Clubhouse	40,000	Lot F	469
8	Recreation and Dining	26,000		
9 & 11	Restaurants	25,000 (total)		
10	Sports Wellness	36,000		
			Street Parking	58
		509,500 sq ft		2,113

Outdoor Use

12	Zipline / Adventure Course	3.2 acres
13	Community Park	6.6 acres
14	Putting Green	
15	Jogging Path (circumnavigates the site)	2 miles

SOURCE: Perkins and Will 2018

Conceptual and Subject to Change

FIGURE 3-4

Proposed Zones

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

SOURCE: Perkins and Will 2018

Conceptual and Subject to Change

FIGURE 3-5

Conceptual Rendering of Proposed Structures on Pad 10 (R) and Pad 11 (L)

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

SOURCE: Perkins and Will 2018

Conceptual and Subject to Change

FIGURE 3-6

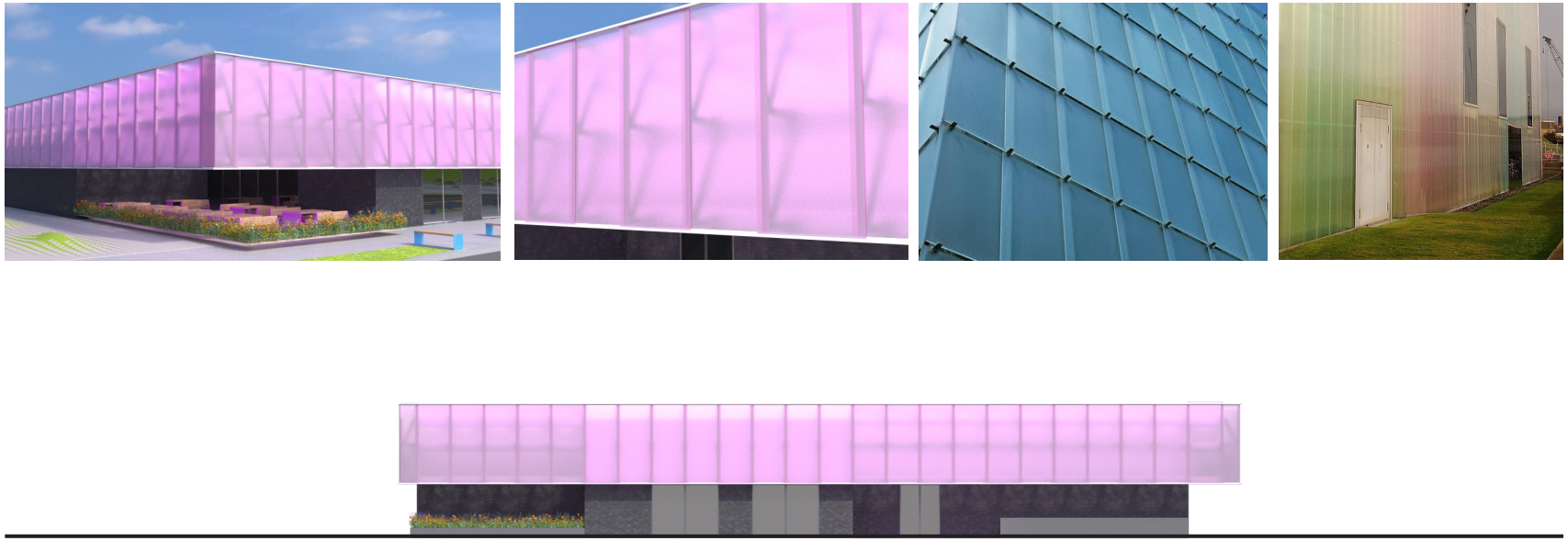
Conceptual Rendering of Proposed Community Park Open Space Area

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

RESTAURANT
Building 9



SOURCE: Perkins and Will 2018

Conceptual and Subject to Change

FIGURE 3-7

Conceptual Rendering of Proposed Structure on Pad 9

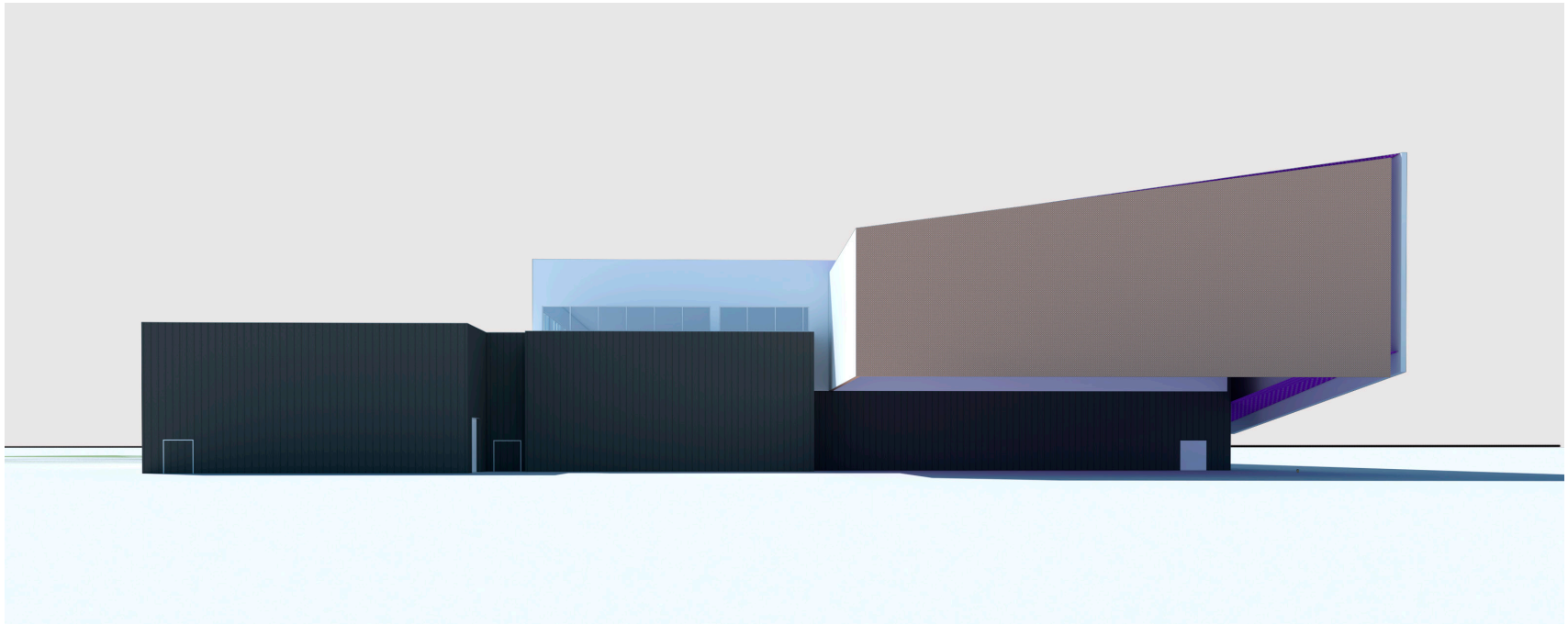
The Creek at Dominguez Hills Project

DUDEK

Path: Z:\Projects\10891010\MAP\DOC\PD

INTENTIONALLY LEFT BLANK

NORTH ELEVATION
Building 1



SOURCE: Perkins and Will 2018

Conceptual and Subject to Change

FIGURE 3-8

Conceptual Rendering of Proposed Structure on Pad 1

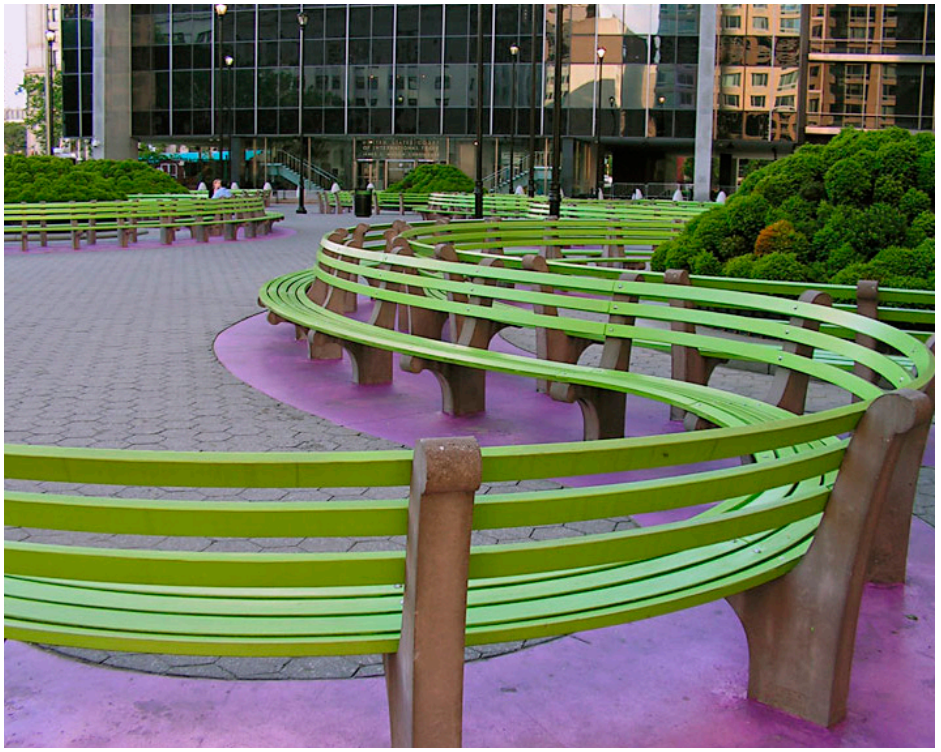
The Creek at Dominguez Hills Project

DUDEK

Path: Z:\Projects\10891010\MAP\DOC\PD

INTENTIONALLY LEFT BLANK

PLAZA PRECEDENTS



SOURCE: Perkins and Will 2018

Conceptual and Subject to Change

FIGURE 3-9

Conceptual Rendering of Proposed Plaza

The Creek at Dominguez Hills Project

DUDEK

Path: Z:\Projects\10991010\MAPDOC\PD

INTENTIONALLY LEFT BLANK

Sports Wellness (Pad 10)

The sports wellness building would be a two-story, approximately 40-foot-high building measuring approximately 36,000 square feet. This building would include numerous tenants involving a variety of sports-related medical and therapeutic uses intended to achieve health and performance goals for individuals, businesses, sports teams, and other organizations. Uses within this building could include physical therapy, nutrition planning, fitness and wellness training, and health and performance consultations.

Outdoor Ropes Course/Adventure Park/Zipline (Pad 12)

This outdoor area would offer recreation activities, and high-impact team building and leadership development experiences for individuals, schools, community groups, organizations and businesses. This area would include a zipline traversing a portion of the project site, an adventure park area with multiple levels of platforms and elements designed to accommodate a wide array of users with challenges ranging from easy to very complex, as well as ropes courses with high and low elements. The zipline would have a launch tower and a landing tower with heights of up to 75 feet. The adventure park would include platforms and elements with heights of up to 75 feet. The ropes course would include poles of up to 60 feet in height.

Community Park (Pad 13)

The community park would be approximately 6.6 acres of open space, and would be centrally located between the clubhouse and the enhanced driving range experience. The park would be situated at the egress point of the pedestrian thoroughfare for marketplace, restaurants, and sports wellness facilities and would be designed to accommodate numerous uses and facilities, including playground areas for children, picnic areas with tables, and team building events. Programming for outdoor community-based events, such as "Movie in the Park" and farmers' markets, could be accommodated within the community park, which would include a sloping lawn, suitable for seating for theatrical or concert performances.

Putting Green (Pad 14)

The putting green would be an outdoor natural grass surface located adjacent to and operated by the enhanced driving range experience. The putting green would offer several adjustable hole locations for serious practice, casual recreation, and entertainment.

Jogging/Walking Path (Pad 15)

The approximately 2-mile-long jogging/walking path would extend from the entrance to the project site near Avalon Boulevard and Turmont Street, and wind through landscaped areas within the project site to the northwesterly portion of the property adjacent to the Goodyear Blimp Airship Base.

Signage

Plenitude proposes to prepare and submit a Master Sign Program to the County for approval that would include on-site outdoor media intended to create a sense of place and to enhance peoples' experiences when navigating their way to and through the project site. Project outdoor media would promote the property as a unique sports, recreation, and fitness and wellness destination for the surrounding community and region.

The purpose of the proposed on-site outdoor media is to designate, identify, indicate, and advertise the names of buildings, facilities, businesses, and events held within the project site; acknowledge founding corporate sponsors of any of the project's buildings and facilities; and advertise the names and trademarks/logos of businesses conducted, services available or rendered, and goods produced or available for sale within the project site. Project signs would direct public attention to programs and events taking place within the project site, and may include the name of one or more corporate sponsoring entities.

Project outdoor media would be provided for the following uses:

- All activities and events held within the multi-use sports complexes, as well as at the Kimmelman Project's tennis courts, soccer fields, and learning center;
- Commercial uses of the multi-use indoor sports complex and other recreational related commercial uses on site;
- Founding corporate sponsors of any of the project's buildings and facilities;
- Sponsorship of activities and events held at the project site;
- Activities and events at the community park;
- The youth learning experience;
- The enhanced driving range experience;
- The indoor skydiving facility;
- The recreation and dining facility and its events; and
- The marketplace and sports wellness uses, and the restaurants.

On-site outdoor media would be designed to serve as a landmark gateway announcing entry into and raising the visibility of the project site, the surrounding community, and the City of Carson. The on-site outdoor media would be wall mounted on the western façade of the multi-use indoor sports complex, with a maximum of 35,000 square feet of sign area. The sign would include digital and/or conventional displays that would comply with the Caltrans and Federal Highway Administration design and operational criteria for digital displays. See Chapter 4.1, Aesthetics, for

further information about the proposed sign. In addition, typical of any large, multi-use development, project identification signs, tenant signs, and entry monument signs would be provided along adjacent streets, and various tenant identification and other signs would be located within the project site.

Lighting

Project lighting would include architectural lighting for the buildings, and exterior lights adjacent to buildings, along pathways, and within parking areas for aesthetic, security and wayfinding purposes. Additionally, the outdoor driving range and recreation field adjoining the multi-use sports complex would be illuminated as described above. All project lighting would comply with current energy standards. All light sources would be shielded and/or directed toward areas to be illuminated, thereby minimizing spill-over onto nearby sensitive areas.

3.5.2 Landscaping and Open Space

The proposed landscaping is intended to connect the various recreation and community facilities into a cohesive park setting. At entry points, landscape medians would provide an additional depth to the landscape. Throughout the project site, areas would have a park-like character with trees that provide shade and with plantings that thrive in the Southern California climate. The proposed project would include over 35 acres of publicly accessible open space and 2 miles of jogging and walking trails.

Beginning at the Turmont Street entrance, a wide landscaped buffer would front Avalon Boulevard and create a park-like environment across from the single-family homes on the east side of Avalon Boulevard. A variety of public pocket parks, paseos, and terraces would shape the pedestrian experience along the Main Street corridor, which opens into a 6.6-acre park (Creek Park) adjacent to the community clubhouse. Park amenities would include a large open lawn, flexible event space, a picnic grove, a playground, natural reflection spaces, shaded terraces, and a paved esplanade leading to an overlook at the Dominguez Channel.

Contiguous open space along the Dominguez Branch Channel, which bisects the property, would connect visitors to the various sports and adventure facilities at the northern portion of the site. A network of roads, sidewalks, paths, plazas, and shaded terraces nest these buildings into the park landscape, provide clear circulation routes, and offer welcoming experiences for pedestrians, cyclists, and those arriving by vehicle. A zipline adventure park is proposed to weave through this area as well.

The proposed project would provide a productive, ecological habitat along the historic Dominguez Branch Channel. The existing vegetation within the creek drainage would remain. Surrounding areas would be planted with vegetation native or adapted to the region. Select areas with greater

soil depth will be more heavily planted with trees, while other areas will be left open as meadows and alkali flats. Flowering trees and perennials along Main Street would provide pockets of color throughout the year.

The Dominguez Branch Channel enters the community park area from the north. It features established trees and greened berms. The proposed project would preserve and enhance these qualities, and additional measures to add landscaping and beautify the area around the Dominguez Branch Channel would be implemented. All throughout the project site, the landscaping and open space concept would emphasize a park-like character.

3.5.3 Sustainability Design

The proposed project would include sustainable design practices, including water and energy efficiency measures, and implementation of Leadership in Energy and Environmental Design (LEED) goals. Sustainability objectives of the proposed project include on-site water management, watershed protection for the Dominguez Branch Channel and Dominguez Channel, energy-efficient design, and opportunities for on-site renewable energy production. Turf lawn will be of low-water-use variety. Additionally, primary plant communities would include riparian woodland, dry coastal scrub, grassland, and alkali sink, all of which are low-water-use plants. The proposed project would include LEED certification for select structures. The project would aim to achieve LEED Gold for Buildings 1 and 7 and LEED Silver for the remainder of the buildings (Plenitude 2018). The LEED framework would ensure water conservation, the use of sustainable materials, construction best practices, and promote health and well-being. See Section 4.13, Recreation, for further discussion.

3.5.4 Access, Circulation, and Parking

Access to the project site would be provided via two east–west roadways extending westerly from Avalon Boulevard into the project site and one north–south roadway extending southwesterly from Martin Luther King Jr. Street into the project site. Of the access roads that would extend from Avalon Boulevard, the southerly of the two access roads would be located opposite the westerly terminus of Turmont Street (on the east side of Avalon Boulevard), and the northerly access road would be located approximately midway between Turmont Street and Elsmere Drive. The intersection of the access roads with Avalon Boulevard would be controlled by traffic signals, allowing ingress and egress to and from the project site from both northbound and southbound traffic on Avalon Boulevard. The access road extending from Martin Luther King Jr. Street would be opposite Victoria Park (on the north side of Martin Luther King Jr. Street). The intersection of the access road with Martin Luther King Jr. Street would be controlled by traffic signals, allowing ingress and egress to and from the project from both eastbound and westbound traffic on Martin Luther King Jr. Street. A portion of this access

road would cross the northwesterly portion of the Kimmelman project site, and the road would then span the Dominguez Branch Channel to access the proposed project site. Regional access to the project site would be provided via the San Diego Freeway on- and off-ramps at Main Street and Avalon Boulevard.

The two access roads off Avalon Boulevard would be connected by a north–south internal circulation road that would allow vehicular traffic to access facilities and parking areas located within the interior portion of the project site. The north access road would connect to an east–west internal circulation road that would span the drainage channel and provide access to the multi-use indoor sports complex and the youth learning experience. The access road off Martin Luther King Jr. Street would provide access to parking areas, the multi-use indoor sports complex, and the youth learning experience, as well as to the rest of the project site.

Two existing pedestrian bridges are currently located in the Dominguez Branch Channel area of the project site. The proposed project would include removal of the southern bridge. The proposed project would include the construction of two bridges that would allow space for two vehicles to drive on the bridge in opposite directions at the same time.

The parking spaces proposed to be provided for the project are shown in Table 3-1, Summary of Project Facilities. A total of approximately 2,113 parking spaces for project uses would be provided in surface parking areas dispersed throughout the project site, and would be located adjacent to the uses the parking spaces would serve.

The proposed project would provide multiple bicycle locking areas throughout the project site to encourage bicycle use. Some of the proposed wider paths within the project site would allow for bicycling. Additionally, a 1-mile bicycle loop would be located within the non-vehicular Creek Promenade and the shared vehicular road located in the western portion of the site.

3.5.5 Infrastructure Improvements

The proposed project would include several on-site and off-site improvements as described in Sections 3.5.2 and 3.5.4 of this chapter. Proposed improvements are summarized as follows: A dual left-turn pocket lane would be developed on Avalon Boulevard, south of Turmont Street, to provide access to the project site. Construction of this lane would require the modification of the existing median for the 150-foot length pocket. The existing traffic signal would be modified from a 3-way to a 4-way signal.

Similarly, a dual left-turn pocket lane would be developed at the second proposed entrance off of Avalon Boulevard (approximately mid-way between Turmont Street and Elsmere Drive). This would also require the modification of the existing median. A new traffic signal would be installed

at this location. Modifications to Martin Luther King Jr. Boulevard may also occur. See Section 4.14, Transportation, for further discussion of proposed improvements.

Proposed off-site utility connections for sewer, water, electricity, gas, phone CCTV would occur. The project would be serviced by the utility purveyors that provide service to this area. An 8" public sewer line would be constructed in the on-site roadways with laterals to each proposed building. A proposed sewer pump station would pump the sewage from the area near the southerly bridge and would then connect to the proposed 8" line.

Domestic and Fire water would be serviced by a 12" line with service provided by CalWater. The line would "loop" thru the project site via connections at Martin Luther King Jr Street and Avalon Blvd. This line would provide both fire suppression needs for the proposed buildings and domestic water.

Proposed storm drains would consist of a system of drain pipes that would collect site runoff and would convey it to the proposed discharge points at Dominguez Branch Channel, Dominguez Channel and Avalon Boulevard. The storm drain system would also incorporate Low Impact Development guidelines.

The proposed project would include four new connections to the existing storm drain system. Three would connect to the Dominguez Branch Channel, which bisects the project site and one would connect offsite, to the Dominguez Channel.

The three connections to the Dominguez Branch Channel would be located immediately below the proposed bridges over the Creek. Specifically, two proposed connections would be located at the proposed southern bridge and one connection would be located at the proposed northern bridge. The connection at the northern bridge would consist of an 18-inch RCP storm drain that would connect to the Dominguez Branch Channel via a proposed reinforced headwall/flared end. The connections at the southern bridge would consist of one 18-inch RCP and one 30-inch RCP located at west and east sides of the proposed bridge respectively. Both of these storm drains are proposed to connect to the Dominguez Branch Channel via a reinforced head wall/flared end.

The proposed connection at Dominguez Channel would be located immediately downstream of the Victoria Golf Course Drain and is proposed as a 24-inch RCP that would connect to a head wall/flared end with riprap rock at the outlet. Connections would be permitted with Los Angeles County Flood Control.

Under the proposed project, electrical, gas, and cable TV services would be part of a dry utility package that would be installed in the on-site public roadways and provide service to the project.

Additionally, the proposed project would include landscaping improvements both on site and at proposed entrances to the site. See Sections 4.13, Recreation, and 4.16, Utilities and Service Systems, for further discussion of proposed improvements.

3.6 PROPOSED CONSTRUCTION

Project construction is anticipated to occur over a period of approximately 18 months and is estimated to be completed in late 2020. Planned construction phasing is as follows:

- site preparation
- waste relocation
- grading/landfill cap construction
- pile foundations
- building construction
- paving
- architectural coating

Construction of the project would commence in mid-2019 with site preparation, grading, and remedial earthwork excavation. It is anticipated that 200,000 cubic yards of earthwork material would be required to support the construction of the project. Waste relocation from utility corridors, grading associated with the construction of the landfill cap and pile foundation installation would all overlap in late 2019. A temporary bridge would be constructed over the Dominguez Branch Channel under the site preparation phase. The temporary bridge would be dismantled and taken off site once construction of the permanent bridge is completed. Upon completion of the construction phases, vertical building construction, paving/concrete, and landscape installation would commence. The timing associated with vertical construction of the proposed buildings has not been finalized as of preparation of this document. However, for the purposes of this EIR, it is assumed that all vertical construction would be completed at one time. During building construction landfill gas extraction systems would be installed with each building. See Appendix C, Air Quality Analysis, for a detailed description of construction phasing.

3.7 PROPOSED OPERATION

Table 3-2 shows estimated hours of operation by proposed use. As shown in the table, all uses would operate seven days a week but hours of operation would vary by use.

Table 3-2
Estimated Hours of Operation

Pad	Use	Hours of Operation
1	Multi-Use Indoor Sports Complex	10am–10pm (M–F) 8am–9pm (Sat, Sun)
2	Youth Learning Experience	10am–5pm (daily)

Table 3-2
Estimated Hours of Operation

Pad	Use	Hours of Operation
3	Indoor Skydiving	11am–8pm (Sun–Thurs) 11am–9:30pm (Fri, Sat)
4	Enhanced Driving Range Experience	9am–11pm (Sun–Thurs) 9am–1am (Fri, Sat)
5	Marketplace	9am–11pm (daily)
6	Marketplace	9am–11pm (daily)
7	Clubhouse	10am–12am (M–Sat) 10am–10pm (Sun)
8	Recreation and Dining	11am–12am (M–Thurs) 11am–2am (Fri) 10am–2am (Sat) 10am–12am (Sun)
9	Restaurant	11am–12am (M–F) 10am–12 am (Sat) 9am–12am (Sun)
10	Sports Wellness	7am–8pm (daily)
11	Restaurant Specialty Grocery Store	11am–12am (M–F) 10am–12am (Sat) 9am–12am (Sun) 7am–10pm (daily)
12	Zipline/Adventure Course	10am–7pm (daily)
13	Community Park	General park hours: 8am–9pm (daily) Concerts/Movies in the park: 5pm–9pm (Fri–Sun) Farmers Market: 8am–12pm (Sat, Sun)
14	Putting Green	9am–9pm (daily)
15	Jogging Path	General park hours: 8am–9pm (daily)

Source: Plenitude 2018.

3.8 INTENDED USES OF THE ENVIRONMENTAL IMPACT REPORT

An EIR is a public document used by public agencies, the general public and decision makers to analyze the environmental effects of a project and to disclose possible ways to reduce or avoid significant environmental impacts, including alternatives to the proposed project. As an informational document, an EIR does not make recommendations for or against approving a project. The main purpose of an EIR is to inform public agency decision makers and the public about potential environmental impacts of the project (14 CCR 15121). This EIR will be used by the County, as the lead agency under CEQA, in making decisions with regard to the adoption of the proposed project described above and the related approvals described below. This EIR is also intended to cover all federal, state, regional, and local governmental discretionary approvals that may be required to construct or implement the proposed Project.

3.9 PROPOSED APPROVALS

Approvals required for development of the Project may include, but would not necessarily be limited to, the following permits and approvals:

- County of Los Angeles
  - Approval of ground lease, related agreements and division of land to implement the proposed project – Board of Supervisors;
  - Site plan review – Department of Regional Planning;
  - Approval of alcoholic beverage sales – Department of Regional Planning;
  - Building permits, grading permits, and other construction-related permits such as stockpile, foundation, plumbing, mechanical, electrical, sewer, storm drain etc. necessary to implement the proposed project –Los Angeles County Public Works and Consolidated Sewer Maintenance District; and
  - Encroachment Permit – Flood Control District
- City of Carson
  - Street improvements, encroachment and haul route permits, sewer connection permits, tree removal permits, etc.as applicable;
- State of California
  - Department of Alcoholic Beverage Control
    - Issuance of alcoholic beverage licenses;
  - Department of Fish and Wildlife
    - Issuance of permits under Section 1600 of the Fish and Game Code related to streambed alterations, as applicable;
  - California Department of Toxic Substances Control
    - Approval of an environmental design document and related plans and/or documents, including but not limited to a Soil Management Plan, Construction Quality Assurance Plan, Dust Control Plan, and Pile Driving Plan, prior to construction;
    - "No exception to issuance" letters for various primary reviewing agencies on items including, but not limited to, the grading plan, landscape plan, building protection system, and certificates of building occupancy;

- Los Angeles Regional Water Quality Control Board
  - Issuance of Notice of Intent prior to construction operations related to National Pollutant Discharge Elimination System (NPDES) Construction Permit;
  - Issuance of water quality certification pursuant to Section 401 of the Clean Water Act (CWA) in connection with issuance of a Section 404 CWA permit, as applicable;
- South Coast Air Quality Management District
  - Issuance of excavation permit under Rule 1150 (Excavation of Landfill Sites); approval of Site-Specific Mitigation Plan pursuant to Rule 1166 (Volatile Organic Compound Emissions from Decontamination of Soil); and notifications pursuant to Rule 1466 (Control of Particulate Emissions from Soils with Toxic Air Contaminants) prior to construction, as applicable;
  - Issuance of a Permit to Construct and Operate a landfill gas collection and control system pursuant to Rule 1150.1 (Control of Gaseous Emissions from Municipal Solid Waste Landfills), as applicable;
  - Compliance with other SCAQMD rules, as applicable;

- Federal Agencies
  - U.S. Army Corps of Engineers
    - Issuance of Section 404 permit under the CWA, as applicable;
- Additional Discretionary Actions
  - Any other discretionary actions or approvals that may be required to implement the proposed project.

3.10 RELATED PROJECTS

A list of related projects has been developed as part of this environmental document. All projects that are proposed (i.e., with pending applications), recently approved, under construction, or reasonably foreseeable that could produce a cumulative impact on the local environment when considered in combination with the proposed project are included in an EIR. These projects can include, if necessary, projects outside of the lead agency. CEQA Guidelines, Section 15130 stipulates that EIRs must consider the significant environmental effects of a proposed project as well as "cumulative impacts." A cumulative impact is defined as an impact that is created as a result of the project evaluated in the EIR combined with the impacts of other projects, thereby causing related impacts (14 CCR 15355). As stated in CEQA Guidelines, Section 15130(a)(1), the cumulative impacts discussion in an EIR need not discuss impacts that do not result, at least in part, from the project evaluated in an EIR. Cumulative

impacts may be analyzed by considering past, present, and probable future projects with related or cumulative impacts (14 CCR 15130(b)(1)(A)).

In this draft EIR, cumulative impact analyses are provided for each environmental issue discussed in Chapter 4, Environmental Analysis. The study areas for the cumulative impact analyses vary by resource area. An analysis of cumulative impacts are discussed in the Cumulative Effects sections for each environmental issue discussed in Chapter 4 of this EIR. Table 3-3 lists the related projects that were considered in the cumulative impact analyses. The locations of the related projects are depicted in Figure 3-10, Related Projects.

Table 3-3
Related Projects

No.	Address/Project Name	Description
1	21521 S Avalon Blvd., Carson, California	357 apartment units, 30,700 square feet of retail
2	1281 E University Dr., Carson, California	47,000 square feet of retail
3	21205 S Main St., Carson, California	46 apartment units
4	17706 S Main St., Gardena, California	94,731 square feet of warehouse, 15,000 square feet of office
5	19210 S Vermont Ave., Gardena, California	61,500 square feet of office
6	1054 W 204th St., Torrance, California	8.5-acre park
7	Development District #3 (11 acres), Carson, California	300 dwelling units
8	The District at South Bay Carson	1,250 dwelling units, 350 hotel rooms, 25,000-square-foot bowling alley, 25,000-square-foot recreation center, 2,500-seat movie theater, 140,000 square feet of restaurant, 581,020 square feet of luxury outlet shops, 635,000 square feet of shopping center
9	Carol Kimmelman Athletic and Academic Campus, Carson, California	62 tennis courts, 10 soccer fields, 25,000 sf learning center, 23,000 sf welcome center, 13,000 sf player development building, 5,000 sf administration, 43,560 sf skate park

Source: LSA 2018

3.11 REFERENCES

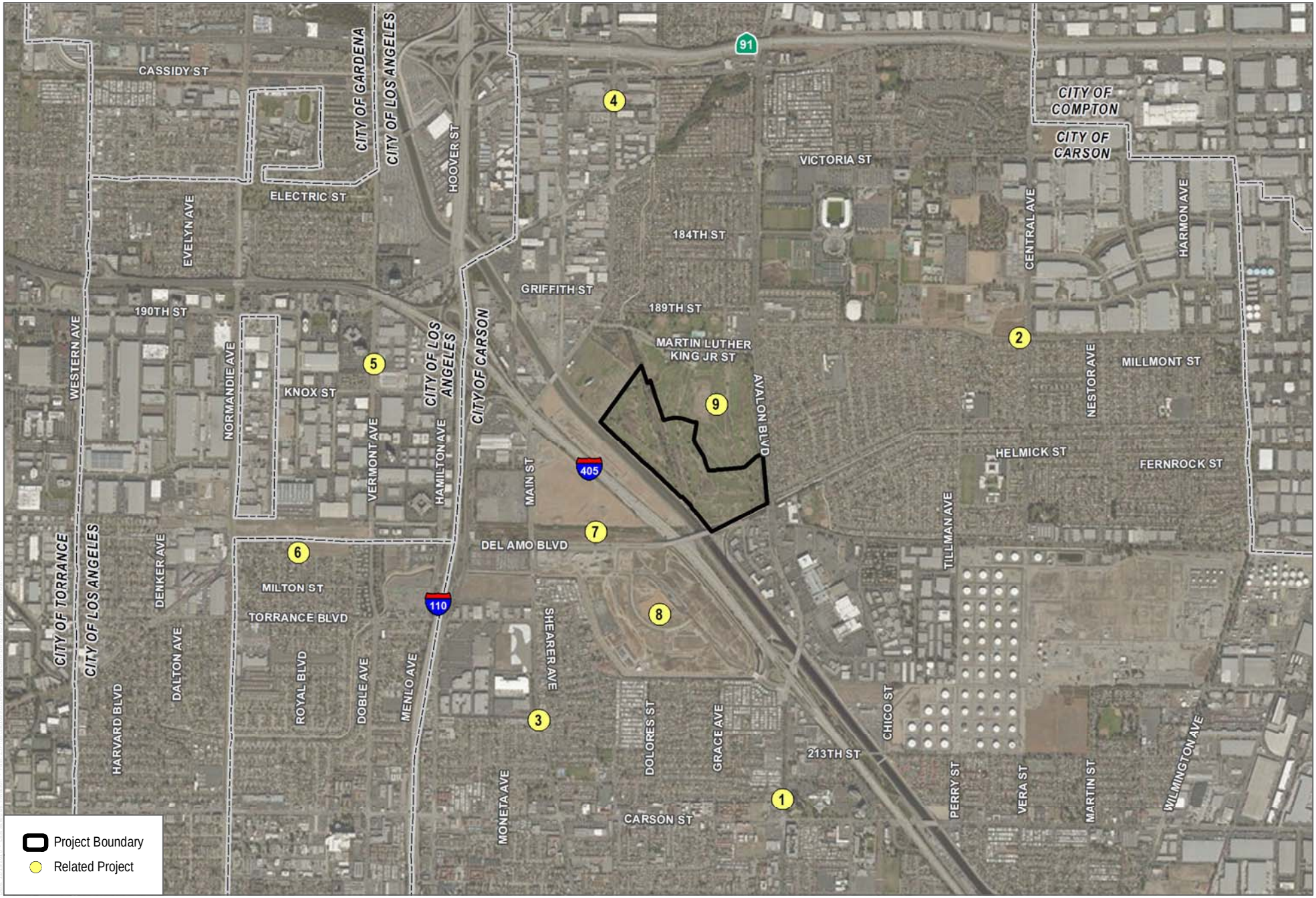
City of Carson. 2004. *City of Carson General Plan.* Adopted October 11, 2004. Accessed October 2018. http://ci.carson.ca.us/content/files/pdfs/planning/CityofCarsonGeneralPlan.pdf.

Logan, M. 2018. Email communication with T. Mir (Dudek) and M. Logan (Greenway Golf). October 4, 2018.

LSA. 2018. Email communication with T. Mir (Dudek) and K. Wilhelm (LSA). September 4, 2018 and October 31, 2018.

Plenitude (Plenitude Holdings LLC). 2018. *The Creek at Dominguez Hills EIR – Sustainability Strategy*. October 12, 2018.

INTENTIONALLY LEFT BLANK



SOURCE: Bing 2018

DUDEK

0 1,250 2,500 Feet

FIGURE 3-10

Related Projects

The Creek at Dominguez Hills Project

INTENTIONALLY LEFT BLANK

CHAPTER 4
ENVIRONMENTAL IMPACT ANALYSIS

The purpose of this Draft Environmental Impact Report (EIR) is to evaluate the potential environmental effects of The Creek at Dominguez Hills project (project or proposed project). The County of Los Angeles circulated a Notice of Preparation (NOP) beginning on August 28, 2018, with the public review period ending on September 27, 2018. The NOP was transmitted to the State Clearinghouse, responsible agencies, other affected agencies, and property owners within 1,000 feet of the project site to solicit issues and concerns related to the project. The NOP, Initial Study, and comment letters are contained in Appendix A, Initial Study and Notice of Preparation, of this Draft EIR.

Sections 4.1 through 4.16 of the Draft EIR contain the potential environmental impacts analysis associated with implementation of the project and focus on the following issues:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population & Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Energy

Technical Studies

Technical studies were prepared in order to accurately analyze air quality/greenhouse gas emissions and health risk assessments, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise and vibration, traffic, tribal cultural resources, and utilities and service systems impacts, and were used in the preparation of this Draft EIR. These documents are identified in the discussions for the individual environmental issues and included as technical appendices on a CD attached to the Draft EIR. Hard copies are available at the County of Los Angeles and will also be available on the County website at http://parks.lacounty.gov/environmental-documents/.

Analysis Format

The Draft EIR assesses how the project would impact each of these issue areas. Each environmental issue addressed in this Draft EIR is presented in terms of the following subsections:

- **Existing Conditions**: Provides information describing the existing setting on or surrounding the project site that may be subject to change as a result of the implementation of the project. This setting discussion describes the conditions that existed when the NOP was sent to responsible agencies and the State Clearinghouse.
- **Relevant Plans, Policies, and Ordinances:** Provides a discussion of federal, state, regional, and local regulations, plans, policies, and ordinances applicable to the project.
- **Thresholds of Significance**: Provides criteria for determining the significance of project impacts for each environmental issue.
- **Impacts Analysis**: Provides a discussion of the characteristics of the project that may have an effect on the environment, analyzes the nature and extent to which the project is expected to change the existing environment, and indicates whether the project impacts meet or exceed the levels of significance thresholds.
- **Mitigation Measures**: Identifies mitigation measures to reduce significant adverse impacts to the extent feasible.
- **Level of Significance After Mitigation**: Provides a discussion of significant adverse environmental impacts that cannot be feasibly mitigated or avoided, significant adverse environmental impacts that can be feasibly mitigated or avoided, adverse environmental impacts that are not significant, and beneficial impacts.
- **Cumulative Impacts:** This subsection discusses the cumulative effects of the project in combination with the effects of other projects in the vicinity.
- **References**: Provides a list of references and documents cited within the section.

4.1 AESTHETICS

This section describes the existing visual setting of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of The Creek at Dominguez Hills project (project or proposed project). The analysis is based on site visits, photo surveys, technical data, and applicable laws, regulations, and guidelines. In addition, a Lighting Study conducted by Francis Krahe & Associates Inc. was prepared for the project and is referenced in the light and glare analysis (the Lighting Study is included as Appendix B to this environmental impact report (EIR)). The information presented in this section was collected from a number of publicly available sources, including the *Los Angeles County General Plan*, the City of Carson General Plan, the County of Los Angeles Park Design Guidelines and Standards, as well as architectural design plans and visual simulations prepared for the project.

Visual Definitions

Scenic Vistas. Scenic vistas are singular vantage points that offer unobstructed views of valued viewsheds, including areas designated as official scenic vistas along major highways or designated by the City as visual resources.

Visual Character. The visual character of a site is defined by physical characteristics such as landform, vertical relief, type of vegetation, textures, and patterns; the presence of clear or cascading water; the range of color in the soil, rock, vegetation, or water; the variety in landscape; built structures that are visually different from the natural environment; and other visually distinguishing elements.

Visual Quality. The visual quality of a site results from the interpretation of physical features determined by the viewer's perception. Perceptual quality factors include vividness, intactness, unity, visual organization, scarcity, adjacent scenery, and cultural modifications. A high visual quality would include a balanced composition of line, form, color, and texture; striking visual patterns or the presence of distinct focal points; enhancement from the adjacent scenery; and overall compatibility with the character of the landscape setting. A low visual quality usually has a chaotic appearance, elements that appear random with no perceivable patterns, adjacent scenery that detracts or has little influence on the scenic quality, and cultural modifications that detract from the setting.

Views. Views are composed of three distinct parts: the viewing scene itself; the viewing location from which an individual sees the viewing scene; and the view corridor, which is the volume of space between the viewing scene and the viewing location.

Viewing Distance. The viewing distance, or distance between a site and the location from which it is viewed, includes a foreground, mid-ground, and background. Foreground views encompass views within less than 0.25 miles, mid-ground views encompass views from 0.25 to 3 miles, and background views encompass views beginning at a distance of 3 miles and beyond.

Viewer Sensitivity. Viewer sensitivity is ranked as high, medium, or low and generally is determined based on the following thresholds: types of use, amount of use, public interest, adjacent land uses, and special areas. Sensitive viewpoints generally include surrounding residences, recreational areas, and designated scenic roads.

Viewshed. The viewshed is the area visible from an observer's viewpoint, including the screening effects of intermediate vegetation and structures. The most comprehensive viewsheds generally are from scenic viewpoints, which are singular vantage points that offer an unobstructed view of expansive visible landscape components. Viewshed components include the underlying landform/topography (e.g., foothills, mountains, and flatlands) and the overlaying land cover (e.g., water features, vegetation, cultural sites, and buildings).

Light Trespass. Light trespass is the light that falls on a property but originates on an adjacent property. Light trespass is measured in terms of illuminance (foot-candles or metric units lux), and can be measured at any point and in any direction. Where Light trespass is evaluated the illuminance is measured perpendicular to the source of light, toward the source of light, at the property line, or the location where light is causing an issue, such as a residential window or balcony. Light trespass is a potential issue during night hours.

Glare. Glare occurs when either the luminance is too high or the range of brightness in a visual field is too large. A bright light source, such as a flood light or street light, viewed against a dark sky may be uncomfortable to look at, and may create a temporary sensation of blindness, which is referred to as disability glare. Glare is evaluated by measuring the luminance (footlamberts [fL] or metric units candelas per square meter [cd/m^2])[1] at the source of light, such as a digital display, in comparison to the surrounding adjacent luminance. The term, which describes the extent of Glare at an observer position for a view is referred to as contrast, and is determined by the variation of luminance within the field of view. "High," "Medium," and "Low" contrast are terms used to describe contrast ratios. The ratio of peak measured luminance to the average within a field of view: contrast ratios greater than 30:1, between 10:1 and 30:1, and below 10:1, respectively. Contrast ratios above 30:1 are generally uncomfortable for the human eye to perceive. Any source luminance that is more than 50 times the adjacent background will be viewed as prominent, and may be viewed as distracting. Glare is evaluated during both day and night hours.

[1] Lighting terminology and definitions related to the light and glare analysis can be found in Appendix B.

4.1.1 Existing Conditions

This section provides a regional overview and project site description, including a description of existing visual character and quality in the project area.

4.1.1.1 Regional Setting

The proposed project is located in the City of Carson (City), in the southwest portion of the County of Los Angeles (County). The project location is illustrated on Figure 3-1, Project Location. The project is within the South Bay Planning Area, which is bounded by the Pacific Ocean on the western border and the Gateway Planning Area and Metro Planning Area on the eastern and northern borders, respectively. The majority of the South Bay Planning Area is comprised of low-elevation areas of the Los Angeles basin with the exception of the Palos Verdes Peninsula, which consists of hills, open space and communities that abut cliffs and rocky shorelines along the Pacific Coast (County of Los Angeles 2015).

Despite dense urbanization, there are a number of scenic resources in Los Angeles County, including mountains, foothills, ridgelines, forests, deserts, beaches, and coastlines. Scenic resources visible from the South Bay Planning Area include the San Gabriel Mountains and the Palos Verdes peninsula. The San Gabriel Mountains are located, at a minimum, approximately 25 miles north and northeast of the project site, and are not visible from the project site due to intervening development. The Palos Verdes peninsula is located approximately 5.75 miles southwest of the project site. The silhouette of the peninsula landform is visible from the project site; however, the particular elements of the peninsula (i.e., rocky cliffs, hillsides) are not discernable from this distance.

The land in the South Bay Planning Area is mostly flat and highly urbanized, with a mix of commercial, office, residential, institutional, public use, and industrial areas. Likewise, the local terrain in the City is also relatively flat, ranging from sea level to 195 feet above mean sea level (City of Carson 2004).

4.1.1.2 Project Setting

The approximately 87-acre project site is located on the western and southern portions of the approximately 170-acre Links at Victoria Golf Course (Victoria Golf Course) located at 340 Martin Luther King Jr. Street. Primarily encompassing golf course tee box areas, greens, fairways and paved golf cart paths that tend to be irregularly lined by shrubs and landscape trees, the project site consists of managed open space recreational use that is surrounded by urban land.

4.1.1.3 Surrounding Land Uses

The project site is situated on land owned by the County of Los Angeles located in the City of Carson. Surrounding lands are relatively flat and mostly developed with recreational, residential, commercial, and industrial land uses. Figure 4.1-1, Existing Visual Conditions, includes photos of the project site and the surrounding area. The immediate surrounding land uses are described below.

North

Immediately to the north of the project site are the remaining fairways and greens (and driving range) of the Victoria Golf Course property. The property features slightly undulating fairways, sand traps, and open green space that define the existing golf course, as well as numerous mature trees throughout the site. This portion of the golf course is proposed to be separately redeveloped by the Carol Kimmelman Foundation LLC (Kimmelman) with tennis, soccer, and recreational facilities dedicated to after-school youth development programming.

South

The project site is bounded by East Del Amo Boulevard, a six-lane road that travels east to west with a center median and sidewalks. Commercial uses including a Mobil Gas Station, a U-Haul dealer, and a car wash are located adjacent to the southeast corner of the site, and additional commercial development is located south of East Del Amo Boulevard, as shown in Figure 4.1-1, photo C. Additionally, a large shopping center (South Bay Pavilion) is located farther south, approximately 0.25 miles from the project site. East Del Amo Boulevard becomes an above-grade bridge (Kay A. Calas Bridge) as it travels to the west of Carson Plaza Drive and spans the Dominguez Channel. A view of the channel with Interstate (I-) 405 in the background is depicted in Figure 4.1-1, photo A. Both the concrete-lined flood channel and interstate roughly parallel the southwestern boundary of the project site. A strip of flat and disturbed land marked by several tall advertisement billboards oriented toward nearby motorists sits between the channel and interstate to the southwest of the project site.

East

As shown in Figure 4.1-1, photo B, the project site is situated atop slightly elevated terrain that slopes downwards towards South Avalon Boulevard along the fenced eastern boundary of the project site. The slope is vegetated with grasses, mature trees and shrubs. A six-lane road that runs north to south, South Avalon Boulevard features shoulders, tree-lined sidewalks, street lights and an approximately 35-foot wide landscaped center median regularly dotted with tall steel lattice transmission line towers. The fenced/walled backyards of one- and two-story single family residential development abuts South Avalon Boulevard. Fencing/walls are made of a variety of material, including wood, concrete masonry unit, and brick.

A. *View looking northwest from the northwest portion of the project site, toward the Dominguez Branch Channel, I-405 and commercial development.*

B. *View looking south from South Avalon Boulevard, east of the project site, with a residential area to the left and the project site to the right.*

C. *View looking south from East Del Amo Boulevard, south of the project site, toward commercial development.*

D. *View looking northwest from northern portion of the project site, toward the Goodyear Blimp Airship Base and commercial development.*

Path: Z:\Projects\10991010\MAP\OCBR\Aesthetics

FIGURE 4.1-1

Existing Visual Conditions

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

West

The Goodyear Blimp Airship Base is located immediately northwest of the project site (Figure 4.1-1, photo D includes a view to the Airship Base property from the project site). The Goodyear Blimp Airship Base property consists of an approximately 29-acre lot with a large flat grassy area, a blimp launching area, and three single-story operations buildings on the far northwestern side of the lot. The Dominguez Channel and an associated restricted access maintenance road border the western boundary of the project site. As previously discussed, I-405 and an undeveloped strip of dirt between the I-405 and the channel are also to the west. The relatively narrow and occasionally tree-lined Dominguez Branch Channel passes through the project site and joins the Dominguez Channel near the southwestern corner of the site.

4.1.1.4 Project Site Viewshed and Visibility

The existing golf course is visible from surrounding land uses, including the I-405 to the west; the Goodyear Blimp Airship Base to the northwest; Del Amo Boulevard and commercial development to the south; and South Avalon Boulevard and single-family residential uses to the east. Views of the project site from public vantage points largely consist of green open space, sand traps, mature trees, turf berms, and fencing associated with the golf course. The limits of the project site viewshed are largely defined by slopes along the eastern and southern property boundaries, landscape trees planted along the property boundaries, and surrounding urban development to the north, east, and south.

The project site is situated approximately 10 to 20 feet higher in elevation than the immediately adjacent residential neighborhood to the east. This higher elevation is most noticeable from South Avalon Boulevard where a landscaped slope encompasses the elevation change along the eastern boundary of the site. Elsewhere, the project site is relatively flat with undulating fairways and mature landscape trees that characterize the existing golf course.

Viewer Groups

Views of the project site are available to motorists, bicyclists and pedestrians on the surrounding street system, residential land uses along South Avalon Boulevard, and employees and visitors frequenting the surrounding commercial and industrial areas. Viewer groups are further described below.

Motorists, Bicyclists and Pedestrians

Motorists, bicyclists and pedestrians on the surrounding roadways including South Avalon Boulevard, East Del Amo Boulevard, and I-405 constitute the main viewer group within the project area. Motorist views are considered to be of short-term duration, while bicyclists and pedestrians have longer viewing durations due to their slower rate of travel. Those traveling on surface streets occasionally have clear

views of the golf course including open space and mature trees. However, on South Avalon Boulevard, the vegetated slope along the eastern property boundary limits the available view to the project site to peripheral fencing and trees. On the eastbound segment of Del Amo Boulevard, the elevated nature of the road as it spans I-405 and the Dominguez Channel increases opportunities for clear and particularly long views across the project site. Visibility to the project site is reduced by intervening development and landscaping as the roadway lowers in elevation and approaches (and passes) Carson Plaza Drive. Motorists traveling on the I-405 have relatively clear albeit distant views of the project site mostly consisting of tall established trees and open space.

Residents

Limited views to the project site are available to residents lining South Avalon Boulevard to the east of the project site. Specifically, residents are provided views to a landscaped slope that effectively screens the golf course. Some fencing lining the eastern property boundary is visible from these residential properties. Outside of the immediate surrounding residences, views of the project site are obstructed by the intervening residential development, private yard landscaping, and street trees located within the neighborhoods.

While the views of residents are considered to be of a long-term duration and exposure, impacts to private views (i.e., views from private property) generally are not considered significant under the California Environmental Quality Act (CEQA).

Commercial/Industrial Employees and Customers

Employees and customers frequenting the surrounding commercial and industrial areas have views of the golf course, including open space and mature trees. Several screening elements, including tall trees, roadway features and intervening development may block views of the site from locations.

Light and Glare

Existing nighttime lighting in the project area is typical for an urban area. The existing lighting conditions within and surrounding the project site include on site lighting for night use of the golf course driving range, city street lights, exterior parking lot light, exterior lighting utilized for security and safety, commercial illuminated signs, interior and exterior building lights and landscape lighting at adjacent residences. Additionally, the nearby StubHub Center features banks of overhead stadium lights used to illuminate the stadium during evening sporting events.

The existing golf course currently operates during daylight hours, beginning in the early morning (approximately 5:30 a.m.) and ending at sunset, as there are no overhead lights throughout the golf course. Hours vary seasonally and are based upon natural daylight hours. The driving range is open from 5:30 a.m. to 10:00 p.m. and is illuminated with overhead field lights. The existing driving range is located on the northern portion of the golf course and is not within the project site boundaries.

Scenic Routes

According to the California Department of Transportation (Caltrans), the County has two officially designated state scenic highways and 11 eligible scenic highways (Caltrans 2018). Route 1, an eligible scenic highway, is the closest to the project site, located approximately 12.25 miles northwest and 8.15 miles southeast of the project site as it extends north and south along the coast. I-210, an eligible scenic highway, is the second closest, located approximately 21.5 miles north of the project site. None of the County's officially designated or eligible scenic highways are visible from the project site, nor is the project site visible from the highways. Further, there are no state designated scenic highways within the City (Caltrans 2018).

Scenic Vistas

Landforms and varied topography such as mountain ranges, coastlines, and hills within the County allow for a variety of long-range views that define the aesthetically diverse communities in the County. These landforms not only create dramatic backdrops against developed communities, but also provide environmental and public benefits to residents. While existing scenic resources in the County are recognized for their importance as they contrast against developed urban areas, the County General Plan does not identify any officially designated scenic vistas for conservation purposes (County of Los Angeles 2015). Likewise, the City General Plan does not identify any officially designated scenic vistas within City boundaries (City of Carson 2004). The Palos Verde Peninsula is the nearest prominent landform to the project site, located approximately 5.25 miles southwest. These hills, open space, and communities abutting cliffs and rocky shoreline are not distinctly visible from the project site due to the distance and intervening development, with the exception of the rise in landform that is visible in the distance. While there are open space views offered by the project site, the project site is not located within nor is it visible from a designated scenic vista. As such, visual changes at the project site would not adversely affect any protected scenic vistas.

4.1.2 Relevant Plans, Policies, and Ordinances

The laws, regulations, plans, policies, ordinances, and guidelines that are potentially applicable to the project are provided as follows.

Federal

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

State

California Scenic Highway Program

Created by the Legislature in 1963, the California Scenic Highway Program includes highways designated by Caltrans as scenic. The purpose of this program is to preserve and protect the scenic beauty of California highways and adjacent corridors through conservation and land use regulation (Caltrans 2018). As stated in Section 4.1.1.3, Surrounding Land Uses, there are no designated or eligible state scenic highways near or visible from the project site.

Senate Bill No. 743 and Public Resources Code 21099

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under CEQA for several categories of development projects, including the development of infill projects in transit priority areas. The bill adds to the CEQA statute, California Public Resources Code Chapter 2.7, Modernization of Transportation Analysis for Transit-Oriented Infill Projects, Section 21099. Pursuant to Section 21099(d) (1) "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." The provisions of SB 743 apply to projects located on a "lot within an urban area that has been previously developed, or on a vacant site where at least 75% of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses…and it is located within one-half mile of a major transit stop."

Based on Section 21099(d)(1) of the Public Resources Code (PRC) enacted under SB 743, a project's aesthetic impacts shall not be considered a significant unavoidable impact on the environment if:

1. The project is a residential, mixed-use residential or employment center project.
2. The project is located on an infill site within a transit priority area.

The proposed project does not meet the criteria set forth in PRC 21099(d)(1), and therefore it must be analyzed for its potential impacts to scenic quality.

California Code of Regulations

Title 24 – California Building Standards Code

Title 24, California Building Standards Code, consists of regulations to control building standards throughout the state. The following components of Title 24 include standards related to lighting:

Title 24, Part 6 – California Energy Code

The California Energy Code stipulates allowances for lighting power and provides lighting control requirements for various lighting systems, with the aim of reducing energy consumption through efficient and effective use of lighting equipment.

Title 24, Part 11 – California Green Building Standards Code

The California Green Building Standards Code, which is Part 11 of Title 24, is commonly referred to as the CALGreen Code. Paragraph 5.1106.8, Light pollution reduction, requires that all non-residential outdoor lighting comply with the minimum requirements in the California Energy Code or the applicable local ordinance if more stringent.

IESNA Recommended Practices

Illuminating Engineering Society of North America (IESNA) recommends illumination standards for a wide range of building and development types. These recommendations are widely recognized and accepted as best practices and are therefore a consistent predictor of the type and direction of illumination for any given building type. For all areas not stipulated by the regulatory building code, municipal code, or specifically defined requirements, the IESNA standards are used as the basis for establishing the amount and direction of light for the project.

The IESNA 10th Edition Lighting Handbook defines Outdoor Lighting Zones relative to a range of human activity. The existing conditions surrounding the project site are best described as Lighting Zone 3, which has a maximum recommended light trespass limit of 8 lux (0.74 foot-candles).

California Vehicle Code

Chapter 2, Article 3 of the California Vehicle Code stipulates limits to the location of light sources that may cause glare and impair the vision of drivers.

Article 3. Offenses Relating to Traffic Devices [21450 - 21468] (Article 3 enacted by Stats. 1959, Ch. 3.), Section 21466.5. No person shall place or maintain or display, upon or in view of any highway, any light of any color of such brilliance as to impair the vision of drivers upon the highway. A light source shall be considered vision impairing when its brilliance exceeds the values listed below.

The brightness reading of an objectionable light source shall be measured with a 1-1/2 degree photoelectric brightness meter placed at the driver's point of view. The maximum measured brightness of the light source within 10 degrees from the driver's normal field of view shall not be more than 1,000 times the minimum measured brightness in the driver's field of view, except that when the minimum measured brightness in the field of view is 10 footlamberts or less, the

measured brightness of the light source in footlambert shall not exceed 500 plus 100 times the angle, in degrees, between the driver's field of view and the light source.

Local

Los Angeles County General Plan

The *Los Angeles County General Plan* was adopted by the Board of Supervisors on October 6, 2015. The following goals and policies from the Land Use and Conservation and Natural Resources Elements may be applicable to the project (County of Los Angeles 2015):

Land Use Element

Policy LU-7: Compatible land uses that complement neighborhood character and the natural environment.

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-10.5: 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.

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.

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 Natural Resources Element

Goal C/NR-13: Protected visual and scenic resources.

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.

Los Angeles County Code of Ordinances

Title 17 – Parks, Beaches and Other Public Areas

Title 17 of the County Code contains provisions for parks, beaches and public areas. General provisions, rules and regulations regarding parks and recreation areas can be found in chapter 17.04. Other topics covered in Title 17 that relate to aesthetics are summarized below.

Signs

Part 2 (General Provisions) of Section 17.4 (General Provisions) regulates the placement and maintenance of signs within parks, beaches, and public spaces.

Title 22 – Planning and Zoning

Title 22 of the Los Angeles County Code contains the Planning and Zoning Ordinance. The topics covered in Title 22 that relate to aesthetics, visual character, and visual resources are summarized as follows.

Oak Tree Ordinance

Contained in Part 16 (Oak Tree Permits) of Section 22.56 (Conditional Use Permits, Variances, Nonconforming Uses, Temporary Uses and Director's Review), the Oak Tree Ordinance was established to recognize oak trees as significant aesthetic, historical, and ecological resources. The ordinance establishes permitting requirements for removal of protected oak trees.

Signs

Part 10 (Signs) of Section 22.52 (General Provisions) of the Los Angeles County Code regulates the placement, erection and maintenance of signs. These regulations are intended to provide standards for the protection of property values, visual aesthetics, and the public health, safety, and general welfare of citizens, while still providing ample opportunities for businesses and the visual advertising industry to operate successfully and effectively.

Title 26 – Los Angeles Building Code

The County of Los Angeles Building Code (LABC) regulates lighting with respect to building lighting, transportation, street lighting, and light trespass. The LABC does not define maximum light trespass illuminance for all properties within the County.

County of Los Angeles Park Design Guidelines and Standards

The Los Angeles County Department of Parks and Recreation created the Park Design Guidelines and Standards to create common design practices for the county-wide park system. The guidelines and standards provide park development and design guidance for design professionals and field agency staff, as well as information on the implementation of sustainable practices. These guidelines are an effort to ensure the highest quality design standards are met while also promoting environmental stewardship.

4.1.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to aesthetics are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, except as provided in Public Resources Code Section 21099, a significant impact related to aesthetics would occur if the project would:

1. Have a substantial adverse effect on a scenic vista.
2. Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway.
3. In non-urbanized areas, substantially degrade the existing visual character or quality of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). In urbanized areas, conflict with applicable zoning and other regulations governing scenic quality.
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

As discussed in the Initial Study prepared for the proposed project (Appendix A), the project would result in less-than-significant impacts to scenic vistas. Additionally, the project would have no impact on scenic resources within a state scenic highway. As such, this section of the EIR only evaluates the following thresholds related to aesthetics:

AES-1 In non-urbanized areas, would the project substantially degrade the existing visual character or quality of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

AES-2 Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

4.1.4 Impacts Analysis

AES-1 ***In non-urbanized areas, would the project substantially degrade the existing visual character or quality of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?***

The project site is located in an urbanized area in the County of Los Angeles within the City of Carson. Therefore, an analysis of the project's consistency with applicable County General Plan policies and goals governing scenic quality has been included in Table 4.1-1. An analysis of the project's potential impact to the existing visual character or quality of the site and its surroundings has also been included for informational purposes only.

Table 4.1-1
Project Consistency with County General Plan

Policy/Goal	Discussion	Consistency
County General Plan Land Use Element		
Goal LU 7: Compatible land uses that complement neighborhood character and the natural environment.	The proposed project would be located adjacent to a residential neighborhood and commercial and industrial land uses. The project would provide recreation opportunities for the surrounding communities and the region. The project would complement the neighborhood character and the natural environment through well-planned landscaping that would create a park-like environment across from the single-family homes on Avalon Boulevard. Streets within the project site would be tree-lined, and landscaped medians would provide additional character to the project site. The project would preserve and enhance the Dominguez Branch Channel that passes through the project site, as well as the associated riparian habitat. Additional measures to beautify the area around the Dominguez Branch Channel would be implemented, such as enhancing enhanced landscaping and open space. Throughout the project site, landscaping and at least 35 acres of publicly accessible open space would emphasize a park-like character and would feature recreation and fitness opportunities that would be open to the public.	Consistent
Policy LU-10.2: Design development adjacent to natural features in a sensitive manner to complement the natural environment.	The existing Dominguez Channel is located immediately west of the project site, and the Dominguez Branch Channel is an earthen drainage channel that passes through the project site. The protection of the Dominguez Branch Channel and Dominguez Channel would be prioritized through prevention of runoff or sedimentation, management of invasive plants,	Consistent

Table 4.1-1
Project Consistency with County General Plan

Policy/Goal	Discussion	Consistency
	and preservation of the surrounding vegetation and established trees where feasible. The project would also include enhanced landscaping and open space. The project would complement the natural environment by promoting environmentally sensitive and sustainable design.	
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.	The proposed project would consider the built environment of the surrounding area in the design, scale, and architectural style of the buildings associated with the project. Buildings would reflect the appropriate features of the surrounding area such as massing, materials, color, detailing, and ornament. The project buildings would be of similar bulk and scale of surrounding development along the I-405 corridor, as discussed below for KOP 3 and KOP 5.	Consistent
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.	The project would include distinctive landscaping, signage, and other features to define the unique character of the project and complement the character of the surrounding community. Landscaped areas featuring furniture and ornamental plantings that thrive in the Southern California climate would adjoin the buildings and create public plazas and gathering spaces. A master sign program will be submitted to the County for approval that would include on-site outdoor media to create a sense of place and enhance the experience. The project would include open space in the form of grassy parks as well as productive ecological habitat along the Dominguez Branch Channel, where existing vegetation would be retained and enhanced with vegetation native or adapted to the region. The project site would provide a space for community interaction, as project elements would be open to the public and would provide recreational opportunities available to the community and region.	Consistent
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.	The buildings associated with the project would be architecturally distinctive. The schematic design proposes using dynamic colors and modern architectural concepts to create distinct buildings and focal points within the project site. Project elements, such as signage, distinctive buildings, and open space, would be visible from I-405 and other surrounding roadways.	Consistent
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.	The project would aid in reducing the urban heat island effect by including substantial tree canopy cover and green open space and utilizing a variety of light-colored paving materials, including natural gray concrete, colored aggregate concrete, colored rubber, and gray unit pavers.	Consistent
County General Plan Conservation and Natural Resources Element		
Goal C/NR-13: Protected visual and scenic resources.	There are no visual and scenic resources specifically designated on the project site or within the City. However, the project would aid in enhancing the aesthetics of the community by including architecturally distinctive buildings, distinctive landscaping, and open space.	Consistent

Table 4.1-1
Project Consistency with County General Plan

Policy/Goal	Discussion	Consistency
Policy C/NR-13.3: Reduce light trespass, light pollution and other threats to scenic resources.	As previously discussed, there are no protected scenic resources designated on the project site or in the City. As discussed below in AES-2, the project would reduce light trespass and light pollution by adhering to the applicable regulatory framework, using light fixtures that would direct light on the project site and minimize light trespass, and implementing the necessary mitigation to reduce potential light and glare impacts.	Consistent
Policy C/NR 13.4: Encourage developments to be designed to create a consistent visual relationship with the natural terrain and vegetation.	The project would include open space and natural areas, creating a consistent visual relationship with the natural terrain and vegetation. The Dominguez Branch Channel, which passes through the project site, and the surrounding vegetation would be preserved and beautified with enhanced landscaping.	Consistent
Policy C/NR 13.5: Encourage required grading to be compatible with the existing terrain.	The existing project site is slightly elevated from the surrounding topography and includes slightly undulating fairways. The project would require grading of portions of the site for the addition of buildings and other project elements. However, the site would remain slightly elevated and grading would be compatible with the existing terrain. As discussed in Section 4.8, Hydrology and Water Quality, of this EIR, project grading would result in a drainage pattern that mimics the existing conditions and conforms to the intended discharge locations indicated on the City of Carson's existing Dominguez Channel hydrology map.	Consistent
Policy C/NR 13.6: Prohibit outdoor advertising and billboards along scenic routes, corridors, waterways, and other scenic areas.	As previously discussed, there are no scenic routes, corridors, waterways, or other scenic areas on the project site or in the City of Carson. The project proposes to include a large digital sign facing I-405 along the western façade of the building on Pad 1. Outdoor advertising and billboards of similar scale as the proposed project sign are commonplace along the I-405 corridor.	Consistent

A detailed analysis of the existing visual character and anticipated project effects as viewed from surrounding land uses and a variety of viewer groups is included below.

The project site encompasses an approximately 87-acre portion of an 18-hole golf course, and portions of the site are visible from surrounding land uses. For those provided views to the project site from public vantage points, views generally consist of undulating green open space, sand traps, mature trees and vegetation, landscaped slopes, and fencing associated with the existing golf course. Implementation of the proposed project would replace the existing golf course with new sports, recreation, fitness, and wellness facilities within a landscaped setting. Upon completion of

project construction, existing views of a recreational setting with areas of open space and landscaping available to viewer groups in the surrounding areas would largely be maintained.

Construction

Construction activities associated with the project would temporarily introduce heavy equipment to the project area and as a result of ground disturbance and landform alteration, would produce new forms, lines, colors and textures on the project site that would be visible from surrounding areas. Project construction is anticipated to occur over an approximate period of 18 months and is estimated to be completed in late 2020.

Views of construction activities would consist of heavy equipment, earthmoving activities, landscape alteration and building/facility construction during the 18-month period. It is assumed that the public would not have access to the northern portion of the Victoria Golf Course once construction has commenced and therefore, views of project construction activities would not generally be available from locations to the north. Motorists would have views of construction activities while driving on the I-405, Del Amo Boulevard, and South Avalon Boulevard. Views of construction activities would also be visible from the commercial area to the south and limited residences to the east across South Avalon Boulevard. While impacts to private residential views are not generally considered under the CEQA, the views provided to the nearest residents would be similar to those available to passing motorists on South Avalon Boulevard. Some views of the site would be screened by existing trees, sloping terrain and intervening development. While the project site would remain topographically elevated, construction of the proposed access roads into the project site would require grading the site to street level at the proposed entry locations and these features would be visible.

Outside of the immediate surrounding area, views of the project site are obscured by intervening development. The primary viewer group provided views to project construction would be motorists. Views available to motorists would be temporary and short in duration. With the exception of the elevated segment of Del Amo Boulevard over I-405 and the Dominguez Channel, views available to motorists are generally limited to the periphery of the eastern, southern and western project boundary. As such, construction activities occurring in the interior of the project site would be partially screened from most mobile viewpoints. Motorists typically have a low to moderate sensitivity to visual change in the landscape based on short duration of the available view and visual focus on the roadway. In addition, once construction activities are completed, heavy equipment, earthmoving activities, and construction crews would no longer be a component of views to the project site. Therefore, the temporary impacts on mobile viewers would be less than significant. As previously discussed, impacts to private residential views generally are not considered significant under CEQA. Project construction activities would be visible and would alter the existing visual character of the site. However, construction workers and equipment would be present in views for a temporary timeframe (18 months)

and construction effects to the existing character and quality of the site and surroundings would be temporary. As such, impacts to the existing character and quality of the site and surroundings during construction activities would be **less than significant.**

Operation

The approximately 87-acre project involves removing a portion of the existing golf course and replacing it with public recreational facilities and supporting ancillary uses. Implementation of the project would replace views of an existing managed golf course with views of recreational facilities, athletic fields, buildings, and open space areas within a landscaped park-like setting. As such, the existing recreational character and much of the existing recreational theme of the site would be maintained. By undergrounding select project utilities such as electrical lines within the project boundary, visual clutter associated with the project would be minimized. The project would introduce new forms, lines, colors and textures to the viewshed and would alter the existing open space character of the golf course property.

As proposed, the numerous proposed project buildings would be designed to be visually appealing. For example, the project's architectural schematic design plan identifies dynamic colors and a modern architectural building design to create visually appealing facilities.. The project would be split into two main zones: the Main Street Park Zone in the south and the Sports and Adventure Park Zone in the north (see Figure 3-4, Proposed Zones). Pads 1–4, 12, and 14 would be within the Sports and Adventure Park Zone; Pads 5-11, and 13 would be within the Main Street Park Zone; and Pad 15 would pass through both Zones. Figure 3-2, Site Plan, in Chapter 3, Project Description, illustrates the proposed location of each of the pads.

- **Pad 1** – The multi-use indoor sports complex would be a one-story, approximately 50-foot-tall building measuring approximately 199,000 square feet. An approximately 2-acre-foot outdoor recreation field would adjoin the southeast side of the multi-use indoor sports complex. The field would be illuminated for nighttime play by approximately 10 poles with lighting fixtures. The poles would be up to approximately 60 to 80 feet in height.
- **Pad 2** – The youth learning experience building would be a one- to two-story, approximately 50-foot-tall building measuring approximately 30,000 square feet.
- **Pad 3** – The indoor skydiving facility would be approximately 7,500 square feet and approximately 65 feet high.
- **Pad 4** – The driving range would be a three-story, approximately 55-foot-high public golf facility, measuring approximately 75,000 square feet. The new facility would include approximately 100 hitting bays. From the hitting bays, players would hit balls into an open outdoor area that would be surrounded by netting and support poles of up to approximately 170 feet in height.

- **Pads 5 and 6** – The marketplace would be within one or more one- to two-story buildings, measuring up to 35 feet high and approximately 71,000 square feet. The marketplace would also feature outdoor landscaped areas adjoining the buildings, including outdoor furniture.
- **Pad 7** – The clubhouse would be a three-story, approximately 45-foot-high building, measuring approximately 40,000 square feet. The building would also include an approximately 9,000-square-foot rooftop deck.
- **Pad 8** – The recreation and dining facility would be a one-story, approximately 40-foot-high building, measuring approximately 26,000 square feet. The building would also include an approximately 7,500-square-foot rooftop deck.
- **Pad 9 and 11** – The restaurants would be located within two one--story, approximately 25-foot-high buildings, measuring approximately 25,000 square feet in total. Alternatively, an approximately 30,000-square-foot specialty grocery store may be developed on Pad 11 (the grocery store option would result in the elimination of 28,600 square feet of restaurant uses elsewhere within the project).
- **Pad 10** – The sports wellness building would be a two-story, approximately 40-foot-high building, measuring approximately 36,000 square feet.
- **Pad 12 –** The zipline, outdoor ropes course and adventure park area would be a 3.2-acre outdoor recreation area. This area would include a zip line traversing a portion of the project site, as well as a ropes course with high and low elements. The zip line and adventure park would have elements with heights of up to 75 feet, and the ropes course would include poles of up to 60 feet in height.
- **Pad 13** – The community park would be approximately 6.6 acres of open space and would be centrally located between the clubhouse and the enhanced driving range. The park would be situated at the egress point of the pedestrian thoroughfare for marketplace, restaurants, and sports wellness facilities and would include playgrounds, picnic areas, and open space.
- **Pad 14 –** The putting green would be an outdoor natural grass surface located adjacent to the proposed driving range.
- **Pad 15 –** The approximately 2-mile jogging/walking path would extend from the entrance of the project site near Avalon Boulevard and Turmont Street, and wind through landscaped areas within the project site to the northwesterly portion of the site adjacent to the Goodyear Blimp Airship Base.

Pads 1 through 4 include the tallest buildings (i.e., 50 to 65 feet) proposed and would be located in the northern and western portion of the project site. Additionally, the golf facility poles would reach up to 170 feet in height. The project would add tall buildings and features to this portion of the project site, which would contrast from the existing golf course views. However, the northern portion of the project

site is surrounded by commercial and industrial land uses to the north and west, including the Goodyear Blimp Airship Base and development along the I-405 corridor. Buildings in the surrounding area vary in bulk and scale, ranging from approximately 15 to 110 feet in height, with the tallest building located approximately 0.65 miles northwest of the project site measuring up to approximately 110 feet in height.

There are few public vantage points to the site from the north and west, limiting the availability of views to motorists traveling on I-405 and those frequenting the Goodyear Blimp Airship Base. Motorists would be set back approximately 600 to 700 feet from the project site, and the building on Pad 1 would be set back approximately 200 feet from the Goodyear Blimp Airship Base property line. These setbacks would reduce the immediacy of project elements.

The remainder of the pad sites, buildings, and features are located in the southern portion of the project site, near the commercial and residential areas of Del Amo Boulevard and South Avalon Boulevard, respectively. These buildings and features on Pads 5 through 15 (20 to 60 feet high) would be partially screened from public view by the existing and proposed landscaping and as viewed from South Avalon Boulevard, intervening terrain. Landscaping, open space, and signage would be distributed throughout the project site.

The proposed buildings would add bulk and scale to the site that would contrast from existing views. Buildings in the commercial area to the south and along the I-405 corridor vary from approximately 20 to 80 feet in height, with the nearest buildings located approximately 130 feet from the project site.

Key Observation Points and Visual Simulations

Key Observation Points (KOPs or key views) were used to evaluate the existing visual character and anticipated project effects. While views to the project site from public vantage points are primarily available from the south and east, KOPs from the west and northwest were selected to better illustrate the range of viewer groups in the project area and quality of available views to the project site. Photographs were taken of the project area in August and September 2018 from several on- and off-site locations to support the characterization of the environmental setting and to use as base images for visual simulations. Atmospheric conditions were clear and photographs were taken between 10 a.m. and 12 p.m.

The location and orientation of photographs taken during the site visits and selected as KOPs is depicted on Figure 4.1-2, Key Observation Points. Visual simulations of the project were created from each KOP. Existing and proposed conditions from each KOP are included in Figures 4.1-3 through 4.1-7. These 3-dimensional computer simulations illustrate proposed visual changes associated with the project and provide a visual aid for analyzing the project's potential impacts on the existing visual character and quality of the site and its surroundings. Landscaping depicted in the visual simulations is depicted at approximately 10 years of vegetation growth. It should be noted that following construction and during the establishment period, project landscaping would be noticeably shorter in scale and less full than as depicted in the visual simulations.

KOP 1

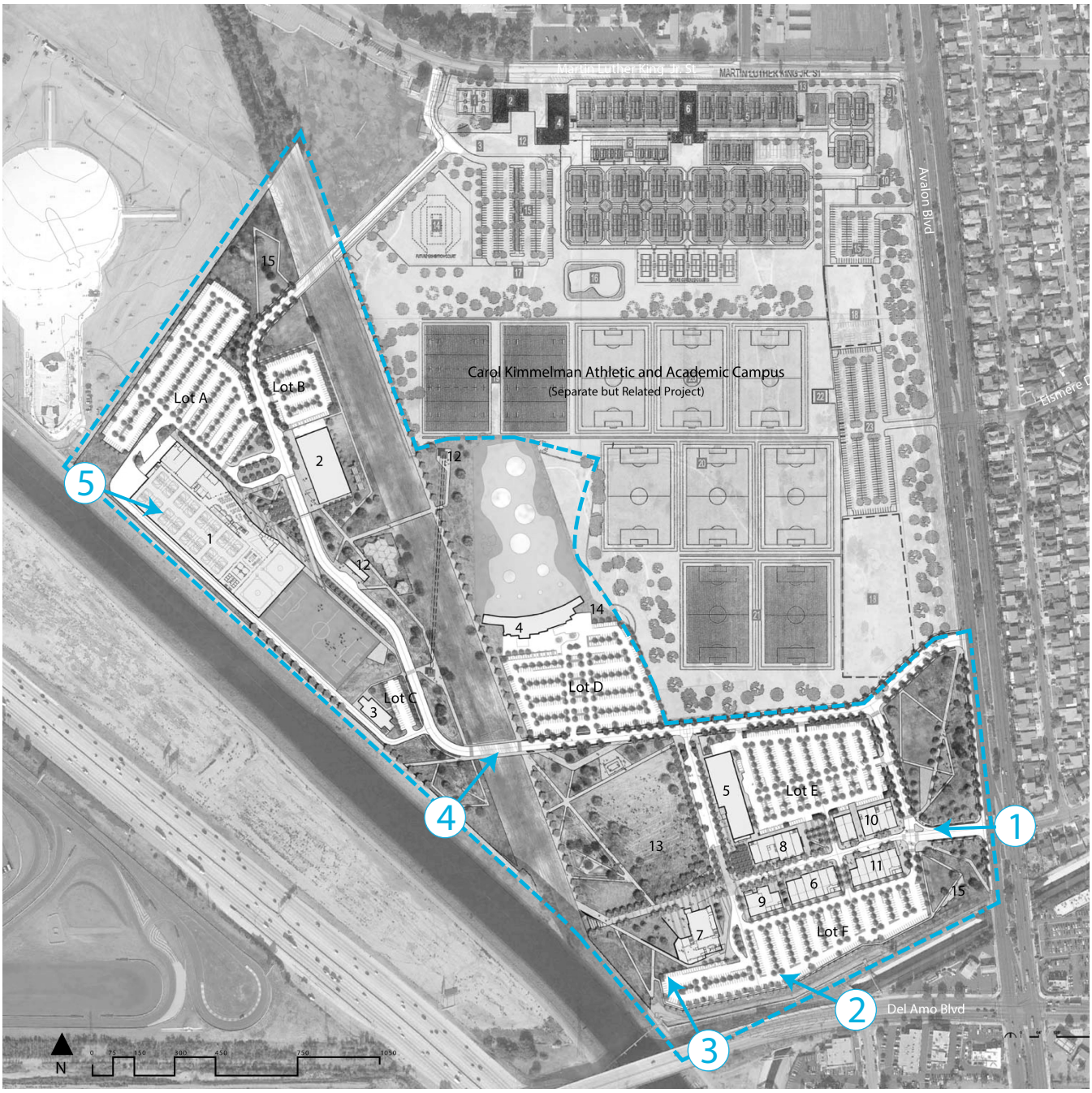
KOP 1 is located at the intersection of South Avalon Boulevard and Turmont Street and looks west toward the project site. As shown on Figure 4.1-3, foreground views at KOP 1 include the three-way intersection and associated traffic signals and streetlights. Beyond the intersection, a seemingly random assortment of evergreen and dying trees, dry grasses and soils atop a slope that rises approximately 15 to 20 feet above street level. A tall chain-link fence is visible on top of the berm, beyond which additional trees and golf course netting are visible.

Project implementation would involve the construction of an east–west roadway extending westerly from South Avalon Boulevard into the project site, and grading of the raised berm to a gentler slope. Once developed, the project site would remain elevated above street level, however, the location of the entry roadway would be graded to street level at South Avalon Boulevard and would softly rise upwards into the project site. As shown on Figure 4.1-3, views would consist of a wide, sloped landscaped buffer planted with trees and grasses and a softly sloping four-lane road lined with street trees. Two-story buildings on Pads 8, 10, and 11 would be partially visible beyond the new landscape trees. Given the low visual quality associated with the existing slope and lack of visual cohesiveness concerning existing landscape plantings, proposed landform alteration and the installation of new landscaping would create a more approachable scene and would enhance existing visual quality. In addition, the new entry road and partially screened buildings would be consistent with the scale of existing road corridors and development in the surrounding urban environment.

KOP 2

KOP 2 is located on Carson Plaza Drive at the intersection with Del Amo Boulevard and looks northwest toward the project site. As shown on Figure 4.1-4, foreground views from this location consist of Del Amo Boulevard and other roadway elements including a raised hardscape median, streetlights, guardrails, concrete barriers, chain link fencing, and street signage. Beyond the intersection, a white, aboveground pipeline bordered by low and unkempt vegetation is visible between the roadway and the golf course. Slightly undulating, turf-covered fairways and mature trees mark the golf course in the mid-ground. The flat rooflines of tall, white buildings located in a commercial area to the northwest of the project site are visible on the low horizon in the background.

KEY OBSERVATION POINTS



SOURCE: Perkins + Will 2018; Relm 2018

Conceptual and Subject to Change

FIGURE 4.1-2

Key Observation Points

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

Existing Conditions

Visual Simulation: Proposed Conditions

Conceptual and Subject to Change

FIGURE 4.1-3

KOP 1: Looking West Toward the Project Site from the Intersection of South Avalon Boulevard and Turmont Street

INTENTIONALLY LEFT BLANK

Following construction and upon maturity of project landscaping, existing views of the golf course would be replaced with trees that would be planted along the project boundary and throughout the project site, as well as project buildings. As shown on Figure 4.1-4, the reddish slatted exterior of the clubhouse building (Pad 7) would be partially visible above the trees to the northwest. The proposed purple, orange, and green exteriors of the one- to two-story restaurant and marketplace buildings (Pads 6, 9, and 11) would be partially visible to the north through the trees. The black netting and poles of the golf facility (Pad 4), located farther north in the Sports and Adventure Park Zone, would rise above the foreground trees and buildings and would be partially visible. As shown in the KOP 2 visual simulation, the bright colored buildings would be eye-catching and attract attention; however, upon maturity, intervening landscaping would reduce the visual impact by partially screening the building exteriors, as shown in Figure 4.1-4. It should also be noted that building materials and colors depicted in the visual simulation shown in Figure 4.1-1 are conceptual and subject to change pending County design review.

Views from KOP 2 are primarily available to motorists, who are considered to have low viewer sensitivity as their views are mobile and short in duration. Additionally, the surrounding urban environment along the I-405 and I-110 corridors, including the commercial areas south of the project site, consists of buildings of similar bulk and scale as the proposed project buildings. Buildings along the freeway corridors near the project site range from approximately 15 to 110 feet in height, such as the approximately 110-foot-high Tire Co building located approximately 0.65 miles northwest of the project site (Emporis 2019). In addition, the surrounding commercial development including structures in the South Bay Pavilion (located approximately 0.5 miles south of the project site) incorporates a range of colors on building exteriors. Further, bright colors are commonplace on signs and billboards along the I-405 and I-110 corridors near the project site. Project design is subject to review and approval by the County, and therefore, final project design would be required to demonstrate compliance with County standards including consideration of the existing visual landscape in the selection of building materials and color.

KOP 3

KOP 3 is located on East Del Amo Boulevard on the Kay A. Calas Bridge and looks north toward the project site. As shown on Figure 4.1-5, this location offers wide views to the southern portion of the project site (albeit through chain-link fencing) and is representative of the views available to motorists, bicyclists and pedestrians along the elevated segment of Del Amo Boulevard. Foreground elements include the six-lane road with a raised hardscape median and a low concrete wall topped with chain-link fencing that borders the road. The intersection of the concrete-lined Dominguez Channel and the earthen Dominguez Branch Channel is visible beyond the roadway. Limited urban development is visible on the horizon and above the crowns of trees on the project site.

Upon project implementation, views of the golf course would be replaced with brightly colored buildings on Pads 7, 4, 1, and 2. As shown on Figure 4.1-5, trees would be planted along the project

boundary and throughout the site. The two most prominent features in the view would be the reddish slatted exterior of the proposed three-story, 40,000-square-foot clubhouse on Pad 7 and the approximately 170-foot high poles and netting system lining the driving range on Pad 4. As the project site does not currently support any structures, the introduction of proposed uses on Pads 7 and 4 would represent substantial building bulk and scale and create moderate form, line, and color contrasts. The magenta- and purple-colored buildings on Pads 1 and 2, respectively, would be partially visible through the trees farther to the north. These include the 50-foot-tall, 199,000-square-foot multi-use indoor sports complex on Pad 1 (shown on the far left of KOP 3) and the 50-foot-tall, 30,000 square foot youth learning experience building on Pad 2 (shown to the right of Pad 1 on KOP 3). As these structures would be set back from KOP 3 and would display a shorter scale than closer development on Pads 7 and 4, development on Pads 1 and 2 would not dominate the scene. In addition to buildings, new trees would be planted throughout the site and many existing mature trees along the Dominguez Branch Channel would be preserved where feasible. New and existing trees would partially screen proposed development from view at KOP 3. The flat, green turf associated with the Community Park and other open space areas would also be partially visible, with trees planted throughout. As under existing conditions, green space and landscaping would remain prevalent in the proposed conditions scenario.

While the project site encompasses approximately 87-acres of an existing golf course and does not support any buildings, the addition of buildings to the project site would be compatible with the surrounding urban environment. Surrounding buildings in the South Bay Pavilion commercial center (approximately 0.25 miles south) include large warehouse stores of similar bulk and scale, with buildings up to approximately 145,000 square feet and 80 feet high. Other commercial development between the South Bay Pavilion and the project site include one- and two-story restaurants, office buildings, and gas stations.

While bright colors are depicted on proposed Pads 7, 1 and 2 (see Figure 4.1-5), the project design (including materials and colors) is subject to review and approval the County Department of Regional Planning. As previously discussed in KOP 2, buildings within the surrounding commercial areas range from approximately 15 to 110 feet in height, and incorporate a range of colors on building exteriors, signs, and billboards. As evident in Figure 4.1-5, the project would alter the existing visual character of the site but not result in substantial degradation of the existing landscape as viewed from KOP 3.

Existing Conditions

Visual Simulation: Proposed Conditions

Conceptual and Subject to Change

FIGURE 4.1-4

KOP 2: Looking Northwest Toward the Project Site from the Intersection of Del Amo Boulevard and Carson Plaza Drive

INTENTIONALLY LEFT BLANK

Existing Conditions

Visual Simulation: Proposed Conditions

Conceptual and Subject to Change

FIGURE 4.1-5

KOP 3: Looking North Toward the Project Site from Kay A. Calas Bridge on East Del Amo Boulevard, Above the Dominguez Channel

INTENTIONALLY LEFT BLANK

KOP 4

As shown on Figure 4.1-2, KOP 4 is located midway along the western boundary of the project site and is situated near the maintenance road adjacent to the Dominguez Channel. KOP 4 looks east toward the project site. KOP 4 was selected in order to provide a representative view to the project site available from motorists traveling along I-405 (located approximately 600 feet west of KOP 4).

As shown on Figure 4.1-6, this location offers uninterrupted views of the project site that consists of a sand trap, relatively flat green and undulating terrain covered with turf. Natural habitat areas that support low shrubs, tall and mature trees are located within the golf course, and these features enhance existing visual quality. For instance, the earthen slopes of the Dominguez Branch Channel and the surrounding vegetation are visible as it crosses the project site from north to the southwest. A small bridge with short railing crosses the Dominguez Branch Channel. Limited urban development is visible on the distant horizon through gaps in the existing tree line.

As depicted on Figure 4.1-6, existing terrain (with the exception of the Dominguez Branch Channel) would be graded to create a flat and open green space. As under existing conditions, green space would dominate the foreground view however, these turf and tree areas would be crossed by paved paths and roads. The majority of existing riparian habitat around the Dominguez Branch Channel would be preserved. The small golf cart bridge would be replaced with a low profile bridge that would allow vehicles traveling on a new internal road to pass over the Dominguez Branch Channel. Tall poles and netting at the proposed golf facility on Pad 4 would reach up to 170 feet high and be visible above the newly installed trees in the foreground. The greyish, boxy form of the proposed 55-foot tall, 75,000-square-foot golf facility would be visible but partially screened by new and existing trees.

Under existing conditions, poles and netting typical of a golf course are present and visible in other parts of the project site (most notably, along the eastern property boundary adjacent to South Avalon Boulevard). Limited urban development would be distant but visible on the eastern horizon. The project would alter the visual setting, but would not substantially degrade the visual character or quality of the managed golf course site from KOP 4. Project development would be partially screened from view and visible components would resemble existing features present on the golf course and visible from public vantages. Further, the nearest viewers under existing conditions (I-405 motorists) would be set back over 600 feet from KOP 4 and would be provided mobile views to project components along the western periphery of the project site. Motorists generally have a low to moderate sensitivity to visual change in the landscape based on duration of view and visual focus on the roadway.

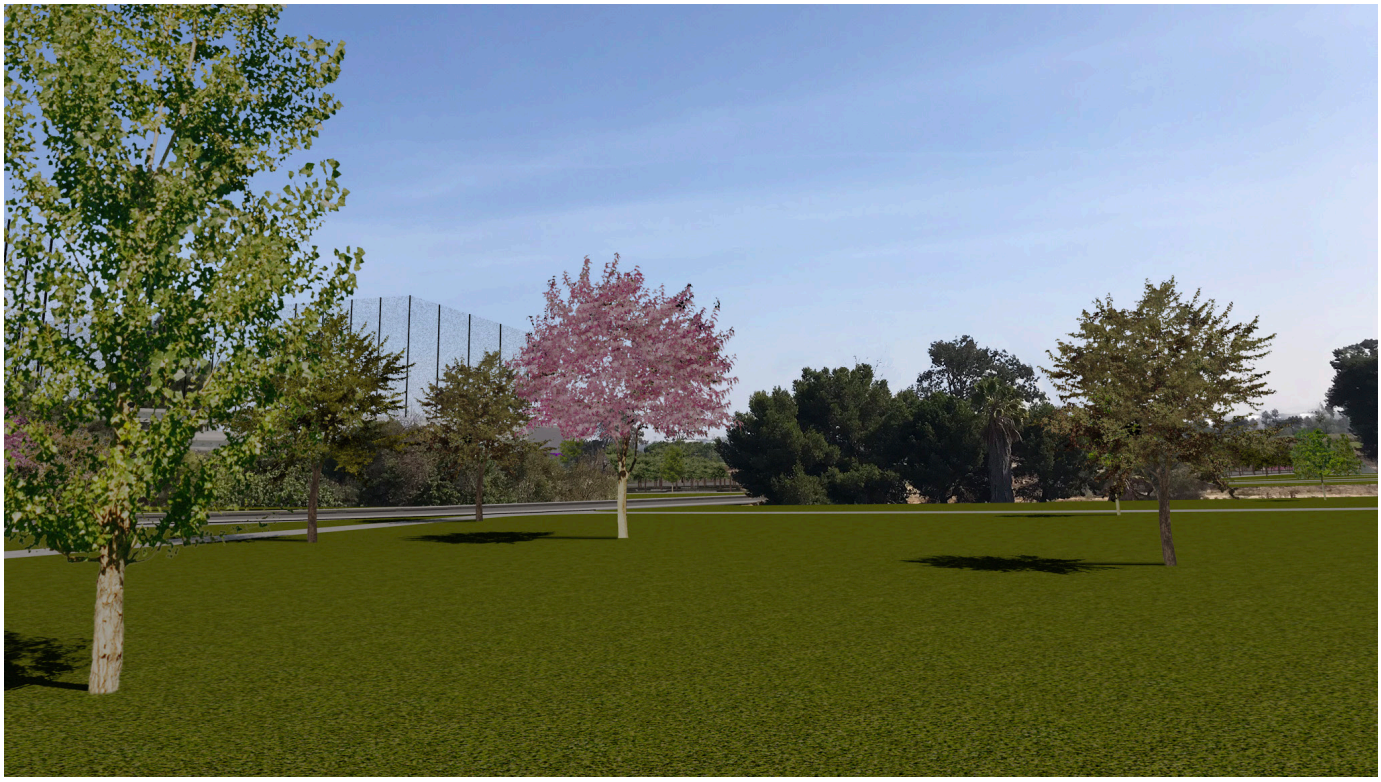
KOP 5

KOP 5 is located at the northwestern corner of the project site, near the Dominguez Channel and the Goodyear Blimp Airship Base. Employees and visitors of the Goodyear Blimp Airship Base would be afforded similar views. As the I-405 travel lanes are located approximately 700 feet west of this location, KOP 5 viewers are primarily anticipated to be employees of and visitors to the Goodyear Blimp Airship Base. Motorists traveling along I-405, set back approximately 700 feet west, would have wider views of the project site than depicted in Figure 4.1-7 due to the distance from the project site.

This location offers narrow views of the golf course and nearby mature trees that tend to enhance the visual quality of the urban setting (see Figure 4.1-7). The undulating, turf covered terrain of the golf course is present in the foreground and along with mature trees, limits the length of the view across the golf course property. Mature pine and eucalyptus trees are visible beyond the immediate foreground and dense clusters of trees extend to the south across the property. The Dominguez Channel is visible to the southwest, as is a short chain-link fence (approximately 4 feet tall) that separates the Dominguez Channel maintenance road from the project site. The Kay A. Calas Bridge along Del Amo Boulevard and urban development are also visible in the mid-ground, approximately 0.5 miles south of this location.

Upon project implementation, existing views of the golf course would be replaced with views of the approximately 50-foot-tall, 199,000-square-foot multi-use indoor sports complex on Pad 1 and nearby landscape and hardscape areas. A wall mounted digital sign (maximum 35,000 square feet) on the western façade of the building facing I-405 would also be visible. The approximately 50-foot-tall youth learning experience building on Pad 2 would be partially visible to the left, however it would be slightly set back from KOP 5 and would display at a shorter vertical scale than the building on Pad 1, which dominates the scene due to proximity. Existing shrub and tree vegetation in the immediate foreground would be retained, and additional landscaping, including flowering ornamental trees and turf would be added. As viewed from KOP 5, the project site would be graded flat. Paved surfaces, including a parking lot serving the nearby facilities (i.e., proposed Lot A1), would be located to the east of KOP 5 and would be partially visible, including proposed trees that would be planted within the parking lot. The 50-foot-tall building would be the most prominent feature in view and it's brightly colored north façade would create noticeable color contrast as compared to the consistent palate of green displayed by the existing golf course. The 50-foot-tall, 199,000-square-foot building area would also represent substantial building bulk and scale as compared to the existing managed golf course site.

Existing Conditions



Visual Simulation: Proposed Conditions

Conceptual and Subject to Change

FIGURE 4.1-6

KOP 4: Looking East Toward the Project Site from the Western Project Boundary

INTENTIONALLY LEFT BLANK

Existing Conditions

Visual Simulation: Proposed Conditions

Conceptual and Subject to Change

FIGURE 4.1-7

KOP 5: Looking Southeast Toward the Project Site near the Northwest Corner of the Project Site and the Goodyear Blimp Airship Base

INTENTIONALLY LEFT BLANK

However, large boxy buildings are typical in the surrounding commercial and industrial areas. As previously discussed, surrounding buildings vary in bulk and scale, ranging from approximately 15 to 110 feet in height. Additionally, advertisement billboards are typical of the I-405 and I-110 corridors. Further, similar to KOP 4, this location would have relatively low viewer sensitivity, as viewers would be set back from this location, and the main viewer group would be motorists with mobile views of the site.

Summary

The area surrounding the project site is characterized by urban development consisting of residential, commercial, and industrial land uses. The surrounding area consists of an urban environment with buildings of varying sizes and colors. Buildings in the surrounding commercial areas consist of large, boxy buildings ranging from approximately 15 to 110 feet in height. The nearest buildings are located within approximately 300 feet of the project site, with the tallest nearby building located 0.65 miles northwest of the project site and measuring up to approximately 110 feet tall. Additionally, the nearby StubHub Center consists of a large soccer stadium with seating capacity for 27,000 spectators, and the Cal State Dominguez Hills campus contains multiple large, boxy buildings measuring up to approximately 80 feet in height (both are located within approximately 1 mile northeast of the project site). Development of similar bulk and scale as well as large illuminated and colorful billboards are typical along the I-405 and I-110 corridors.

The project would largely retain the existing recreational character of the site and would retain many areas of open space. Development proposed on the project site includes a variety of recreational uses and indoor and outdoor facilities including a community park, adventure course, jogging paths, and programmed green space. Landscaping and open space, including open play areas and enhanced habitat areas would be distributed throughout the project site. The addition of buildings would alter the visual character of the site through the introduction of new forms, lines, colors and textures that are currently not supported on the existing golf course. Existing views of the golf course would be replaced with recreational facilities, new landscaping, signage and large buildings. The area with the largest buildings and the greatest potential for substantial change in the visual environment is the northwestern portion of the site, where the 50-foot-tall multi-use indoor sports complex and the 50-foot-tall youth learning center are proposed on Pads 1 and 2, respectively. These buildings would be located close to the western project boundary, with few screening elements, whereas other proposed buildings would be located internally within the site, with a variety of trees and landscape elements that would partially screen buildings from view. However, interstate motorists are the primary group that would be provided views to development on Pads 1 and 2 and their viewer sensitivity is considered low. Other project elements that have the potential to result in the greatest contrast from the existing golf course scene include the bright colors and height of buildings visible from KOPs 2, 3 and 5. The primary viewer group at these KOPs would also be motorists, who have low viewer sensitivity and experience development of similar scale in the general project area when traveling on I-405 and Del Amo Boulevard.

As demonstrated in the visual simulations, the project would alter the visual setting and result in a perceptible contrast relative to the existing golf course. However, given the surrounding development of similar bulk and scale, the project would be compatible with the surrounding urban environment. Further, viewer sensitivity is considered low in the areas that would produce the most visual contrast, as the main viewers would be motorists who have a short duration of view. In many areas, the site is set back from public vantage points and shielded by existing trees or new landscaping associated with the project. Implementation of the project would achieve a coherent and consistent landscape theme throughout the site and maintain much of the open space and recreational character of the project site. As previously discussed, while bright colors are depicted in KOPs, the project design (including materials and colors) is conceptual and subject to change pending review and approval by the County Department of Regional Planning. Viewer groups experience similar development in the project area and the project would achieve a coherent and consistent landscape throughout the site and maintain the recreational character of the project site. Because the project site is located within an urbanized area and is consistent with applicable regulations regarding viewsheds, impacts to existing visual character and quality would be **less than significant**.

AES-2 Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Francis Krahe & Associates Inc. completed a Lighting Study (Appendix B) in November 2018, to analyze the project's potential impacts related to light and glare. The analysis includes an evaluation of the light trespass, measured in terms of illuminance (foot-candles [fc]), from the project to light sensitive use properties, and an evaluation of glare, measured in terms of luminance (footlamberts [fL] or candelas per square meter [cd/m^2]), from the project visible at residential properties or at adjacent roadway locations (light trespass and glare are defined in Section 4.1.1, Existing Conditions). The Lighting Study presents a conservative analysis with respect to light trespass and glare. The project lighting is evaluated with a configuration of the maximum permissible lights that are within the limits of the California Building Code.

Surrounding sensitive use properties include the I-405 freeway, residential properties to the east, north and south of the project site, and the Goodyear Blimp Airship Base to the west of the project site at South Main Street. Residential properties and the adjacent I-405 are identified as the most sensitive use sites due to their close proximity to the project site and possible direct view of the project signs and project lighting. Further, the Goodyear Blimp Airship Base is zoned commercial, and there are no thresholds specific to light trespass for commercial properties.

As explained in the Lighting Study, the project would have a significant impact related to light or glare if:

- The project lighting exceeds 0.74 illuminance (fc) at the property line of a residential zoned property.
- The project sign lighting creates glare with new high contrast conditions, with luminance greater than 600 cd/m^2 or contrast ratio greater than 30:1, visible from a field of view from a residentially zoned property.
- The project building lighting creates glare with new high contrast conditions, with luminance greater than 100 cd/m^2 or contrast ratio greater than 30:1, visible from a field of view from a residentially zoned property

In addition, based on the California Vehicle Code requirements, the project lighting would create a significant impact with regard to artificial light or glare effects on drivers of motor vehicles if:

- The maximum measured brightness of the light source within 10 degrees from the driver's normal field of view were more than 1,000 times the minimum measured brightness in the driver's field of view, except that when the minimum measured brightness in the field of view is 10 footlamberts or less, the measured brightness of the light source in footlamberts shall not exceed 500 plus 100 times the angle, in degrees, between the driver's field of view and the light source.[2] Thus, a conservative evaluation, occurs where the project lighting is visible within the centerline of the driver's field of view; the angle noted above within the field of view is 0; the surrounding surface luminance is less than 10 fL; and therefore, the maximum allowable luminance is 500 fL. Therefore, the most conservative condition at night evaluates project lighting against a threshold for luminance of a maximum 500 fL in the driver's field of view.

Construction

Project construction would be required to comply with County regulations governing construction hours. Adherence to these regulations would minimize impacts to the surrounding community. Section 12.08.440 of the County municipal code prohibits construction between the hours of 7 p.m. and 7 a.m. on weekdays and Saturdays, and any time on Sundays or holidays. During the limited periods of the year in which construction could occur during evening hours that require lighting, the construction lighting would be directed to the on-site area of construction work. Additionally, project construction would occur over a period of 18 months and construction effects related to light or glare would be temporary. Therefore, construction of the project would not create new sources of light or glare that would adversely affect day or nighttime views in the area. Temporary construction impacts would be **less than significant.**

[2] The driver's field of view from the center of the roadway plus 10 degrees.

Operation

The project would introduce new light sources to the project site, to provide illumination for nighttime use of the property, including building code required lighting for safety and security, lighting for on-site roads and parking, illuminated digital signage, and lighting for outdoor signs, as well as lighting for the use and enjoyment of some of the outdoor sports facilities. The project site hours of operation would vary between facilities and special events. However, the longest hours of operation would generally be between 7 a.m. and 12 a.m. Monday through Thursday, with hours as late as 2 a.m. on weekends for select recreation and dining opportunities on Pads 7 through 11. Not all facilities would operate into the evening (see Table 3-2, Estimated Hours of Operation, for facility hours of operation). All project lighting would comply with local municipal code and the state energy and building codes standards and requirements.

This analysis represents a conservative evaluation of the potential for off-site light trespass illuminance and glare from the project sign lighting and building lighting. Vertical Plane Locations and Monitoring Sites (see Figures 4 and 5 of Appendix B) were utilized to describe and evaluate the existing light trespass and glare conditions at and surrounding the project site, and to determine the maximum potential impacts that may result from light or glare onto adjacent sensitive use properties surrounding the project site.

As previously discussed, the existing lighting conditions within and surrounding the project site are typical of an urban setting, including interior and exterior building lighting, street lights, lighting for safety and security, landscape lighting and overhead field lighting. The distance to adjacent residential properties varies considerably; however, the approximate distance to the nearest residential properties from the east project boundary is 124 feet, from the north project boundary is 742 feet, and from the south project boundary is 2,177 feet. Light intensity diminishes rapidly in relation to distance. Therefore, more distant sensitive receptor locations would receive much lower light trespass or glare, and would therefore be less affected by the project.

Monitoring Sites were used to describe and evaluate the existing lighting conditions in the project area. As shown in Figure 5, Appendix B, all Monitoring Sites are in close proximity and have views to the project site and are representative of views of the nearest light sensitive use residential properties. Also shown in Figure 5, Freeway Sites were selected to evaluate the project's potential impacts on drivers traveling on I-405.

Monitoring Site ME1: Monitoring Site ME1 is located along the east property line on South Avalon Boulevard behind the residential property located at Dunbrooke Avenue and Elsmere Drive, to evaluate the east project property line. The distance to the project property line is approximately 816 feet.

Monitoring Site ME2: Monitoring Site ME2 is located on the southeast corner of Avalon Avenue and Turmont Street at the adjacent residential property, to evaluate the east project property line. The distance to the project property line is approximately 170 feet.

Monitoring Site MS1: Monitoring Site MS1 located on the E. Del Amo Overpass above the south bound I-405 Freeway to evaluate the project south property line. The distance to the project property line is approximately 430 feet.

Monitoring Site MW1: Monitoring Site MW1 is located at the west end of the Main Street Bridge over the Dominguez Creek Channel to the north of the Project property line to evaluate the project north property line. The distance to the project property line is approximately 1224 feet.

Monitoring Site MN1: Monitoring MW1 site is located at the southwest corner of Victoria Park to evaluate the project east property line. The distance to the project east property line is approximately 10 feet.

The measured existing illuminance (light trespass) in the project area is consistent with an urban lighting setting, with relatively higher illuminance at the street and sidewalk within the public right of way and nearby commercial properties, and lower illuminance within the residential properties but sufficient for safety and security. Surrounding commercial properties and roadways contribute to a relatively bright night environment. Under existing conditions, illuminance at the Monitoring Sites ranges from 0.03 fc to 1.96 fc, with the highest existing horizontal illuminance level recorded at Monitoring Site at MW1 at 1.96 fc, while the lowest horizontal illuminance was recorded at Monitoring Site MS1 at 0.09 fc. The highest existing vertical illuminance level was recorded at Monitoring Site ME2 at 0.72 fc, while the lowest vertical illuminance was recorded at Monitoring Site MN1 at 0.03 fc.

Existing luminance (glare) levels and contrast ratios were also measured at each of the above Monitoring Sites. The highest measured average luminance was recorded at Monitoring Site ME2 at 175.9 cd/m^2, while the lowest measured average luminance was recorded at Monitoring Site MN1 at 0.1 cd/m^2. The highest measured maximum luminance was recorded at Monitoring Site ME2 at 2633 cd/m^2, while the lowest measured maximum luminance was recorded at Monitoring Site MN1 at 0.31 cd/m^2. Under existing conditions, the calculated contrast ratio for Monitoring Sites ME1, ME2, MS1 and MW1 is medium contrast, less than 30:1. The calculated contrast ratio for Monitoring Site MN1 is low contrast, less than 10:1. The variation in recorded luminance indicates the variation in existing light within the project area.

The following discussion considers sign lighting and building lighting and makes a significance determination for each source. As proposed, the project would incorporate the following design standards as it relates to project lighting:

- Light trespass illuminance would be less than 0.74 fc at all adjacent residential use properties as stipulated by California Energy Commission (CEC).
- At night and during sunset, sunrise, glare at sensitive residential or roadway sites would be less than high contrast conditions with a maximum sign luminance of 600 cd/m^2.
- At night and during sunset, sunrise, glare at sensitive residential or roadway sites would be less than high contrast conditions with a maximum building lighting luminance of 60 cd/m^2.
- Sign lighting would be controlled by a photocell on and time clock off to transition smoothly from the daytime conditions to the maximum nighttime luminance of 600 cd/m^2. Building lighting would be controlled by a photocell on and time clock off to transition from the daytime conditions to the maximum nighttime luminance of 60 cd/m^2.

Light Trespass Analysis

Building Lighting

The proposed project includes installation of new outdoor lighting throughout the project site. New outdoor lighting would be designed and installed consistent with the design standards described above. To evaluate light trespass, the illuminance (fc) from the building lighting is calculated within a vertical plane. As shown in Figure 4 in Appendix B, building lighting was evaluated within vertical planes at the project property lines. More distant sensitive use properties would receive less light from the project due to the increased distance. Therefore, the building lighting would produce a less significant light trespass impact on sensitive use properties more distant from the project property line. The Vertical Plane locations, illuminance measurements, and resulting analysis are described below in Table 4.1-2.

Table 4.1-2
Building Lighting Trespass Illuminance (fc) – Calculated at Vertical Planes

Vertical Calculation Planes	Description	Illuminance (fc)			Analysis
		Max	*Min*	*Average*	
VPW1	Project west property line at Goodyear Blimp Airship Base	0.70	0.00	0.43	Below Threshold of 0.74 fc, no light trespass impact
VPW2	Project west property line	0.10	0.00	0.01	Below Threshold of 0.74 fc, no light trespass impact
VPS2	Project south property line	0.30	0.00	0.19	Below Threshold of 0.74 fc, no light trespass impact

Table 4.1-2
Building Lighting Trespass Illuminance (fc) – Calculated at Vertical Planes

Vertical Calculation Planes	Description	Illuminance (fc)			Analysis
		Max	*Min*	*Average*	
VPS3	Project south property line	0.70	0.00	0.27	Below Threshold of 0.74 fc, no light trespass impact
VPE2	Project east property Line	0.10	0.00	0.01	Below Threshold of 0.74 fc, no light trespass impact
VPN2	Project north property line	0.10	0.00	0.00	Below Threshold of 0.74 fc, no light trespass impact
VPN3	Project north property line	1.60	0.60	1.21	Above Threshold of 0.74 fc at commercial use property, no light trespass impact
VPN4	Project north property line	0.60	0.10	0.29	Below Threshold of 0.74 fc, no light trespass impact
VPN5	Project north property line	2.70	0.10	0.61	Above Threshold of 0.74 fc at commercial use property, no light trespass impact
VPN6	Project north property line	0.50	0.10	0.30	Below Threshold of 0.74 fc, no light trespass impact
VPN7	Project north property line	0.40	0.10	0.20	Below Threshold of 0.74 fc, no light trespass impact

The building lighting trespass illuminance analysis evaluates the fc at Vertical Plane Locations with respect to light leaving the project site toward adjacent properties. The building light trespass illuminance at the Vertical Planes varies from a minimum of 0 fc to a maximum of 2.70 fc. The maximum building lighting trespass illuminance exceeds the 0.74 fc threshold at two vertical calculation planes: VPN3 at 1.6 fc; and VPN5 at 2.70 fc. However, these locations border the remaining northern portion of the golf course, and are not light-sensitive residential use properties. As previously discussed, the 0.74 fc threshold applies to residential properties only; therefore, light trespass from building lighting at VPN3 or VPN5 would not result in an impact. The building light trespass illuminance at all other Vertical Plane Locations is below the 0.74 fc threshold and therefore, the project building lighting would result in a **less-than-significant impact** associated with light trespass.

Sign Lighting

The project proposes to install new illuminated digital signage (maximum of 35,000 square feet) on the west façade of the 50-foot-tall multi-use indoor sports complex building on Pad 1. The sign would be oriented towards motorists on I-405. As shown in Figure 4, Appendix B, sign lighting was evaluated within vertical planes at the nearest residential property lines to the north, east, and south. The Vertical Plane locations, illuminance measurements, and resulting analysis are described below in Table 4.1-3.

Table 4.1-3
Sign Light Trespass Illuminance (fc) – Calculated at Vertical Planes

Vertical Calculation Planes	Illuminance (fc)			Analysis
	Max	*Min*	*Average*	
VPN1	0.10	0.00	0.06	Below Threshold of 0.74 fc, no Light Trespass impact
VPE1	0.10	0.00	0.01	Below Threshold of 0.74 fc, no Light Trespass impact
VPS1	0.30	0.10	0.23	Below Threshold of 0.74 fc, no Light Trespass impact

The building light trespass illuminance at all other Vertical Plane Locations is below the 0.74 fc threshold; therefore, the project sign lighting would result in a **less-than-significant impact** associated with light trespass.

Glare Analysis

Building Lighting

Glare from proposed building lighting at residential properties at night was analyzed by calculating the contrast ratio, which compares the maximum building lighting (60 cd/m^2) luminance to the measured existing luminance at the Monitoring Sites.

The existing measured luminance, maximum building lighting luminance, and contrast ratio are included in Table 4.1-4. As summarized in Table 4.1-4, the project building lighting would result in contrast ratio less than 30:1 at Monitoring Sites ME1, ME2, MS1, and MW1 and thus, would not introduce a significant new source of glare as viewed from these Monitoring Sites. The calculated contrast ratio at MN1 is above 30:1 and is very high due to the extremely low existing luminance in the vicinity of MN1. Monitoring Site MN1 is located at the north project property line adjacent to the remainder of the golf course, which is not a residential use property and thus not considered a light-sensitive use property. Further, the remaining portion of the golf course is separately proposed for development of The Carol Kimmelman Athletic and Academic Complex, which includes similar outdoor sports field lighting, and is not considered a sensitive use location. Therefore, project building lighting would not create a new source of high contrast glare for light-sensitive use properties when viewed from the Monitoring Sites.

Potential glare from the project has been limited by shielding lighting sources and restricting project lighting to the project site. The project lighting would comply with the applicable requirements of CALGreen, which limits view of bright light sources such as parking or field light poles.

Table 4.1-4
Contrast Ratio: Comparison of Existing Measured Luminance to Project Building Lighting

Monitoring Site	Existing Measured Luminance		Project Building Lighting Luminance		
				Contrast Ratio	
	Maximum	*Average*	*Max*	*Max to Average*	*Evaluation*
ME1	248.0	20.0	60	3	Low, Less than 30:1 Contrast Ratio, No Glare Impact
ME2	2633.0	175.9	60	0	Low, Less than 30:1 Contrast Ratio, No Glare Impact
MS1	348.0	17.1	60	3	Low, Less than 30:1 Contrast Ratio, No Glare Impact
MW1	881.1	43.1	60	1	Low, Less than 30:1 Contrast Ratio, No Glare Impact
MN1	0.3	0.1	60	555	High, above 30:1 Contrast Ratio, Glare Impact

As summarized in the Lighting Study, the roadway glare analysis was evaluated with respect to the most stringent requirements of the California Vehicle Code, as described in Section 4.1.2, to determine if the project building lighting would introduce a new source of glare that would impact drivers. Therefore, since a measured brightness within the driver's field of view of less than 10 fL may occur at night, the most conservative condition at night evaluates project lighting against a threshold for luminance of a maximum 500 fL. The project building lighting is evaluated with a maximum luminance of 60 cd/m^2. Calculating the equivalent building lighting luminance by converting to English units from metric units: 60 cd/m^2 equals 19.1 fL. The building lighting would not exceed 19.1 fL, which is 96% less than the 500 fL maximum, the most conservative limit of the California Vehicle Code for conditions where the minimum brightness in the driver's field of view is less than 10 fL. Further, under the California Vehicle Code, for project lighting that is located beyond the driver's 10 degree field of view, the maximum luminance is permitted to increase. Therefore, the project lighting would be well within the allowed maximum luminance and would not create a new source of glare for drivers on surrounding roadways.

Project building lighting would result in a **less-than-significant impact** associated with glare.

Sign Lighting

Project sign lighting was separately evaluated for glare at each of the Monitoring Sites. As previously indicated, the digital sign facing I-405 was evaluated with a maximum illuminance of 600 cd/m^2. Similar to project lighting, potential glare from project sign lighting is evaluated by calculating the contrast ratio by comparing the maximum sign luminance to the existing measured average luminance at Monitoring Sites, as summarized in Table 4.1-5.

Table 4.1-5
Contrast Ratio: Comparison of Existing Measured Luminance to Project Sign Luminance

Monitoring Site	Existing Measured Luminance		Project Sign Luminance		
				Contrast Ratio	
	Maximum	*Average*	*Max*	*Max to Average*	*Evaluation*
ME1	248.0	20.0	600	30	Medium, at 30:1 Contrast Ratio, No Glare Impact
ME2	2633.0	175.9	600	3	Low, Less than 30:1 Contrast Ratio, No Glare Impact
MS1	348.0	17.1	600	35	High, above 30:1 Contrast Ratio, Glare Impact, See discussion of mitigation measures to reduce below 30:1 Contrast Ratio
MW1	881.1	43.1	600	14	Low, Less than 30:1 Contrast Ratio, No Glare Impact
MN1	0.3	0.1	600	5551	High, above 30:1 Contrast Ratio, Sign is not visible from M-W1, No Glare Impact

The sign lighting contrast ratio equals 30:1 at Monitoring Site ME1, and is less than 30:1 at Monitoring Sites ME2 and MW1. Therefore, sign lighting would not create a new source of high contrast or glare at Monitoring Sites ME1, ME2 and MW1.

The calculated contrast ratio exceeds 30:1, at two Monitoring Sites: MS1 at 35:1; and MN1 at 5551:1. Monitoring Site MN1 is located immediately north of the project site, approximately 0.25 mile from the proposed digital sign. It is not located a within a residential area and would not have a direct view of the sign, which faces southwest toward the I-405. Likewise, all residential properties north and east of the project site would not have views of the digital sign. Therefore, although the contrast ratio at MN1 is greater than 30:1 the sign lighting would not be visible at this location, and thus would not result in a new source of high contrast and glare.

Monitoring Site MS1 is located at the Del Amo Boulevard Overpass above the I-405, approximately 0.4-miles south of the project sign. It is not a residential use site; however, the view from the residential properties located south of the project site would have similar views to the digital sign. Therefore, the sign lighting would create a source of high contrast at Monitoring Site MS1 with a 35:1 contrast ratio, and would result in an impact. **MM-AES-1** reduces the maximum project sign luminance from 600 cd/m^2 to 500 cd/m^2, which would reduce the contrast ratio to a level below 30:1. Therefore project sign lighting would result in a **less-than-significant impact with mitigation incorporated.**

A roadway glare analysis was separately conducted to determine the potential glare impacts of the project sign for drivers traveling on I-405. The potential roadway glare impacts are analyzed with respect to the California Vehicle Code requirements, which defines maximum sign luminance within drivers' field of view, for both night and day conditions.

The roadway glare analysis includes evaluation of the view angle at each Roadway Receptor Site location from the driver's line of sight to the project sign lighting to determine the visibility of the project sign lighting, and evaluates the luminance of the project sign lighting at that location. As shown in Figure 5 in Appendix B, the Roadway Receptor Sites are located along both northbound (FN-) and southbound (FS-) freeway lanes. The view angles range from 18 degrees to 90 degrees for northbound drivers and from 21 degrees to 64 degrees for southbound drivers. The project sign would be visible from all freeway Roadway Receptor Sites.

As summarized in the Lighting Study, the roadway glare analysis was evaluated with respect to the most stringent requirements of the California Vehicle Code, as described in Section 4.1.2, to determine if the project would introduce a new source of glare that would impact drivers. Therefore, since a measured brightness within the driver's field of view of less than 10 fL may occur at night, the most conservative condition at night evaluates project lighting against a threshold for luminance of a maximum 500 fL.

As proposed, the sign lighting would operate at a maximum luminance of 600 cd/m^2 at night. Converting the sign lighting luminance to English units from metric units: 600 cd/m^2 equals 192.7 fL. The sign lighting would not exceed 192.7 fL, which is 61% less than the 500 fL maximum, the most conservative limit stipulated by the California Vehicle Code for conditions where the minimum brightness in the driver's field of view is less than 10 fL. Further, under the California Vehicle Code, for lighting that is located beyond the driver's 10 degree field of view the maximum luminance is permitted to increase. Therefore, the project sign lighting would not introduce a new source of distracting glare to drivers on I-405.

As previously discussed, the project sign lighting would be designed to operate on a photocell and time clock to transition smoothly between day and nighttime conditions. The proposed sign lighting would be designed to limit the maximum luminance to less than 600 cd/m^2 (192.7 fL) from 20 minutes before sunset to 20 minutes after sunrise. Therefore, the sign lighting would not exceed 600 cd/m^2 for the period beginning 20 minutes prior to sunset until 20 minutes after sunrise, and would not introduce a new source of glare during nighttime conditions.

During the day (20 minutes after sunrise until 20 minutes before sunset) sunlight with clear sky conditions or light overcast conditions provides sufficient illuminance to generate surface brightness greater than 10 fL and up to 1,200 fL on the least reflective surfaces, such as roadway pavement. Utilizing the value of 10fL as the minimum within the driver's field of view, the

maximum allowable brightness would be 1,000 times 10 fL, or 10,000 fL. As proposed, the project sign lighting would not exceed 7,000 cd/m^2 (2,228 fL) during the daytime hours of operation. The project sign would therefore operate at less than 23% of the maximum luminance stipulated by the California Vehicle Code. Therefore, the project sign lighting would not create a new source of glare during daytime hours of operation with clear sky or light overcast conditions.

Severe storms, heavy cloud cover, or other atmospheric conditions may occur during the day, which may cause the minimum brightness within the driver's field of view to be reduced. As proposed, an electronic control system would reduce the sign luminance when the ambient sun light falls to illuminance values similar to night. During the day, when storms, cloud cover, or other low ambient sunlight conditions occur and when the ambient sunlight is less than 100 fL, the project illuminated sign would transition from the daytime 7,000 cd/m^2 (2,228 fL) maximum luminance to 600 cd/m^2 (191 fL) maximum luminance, thereby ensuring that the sign brightness remains less than the maximum brightness stipulated by the California Vehicle Code. Therefore, the project sign lighting would not create a new source of glare during daytime periods with storm or severe overcast weather conditions. Thus, the project sign lighting would result in a **less-than-significant impact** associated with glare for drivers on I-405.

Summary

As demonstrated above, proposed building lighting would not produce a new source of significant light trespass or glare at nearby residential properties or roadways. Proposed sign lighting would not produce a new source of significant light trespass or glare for roadways; however, sign lighting has the potential to result in an impact at Monitoring Site MS1. **MM-AES-1** has been proposed to reduce impacts to below a level of significance. With adherence to **MM-AES-1**, impacts would be **less than significant with mitigation incorporated.**

4.1.5 Mitigation Measures

The following mitigation measure would ensure that the project has a less-than-significant impact on aesthetics.

MM-AES-1 Project sign lighting facing Interstate (I-) 405 along the exterior of the multi-use indoor sports complex building on Pad 1 shall conform to a maximum luminance of 500 candelas per square meter (cd/m^2) for the period beginning 20 minutes prior to sunset until 20 minutes after sunrise, when ambient luminance levels reach minimum levels in order to avoid high contrast conditions. As specified in the project Lighting Study, conducted by Francis Krahe & Associates Inc., sign lighting shall be controlled by a photocell and time clock to transition smoothly from daytime conditions to the maximum nighttime luminance of 500 cd/m^2. As detailed

in the Lighting Study, a maximum luminance of 500 cd/m^2 for the project sign during nighttime hours would reduce the contrast ratio to a level below the 30:1 threshold at all Monitoring Sites and nearby sensitive receptors.

4.1.6 Level of Significance After Mitigation

With implementation of **MM-AES-1**, the contrast ratio at Monitoring Site MS1 would be reduced from 35:1 to 29:1, which is less than the 30:1 threshold for contrast, as discussed in the Lighting Study (Appendix B). Thus, project sign lighting located on Pad 1 would result in a **less-than-significant impact** related to nighttime lighting and glare. It should also be noted that while glare and light trespass impacts were calculated to be below thresholds at other Monitoring Sites, this mitigation would also further reduce light trespass and glare contrast ratios related to the project sign lighting at the remaining Monitoring Sites.

4.1.7 Cumulative Impacts

A significant cumulative impact to aesthetics would occur where the development of the cumulative projects would degrade the visual quality or character of an area, where projects would combine to block important views, or where projects would cumulatively result in a new source of light or glare. The geographic scope for analyzing cumulative impacts related to aesthetics focuses on lands in proximity to the project area and within the surrounding viewshed that would have views of the site from public locations (e.g., public roadways). The cumulative projects located in close proximity to the project site—which would be visible from public roadways or vantage points near the project site—include the Carol Kimmelman Athletic and Academic Campus, located immediately north of the project site; the Carson Marketplace Apartments; and The District at South Bay, located south of the project site, across the I-405. All other projects are located outside of the surrounding viewshed.

Scenic Vistas

Cumulative projects located in the project area would have the potential to result in a cumulative impact to scenic vistas if, in combination, they would result in the obstruction, interruption, or detraction from a scenic vista. As discussed in Section 4.1.1, the City does not have any specifically designated scenic vistas. Additionally, cumulative projects would be required to comply with applicable regulations pertaining to scenic vistas. Therefore, the project would not contribute to a cumulatively considerable impact related to scenic vistas.

Scenic Highways

State scenic highways are those highways that are either officially designated as state scenic highways by Caltrans or are eligible for such designation. As discussed in Section 4.1.1, there

are no officially designated or eligible highways within the City, or within viewing distance of the project site. Additionally, all cumulative projects would be required to comply with applicable regulations pertaining to scenic highways. Thus, no cumulative impact to a state scenic highway would occur.

Visual Character or Quality

Cumulative projects located in the project area would have the potential to result in a cumulative impact to visual character or quality if the projects would conflict with applicable zoning or other regulations governing scenic quality.

Any future and proposed projects would be subject to compliance with the local and regional plans, programs, and policies; would be reviewed for visual character and quality impacts; and would be required to mitigate for those impacts. Projects would also be designed to be compatible with existing adjacent land uses. As discussed, visual character or quality would change in some of the key views observed, but would not be substantially degraded. When viewed in light of the surrounding development, the project would result in a less-than-significant cumulative impact to visual character or quality.

Light or Glare

The project would have the potential to result in a cumulative impact if, in combination with other projects, it would result in a significant increase in light and glare for sensitive receptors. In order to contribute to cumulative light or glare impacts, related projects must be located in the same field of view as the proposed project. The Carol Kimmelman Athletic and Academic Campus project is the only cumulative project that meets this criteria. With adherence to existing regulations and requirements, the proposed projects would avoid light trespass and glare. All other projects would also be subject to applicable local, regional and state regulations regarding light and glare.

The Carol Kimmelman Athletic and Academic Campus project would include athletic fields, tennis courts, outdoor sports field lighting, and building lighting on the remaining northern portion of the golf course. The nearest residential properties are located east of the golf course along South Avalon Boulevard and would have direct views of both project sites. As previously discussed, project signage could have a significant light and glare impact prior to mitigation. However, implementation of **MM-AES-1** would reduce that impact to below a level of significance. Further, the Carol Kimmelman Athletic and Academic Campus project lighting would not create a significant source of high contrast glare or light trespass. Therefore, the project would not combine with another project to result in a cumulatively considerable increase in light and glare for sensitive receptors in the project area.

4.1.8 References

Caltrans (California Department of Transportation). 2018. *Scenic Highways.* Accessed August 16, 2018. http://www.dot.ca.gov/design/lap/livability/scenic-highways.

City of Carson. 2004. *General Plan Environmental Impact Report,* Volume II. Accessed August 16, 2018. http://ci.carson.ca.us/content/files/pdfs/planning/generalplan/EIR.pdf.

County of Los Angeles. 2015. *Los Angeles County General Plan*. Adopted October 6, 2015. Accessed August 21, 2018. http://planning.lacounty.gov/generalplan/generalplan.

Emporis. 2019. *Emporis Resarch.* Accessed August 2018. https://www.emporis.com/statistics/tallest-buildings/city/107036/carson-ca-usa.

INTENTIONALLY LEFT BLANK

4.2 AIR QUALITY

This section describes the projects impacts on air quality and contribution to regional air quality conditions, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of The Creek at Dominguez Hills project (project or proposed project). This analysis is based, in part, on a review of existing conditions; applicable laws, regulations, and guidelines; air quality modeling (Appendix C of this environmental impact report (EIR)); and the Traffic Impact Analysis (TIA) prepared by LSA (Appendix J of this EIR).

4.2.1 Existing Conditions

The project site is located within the South Coast Air Basin (SCAB). SCAB is a 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. SCAB includes Orange County, Los Angeles County (except the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside Counties.

Meteorological and Topographical Conditions

The primary factors that determine air quality are the locations of air pollutant sources and the amount of pollutants emitted. Meteorological and topographical conditions, however, are also important. Factors such as wind speed and direction, air temperature gradients and sunlight, and precipitation and humidity interact with physical landscape features to determine the movement and dispersal of air pollutants. SCAB's air pollution problems are a consequence of the combination of emissions from the nation's second largest urban area, meteorological conditions discouraging dispersion of those emissions, and mountainous terrain surrounding SCAB that traps pollutants as they are pushed inland by the sea breeze (SCAQMD 2017a). The meteorological and topographical factors affecting air quality in SCAB are described in the following subsections.[1]

Climate

SCAB is characterized as having a Mediterranean climate (typified as semiarid with mild winters, warm summers, and moderate rainfall). The general region lies in the semi-permanent high-pressure zone of the eastern Pacific; as a result, the climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in SCAB is a function of the area's natural physical characteristics (e.g., weather and topography) and of manufactured influences (e.g., development patterns and lifestyle). Moderate temperatures,

[1] The discussion of meteorological and topographical conditions of SCAB is based on information provided in the Final 2016 Air Quality Management Plan (SCAQMD 2017a).

comfortable humidity, and limited precipitation characterize the climate in SCAB. The average annual temperature varies little, averaging 75°F; however, with a less-pronounced oceanic influence, the eastern inland portions of SCAB show greater variability in annual minimum and maximum temperatures, and all portions have recorded temperatures over 100°F in recent years. Although SCAB has a semiarid climate, the air near the surface is moist because of the presence of a shallow marine layer. Except for infrequent periods when dry air is brought into SCAB by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70% at the coast and 57% in the eastern part of SCAB. Precipitation is typically 9–14 inches annually and is rarely in the form of snow or hail because of typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of SCAB.

The greatest precipitation in the City occurs from November to March, during which time the rainfall averages 2–4 inches per month. The average annual precipitation is 13.55 inches. The City has a mild climate with an annual average temperature of 72°F. The coolest months of the year are typically January and February, with an annual average low of 38.8°F. The warmest months are typically July through September, with an annual average high of 78°F. Prevailing wind direction in the City (as measured in Torrance approximately 4.3 miles southwest of the site) is from the west (WRCC 2016)

Sunlight

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain "primary" pollutants (mainly reactive hydrocarbons and oxides of nitrogen (NO_x)[2]) react to form "secondary" pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind of the emission sources. Southern California also has abundant sunshine, which drives the photochemical reactions that form pollutants such as ozone (O_3) and a substantial portion of fine particulate matter (particulate matter less than or equal to 2.5 microns in diameter ($PM_{2.5}$)). In SCAB, high concentrations of O_3 are normally recorded during the late spring, summer, and early autumn months, when more intense sunlight drives enhanced photochemical reactions. Due to the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of Southern California.

Temperature Inversions

Under ideal meteorological conditions and irrespective of topography, pollutants emitted into the air mix and disperse into the upper atmosphere. However, the Southern California region frequently experiences temperature inversions in which pollutants are trapped and accumulate close to the ground.

[2] NO_x is a general term pertaining to compounds of nitric oxide (NO), nitrogen dioxide (NO_2) and other oxides of nitrogen.

The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in coastal Southern California. The cool, damp, and hazy sea air capped by coastal clouds is heavier than the warm, clear air, which acts as a lid through which the cooler marine layer cannot rise. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above mean sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet above mean sea level, the terrain prevents the pollutants from entering the upper atmosphere, resulting in the pollutants settling in the foothill communities. Below 1,200 feet above mean sea level, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the daylight hours.

Mixing heights for inversions are lower in the summer, and inversions are more persistent, being partly responsible for the high levels of O_3 observed during summer months in SCAB. Smog in Southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods, allowing them to form secondary pollutants by reacting in the presence of sunlight. SCAB has a limited ability to disperse these pollutants due to typically low wind speeds and the surrounding mountain ranges.

As with other cities within SCAB, the City of Los Angeles is susceptible to air inversions, which trap a layer of stagnant air near the ground where pollutants are further concentrated. These inversions produce haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources. Elevated particulate matter less than or equal to 10 microns in diameter (PM_{10}) and $PM_{2.5}$ concentrations can occur in SCAB throughout the year, but occur most frequently in fall and winter. Although there are some changes in emissions by day-of-week and season, the observed variations in pollutant concentrations are primarily the result of seasonal differences in weather conditions.

Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set (pursuant to the federal and state Clean Air Acts, which are discussed in the following pages), with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead (Pb). These pollutants, as well as toxic air contaminants (TACs), are discussed in the

following paragraphs.[3] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. A more detailed discussion of health effects of criteria air pollutants is provided in Appendix C.

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 NO_X and volatile organic compounds (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. O_3 exists in the upper atmosphere O_3 layer (stratospheric ozone) and at Earth's surface in the lower atmosphere (tropospheric ozone).[4] 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 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

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 2013). 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 2016b).

[3] The descriptions of each of the criteria air pollutants and associated health effects are based on the EPA's Criteria Air Pollutants (2016a) and the CARB Glossary of Air Pollutant Terms (2016a).

[4] The troposphere is the layer of Earth's atmosphere nearest to the surface of Earth, extending outward approximately 5 miles at the poles and approximately 10 miles at the equator.

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 City of Los Angeles, transportation 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.

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.

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 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 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 (SO_x), 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 blood stream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. PM_{10} tends to collect in the upper portion of the respiratory system, whereas $PM_{2.5}$ is small enough to penetrate deeper into the lungs and damage lung tissue. Suspended particulates also produce haze and reduce regional visibility and damage and discolor surfaces on which they settle.

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_{10} and $PM_{2.5}$ (EPA 2009).

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 performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a TAC. 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 hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC, such as diesel particulate matter (DPM).

Diesel Particulate Matter. DPM, which is the predominant TAC, is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70 the diameter of a human hair) and, thus, is a subset of $PM_{2.5}$ (CARB 2016b). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2016b). CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM; 17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children.

Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2016b). Those most vulnerable to non-cancer health effects are children whose lungs are still developing and the elderly who often have chronic health problems.

Odorous Compounds

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. 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.

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air-pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air-pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). The South Coast Air Quality Management District (SCAQMD) identifies sensitive receptors as residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993).

The nearest off-site sensitive receptors to the proposed project include residential land uses, located approximately 150 feet from the project on the project's eastern boundary. All other air quality sensitive receptors are located at greater distances from the project site and would be less impacted by emissions generated by the proposed project. Impacts are quantified in Section 4.2.4, Impacts Analysis, for the above sensitive receptors.

Regional and Local Air Quality Conditions

South Coast Air Basin Attainment Designation

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the National Ambient Air Quality Standards (NAAQS) have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to be meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on California Ambient Air Quality Standards (CAAQS) rather than the NAAQS. Table 4.2-1 depicts the current attainment status of the project site with respect to the NAAQS and CAAQS as well as the attainment classifications for the criteria pollutants.

Table 4.2-1
South Coast Air Basin Attainment Classification

Pollutant	Designation/Classification	
	Federal Standards[a]	*State Standards*[b]
Ozone (O_3) – 1 hour	No federal standard	**Nonattainment**
Ozone (O_3) – 8 hour	**Extreme nonattainment**	**Nonattainment**
Nitrogen dioxide (NO_2)	Unclassifiable/attainment	Attainment
Carbon monoxide (CO)	Attainment/maintenance	Attainment
Sulfur dioxide (SO_2)	Unclassifiable/attainment	Attainment
Coarse particulate matter (PM_{10})	Attainment/maintenance	**Nonattainment**
Fine particulate matter ($PM_{2.5}$)	**Serious nonattainment**	**Nonattainment**
Lead (Pb)	Nonattainment	Attainment
Hydrogen sulfide	No federal standard	Unclassified
Sulfates	No federal standard	Attainment
Visibility-reducing particles	No federal standard	Unclassified
Vinyl chloride	No federal standard	No designation

Notes: bold text = not in attainment; attainment = meets the standards; attainment/maintenance = achieve the standards after a nonattainment designation; nonattainment = does not meet the standards; unclassified or unclassifiable = insufficient data to classify; unclassifiable/attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

[a] EPA 2018a.

[b] CARB 2018a.

In summary, SCAB is designated as a nonattainment area for federal and state O_3 standards and federal and state $PM_{2.5}$ standards. SCAB is designated as a nonattainment area for state PM_{10} standards; however, it is designated as an attainment area for federal PM_{10} standards. SCAB is designated as an attainment area for federal and state CO standards, federal and state NO_2 standards, and federal and state SO_2 standards. While SCAB has been designated as nonattainment for the federal rolling 3-month average lead standard, it is designated attainment for the state lead standard (EPA 2016c; CARB 2016d).

Despite the current nonattainment status, air quality within SCAB has generally improved since the inception of air pollutant monitoring in 1976. This improvement is mainly due to lower-polluting on-road motor vehicles, more stringent regulation of industrial sources, and the implementation of emission reduction strategies by the SCAQMD. This trend toward cleaner air has occurred in spite of continued population growth. Despite this growth, air quality has improved significantly over the years, primarily due to the impacts of the region's air quality control program. PM_{10} levels have declined almost 50% since 1990, and $PM_{2.5}$ levels have also declined 50% since measurements began in 1999 (SCAQMD 2013). Similar improvements are observed with O_3, although the rate of O_3 decline has slowed in recent years.

Local Ambient Air Quality

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. The SCAQMD monitors local ambient air quality at the proposed project site. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The most recent background ambient air quality data from 2015 to 2017 are presented in Table 4.2-2. The Compton monitoring station, located at 700 North Bullis Road, Compton, California 90221, is the nearest air quality monitoring station to the project site, located approximately 5 miles northwest from the project site. Air quality data for O_3, NO_2, CO, and $PM_{2.5}$ from the Compton monitoring station monitoring station are provided in Table 4.2-2. Because SO_2 and PM_{10} are not monitored at the Compton monitoring station, these measurements were taken from the Los Angeles North Main Street monitoring station (1630 North Main Street, California 90012, approximately 15 miles north of the project site). The data collected these stations are considered representative of the air quality experienced in the project vicinity. The number of days exceeding the ambient air quality standards is also shown in Table 4.2-2.

Table 4.2-2
Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2015	*2016*	*2017*	*2015*	*2016*	*2017*
Ozone (O_3)										
Compton	ppm	Maximum 1-hour concentration	State	0.126	0.091	0.098	0.092	0	1	0
	ppm	Maximum 8-hour concentration	State	0.070	0.072	0.071	0.076	*1*	*1*	*5*
			Federal	0.070	0.072	0.071	0.076	0	0	1
Nitrogen Dioxide (NO_2)										
Compton	ppm	Maximum 1-hour concentration	State	0.18	0.073	0.063	0.099	0	0	0
			Federal	0.100	0.0736	0.0637	0.0991	0	0	0
	ppm	Annual concentration	State	0.030	0.016	0.015	0.010	0	0	0
			Federal	0.053	ND	ND	ND	—	—	—
Carbon Monoxide (CO)										
Compton	ppm	Maximum 1-hour concentration	State	20	—	—	—	—	—	—
			Federal	35	4.4	4.4	6.1	0	0	0
	ppm	Maximum 8-hour concentration	State	9.0	—	—	—	—	—	—
			Federal	9	3.3	3.9	4.6	0	0	0
Sulfur Dioxide (SO_2)										
Los Angeles–North Main Street	ppm	Maximum 1-hour concentration	Federal	0.075	0.126	0.134	0.057	0	0	0
	ppm	Maximum 24-hour concentration	Federal	0.14	0.011	0.013	0.015	0	0	0
	ppm	Annual concentration	Federal	0.030	0.0017[a]	0.003	0.0036	0	0	0
Coarse Particulate Matter (PM_{10})[b]										
Los Angeles–North Main Street	µg/m³	Maximum 24-hour concentration	State	50	ND	ND	ND	ND (0)	ND (ND)	ND (ND)
			Federal	150	73	64	64	0.0 (0)	0.0 (0)	0.0 (0)
	µg/m³	Annual concentration	State	20	—	—	—	—	—	—

Table 4.2-2
Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2015	*2016*	*2017*	*2015*	*2016*	*2017*
Fine Particulate Matter ($PM_{2.5}$)[b]										
Compton	$\mu g/m^3$	Maximum 24-hour concentration	Federal	35	41.3	36.3	66.7	9 (3)	3.3 (1)	15.4 (5)
	$\mu g/m^3$	Annual concentration	State	12	ND	ND	13	—	—	—
			Federal	12.0	11.7	11.0	13.2	—	—	—

Sources: CARB 2018b; EPA 2018b.

Notes: ppm = parts per million; — = data not available; $\mu g/m_3$ = micrograms per cubic meter; ND = insufficient data available to determine the value. Data taken from CARB iADAM (http://www.arb.ca.gov/adam) and EPA AirData (http://www.epa.gov/airdata/) represent the highest concentrations experienced over a given year.

Exceedances of federal and state standards are only shown for O_3 and particulate matter. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed federal or state standards during the years shown. There is no federal standard for 1-hour ozone, annual PM_{10}, or 24-hour SO_2, nor is there a state 24-hour standard for $PM_{2.5}$.

Compton Monitoring Station is located 700 North Bullis Road, Compton, California 90221

Los Angeles Monitoring Station is located at 1630 North Main Street, Los Angeles, California 90012.

[a] Mean does not satisfy minimum data completeness criteria.

[b] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

4.2.2 Relevant Plans, Policies, and Ordinances

Federal

Clean Air Act

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including setting NAAQS for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific

evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the standards within mandated timeframes. A more detailed discussion of the NAAQS, as well as the CAAQS (discussed below), is provided in Appendix C.

Hazardous Air Pollutants

The 1977 federal Clean Air Act amendments required the EPA to identify National Emission Standards for Hazardous Air Pollutants to protect public health and welfare. HAPs include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act amendments, which expanded the control program for HAPs, 189 substances and chemical families were identified as HAPs.

State

The following state regulations pertaining to air quality would apply to the proposed project.

Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established CAAQS, which are generally more restrictive than the NAAQS. As stated previously, an ambient air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

California air districts have based their thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate without affecting the attainment date for the NAAQS or CAAQS. Since an ambient air quality standard is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district

thresholds pertain to attainment of the ambient air quality standard, this means that the thresholds established by air districts are also protective of human health.

The NAAQS and CAAQS are presented in Table 4.2-3.

Table 4.2-3
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
O_3	1 hour	0.09 ppm (180 μg/m³)	—	Same as Primary Standard[f]
	8 hours	0.070 ppm (137 μg/m³)	0.070 ppm (137 μg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 μg/m³)	0.100 ppm (188 μg/m³)	Same as Primary Standard
	annual arithmetic mean	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 μg/m³)	0.075 ppm (196 μg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 μg/m³)
	24 hours	0.04 ppm (105 μg/m³)	0.14 ppm (for certain areas)[g]	—
	annual	—	0.030 ppm (for certain areas)[g]	—
PM_{10}[i]	24 hours	50 μg/m³	150 μg/m³	Same as Primary Standard
	annual arithmetic mean	20 μg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 μg/m³	Same as Primary Standard
	annual arithmetic mean	12 μg/m³	12.0 μg/m³	15.0 μg/m³
Lead[j,k]	30-day average	1.5 μg/m³	—	—
	calendar quarter	—	1.5 μg/m³ (for certain areas)[k]	Same as Primary Standard
	rolling 3-month average	—	0.15 μg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 μg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 μg/m³)	—	—
Sulfates	24 hours	25 μg/m³	—	—

Table 4.2-3
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
Visibility-reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2016c.

Notes: μg/m^3 = micrograms per cubic meter; mg/m^3= milligrams per cubic meter; ppm = parts per million by volume; O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

a California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

b National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

e National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

f On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

g To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

h On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

i On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 μg/m^3 to 12.0 μg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/m^3, as was the annual secondary standard of 15 μg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/m^3 were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.

j CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

k The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 μg/m^3 as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Toxic Air Contaminants

The state Air Toxics Program was established in 1983 under AB 1807 (Tanner). The California TAC list identifies more than 700 pollutants, a subset of which have carcinogenic and noncarcinogenic toxicity criteria established pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. AB 2588 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 hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment (HRA), and if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation (CARB 2014), On-Road Heavy Duty (New) Vehicle Program (CARB 2005), In-Use Off-Road Diesel Vehicle Regulation (CARB 2011), and New Off-Road Compression-Ignition (Diesel) Engines and Equipment program (CARB 2008). These regulations and programs have timetables to which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

California Health and Safety Code Section 41700

This section of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

Local

The following local/regional regulations pertaining to air quality would apply to the proposed project.

South Coast Air Quality Management District

The SCAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in SCAB, where the proposed project is located. The SCAQMD operates monitoring stations in SCAB, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. The SCAQMD's Air Quality Management Plans (AQMPs) include control measures and strategies to be implemented to attain state and federal ambient air quality standards in SCAB. The SCAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment.

The 2012 AQMP proposed policies and measures to achieve federal and state standards for improved air quality in SCAB and portions of the Salton Sea Air Basin (formerly named the Southeast Desert Air Basin) that are under SCAQMD jurisdiction. The 2012 AQMP is designed to meet applicable federal and state requirements for O_3 and particulate matter. The 2012 AQMP stated that attainment of the federal 24-hour $PM_{2.5}$ standard was impracticable by 2015 and that SCAB should be classified as a serious nonattainment area along with the appropriate federal requirements. The 2012 AQMP included the planning requirements to meet the 1-hour O_3 standard. The 2012 AQMP demonstrated a plan for attainment of the federal 24-hour $PM_{2.5}$ standard by 2014 in SCAB through adoption of all feasible measures. Finally, the 2012 AQMP updated the EPA-approved 8-hour O_3 control plan with new measures designed to reduce reliance on the Clean Air Act Section 182(e)(5) long-term measures for NO_x and VOC reductions. The 2012 AQMP reduction and control measures, which are outlined to mitigate emissions, are based on existing and projected land use and development. The EPA, with a final ruling on April 14, 2016, approved the Clean Air Act planning requirements for the 24-hour $PM_{2.5}$ standard portion and on September 3, 2014, approved the 1-hour O_3 Clean Air Act planning requirements. The 2012 AQMP was updated in 2016 (approved March 2017); this AQMP accounts for updates to CARB's and SCAQMD's emission reductions resulting from adopted rules and regulations since the 2012 AQMP, growth factors, and demographic trends.

The 2016 AQMP is a regional blueprint for achieving air quality standards and healthful air. The 2016 AQMP represents a new approach, focusing on available, proven, and cost-effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities promoting reductions in greenhouse gas emissions and toxic risk, as well as efficiencies in energy use, transportation, and goods movement (SCAQMD 2017a). Because mobile sources are the principal contributor to SCAB's air quality challenges, SCAQMD has been and will continue to be closely engaged with CARB and the EPA, who have primary responsibility for these sources. The 2016 AQMP recognizes the critical importance of working with other agencies to develop funding and other incentives that encourage the accelerated transition of vehicles, buildings, and industrial facilities to

cleaner technologies in a manner that benefits not only air quality but also local businesses and the regional economy. These "win-win" scenarios are key to implementation of this 2016 AQMP with broad support from a wide range of stakeholders.

While striving to achieve the NAAQS for O_3 and $PM_{2.5}$ and the CAAQS for O_3, PM_{10}, and $PM_{2.5}$ through a variety of air quality control measures, the 2016 AQMP also accommodates planned growth in SCAB. Projects are considered consistent with, and would not conflict with or obstruct, implementation of the AQMP if growth in socioeconomic factors (e.g., population, employment) is consistent with the underlying regional plans used to develop the AQMP. The demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) developed by the Southern California Association of Governments (SCAG) based on general plans for cities and counties in SCAB were used in the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) (SCAG 2016) to estimate future emissions in the 2016 AQMP (SCAQMD 2017a).

SCAQMD Rules

Emissions that would result from mobile, area, and stationary sources during maintenance activities of the proposed program are subject to the rules and regulations of SCAQMD (2017b), which include the following:

- **Rule 401 – Visible Emissions:**[5] This rule establishes the limit for visible emissions from stationary sources.
- **Rule 402 – Nuisance:**[6] This rule prohibits the discharge of air pollutants from a facility that cause injury, detriment, nuisance, or annoyance to the public or damage to business or property.
- **Rule 403 – Fugitive Dust:**[7] This rule requires fugitive dust sources to implement best available control measures for all sources and prohibits all forms of visible particulate matter from crossing any property line. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust, and identifies measures to reduce fugitive dust. This includes soil treatment for exposed soil areas. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate.
- **Rule 431.2 – Sulfur Content of Liquid Fuels:**[8] The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of reducing the formation of sulfur

5 Rule 401 Visible Emissions: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-401.pdf?sfvrsn=4.
6 Rule 402 Nuisance: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf?sfvrsn=4.
7 Rule 403 Fugitive Dust: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4.
8 Rule 431.2 Sulfur Content of Liquid Fuels: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-431-2.pdf?sfvrsn=4.

oxides (SO_x) and particulates during combustion and of enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers, and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the SCAQMD. The rule also affects diesel fuel supplied for mobile sources.

- **Rule 1110.2 – Emissions from Gaseous- and Liquid-Fueled Engines:**[9] This rule applies to stationary and portable engines rated at greater than 50 horsepower. The purpose of Rule 1110.2 is to reduce NO_x, VOC, and CO emissions from engines. Emergency engines, including those powering standby generators, are generally exempt from the emissions and monitoring requirements of this rule because they have permit conditions that limit operation to 200 hours or less per year as determined by an elapsed operating time meter.
- **Rule 1113 – Architectural Coatings:**[10] This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities:**[11] This rule specifies work practices to limit asbestos emissions from building demolition and renovation activities, including removal and associated disturbance of asbestos-containing material (ACM).

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG serves as the federally designated metropolitan planning organization for the Southern California region and is the largest metropolitan planning organization in the United States.

With respect to air quality planning and other regional issues, SCAG has prepared the *Final 2008 Regional Comprehensive Plan: Helping Communities Achieve a Sustainable Future* (2008 RCP) for the region (SCAG 2008). The 2008 RCP sets the policy context in which SCAG participates in and responds to the SCAQMD air quality plans and builds off the SCAMQD AQMP processes that are designed to meet health-based criteria pollutant standards in several ways (SCAG 2008). First, it complements AQMPs by providing guidance and incentives for public agencies to consider best practices that support the technology-based control measures in AQMPs. Second, the 2008 RCP

[9] Rule 1110.2 Emissions from Gaseous and Liquid-Fueled Engines: http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1110-2.pdf.

[10] Rule 1113 Architectural Coatings: http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf?sfvrsn=17.

[11] Rule 1403 Asbestos Emissions from Demolition/Renovation Activities: http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1403.pdf.

emphasizes the need for local initiatives that can reduce the region's GHG emissions that contribute to climate change, an issue that is largely outside the focus of local attainment plans, which it assessed in Section 3 of the plan. Third, the 2008 RCP emphasizes the need for better coordination of land use and transportation planning, which heavily influences the emissions inventory from the transportation sectors of the economy. This also minimizes land use conflicts, such as residential development near freeways, industrial areas, or other sources of air pollution.

On April 7, 2016, SCAG's Regional Council adopted the 2016 RTP/SCS. The 2016 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The 2016 RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The 2016 RTP/SCS was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders within the Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. In June 2016, SCAG received its conformity determination from the Federal Highway Administration and the Federal Transit Administration indicating that all air quality conformity requirements for the 2016 RTP/SCS and associated 2015 Federal Transportation Improvement Program Consistency Amendment through Amendment 15-12 have been met (SCAG 2016). As previously noted, SCAQMD's 2016 AQMP applies the updated SCAG growth forecasts assumed in the 2016 RTP/SCS.

Los Angeles County General Plan

The *Los Angeles County General Plan* was adopted by the Board of Supervisors on October 6, 2015. The following policies from the Air Quality Element may be applicable to the project (County of Los Angeles 2015):

> **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.
>
> **Policy AQ 1.2:** Encourage the use of low or no volatile organic compound (VOC) emitting materials.
>
> **Policy AQ 1.3:** Reduce particulate inorganic and biological emissions from construction, grading, excavation, and demolition to the maximum extent feasible.
>
> **Policy AQ 1.4:** Work with local air quality management districts to publicize air quality warnings, and to track potential sources of airborne toxics from identified mobile and stationary sources.

Policy AQ 2.1: Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.

Policy AQ 2.2: Participate in, and effectively coordinate the development and implementation of community and regional air quality programs.

Policy AQ 2.3: Support the conservation of natural resources and vegetation to reduce and mitigate air pollution impacts.

Policy AQ 2.4: Coordinate with different agencies to minimize fugitive dust from different sources, activities, and uses.

4.2.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if the project would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. 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.
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Pursuant to the State CEQA Guidelines (Section 15064.7), a lead agency may consider using, when available, the significance criteria established by the applicable air quality management district or air pollution control district when making determinations of significance. The City of Los Angeles uses the SCAQMD's thresholds to evaluate proposed development projects and assess the significance of quantifiable impacts. The potential air quality impacts of a project are, therefore, evaluated according to the thresholds adopted by the SCAQMD in connection with its CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook, and subsequent SCAQMD guidance as discussed previously.

Threshold 1: Consistency with Air Quality Management Plan. The evaluation of whether the proposed project would conflict with or obstruct implementation of the applicable air quality plan is based on the SCAQMD CEQA Air Quality Handbook (SCAQMD 1993), Chapter 12, Section

12.2 (Consistency Criterion No. 1), which asks whether the proposed project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards of the interim emissions reductions specified in the AQMP. This issue is addressed in detail under Threshold 1 in Section 4.2.4, Impacts Analysis. Consistency Criterion No. 2 in the SCAQMD CEQA Air Quality Handbook, Chapter 12, Section 12.3, asks whether the proposed project would exceed the assumptions in the AQMP or increments based on the year of proposed project buildout and phase, as discussed further in Section 4.2.4.

Threshold 2: Cumulative Impacts on Air Quality. Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to determine whether the proposed project would have a significant impact on air quality.

The SCAQMD has established Air Quality Significance Thresholds, as revised in March 2015, which set forth quantitative emission significance thresholds below which a project would not have a significant impact on ambient air quality under existing and cumulative conditions. The quantitative air quality analysis provided herein applies the SCAQMD thresholds identified in Table 4.2-4 to determine the potential for the proposed project to result in a significant impact under CEQA.

Table 4.2-4
South Coast Air Quality Management District Air Quality Significance Thresholds

Criteria Pollutants Mass Daily Thresholds		
Pollutant	*Construction (pounds per day)*	*Operation (pounds per day)*
VOCs	75	55
NO_x	100	55
CO	550	550
SO_x	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55
Lead[a]	3	3
TACs and Odor Thresholds		
TACs[b]	Maximum incremental cancer risk ≥10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥1 in 1 million) Chronic and acute hazard index ≥1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality Standards for Criteria Pollutants[c]		
NO_2 1-hour average NO_2 annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.030 ppm (state) and 0.0534 ppm (federal)	

Table 4.2-4
South Coast Air Quality Management District Air Quality Significance Thresholds

Criteria Pollutants Mass Daily Thresholds		
Pollutant	*Construction (pounds per day)*	*Operation (pounds per day)*
CO 1-hour average CO 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
PM_{10} 24-hour average PM_{10} annual average	10.4 μg/m³ (construction)[d] 2.5 μg/m³ (operation) 1.0 μg/m³	
$PM_{2.5}$ 24-hour average	10.4 μg/m³ (construction)[d] 2.5 μg/m³ (operation)	

Source: SCAQMD 2015.
Notes: SCAQMD = South Coast Air Quality Management District; VOC = volatile organic compounds; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; TAC = toxic air contaminant; NO_2 = nitrogen dioxide; ppm = parts per million; μg/m³ = micrograms per cubic meter.
GHG emissions thresholds for industrial projects, as added in the March 2015 revision to the SCAQMD Air Quality Significance Thresholds, were not include included in Table 4.2-4 because they are addressed within the GHG emissions analysis and not the air quality study.
[a] The phaseout of leaded gasoline started in 1976. Since gasoline no longer contains lead, the proposed project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.
[b] TACs include carcinogens and noncarcinogens.
[c] Ambient air quality standards for criteria pollutants are based on SCAQMD Rule 1303, Table A-2, unless otherwise stated.
[d] Ambient air quality threshold are based on SCAQMD Rule 403.

A project would result in a substantial contribution to an existing air quality violation of the NAAQS or CAAQS for O_3, which is a nonattainment pollutant, if the proposed project's construction or operational emissions would exceed the SCAQMD VOC or NO_x thresholds shown in Table 4.2-4. These emissions-based thresholds for O_3 precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O_3 impacts to occur). This approach is used because O_3 is not emitted directly (see the discussion of O_3 and its sources in Section 4.2.1, Existing Conditions) and the effects of an individual project's emissions of O_3 precursors (VOC and NO_x) on O_3 levels in ambient air cannot be determined through air quality models or other quantitative methods.

Regarding cumulative impacts (checklist question 3) for nonattainment pollutants, if emissions exceed the thresholds shown in Table 4.2-4, the proposed project could have the potential to result in a cumulatively considerable net increase in these pollutants and, thus, could have a significant impact on ambient air quality.

Threshold 3: Sensitive Receptors. The assessment of the proposed project's potential to expose sensitive receptors to substantial pollutant concentrations (threshold criterion 4) includes a localized significance threshold (LST) analysis, as recommended by the SCAQMD, to evaluate the potential of localized air quality impacts to sensitive receptors in the immediate vicinity of the proposed project. A LST analysis was performed to evaluate potential localized impacts associated with construction activities. For project sites of 5 acres or less the SCAQMD LST Methodology

(2009) includes lookup tables that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance criteria (i.e., the emissions would not cause an exceedance of the applicable concentration limits for NO_2, CO, PM_{10}, and $PM_{2.5}$) without performing project-specific dispersion modeling.

The LST significance thresholds for NO_2 and CO represent the allowable increase in concentrations above background levels in the vicinity of a project that would not cause or contribute to an exceedance of the relevant ambient air quality standards, while the threshold for PM_{10} represents compliance with Rule 403 (Fugitive Dust). The LST significance threshold for $PM_{2.5}$ is intended to ensure that construction emissions do not contribute substantially to existing exceedances of the $PM_{2.5}$ ambient air quality standards. The allowable emission rates depend on the following parameters:

- Source receptor area (SRA) in which the project is located
- Size of the project site
- Distance between the project site and the nearest sensitive receptor (e.g., residences, schools, hospitals)

The project site is within SRA, 4 (South Coastal LA County). The SCAQMD provides guidance for applying California Emissions Estimator Model (CalEEMod) to the LSTs. LST pollutant screening level concentration data is currently published for 1-, 2-, and 5-acre sites for varying distances. The maximum number of acres disturbed on the peak day was estimated using the "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (SCAQMD 2011), which provides estimated acres per 8-hour day for crawler tractors, graders, rubber tired dozers, and scrapers. The proposed project would disturb approximately 87 acres over the course of 115 days. Accounting for four grading passes, this would result in 3 acres of disturbance per day. Therefore, using the LST for a 2-acre site was utilized as the thresholds are more conservative than using the 5-acre LST.

As discussed in Section 4.2.1, the nearest sensitive-receptor land use (the existing residences) is located approximately 150 feet from the project on South Avalon Boulevard. As such, the LST receptor distance was assumed to be 82 feet (25 meters), which is the shortest distance provided by the SCAQMD lookup tables. The construction LST values from the SCAQMD lookup tables for SRA 4 for a 2-acre construction site and a receptor distance of 25 meters are shown in Table 4.2-5.

Table 4.2-5
Localized Significance Thresholds for Source Receptor Area 4
(South Coastal LA County)

Pollutant	Threshold (pounds per day)
NO_2	82
CO	842
PM_{10}	7

Table 4.2-5
Localized Significance Thresholds for Source Receptor Area 4
(South Coastal LA County)

Pollutant	Threshold (pounds per day)
$PM_{2.5}$	5

Source: SCAQMD 2008.
Notes: NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
LST thresholds were determined based on the values for 2-acre site at a distance of 25 meters from the nearest sensitive receptor.

The assessment of the proposed project's potential to expose sensitive receptors to substantial pollutant concentrations (threshold criterion 4) also includes an evaluation of CO hotspots, and an assessment of the potential health effects of criteria air pollutants.

Threshold 4: Odors. The potential for the proposed project to result in an odor impact (threshold criterion 5) is based on the proposed project's anticipated construction activity and land use type, and the potential for the proposed project to create an odor nuisance pursuant to SCAQMD Rule 402 (Nuisance).

All of the Appendix G thresholds for air quality have been analyzed in this EIR (see Section 4.2.4); none were eliminated from discussion.

4.2.4 Impacts Analysis

AQ-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

As previously discussed, the project site is located within the SCAB and under the jurisdiction of SCAQMD, which is the local agency for administration and enforcement of air quality regulations for the area. SCAQMD has established criteria for determining consistency with the 2016 AQMP in Chapter 12, Sections 12.2 and 12.3, in SCAQMD's CEQA Air Quality Handbook (SCAQMD 1993). The criteria are as follows (SCAQMD 1993):

- **Consistency Criterion No. 1:** The proposed project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards of the interim emissions reductions specified in the AQMP.
- **Consistency Criterion No. 2:** The proposed project will not exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

Criterion 1: Increase in the Frequency or Severity of Violations?

Based on the air quality modeling analysis completed for the proposed project, which is discussed in detail under the threshold AQ-2 discussion, emissions would result in in a significant and unavoidable impact associated with the violation of an air quality standard. Because the proposed project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, the project would conflict with Consistency Criterion No. 1 of the SCAQMD CEQA Air Quality Handbook.

Criterion 2: Exceed Assumptions in the AQMP?

While striving to achieve the NAAQS for O_3 and $PM_{2.5}$ and the CAAQS for O_3, PM_{10}, and $PM_{2.5}$ through a variety of air quality control measures, the 2016 AQMP also accommodates planned growth in the SCAB. Projects are considered consistent with, and would not conflict with or obstruct implementation of, the AQMP if the growth in socioeconomic factors (e.g., population, employment) is consistent with the underlying regional plans used to develop the AQMP (per Consistency Criterion No. 2 of the SCAQMD CEQA Air Quality Handbook). As discussed in Section 4.2.2 (Relevant Plans, Policies, and Ordinances), the demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) developed by SCAG for their 2016–2040 RTP/SCS, which are based on general plans for cities and counties in the SCAB, were used to estimate future emissions in the 2016 AQMP (SCAQMD 2017a). Accordingly, the 2016 AQMP is generally consistent with local government plans.

As discussed in Section 4.9, Land Use, the Parks and Recreation Element of the County's General Plan designates the site as a "special use facility"[12] (County of Los Angeles 2015). Additionally, the County Planning and Zoning map designates the project site's use type as Recreational (County of Los Angeles 2009). The project would not change the site's zoning designations or land use designations. Therefore, the project would be consistent with the existing County general plan, and in turn the assumptions utilized in SCAG's RTP/SCS and SCAQMD's AQMP. Therefore, implementation of the proposed project would not result in a conflict with, or obstruct implementation of, the applicable air quality plan (i.e., the 2016 AQMP). Accordingly, the project would meet Consistency Criterion No. 2 of SCAQMD's CEQA Air Quality Handbook.

Summary

As described previously, the project would result in an increase in the frequency and severity of existing air quality violations and would conflict with Consistency Criterion No. 1. However, implementation of the project would not exceed the demographic growth forecasts in the SCAG 2016 RTP/SCS; therefore, the project would also be consistent with the SCAQMD 2016 AQMP,

[12] Special use facilities are generally single purpose facilities that serve greater regional recreational or cultural needs.

which based future emission estimates on the SCAG 2016 RTP/SCS. Thus, the project would not conflict with Consistency Criterion No. 2. Based on these considerations, impacts related to the project's potential to conflict with or obstruct implementation of the applicable air quality plan would be **potentially significant**.

AQ-2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Construction and operation of the proposed project would result in emissions of criteria air pollutants from mobile, area, and/or stationary sources, which may cause exceedances of federal and state ambient air quality standards or contribute to existing nonattainment of ambient air quality standards. The following discussion identifies potential short-term construction and long-term operational impacts that would result from implementation of the project.

Construction Emissions

Construction of the project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing) and off-site sources (i.e., vendor trucks and worker vehicle trips). Construction emissions can vary substantially from day to day depending on the level of activity, the specific type of operation, and for dust, and the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

Construction criteria air pollutant emissions associated with temporary construction activity were quantified using CalEEMod (CAPCOA 2017). Construction emissions were calculated for the estimated worst-case day over the construction period associated with each phase and reported as the maximum daily emissions estimated during each year of construction (2019 and 2020). Construction schedule assumptions, including phase type, duration, and sequencing, were based on information default values provided in CalEEMod and are intended to represent a reasonable scenario based on the best information available.

To estimate project emissions, and based on information provided by the applicant, it is assumed that construction of the project would begin in July 2019 and would last approximately 18 months, ending in November 2020. The analysis is based on the following assumptions (duration of phases is approximate):

- Site preparation: 2 Months (July 2019 to August 2019)
- Temporary Bridge Constriction: 3 weeks (July 2019)
- Waste Relocation: 6 Months (July 2019 to December 2019)

- Grading/Landfill Cap Construction: 5 Months (August 2019 to December 2019)
- Pile Foundations: 3 Months (October 2019 to December 2019)
- Building Construction: 12 months (November 2019 to November 2020)
- Paving: 4 months (July 2020 to October 2020)
- Temporary Bridge Removal: 3 weeks (July 2020)
- Architectural coating: 5 Months (June 2020 to October 2020)

Construction of the project would commence in mid-2019 with site preparation, grading and remedial earthwork excavation. It is anticipated that 200,000 cubic yards of earthwork material would be required to support the construction of the project. The material would be imported during the grading phase. Waste relocation from utility corridors, grading associated with the construction of the landfill cap and pile foundation installation would all overlap in late 2019. Upon completion of these phases, vertical building construction, paving/concrete, and landscape installation would commence. The timing associated with vertical construction of the proposed buildings has not been finalized as of preparation of this document. However, for the purposes of this EIR, it is assumed that all vertical construction would be completed at one time. During building construction landfill gas extraction systems would be installed with each building operating at the site for approximately 8 hours per day, 5 days per week (22 days a month), during project construction. Construction worker estimates and vendor truck trips by construction phase were based on information provided by the project applicant. CalEEMod default trip length values were used for all construction-related trips. The construction equipment mix and vehicle trips used for estimating the project-generated construction emissions are shown in Table 4.2-6.

Table 4.2-6
Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Site preparation	72	0	4,000	Rubber-tired dozers	4	8
				Tractors/loaders/backhoes	5	8
Temporary Bridge Construction	16	20	0	Crane	1	8
				Excavator	1	8
				Forklift	1	8
Waste Relocation	72	0	0	Excavators	2	8
				Dozer	3	8
				Compactor	3	8
				Scraper	3	8

Table 4.2-6
Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Grading/Landfill Cap Construction	96	4	25,000	Excavators	4	8
				Graders	2	8
				Rubber Tired Dozers	2	8
				Scrapers	4	8
				Tractors/loaders/backhoes	4	8
Pile Driving	144	12	0	Pile Driver	3	8
				Drill Rig	3	8
				Excavator	3	8
				Forklift	3	8
				Tractors/loaders/backhoes	9	8
				Air Compressor	3	8
Building Construction	5,952	2,340	0	Crane	1	8
				Forklift	1	8
				Generator set	2	8
				Tractor/loader/backhoe	6	8
				Welders	2	8
Paving	60	0	0	Cement and Mortar Mixers	4	8
				Pavers	4	8
				Paving Equipment	4	8
				Rollers	4	8
				Tractor/loader/backhoe	2	8
Temporary Bridge removal	16	20	0	Crane	1	8
				Excavator	1	8
				Forklift	1	8
Architectural Coating	1,136	0	0	Air Compressors	10	8

Notes: See Appendix C.

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. The project would be required to comply with SCAQMD Rule 403 to control dust emissions generated during the grading activities. Standard construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites three times per day, depending on weather conditions. Internal-combustion engines used by construction equipment, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior application/interior paint and other finishes, and asphalt pavement would also produce VOC emissions; however, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of SCAQMD's Rule 1113 (Architectural Coatings).

Table 4.2-7 presents the estimated maximum daily construction emissions generated during construction of the project. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emissions are provided in Appendix C.

Table 4.2-7
Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
2019	68.88	653.74	556.34	1.91	118.69	46.18
2020	96.84	364.85	446.15	1.58	102.40	32.63
Maximum	*96.84*	*653.28*	*556.23*	*1.91*	*118.69*	*46.18*
SCAQMD threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District.
See Appendix C for complete results.
The values shown are the maximum summer or winter daily emissions results from CalEEMod. The PM_{10} and $PM_{2.5}$ emissions reflect CalEEMod "mitigated" output, which accounts for compliance with SCAQMD Rule 403 (Fugitive Dust).

As shown in Table 4.2-7, construction activities would not generate emissions in excess of the SCAQMD daily construction emissions thresholds for SO_x, PM_{10}, and $PM_{2.5}$. However, the project would exceed the SCAQMD daily construction emissions threshold for VOCs, CO, and NO_x. Therefore, impacts related to construction would be potentially significant.

Operational Emissions

The project involves the operation of a multi-use indoor sports complex, youth learning center, indoor skydiving, a driving range, a clubhouse, two marketplaces with retail and restaurants, stand-alone restaurants, a sports wellness building, a zipline and adventure course, a putting green, and a community park and jogging path. Operation of the project would generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicle trips from employees and patrons; area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment; and energy sources including electricity and natural gas.

Baseline Operational Emissions

The existing golf course also generates criteria air pollutant emissions, which are primarily associated with vehicular traffic. Emissions generated during operation of the existing facility were estimated to provide a baseline for comparison to projected operational emissions generated by buildout of the project. An operational year of 2000 was used to represent existing conditions because that was when the last major renovation of the golf course occurred.

Estimation of operational area source emissions generated under existing conditions was based on the existing 77-acre golf course.

Area Sources

CalEEMod was used to estimate criteria pollutant emissions from the existing golf course's area sources, which include operation of gasoline-powered landscape maintenance equipment. Consumer product use and architectural coatings result in VOC emissions. CalEEMod default values were used to estimate emissions from the existing golf course's area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment.

Energy Sources

The estimation of operational energy emissions was based on CalEEMod land use defaults and total area (i.e., square footage) of the existing Victoria Golf Course. The energy use from nonresidential land uses is calculated in CalEEMod based on the California Commercial End-Use Survey database. Energy source emissions from combustion of fuels used for space and water heating and cooking appliances were based on CalEEMod defaults.

Mobile Sources

Vehicle trip generation for the existing golf course was based on the trip rates within the TIA (Appendix J). CalEEMod default data for temperature, variable start information, and emission factors were conservatively used for the model inputs. Project-related traffic was assumed to consist of a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions factors for the year 2000 were used to represent the existing golf course's operation.

Proposed Project Operations

Pollutant emissions associated with long-term operations of the proposed project were quantified using CalEEMod.

Area Sources

CalEEMod was used to estimate criteria pollutant emissions from the project's area sources, which include operation of gasoline-powered landscape maintenance equipment. Consumer product use and architectural coatings result in VOC emissions. CalEEMod default values were used to estimate emissions from the project area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment.

Energy Sources

The estimation of operational energy emissions was based on CalEEMod land use defaults and total area (i.e., square footage) of the project's land uses. The energy use from nonresidential land uses is calculated in CalEEMod based on the California Commercial End-Use Survey database. Energy source emissions from combustion of fuels used for space and water heating and

cooking appliances were based on CalEEMod defaults and information provided by the applicant to account for the energy demand of nontraditional uses such as the indoor skydiving facility.

Mobile Sources

Emissions associated with project-generated daily traffic were modeled using weekday and Saturday trip-generation rates, which were calculated using the project traffic generation values provided in the TIA (Appendix J). CalEEMod default data for emission factors were conservatively used for the model inputs. Project-related traffic was assumed to consist of a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2020 emission factors were used to represent project buildout year of operation.

Table 4.2-8 summarizes the maximum daily mobile, energy, and area emissions of criteria pollutants that would be generated by the development of the project, and how project-generated emissions would compare to the SCAQMD thresholds of significance. The values shown are the maximum summer or winter daily emissions (i.e., foreseeable worst case) results in CalEEMod. Details of the emissions calculations are provided in Appendix C.

Table 4.2-8
Estimated Maximum Daily Operational Emissions

Emission Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Existing						
Area	0.18	<0.01	0.01	0.00	<0.01	<0.01
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	4.28	10.43	54.02	0.07	2.00	0.72
Total	**4.45**	**10.43**	**54.03**	**0.07**	**2.00**	**0.72**
Proposed						
Area	11.80	<0.01	0.28	<0.01	<0.01	<0.01
Energy	0.79	7.23	6.07	0.04	0.55	0.55
Mobile	35.22	158.73	347.53	1.09	81.86	22.63
Total	**47.81**	**165.95**	**353.87**	**1.14**	**82.41**	**23.18**
Net Emissions	**4.45**	**155.52**	**299.84**	**1.07**	**80.41**	**22.46**
Emission threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold exceeded?	**No**	**Yes**	**No**	**No**	**No**	**No**

Source: SCAQMD 1993, 2015.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
Area sources = consumer product use, architectural coatings, and landscape maintenance equipment. Energy sources = natural gas. Mobile sources = motor vehicles.
See Appendix C for detailed results.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.

As shown in Table 4.2-8, operation of the proposed project would not exceed the SCAQMD thresholds for VOC, CO, SO_x, PM_{10}, or $PM_{2.5}$. However, the project would exceed the SCAQMD threshold for NO_x.

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and SCAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

When considering cumulative impacts from the proposed project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SCAB is designated as nonattainment for the CAAQS and NAAQS. If a project's emissions would exceed the SCAQMD significance thresholds, it would be considered to have a cumulatively considerable contribution to nonattainment status in the SCAB. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant (SCAQMD 1993).

As discussed in Section 4.2.2, under "South Coast Air Basin Attainment Classification," the SCAB has been designated as a federal nonattainment area for O_3 and $PM_{2.5}$ and a state nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. The nonattainment status is the result of cumulative emissions from various sources of air pollutants and their precursors within the SCAB, including motor vehicles, off-road equipment, and commercial and industrial facilities. Construction and operation of the project would generate VOC and NO_x emissions (which are precursors to O_3) and emissions of PM_{10} and $PM_{2.5}$. As indicated in Table 4.2-7, project-generated construction emissions would exceed the SCAQMD emission-based significance thresholds for VOCs, CO, and NO_x and in Table 4.2-8 project-generated operational emissions would exceed SCAQMD thresholds for NO_x.

Cumulative localized impacts would potentially occur if a construction project were to occur concurrently with another off-site project. Construction schedules for potential future projects near the project site are currently unknown; therefore, potential construction impacts associated with two or more simultaneous projects would be speculative.[13] However, future projects would be subject to CEQA and would require air quality analysis, and where necessary, mitigation, if the project would exceed SCAQMD thresholds. Criteria air pollutant emissions associated with construction activity of future projects would be reduced through implementation of control measures required by SCAQMD. Cumulative PM_{10} and $PM_{2.5}$ emissions would be reduced

[13] The CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (14 CCR 15145). This discussion is nonetheless provided in an effort to show good-faith analysis and comply with CEQA's information disclosure requirements.

because all future projects would be subject to SCAQMD Rule 403 (Fugitive Dust), which sets forth general and specific requirements for all construction sites in the SCAQMD.

Based on the project-generated construction emissions of VOCs, CO, and NO_x, and operational emissions of NO_x, the project would result in a cumulatively considerable increase in emissions of nonattainment pollutants. Impacts would be **potentially significant.**

As discussed above, prior to mitigation, the proposed project would result in emissions that would exceed the SCAQMD thresholds for VOC, NO_x, CO, during construction, as well as NO_x exceedances during operations. As discussed in Section 4.2.5 below, implementation of feasible mitigation would reduce the project's construction-related VOC impacts to a level below significant. However, the project's construction-related NO_x and CO emissions and operations-related NO_x emissions would still exceed the SCAQMD's thresholds following implementation of all feasible mitigation. Notably, since the emission-based thresholds used in this analysis were established to provide project-level estimates of criteria air pollutant quantities that the SCAB can accommodate without affecting the attainment dates for the ambient air quality standards, and since the EPA and CARB have established the ambient air quality standards at levels above which concentrations could be harmful to human health and welfare, with an adequate margin of safety, elevated levels of criteria air pollutants above adopted thresholds as a result of the proposed project's construction and operation could cause adverse health effects associated with these pollutants. (The effects typically associated with unhealthy levels of criteria air pollutant exposure are described in Section 4.2.1, Existing Setting (Pollutants and Effects), above.) However, as detailed in the Appendix C, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days, and there are currently no modeling tools that could provide reliable and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects.

AQ-3 Would the project expose sensitive receptors to substantial pollutant concentrations?

As discussed under Sensitive Receptors in Section 4.2.1, sensitive receptors are those individuals more susceptible to the effects of air pollution than the population at large. According to SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). The southeastern project is located in close proximity to single-family homes, which are approximately 150 feet to the east of the project site.

Localized Significance Thresholds Analysis

LST analysis has been prepared to determine potential impacts to nearby sensitive receptors during construction of the project. As indicated in Section 4.2.3, Thresholds of Significance, the SCAQMD recommends the evaluation of localized NO_2, CO, PM_{10}, and $PM_{2.5}$ impacts to sensitive receptors in the immediate vicinity of the project site that would occur as a result of construction activities. The impacts were analyzed using methods consistent with those in the SCAQMD's Final LST Methodology (2008). According to the Final LST Methodology, "off-site mobile emissions from the project should not be included in the emissions compared to the LSTs" (SCAQMD 2008). Hauling of construction materials associated with project construction is not expected to cause substantial air quality impacts to sensitive receptors along off-site roadways. Emissions from the trucks would be relatively brief in nature and would cease once the trucks pass through the main streets.

Construction activities associated with the project would result in temporary sources of on-site fugitive dust and construction equipment emissions. Off-site emissions from vendor trucks and worker vehicle trips are not included in the LST analysis. The maximum allowable daily emissions that would satisfy the SCAQMD LSTs for SRA 4 are presented in Table 4.2-9 and compared with the maximum daily on-site construction emissions generated during the project.

Table 4.2-9
Localized Significance Thresholds Analysis for Project Construction

Pollutant	Project Construction Emissions (Pounds per Day)	LST Criteria (Pounds per Day)	Exceeds LST?
NO_2	13.57	82	No
CO	132.89	842	No
PM_{10}	22.21	7	YES
$PM_{2.5}$	12.11	5	YES

Source: SCAQMD 2008.
Notes: LST = localized significance threshold; NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = particulate matter; $PM_{2.5}$ = fine particulate matter.
See Appendix A for detailed results.
Localized significance thresholds are shown for 2-acre project sites corresponding to a distance to a sensitive receptor of 25 meters.
These estimates reflect control of fugitive dust required by Rule 403.
Greatest on-site NO_x, CO, PM_{10}, and $PM_{2.5}$ emissions are associated with the overlap of the Site Preparation, Waste Relocation and Grading phases.

Although diesel equipment would be subject to the CARB air toxic control measures for in-use off-road diesel fleets, which would minimize DPM emissions, as shown in Table 4.2-9, construction activities would generate PM_{10} and $PM_{2.5}$ emissions in excess of site-specific LSTs; therefore, site-specific construction impacts during construction of the project would be potentially significant.

Toxic Air Contaminants

As a precautionary measure, a health risk assessment (HRA) was performed to assess the impact of construction on sensitive receptors proximate to the project site. This report includes an HRA associated with emissions from construction of the project based on the methodologies prescribed in the Office of Environmental Health Hazard Assessment (OEHHA) Air Toxics Hot Spots Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2015). To implement the OEHHA Guidelines based on project information, the SCAQMD has developed a three-tiered approach where each successive tier is progressively more refined, with fewer conservative assumptions. The SCAQMD Modeling Guidance for AERMOD provides guidance with which to perform HRAs within the SCAB (SCAQMD 2017b).

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SCAQMD recommends a carcinogenic (cancer) risk threshold of 10 in 1 million. Additionally, some TACs increase non-cancer health risk due to long-term (chronic) exposures. The Chronic Hazard Index is the sum of the individual substance chronic hazard indices for all TACs affecting the same target organ system. The SCAQMD recommend a Chronic Hazard Index significance threshold of 1.0 (project increment). The exhaust from diesel engines is a complex mixture of gases, vapors, and particles, many of which are known human carcinogens. DPM has established cancer risk factors and relative exposure values for long-term chronic health hazard impacts. No short-term, acute relative exposure level has been established for DPM; therefore, acute impacts of DPM are not addressed in this assessment. This HRA evaluated the risk to existing residents from diesel emissions from exhaust from on-site construction equipment and diesel haul and vendor trucks.

The dispersion modeling of DPM was performed using the American Meteorological Society/EPA Regulatory Model (AERMOD), which is the model SCAQMD requires for atmospheric dispersion of emissions. AERMOD is a steady-state Gaussian plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources, building downwash, and simple and complex terrain (EPA 2018). For the project, AERMOD was run with all sources emitting unit emissions (1 gram per second) to obtain the "X/Q" values. X/Q is a dispersion factor that is the average effluent concentration normalized by source strength and is used as a way to simplify the representation of emissions from many sources. The X/Q values of ground-level concentrations were determined for construction emissions using AERMOD and the maximum concentrations determined for the 1-hour and Period averaging periods. Principal parameters of this modeling are presented in Table 4.2-10.

Table 4.2-10
AERMOD Principal Parameters

Parameter	Details
Meteorological Data	The latest 3-year meteorological data (2012–2016) for the Hawthorne Airport Station from SCAQMD were downloaded and then input to AERMOD. For cancer or chronic non-cancer risk assessments, the average cancer risk of all years modeled was used.
Urban versus Rural Option	Urban areas typically have more surface roughness, as well as structures and low-albedo surfaces that absorb more sunlight—and thus more heat—relative to rural areas. Based on the SCAQMD guidelines and the project location, the urban dispersion option was selected.
Terrain Characteristics	The terrain in the vicinity of the modeled project site is generally mountainous. The elevation of the modeled site is 34 feet above sea level. Digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate.
Elevation Data	Digital elevation data were imported into AERMOD, and elevations were assigned to the emission sources and receptors. Digital elevation data were obtained through AERMOD View in the United States Geological Survey's National Elevation Dataset format with a 10-meter resolution.
Emission Sources and Release Parameters	Air dispersion modeling of DPM from construction equipment and diesel vehicles was conducted using emissions estimated using the CalEEMod, assuming emissions would occur up to 8 hours per day, 5 days per week. The project site was modeled as a series of volume sources.
Source Release Characterizations	The source release height was assumed to be 5 meters. The length of the volume sources was assumed to be 25 meters on each side with an initial lateral and vertical dimension of 5.81 meters.
Receptors	A uniform Cartesian grid of 20-meter spacing was placed over the residential receptors nearest to the project site and then converted to discrete receptors.

Note: See Appendix C.

Dispersion model plot files from AERMOD were then imported into CARB's Hotspots Analysis and Reporting Program Version 2 to determine health risk, which requires peak 1-hour emission rates and annual-averaged emission rates for all pollutants for each modeling source. For the residential health risk, the HRA assumes exposure would start in the third trimester of pregnancy. Based on the HRA included in Appendix C, the maximally exposed individual resident would be located at the east of the project site. The results of the HRA are provided below, and detailed results and methodology are provided in Appendix C.

"Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period would contract cancer based on the use of standard OEHHA risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. TACs that would potentially be emitted during construction activities would be DPM, emitted from heavy-duty construction equipment and heavy-duty trucks. Heavy-duty construction equipment and diesel trucks are subject to CARB ATCMs to reduce DPM emissions. According to the OEHHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Thus, the duration of proposed construction activities (approximately 16 months)

would only constitute a small percentage of the total long-term exposure period and would not result in exposure of proximate sensitive receptors to substantial TACs.

During project construction, DPM emissions would be emitted from heavy-duty construction equipment and heavy-duty trucks. Heavy-duty construction equipment and diesel trucks are subject to CARB ATCMs (described in Section 4.2.2) to reduce DPM emissions. According to the OEHHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the project. Because the project would involve construction activities in several areas across the site, the project would not require the extensive use of heavy-duty construction equipment or diesel trucks in any one location over the duration of development, which would limit the exposure of any proximate individual sensitive receptor to TACs. In addition, due to the relatively short period of exposure at any individual sensitive receptor (less than 2 years) and minimal particulate emissions generated on site, TACs generated during construction would not be expected to result in concentrations that could cause significant health risks.

However, as a precautionary measure a HRA was performed to evaluate the risk from diesel exhaust emissions on existing sensitive receptors from construction activities. The HRA detailed assessment is provided in Appendix C. The results of the HRA for project construction are summarized in Table 4.2-11.

Table 4.2-11
Construction Activity Health Risk Assessment Results - Unmitigated

Impact Parameter	Units	Proposed Project Impact	CEQA Threshold	Level of Significance
Cancer Risk	Per Million	77.4	10.0	**Potentially Significant**
HIC	Not Applicable	0785	1.0	Less than Significant

Source: Appendix C.
Notes: CEQA = California Environmental Quality Act; HIC = Chronic Hazard Index.

The results of the HRA demonstrate that the TAC exposure from construction diesel exhaust emissions would result in an on-site cancer risk greater than the 10 in 1 million threshold, as well as Chronic Hazard Index less than 1, resulting in a potentially significant impact.

As determined above, since the cancer risk at the MEIR exceeds 1 in a million, cancer burden, for which a SCAQMD significance threshold of 0.5, is evaluated. Unlike cancer risk, which is the lifetime probability (chances) of an individual developing cancer due to exposure to a carcinogenic compound, cancer burden estimates the number of theoretical cancer cases in a defined population resulting from a lifetime exposure to carcinogenic TACs. As described in the OEHHA guidance manual:

> The cancer burden can be calculated by multiplying the cancer risk at a census block centroid by the number of people who live in the census block, and adding up the estimated number of potential cancer cases across the zone of impact. The result of this calculation is a single number that is intended to estimate of the number of potential cancer cases within the population that was exposed to the emissions for a lifetime (70 years) (OEHHA 2015).

The SCAQMD has established a procedural screening approach for estimating cancer burden (SCAQMD 2017b), which includes the following steps:

- Recalculate cancer risk from all TACs using a 70-year exposure duration;
- Estimate the distance at which the at which maximum individual cancer risk from a 70-year exposure duration falls below 1 in a million;
- Define a zone of impact in the shape of a circle, with the radius equal to the distance between the TAC source and the point at which the risk falls below 1 in a million;
- Estimate the residential population within this zone of impact based on census data or a worse-case estimate;
- Calculate the screening level cancer burden by multiplying the total residential population in the zone of impact by the maximum individual cancer risk.

Accordingly, the maximum estimated 70-year cancer risk for the unmitigated project was estimated at 236.7 in a million with HARP2 using the Population-Wide option in the model, which is specified for use in cancer burden estimates. The zone of impact was estimated to be 29.21 square-kilometers. The total population in this area was estimated to be approximately 45,305 persons, based on the average densities of the Census Tracts that would be within the zone of impact (Census Tracts 5434, 5433.22, 2920, 5435.02, 5435,01, 5438.02, 5439.03, 9800.25, 5433.06, 5433.05, 5433.21, 5410.02,5433.04, and 5438.01) (U.S. Census Bureau 2016). Multiplying the maximum estimated 70-year cancer risk by the project population gives a cancer burden of 10.7. Accordingly, the cancer burden indicates that more than one person could contract cancer assuming a 70-year exposure under the modeled scenario of TAC emissions and provided that other factors related to an individual's susceptibility to contracting cancer would occur. This would be greater than the SCAQMD cancer burden threshold of 0.5. Thus, the impact with respect to potential cancer burden due to construction of the project would be potentially significant.

Health Effects of Carbon Monoxide

As explained in Carbon Monoxide Hotspots in Section 4.2.3, to verify that the project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted based on the TIA (Appendix J) results and the Caltrans Institute

of Transportation Studies *Transportation Project-Level Carbon Monoxide Protocol* (CO Protocol; Niemeier et al. 1997).

The proposed project's TIA evaluated 31 intersections. As determined by the TIA, the following intersections under the Cumulative Year (2020) operate at LOS E or worse during the AM or PM peak hours:

- Main Street/Martin Luther King Jr. Street (LOS E in PM)
- Main Street/Del Amo Boulevard (LOS F in PM)
- Avalon Boulevard/Albertoni Street (LOS E in PM)
- Avalon Boulevard/Del Amo Boulevard (LOS E in PM)
- Main Street/Albertoni Street (LOS E in PM)
- Main Street/Victoria Street (LOS E in PM)
- Hamilton Avenue/Del Amo Boulevard (LOS F in AM and PM)
- Hamilton Avenue/I-110 SB ramps (LOS F in AM and PM)
- Figueroa Street/Del Amo Boulevard (LOS F in PM)

For each scenario (existing with project; existing with ambient growth and the proposed project; existing with ambient growth, cumulative projects, and the proposed project), the screening evaluation presents LOS with project improvements (mitigation), whether the recommended improvements (mitigation measures) are feasible, and whether a quantitative CO hotspots analysis may be required. According to the CO Protocol, there is a cap on the number of intersections that need to be analyzed for any one project. For a single project with multiple intersections, only the three intersections representing the worst LOS ratings of the project, and, to the extent they are different intersections, the three intersections representing the highest traffic volumes, need be analyzed. For each intersection failing a screening test as described in this protocol, an additional intersection should be analyzed (Caltrans 2010).

Based on the CO hotspot screening evaluation (Appendix C), the intersections that exceeded the CO hotspot screening criteria shown above all have similar geometries and are signalized. Therefore, all three intersections with an LOS of F that exceeded the CO hotspot screening criteria were evaluated. The potential impact of the project on local CO levels was assessed at this intersection with the Caltrans CL4 interface based on the California LINE Source Dispersion Model (CALINE4), which allows microscale CO concentrations to be estimated along each roadway corridor or near intersections (Coe et al. 1998).

The emissions factor represents the weighted average emissions rate of the local SCAB vehicle fleet expressed in grams per mile per vehicle. Consistent with the TIA, emissions factors for 2020 were used for the analysis. Emissions factors for 2020 were predicted by EMFAC 2014 based on a 5-mile-per-hour average speed for all of the intersections for approach and departure segments. The hourly traffic volume anticipated to travel on each link, in units of vehicles per hour, was based on the traffic report. Modeling assumptions are outlined in Appendix C.

Four receptor locations at each intersection were modeled to determine CO ambient concentrations. A receptor was assumed on the sidewalk at each corner of the modeled intersections, for a total of four receptors adjacent to the intersection, to represent the future possibility of extended outdoor exposure. CO concentrations were modeled at these locations to assess the maximum potential CO exposure that could occur in 2020, which is more conservative than an operational year of 2021. A receptor height of 5.9 feet (1.8 meters) was used in accordance with Caltrans recommendations for all receptor locations (Coe et al. 1998).

The maximum CO concentration measured at the Compton monitoring station over the last 3 years was 6.1 parts per million, which was measured in 2017. The 1-hour average CO concentration was added the ambient concentration to compare to the CAAQS. The 8-hour average CO concentration was added to the SCAQMD 8-hour CO ambient concentration of 4.6 parts per million for 2020 from the Compton monitoring station to compare to the CAAQS.

The CALINE4 predicted CO concentrations are shown in Table 4.2-12. Model input and output data are provided in Appendix C.

Table 4.2-12
CALINE4 Predicted Carbon Monoxide Concentrations

Intersection	Maximum Modeled Carbon Monoxide Impact (ppm)	
	1-hour	*8-hour*
Hamilton Ave and Del Amo Blvd	6.5	4.88
Hamilton Ave and I-110 SB ramps	6.5	4.88
Figueroa St and Del Amo Blvd	6.7	5.02

Source: Coe et al. 1998.
Notes: ppm = parts per million.

As shown in Table 4.2-12, the maximum CO concentration predicted for the 1-hour averaging period at the studied intersections would be 6.7 ppm, which is below the 1-hour CO CAAQS of 20 ppm (CARB 2016c). The maximum predicted 8-hour CO concentration of 5.02 ppm at the studied intersections would be below the 8-hour CO CAAQS of 9.0 ppm (CARB 2016c). Neither the 1-hour nor 8-hour CAAQS would be equaled or exceeded at any of the intersections studied. Accordingly, the project would not cause or contribute to violations of the CAAQS, and would not result in exposure of sensitive receptors to localized high concentrations of CO. As such, impacts would be

less than significant to sensitive receptors with regard to potential CO hotspots resulting from project contribution to cumulative traffic-related air quality impacts, and no mitigation is required.

Health Effects of Other Criteria Air Pollutants

The proposed project would result in emissions that would exceed the SCAQMD thresholds for VOC, NO_x, CO, during construction, and would exceed the SCAQMD threshold for NO_x during operations.

As discussed in Section 4.2.1, health effects associated with O_3 include respiratory symptoms, worsening of lung disease leading to premature death, and damage to lung tissue (CARB 2019). VOCs and NO_x are precursors to O_3, for which the SCAB is designated as nonattainment with respect to the NAAQS and CAAQS. The health effects associated with O_3 are generally associated with reduced lung function. The contribution of VOCs and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the SCAB due to O_3 precursor emissions tend to be found downwind of the source location because of the time required for the photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the VOC emissions would occur, because exceedances of the O_3 NAAQS and CAAQS tend to occur between April and October when solar radiation is highest. The holistic effect of a single project's emissions of O_3 precursors is speculative due to the lack of quantitative methods to assess this impact. Because construction and operation of the project would exceed SCAQMD threshold for VOCs and NO_x, health effects would be considered potentially significant.

Health effects associated with NO_x include lung irritation and enhanced allergic responses (see Section 4.2.1; CARB 2019). Health impacts that result from NO_2 and NO_x include respiratory irritation. Although the proposed project construction would generate NO_x emissions that would exceed the SCAQMD mass daily thresholds, it is unlikely that construction of the proposed project would contribute to exceedances of the NAAQS and CAAQS for NO_2 because the SCAB is designated as in attainment of the NAAQS and CAAQS for NO_2 and the existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards. Nonetheless, because there are nearby receptors that could be affected by off-road construction equipment (primary source of NO_x), the proposed project could result in potential health effects associated with NO_2 and NO_x, and impacts would be potentially significant.

Health effects associated with CO include chest pain in patients with heart disease, headache, light-headedness, and reduced mental alertness (See Section 4.2.1; CARB 2019). CO tends to be a localized impact associated with congested intersections. The associated potential for CO hotspots was discussed previously and was determined to be a less-than-significant impact. Thus, the project's CO emissions would not contribute to significant health effects associated with this pollutant.

Construction and operation of the project would not exceed mass daily thresholds for PM_{10} or $PM_{2.5}$ and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter or would obstruct the SCAB from coming into attainment for these pollutants. The project would also not result in substantial DPM emissions during construction and operation and therefore would not result in significant health effects related to DPM exposure. Additionally, the project would be required to comply with SCAQMD Rule 403, which limits the amount of fugitive dust generated during construction. Due to the minimal contribution of particulate matter during construction and operation, health effects would be considered less than significant.

In summary, because construction and operation of the proposed project would result in exceedances of the SCAQMD significance thresholds for VOC, NOx, and CO during construction and/or operation, and potential health effects associated with these criteria air pollutants would be **potentially significant.** Notably, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days, and there are currently no modeling tools that could provide reliable and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects. These subjects are discussed further in Appendix C.

AQ-4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Odors would potentially be generated from vehicles and equipment exhaust emissions during construction of the project. Potential odors produced during construction would result from concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application. Such odors would disperse rapidly from the project site and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be less than significant.

Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities (SCAQMD 1993). The project entails operation of a sports field and would not result in the creation of a land use that is commonly associated with odors. Therefore, project operations would result in an odor impact that would be **less than significant**.

4.2.5 Mitigation Measures

The following mitigation measures would reduce potentially significant impacts during construction:

MM-AQ-1 To reduce the potential for health risks, and mass emissions of VOCs, CO, and NO_x as a result of the construction of the project, the applicant shall do the following:

- Equip heavy-duty diesel-powered construction equipment with Tier 4 Final or better diesel engines, except where Tier 4 Final or better engines are not available for specific construction equipment. The County of Los Angeles shall verify and approve all pieces within the construction fleet that would not meet Tier 4 Final standards.
- Minimize simultaneous operation of multiple construction equipment units. During construction, vehicles in loading and unloading queues shall not idle for more than 5 minutes, and shall turn their engines off when not in use to reduce vehicle emissions.
- Properly tune and maintain all construction equipment in accordance with manufacturer's specifications;
- Where feasible, employ the use of electrical or natural gas-powered construction equipment, including forklifts and other comparable equipment types.
- To reduce the need for electric generators and other fuel-powered equipment, provide on-site electrical hookups for the use of hand tools such as saws, drills, and compressors used for building construction.
- Develop a Construction Traffic Control Plan to ensure construction traffic and equipment use is minimized to the extent practicable. The Construction Traffic Control Plan shall include measures to reduce the number of large pieces of equipment operating simultaneously during peak construction periods, minimize scheduling of vendor and haul truck trips to occur during non-peak hours where feasible, establish dedicated construction parking areas to encourage carpooling and efficiently accommodate construction vehicles, identify alternative routes to reduce traffic congestion during peak activities, and increase construction employee carpooling.

MM-AQ-2 Prior to the County's approval of any grading permits, and during project construction, a Fugitive Dust Plan shall be prepared demonstrating compliance with SCAQMD Rule 403, to the satisfaction of the County. The project applicant or its designee shall require implementation of the following fugitive dust measures to minimize PM_{10} and $PM_{2.5}$ emissions as part of the Fugitive Dust Plan. All measures

shall be designated on grading and improvement plans. Measures shall include but are not limited to the following:

- Prior to construction activities, the project applicant shall employ a construction relations officer who will address community concerns regarding on-site construction activity. The applicant shall provide public notification in the form of a visible sign containing the contact information of the construction relations officer who will document complaints and concerns regarding on-site construction activity. The sign shall be placed in easily accessible locations along South Avalon Boulevard and noted on grading and improvement plans.
- Water, or utilize another SCAQMD-approved dust control non-toxic agent, on the grading areas at least three times daily to minimize fugitive dust.
- All permanent roads and roadway improvements shall be constructed and paved as early as possible in the construction process to reduce construction vehicle travel on unpaved roads. To reduce fugitive dust from earth-moving operations, building pads shall be finalized as soon as possible following site preparation and grading activities.
- Stabilize grading areas as quickly as possible to minimize fugitive dust.
- Apply chemical stabilizer, install a gravel pad, or pave the last 100 feet of internal travel path within the construction site prior to public road entry.
- Remove any visible track-out into traveled public streets with the use of sweepers, water trucks, or similar method as soon as possible.
- Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads. Unpaved construction site egress points shall be graveled to prevent track-out.
- Wet wash the construction access point at the end of the workday if any vehicle travel on unpaved surfaces has occurred.
- Cover haul trucks or maintain at least 2 feet of freeboard to reduce blow-off during hauling.
- Evaluate potential for reduction in dust generating activity if winds exceed 25 miles per hour.
- Apply chemical soil stabilizer to on-site stockpiles of excavated material.
- Enforce a 15-mile-per-hour speed limit on unpaved surfaces.
- Pave permanent roads as quickly as possible to minimize dust.

- Provide haul truck staging areas for the loading and unloading of soil and materials. Staging areas shall be located away from sensitive receptors, at the furthest feasible distance.
- Construction Traffic Control Plans shall route delivery and haul trucks required during construction away from sensitive receptor locations and congested intersections, to the extent feasible. Construction Traffic Control plans shall be finalized and approved prior to issuance of grading permits.

MM-AQ-3 The construction contractor shall be required to utilize Super-Compliant VOC interior and exterior paints, which are defined by SCAQMD as meeting the "super-compliant" VOC standard of 10 grams per liter (g/L), during construction and long-term operations.

The following mitigation measures would reduce potentially significant impacts during operation. As a conservative approach, the reductions from MM-AQ-4 and MM-AQ-5 were not quantified due to the lack of clarity on the quantity of reductions associated with these mitigation measures.

MM-AQ-4 The applicant shall include the following transit-oriented development design features into the project to reduce the use of single-occupancy vehicles and vehicle miles traveled:

- Bus pull-ins shall be constructed throughout the proposed project area.
- The proposed project shall include improved design elements to enhance walkability and connectivity.
- The proposed project design shall include a network that connects the proposed project uses to the existing off-site facilities through connecting with off-site Class I bike paths or Class II bike lanes.
- The proposed project shall provide a pedestrian access network that internally links all uses and connects to all existing or planned external streets and pedestrian facilities contiguous with the proposed project area. The proposed project shall minimize barriers to pedestrian access and interconnectivity. Physical barriers, such as walls or landscaping, that impede pedestrian circulation shall be eliminated.
- Proposed project design shall include pedestrian/bicycle safety and traffic calming measures in excess of jurisdiction requirements. Roadways shall be designed to reduce motor vehicle speeds and encourage pedestrian and bicycle trips with traffic calming features. Traffic calming features may include: marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii,

roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers, and others.

- The proposed project shall promote ridesharing programs through a multi-faceted approach, such as designating a certain percentage of parking spaces for ridesharing vehicles; designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles; or providing a website or message board for coordinating rides.
- The proposed project shall implement marketing strategies to reduce commute trips. Information sharing and marketing are important components to successful commute trip-reduction strategies. Implementing commute trip-reduction strategies without a complementary marketing strategy would result in lower VMT reductions. Marketing strategies may include: new employee orientation of trip reduction and alternative mode options; event promotions; or publications.
- One percent (1%) of vehicle/employee parking spaces shall be reserved for preferential spaces for car pools and van pools.
- The proposed project shall provide short-term bicycle parking facilities to meet peak season maximum demand (one bike rack space per 20 vehicle/employee parking spaces).
- The proposed project shall promote the adjacent park-and-ride lots to employees to support carpooling.
- The proposed project shall implement a demand-responsive shuttle service that provides access throughout the project site, to the park-and-ride lots, and to the nearby transit centers.
- The proposed project shall coordinate with the Southern California Association of Governments (SCAG) for carpool, vanpool, and rideshare programs that are specific to the project's employees.
- The proposed project shall coordinate with SCAG on the future siting of transit stops/stations at the adjacent park-and-ride lots.

MM-AQ-5 The proposed project shall provide circuitry and capacity for installation of electric vehicle (EV) charging stations consistent with the County of Los Angeles criteria. The proposed project shall develop up to 2% of the available parking spaces on site as EV charging stations.

4.2.6 Level of Significance After Mitigation

The construction of the proposed project would result in a potentially significant impact prior to mitigation. Table 4.2-13 shows the results of the mass emissions analysis for the proposed project after implementation of **MM-AQ-1**, **MM-AQ-2**, and **MM-AQ-3**. The detailed emissions assumptions and model outputs using CalEEMod are provided in Appendix C.

Table 4.2-13
Estimated Mitigated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
2019	46.18	386.61	560.78	1.91	105.20	33.72
2020	46.85	276.43	451.73	1.58	96.92	27.45
Maximum Daily Emissions	**46.85**	**386.61**	**560.78**	**1.91**	**105.20**	**33.72**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**No**	**Yes**	**Yes**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District.
See Appendix C for complete results.
The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect CalEEMod "mitigated" output, which accounts for compliance with SCAQMD Rule 403 (Fugitive Dust) and MM-AQ-1, MM-AQ-2, and MM-AQ-3.

The mitigated results shown in Table 4.2-13 demonstrate that with implementation of **MM-AQ-1**, **MM-AQ-2**, and **MM-AQ-3**, VOC emissions would be reduced below the SCAQMD significance thresholds; however, NO_X and CO emissions would continue to exceed the SCAQMD's daily threshold. Therefore, impacts would be **significant and unavoidable**. Similarly, because emissions would still exceed the SCAQMD thresholds, the project would have a significant and unavoidable cumulative impact.

With implementation of mitigation measures **MM-AQ-1**, **MM-AQ-2**, and **MM-AQ-3**, emissions of DPM would be reduced. Table 4.2-14 shows the cancer and non-cancer risk results with mitigation.

Table 4.2-14
Construction Activity Health Risk Assessment Results - Mitigated

Impact Parameter	Units	Proposed Project Impact	CEQA Threshold	Level of Significance
Cancer Risk	Per Million	4.61	10.0	Less than Significant
HIC	Not Applicable	0.005	1.0	Less than Significant

Source: Appendix C.
Notes: CEQA = California Environmental Quality Act; HIC = Chronic Hazard Index.

With implementation of mitigation, the results of the HRA demonstrate that the TAC exposure from construction diesel exhaust emissions would result in an on-site cancer risk below the 10 in 1 million threshold, as well as Chronic Hazard Index less than 1. Therefore, TAC emissions from construction of the project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be **less than significant with mitigation**.

With mitigation, the maximum estimated 70-year cancer risk for the project was estimated at 24.5 in a million with HARP2 using the Population-Wide option in the model, which is specified for use in cancer burden estimates. The zone of impact was estimated to be 2.46 square-kilometers. The total population in this area was estimated to be approximately 9,749 persons, based on the average densities of the Census Tracts that would be within the zone of impact (Census Tracts 5434, 5433.22, and 5438.01) (U.S. Census Bureau 2016). Multiplying the maximum estimated 70-year cancer risk by the project population gives a cancer burden of 0.23. Accordingly, the cancer burden indicates that less than one person could contract cancer, assuming a 70-year exposure under the modeled scenario of TAC emissions and provided that other factors related to an individual's susceptibility to contracting cancer would occur. This would be less than the SCAQMD cancer burden threshold of 0.5. Thus, the impact with respect to potential cancer burden due to construction of the project would be **less than significant with mitigation**.

As discussed in Section 4.2.5, Mitigation Measures, the reductions from **MM-AQ-4** and **MM-AQ-5** were not quantified, due to the lack of clarity on the quantity of reductions associated with these mitigation measures.

As discussed in Section 4.2.4, because the project would continue to exceed the SCAQMD threshold for NO_x after mitigation is incorporated, the project would potentially result in health effects related to O_3, NO_2 and CO. Therefore, impacts during operation of the proposed project would be **significant and unavoidable**.

4.2.7 Cumulative Impacts

Because of the cumulative nature of air quality impacts, cumulative impacts to air quality are addressed in Section 4.2.4, under impact threshold AQ-2. As discussed in Section 4.2.6, Levels of Significance after Mitigation, impacts resulting from the proposed project would remain significant and unavoidable after mitigation.

4.2.8 References

13 CCR 2449–2449.3 and Appendix A. General Requirements for In-Use Off-Road Diesel-Fueled Fleets.

13 CCR 2449–2449.3 and Appendix A. General Requirements for In-Use Off-Road Diesel-Fueled Fleets.

17 CCR 93000. Substances Identified as Toxic Air Contaminants. In Subchapter 7, Toxic Air Contaminants.

Caltrans (California Department of Transportation). 2010. "Searchable PDF Version of CO Protocol." Memorandum from Caltrans to Users of CO Protocol. October 13, 2010. Accessed September 2018. http://www.dot.ca.gov/hq/env/air/documents/COProtocol_searchable.pdf.

CAPCOA (California Air Pollution Control Officers Association). 2017. *California Emissions Estimator Model (CalEEMod) User's Guide Version 2016.3.2*. Prepared by BREEZE Software, A Division of Trinity Consultants in collaboration with South Coast Air Quality Management District and the California Air Districts. November 2017. Accessed November 2017. http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4.

CARB (California Air Resources Board). 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* ARB, Stationary Source Division, Mobile Source Control Division. October 2000. Accessed October 26, 2016. https://www.arb.ca.gov/diesel/documents/rrpFinal.pdf.

CARB. 2005. *On-Road Heavy-Duty Diesel Engine Reduced Emission Standards*. January 6, 2005. Accessed December 2016. https://www.arb.ca.gov/msprog/onroadhd/reducstd.htm.

CARB. 2008. *Off-Road Compression-Ignition (Diesel) Engines and Equipment*. September 8, 2008. Accessed December 2016. https://www.arb.ca.gov/msprog/offroad/orcomp/regulations.htm.

CARB. 2011. *Regulation for In-Use Off-Road Diesel-Fueled Fleets*. December 2011. Accessed December 2016. https://www.arb.ca.gov/msprog/ordiesel/documents/finalregorder-dec2011.pdf.

CARB. 2014. *Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants from In-Use Heavy-Duty Diesel-Fueled Vehicles.* January 2014. Accessed December 2016. https://www.arb.ca.gov/regact/2014/truckbus14/tbfrooal.pdf.

CARB. 2016a. "Glossary of Air Pollution Terms." Accessed October 26, 2016. http://www.arb.ca.gov/html/gloss.htm.

CARB. 2016b. "Overview: Diesel Exhaust and Health." April 12, 2016. Accessed December 2016. https://www.arb.ca.gov/research/diesel/diesel-health.htm.

CARB. 2016c. "Ambient Air Quality Standards." May 4, 2016. Accessed December 2016. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

CARB. 2016d. "Area Designation Maps/State and National." Last updated May 5, 2016. Accessed December 2016. http://www.arb.ca.gov/desig/adm/adm.htm.

CARB. 2018a. "iADAM: Air Quality Data Statistics." Accessed March 2018. http://www.arb.ca.gov/adam/topfour/topfour1.php.

CARB. 2018b. "Area Designation Maps/State and National." Last reviewed December 28, 2018. http://www.arb.ca.gov/desig/adm/adm.htm.

CARB. 2019. "Common Air Pollutants." https://ww2.arb.ca.gov/resources/common-air-pollutants

Coe, D.L., D.S. Eisinger, J.D. Prouty, and T. Kear. *User's Guide for CL4: A User-Friendly Interface for the Caline 4 Model for Transportation Project Impact Assessments.* User's Guide STI-997480-1814-UG. Prepared for Caltrans - U.C. Davis Air Quality Project. June 20, 1998. Accessed January 27, 2010. http://aqp.engr.ucdavis.edu/Modeling/Modeling.html.

County of Los Angeles. 2009. Planning and Zoning Information. Accessed August 6, 2018. http://rpgis.isd.lacounty.gov/GIS-NET3_Public/Viewer.html.

County of Los Angeles. 2015. *Los Angeles County General Plan*. Adopted October 6, 2015. Accessed November 2018. http://planning.lacounty.gov/generalplan/generalplan.

EPA (U.S. Environmental Protection Agency). 2009. "Integrated Science Assessment for Particulate Matter." U.S. EPA, EPA/600/R-08/139F, 2009.

EPA. 2013. "Integrated Science Assessment of Ozone and Related Photochemical Oxidants." U.S. EPA, EPA/600R-10/076F, 2013.

EPA. 2016a. "Criteria Air Pollutants." Last updated October 19, 2016. Accessed October 26, 2016. https://www.epa.gov/criteria-air-pollutants.

EPA. 2016b. "Integrated Science Assessment for Oxides of Nitrogen-Health Criteria (2016 Final Report)." U.S. EPA, EPA/600/R-15/068, 2016.

EPA. 2018a. "EPA Region 9 Air Quality Maps and Geographic Information." Last updated September 28, 2018. http://www.epa.gov/region9/air/maps

EPA. 2018b. "AirData: Access to Air Pollution Data." Last updated December 5, 2017. http://www.epa.gov/airdata/ad_rep_mon.html.

Niemeier, D.A., D. Eisinger, T.P. Kear, D.P. Chang, and Y. Meng. 1997. *Transportation Project-Level Carbon Monoxide Protocol*. Revised ed. Research Report UCD-ITS-RR-97-21. Prepared for California Department of Transportation (Caltrans), Environmental Program. Davis, California: University of California, Davis; Institute of Transportation Studies. December 1997. Accessed January 27, 2010. http://www.dot.ca.gov/hq/env/air/documents/co_protocol1997_wLetters.pdf.

OEHHA (Office of Environmental Health Hazard Assessment). 2015. *Air Toxics Hot Spots Program, Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments*. February 2015.

SCAG (Southern California Association of Governments). 2008. *Final 2008 Regional Comprehensive Plan: Helping Communities Achieve a Sustainable Future.* Adopted October 2, 2008. Accessed October 26, 2016. https://www.scag.ca.gov/Documents/f2008RCP_Complete.pdf.

SCAG. 2016. *Final 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy.* Adopted April 2016. Accessed October 26, 2018. http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf.

SCAQMD (South Coast Air Quality Management District). 1993. *CEQA Air Quality Handbook*. December 2016. http://www.aqmd.gov/docs/default-source/ceqa/handbook/mobile-source-toxics-analysis.doc?sfvrsn=2.

SCAQMD. 2008. *Final Localized Significance Threshold Methodology*. June 2003; revised July 2008. Accessed September 2018. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf.

SCAQMD. 2011. "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds." Accessed October 26, 2016. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2.

SCAQMD. 2013. *Final 2012 Air Quality Management Plan*. February 2013. Accessed October 26, 2016. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2012-air-quality-management-plan/final-2012-aqmp-(february-2013)/main-document-final-2012.pdf.

SCAQMD. 2015. "SCAQMD Air Quality Significance Thresholds." Based on the 1993 SCAQMD CEQA Handbook. Revised March 2015. Accessed October 26, 2016. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

SCAQMD. 2017a. *Final 2016 Air Quality Management Plan.*

SCAQMD. 2017b. "SCAQMD Modeling Guidance for AERMOD." Accessed April 2018. http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/modeling-guidance.

U.S. Census Bureau. 2016. American Community Survey 5-year estimates. Accessed December 2018. https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_5YR_B01003&prodType=table.

WRCC (Western Regional Climate Center). 2016. *Torrance AP (048973), Monthly Climate Summary*. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca8973.

INTENTIONALLY LEFT BLANK

4.3 BIOLOGICAL RESOURCES

This section describes the existing biological resources of the project site, identifies associated regulatory requirements, evaluates potential impacts, and provides compensatory mitigation measures to address significant impacts that may result from implementation of The Creek at Dominguez Hills Project (project or proposed project). For the purpose of evaluating biological resources both on and immediately adjacent to the project site, a 100-foot buffer was established around the project site boundary, and collectively referred to as the study area in this section. The biological resources described in this section are based on the findings provided in the following reports:

- Biological Technical Report for The Creek at Dominguez Hills Project (Appendix D of this environmental impact report [EIR])
    - 45-Day Coastal California Gnatcatcher Focused Survey Report for The Creek and Kimmelman Project Sites (Appendix A of Appendix D)
    - Draft Victoria Park Golf Course Redevelopment Project Jurisdictional Delineation Report (Appendix F of Appendix D)
    - Oak Tree Report for The Creek at Dominguez Hills Project (Appendix C of Appendix D)
    - Addendum to the Jurisdictional Delineation Report Prepared for The Creek at Dominguez Hills Project (Appendix F of Appendix D)
- Draft Biological Technical Report for The Links at Victoria Golf Course Los Angeles County, California (ECORP 2015)

The Biological Technical Report (Appendix D of this EIR) prepared in 2018 includes the results of general biological reconnaissance surveys conducted on February 9 and May 9, 2018; a focused botanical survey conducted on July 10, 2018; an oak tree assessment conducted on May 9, 2018; focused coastal California gnatcatcher (*Polioptila californica californica)* surveys conducted from August 8 through October 3, 2018; and an addendum to the jurisdictional delineation conducted on April 19, 2019. Methodologies for determining the existing conditions on the project site are included in the Biological Technical Report and the associated focused surveys are included in Appendix D of this EIR.

4.3.1 Existing Conditions

Regional Setting

Regionally, the study area is located in the South Bay area of the Los Angeles Basin, inland from Long Beach and the Los Angeles Harbor. The study area generally occurs between the Pacific Ocean to the south and the City of Los Angeles to the north. The climate in the region is Mediterranean-like with warm, dry summers and mild, wet winters partly due its coastal location and marine air influence, which keeps temperatures from reaching extremes. Average temperatures

range from 55°F to 85°F, with an annual average precipitation of 14 inches. Rainfall is fairly evenly distributed throughout the year, with January being the wettest month of the year. Most of the rain falls in the winter and frosts are not a threat, with the coldest temperatures experienced in the canyons and near canyon mouths.

Project Setting

The study area is located within and immediately adjacent to the existing Links at Victoria Park Golf Course (Victoria Golf Course), which was constructed in 1966 atop the former BKK Carson Landfill that operated from 1948 to 1959 (DTSC 2016). The study area has been used for recreational golf activities since 1966, and as such, the study area has remained in a disturbed condition for several decades. The study area is characterized by landscaped sod grass and trees, with areas of bare ground and development (e.g., pro shop, parking lot, cart paths), and scattered stands of native vegetation.

The study area is surrounded by the following land uses:

North: Immediately to the north is the remainder of the Victoria Golf Course property. This portion of the property is proposed to be separately redeveloped by the Carol Kimmelman Center LLC with tennis, soccer, and facilities dedicated to after-school youth development programming.

South: Commercial uses exist to the south, across East Del Amo Boulevard. Flood control channels and transportation corridors, including the Dominguez Channel and I-405, also extend to the south of the study area.

East: Single-family residential uses are found to the east and across South Avalon Boulevard.

West: The Goodyear Blimp Airship Base is located immediately northwest of the study area. Southwest of the study area is the Dominguez Channel, I-405 and an undeveloped swatch of land between I-405 and the Victoria Golf Course property.

Topography

The elevation on the study area is relatively flat, ranging from approximately 25 feet above mean sea level (AMSL) in the northern portion to approximately 30 feet AMSL in the southern portion. Significant topographic features on the study area include the Dominguez Branch Channel on the western portion of the site that is mapped as an intermittent stream on the Torrance, California U.S. Geological Survey 7.5-minute topographic quadrangle map. This intermittent stream connects to the Dominguez Channel, a perennial stream that is located in the southwestern portion of the study area; however, the Dominguez Branch Channel on site was installed during construction of the golf course and upstream residences in the 1960s. The Dominguez Branch Channel on site currently contains a disturbed freshwater marsh vegetation community and non-native trees along the slopes.

Soils

According to the U.S Department of Agriculture Natural Resources Conservation Service (NRCS) soil maps, the majority of the study area contains complexes of several soil types including the following: Urban land-Biscailuz-Hueneme, drained complex, Urban land-Aquic Xerorthents, fine substratum-Cropley complex, and Urban land-Windfetch-Typic Haploxerolls complex (USDA 2018a; Figure 4.3-1, Vegetation Community and Soil Types). According to the NRCS, none of these soils are considered hydric (USDA 2018b). The observed surface soils show evidence of previous and continued disturbance due to golf course operations and maintenance activities. The previous grading and degradation to the natural soil horizons has created complexes of mixed native soil and urban land that has either been constructed upon, compacted, and/or consists of fill material. Brief descriptions of the soil types based on the USDA soils maps (2018a) are provided in the following text.

Urban Land-Biscailuz-Hueneme, Drained Complex, 0% to 2% Slopes

Biscailuz soils consist of very deep, somewhat poorly drained soils that formed in alluvium from mixed rock sources. Biscailuz soils are typically on floodplains and lowlands, with slopes ranging from 0 to 5%. Hueneme soils have grayish brown, loamy fine sand and light sandy loam, with moderately alkaline A horizons and stratified, calcareous C horizons of sandy loams through sands with thin silt layers, mottled, and containing segregated gypsum. These soils are mixed with fill material from previous grading of urban land, and are well drained. Hueneme soils are typically hydric in California and occur on tidal flats. However, the previous disturbances to the land has removed much of the native composition of this soil and altered the natural topography to remove any remnants of a tidal flat community. The majority of the study area consists of this soil type.

Urban Land-Aquic Xerorthents, Fine Substratum-Cropley Complex, 0% to 5% Slopes

Aquic xerorthents are soils that have, in one or more horizons within 100 centimeters of the mineral soil surface, redox depletions with chroma of 2 or less and also aquic conditions for some time in normal years (or artificial drainage). The soils typically occur on low terraces in the western part of the United States and are not extensive. Cropley soils consist of very deep, moderately well and well-drained soils that formed in alluvium from mixed rock sources. Cropley soils typically occur on alluvial fans, floodplains and in small basins, with slopes ranging from 0 to 15%.

Urban Land-Windfetch-Typic Haploxerolls Complex, 0% to 2% Slopes

Windfetch soils consist of well-drained soils that formed in a thin, discontinuous layer of human transport materials overlying uplifted alluvium from marine and other mixed rock sources. The typic subgroup of Haploxerolls is fixed on freely drained soils that have a xeric moisture regime and do not have aquic conditions within 75 centimeters of the mineral soil surface. By definition,

these soils are not hydric and due to the previous disturbances on the study area this complex of soils has been altered from its natural composition.

Vegetation Communities and Land Covers

The study area is characterized and dominated by non-native and disturbed habitat with scattered native vegetation communities and a man-made drainage feature referred to as the Dominguez Branch Channel. Within the study area, the most dominant cover type is ornamental vegetation, which mainly consists of regularly maintained sod grass installed for use on the golf course. Other vegetation communities within the study area that were observed less frequently include non-native woodland, disturbed California buckwheat-California sagebrush, California brittlebush-California sagebrush, fourwing saltbush, freshwater marsh, California buckwheat-California sagebrush, Menzies's golden bush scrub, and disturbed habitat. Non-natural land cover types on the study area include open water, developed, disturbed habitat, non-native woodland, non-native grassland, and parks and ornamental plantings. These vegetation communities and land cover types are described in this section and depicted on Figure 4.3-1. Table 4.3-1 summarizes the mapped extent of each vegetation community or land cover within the study area.

The sensitive natural vegetation communities known to occur in the region include southern coastal bluff scrub, southern coastal salt marsh, and southern dune scrub (CDFW 2018a). None of these sensitive natural communities were observed within the study area. However, portions of freshwater marsh occur within the Dominguez Branch Channel in the western portion of the study area. This vegetation community is considered sensitive because it is a native vegetation community associated with a jurisdictional drainage feature (Dominguez Branch Channel).

Table 4.3-1
Vegetation Communities and Land Covers within the Study Area

Vegetation Community or Land Cover	Map Code	Study Area	
		Project Site (acres)	*100-foot buffer (acres)*
Shrubland Alliances and Stands			
California buckwheat-California sagebrush association	Erifas-Artcal	2.53	0.18
California brittlebush-California sagebrush association	Enccal-Artcal	3.09	0.00
Disturbed California buckwheat-California sagebrush association	dErifas-Artcal	3.97	0.00
Fourwing saltbush alliance	Atrcan	2.99	0.00
Menzies's goldenbush alliance	Isomen	1.16	0.00
Subtotal Shrubland Alliances and Stands		*13.74*	*0.18*
Herbaceous Communities			
Freshwater marsh	FM	3.31	0.25
Subtotal Herbaceous Communities		3.31	0.25

Table 4.3-1
Vegetation Communities and Land Covers within the Study Area

Vegetation Community or Land Cover	Map Code	Study Area	
		Project Site (acres)	*100-foot buffer (acres)*
Non-Natural Land Covers/Unvegetated Communities			
Open Water	OW	0.00	0.98
Developed	DEV	0.53	4.66
Disturbed habitat	DH	1.65	10.02
Non-native woodland	NNW	16.45	1.20
Non-native grassland	NNG	2.97	1.07
Parks and ornamental plantings	ORN	48.37	6.39
Subtotal Non-Natural Land Covers/Unvegetated Communities		*69.97*	*24.46*
Total		**87.02**	**24.89**

Shrubland Alliances and Stands

Coastal Sage Scrub

California Brittlebush-California Sagebrush Association

The California brittlebush–California sagebrush association (*Encelia farinosa-Artemisia californica*) includes California brittlebush and California sagebrush as the co-dominant shrubs in the canopy. This alliance has a continuous or intermittent shrub canopy less than 7 feet (2 meters) in height with a variable ground layer (Sawyer et al. 2009). Species associated with this alliance include chamise (*Adenostoma fasciculatum*), California brittlebush, Eastern Mojave buckwheat, chaparral yucca, common deerweed, and white sage (Sawyer et al. 2009). This community occurs in the southern portion of the study area, in an area located between golf course fairways.

The California brittlebush-California sagebrush association does not have a state ranking, meaning it is apparently secure globally and is not vulnerable to extirpation or extinction in the state. This association is not considered a sensitive vegetation community per CDFW (2018b).

California Buckwheat-California Sagebrush Disturbance Mapping Unit

The California buckwheat-California sagebrush disturbance mapping unit is not recognized by the Natural Communities List (CDFW 2018c). This mapping unit was used to differentiate areas co-dominated by California buckwheat and California sagebrush, but characterized by areas of disturbance particularly within the understory that creates a more open canopy. The California buckwheat scrub-California sagebrush association disturbance mapping unit within the study area is substantially disturbed from previous and ongoing disturbances. This community supports

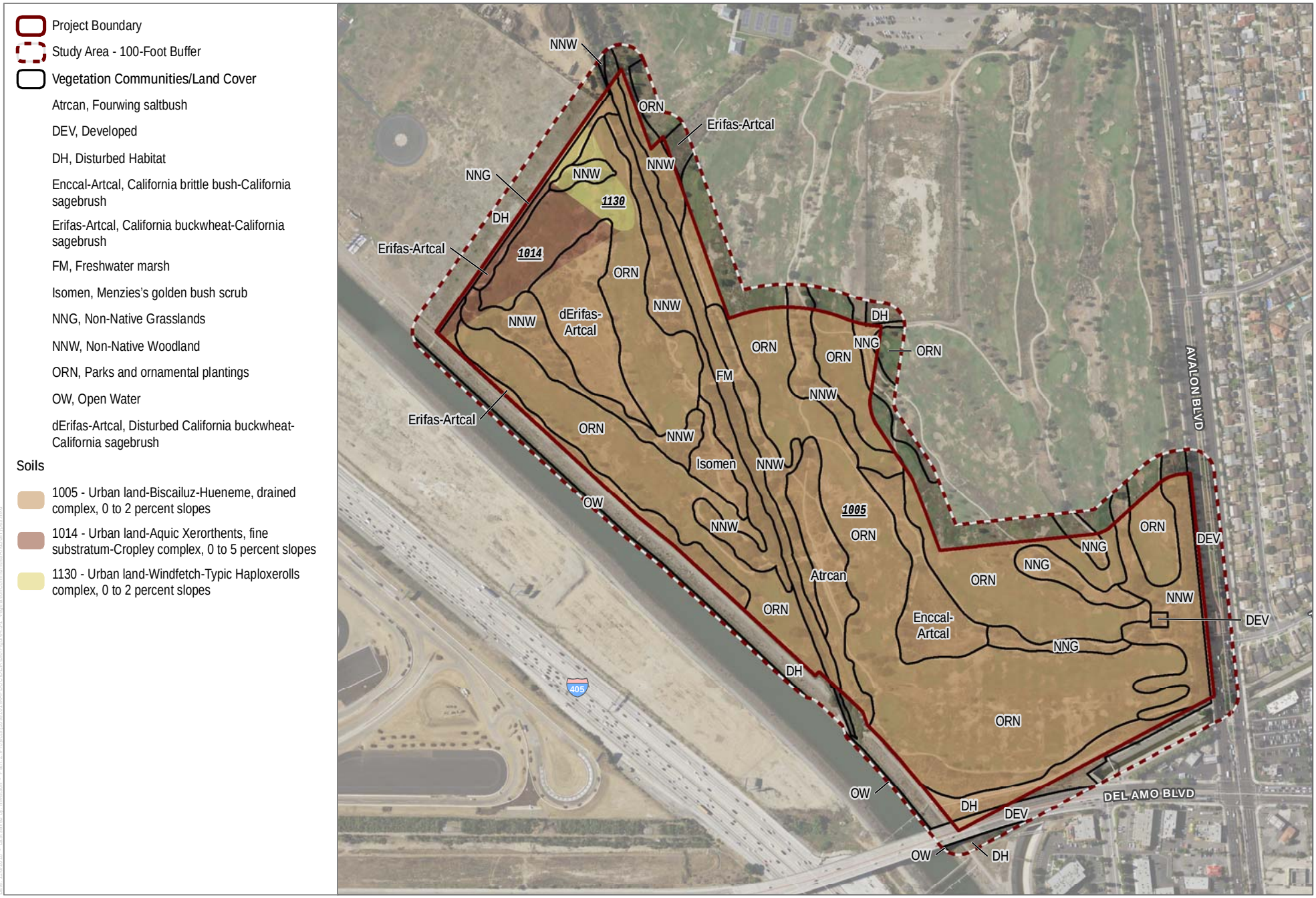
anywhere from 20% to 40% cover of native vegetation dominated by California buckwheat and 60% to 80% cover of non-native annual grasses, other non-native species, and bare ground. Although the California buckwheat-California sagebrush association within the study area is dominated by California buckwheat and California sagebrush, it also contains forbs and grasses dominated by bromes (*Bromus* spp.), wild oat (*Avena fatua*), fescue (*Festuca* sp.), black mustard, stork's bill, and star-thistle (*Centaurea* sp.). This vegetation community occurs along the northwestern portion of the site where the slope stabilization is proposed to occur.

The California buckwheat-California sagebrush association disturbance mapping unit does not have a state rank, meaning it is apparently secure globally and is not vulnerable to extirpation or extinction in the state. This association is not considered a sensitive vegetation community per CDFW (2018b).

California Buckwheat-California Sagebrush Association

The California buckwheat-California sagebrush association (*Eriogonum fasciculatum-Artemisia californica*) includes Eastern Mojave (California) buckwheat and California sagebrush as the co-dominant shrubs in the canopy. This association has a continuous or intermittent shrub canopy less than 7 feet (2 meters) in height with a variable ground layer that may be grassy (Sawyer et al. 2009). Species typically observed within this association include black sage (*Salvia mellifera*), white sage (*Salvia apiana*), California brittlebush (*Encelia farinosa*), chaparral yucca (*Yucca whipplei*), Mendocino bushmallow (*Malacothamnus fasciculatus*), Menzies' goldenbush (*Isocoma menziesii*), coyotebrush (*Baccharis pilularis*), and common deerweed (*Acmispon glaber* var. *glaber*) (Sawyer et al. 2009). This vegetation community association occurs in the western portion of the study area, along the boundaries of the existing golf course.

The California buckwheat-California sagebrush association does not have a state rank, meaning it is apparently secure globally and is not vulnerable to extirpation or extinction in the state. This association is not considered a sensitive vegetation community per CDFW (2018b).



SOURCE: Los Angeles County 2011; USDA 2016/2018

DUDEK

FIGURE 4.3-1

Vegetation Communities and Soil Types

The Creek at Dominguez Hills Project

INTENTIONALLY LEFT BLANK

Alkaline Scrub

Fourwing Saltbush Alliance

The fourwing saltbush (*Atriplex canescens*) shrubland alliance includes fourwing saltbush as the dominant or co-dominant shrub in the canopy. This community has an open to intermittent canopy with shrubs less than 3 meters in height, and an herbaceous layer that is variable with seasonal herbs and non-native grasses (Sawyer et al. 2009). Species typically observed in this alliance include burro weed (*Ambrosia dumosa*), burrobush (*Ambrosia salsola*), spiny saltbush (*Atriplex confertifolia*), cattle spinach (*Atriplex polycarpa*), green rabbitbrush (*Chrysothamnus viscidiflorus*), bladderpod (*Cleome isomeris*), green ephedra (*Ephedra viridis*), hop sage (*Grayia spinosa*), creosote bush (*Larrea tridentata*), and bush seepweed (*Suaeda moquinii*). This community occurs in a swath near the center of the study area, east of the drainage feature.

The fourwing saltbush alliance does not have a state rank, meaning it is apparently secure globally and is not vulnerable to extirpation or extinction in the state. This alliance is not considered a sensitive vegetation community per CDFW (2018b).

Menzies's Goldenbush Alliance

The Menzies's goldenbush (*Isocoma menziesii*) shrubland alliance includes Menzies's goldenbush as the sole or dominant shrub in the canopy. Menzies's goldenbush alliance has an open to intermittent canopy of shrubs less than 1 meter in height, with an herbaceous layer that is open to continuous, diverse, and grassy (Sawyer et al. 2009). Species typically observed within this association include California orach (*Atriplex californica*), broom baccharis (*Baccharis sarothroides*), matchweed (*Gutierrezia californica*), and Virginia glasswort (*Salicornia depressa*). This community typically occurs on alluvial fans, arroyos, and stream terraces. On the study area this community occurs in a relatively small patch in the center of the study area, west of the drainage feature.

The Menzies's goldenbush alliance has a rank of G4S4, meaning it is apparently secure globally and is vulnerable to extirpation or extinction in the state. This alliance is not considered a sensitive vegetation community per CDFW (2018b).

Herbaceous

Freshwater Marsh

Freshwater marsh is described by Holland (1986) and Oberbauer et al. (2008) as a vegetation community associated with a freshwater drainage or wetland dominate by perennial, emergent monocots 4 to 5 meters tall, and often forming completely closed canopies. *Scirpus* and *Typha* dominated species typically characterize freshwater marsh. Characteristic species include woolly

sedge (*Carex lanuginosa*), rough sedge (*C. senta*), tall sedge (*Cyperus eragrostis*), spike rush (*Eleocharis* spp.), bulrush (*Schoenoplectus* ssp.), cattail (*Typha domingensis*), and broadleaf cattail (*T. latifolia*). This community includes a mix of native and non-native species due to adjacent disturbances and seed input from upstream sources. The entire drainage feature in the center of the study area is characterized as freshwater marsh.

The freshwater marsh vegetation community does not have a state rank; however, because this vegetation community is associated with a jurisdictional drainage feature, it is considered a sensitive vegetation community.

Non-Natural Land Covers/Unvegetated Communities

Non-natural land covers and unvegetated communities are generally not recognized by the Natural Communities List (CDFW 2018c). These mapping units are used to differentiate areas that have been significantly disturbed, lack native or naturally occurring habitats, or have been constructed upon and lack vegetation. Because these non-natural and unvegetated communities do not typically support special-status species, none of these land cover types are considered sensitive by CDFW (2018b).

Non-Native Woodland

Non-native woodland includes non-native trees planted for ornamental purposes and are regularly landscaped for maintenance. This community typically contains an open canopy of trees that are planted in rows or within planters to add aesthetic value to a development. The non-native woodland on the study area consists of a mix of Washington fan palm (*Washingtonia robusta*), Aleppo pine (*Pinus halepensis*), Italian stone pine (*Pinus pinea*), and olive (*Olea europaea*). This community occurs throughout the study area, in patches outside of active golf course fairways. Scattered individual trees lining the boundaries of the fairways were not included in the mapping of this community.

Non-Native Grassland

Non-native grassland includes a mix of non-native grasses and ruderal (weedy) forbs that typically occur in disturbed areas. Most of the introduced grasses in this community are naturalized annual species. The non-native grassland on the study area consists of a co-dominance of ripgut brome (*Bromus diandrus*), Bermudagrass (*Cynodon dactylon*), slender oat (*Avena barbata*), and wild oat (*Avena fatua*). The non-native grassland mapped within the study area occurs predominantly on the eastern portion, in areas in between active fairways.

Parks and Ornamental Plantings

Parks and ornamental plantings include a mix of non-native woodland and non-native grassland vegetation, but is specific to areas of active recreational use. The parks and ornamental plantings community was mapped for the existing golf course facilities and fairways on the study area, characterized as grass sod with scattered trees that are regularly landscaped. Dudek conducted a tree survey to inventory the existing trees in the study area (Appendix C of Appendix D). The tree survey determined there are 598 trees located within and immediately adjacent to the study area, and none of trees met the County's criteria for a protected oak tree. Furthermore, the proposed site contains 21 parkway trees that are protected by the City of Carson; however, none of the site's 598 trees are protected by the Los Angeles County Oak Tree Ordinance. The site's trees are composed of 32 individual tree species. The top five tree species found on site include stone pine (*Pinus pinea*), Aleppo pine (*Pinus halepensis*), Afghan pine (*Pinus eldarica*), Canary Island Pine (*Pinus canariensis*), and Mexican fan palm (*Washingtonia robusta*). Of the 32 tree species found within the study area, only one species—the western sycamore (*Platanus racemosa*)—is native to California. All of the trees are believed to have been planted as part of the golf course's landscaping plan.

Disturbed Land

The disturbed or barren mapping unit refers to areas that lack vegetation but still retain a pervious surface or that are dominated by a sparse cover of ruderal vegetation such as Maltese star-thistle (*Centaurea melitensis*), wild oat (*Avena fatua*), black mustard (*Brassica nigra*), spiny sowthistle (*Sonchus asper*), and prickly lettuce (*Lactuca serriola*). Disturbed portions of the study area include unvegetated areas on the southern corner of the study area and on the levee along the Dominguez Channel.

Developed Land

The developed mapping unit refers to areas that generally have been graded and cleared of natural vegetation, which are then constructed upon with concrete and asphalt surfaces. Ornamental landscaped vegetation associated with the development may also be included in this mapping unit. Developed portions of the study area include paved access roads and commercial development outside the existing golf course facility.

Open Water

Open water is mapped for the Dominguez Channel that is a concrete-line channelized perennial feature that occurs in the southwestern portion of the study area. The areas of the Dominguez Channel that are mapped as open water include the channel bottom that is regularly inundated with water during most times of the year. The concrete banks of the channel are not included in the mapping of open water within the Dominguez Channel.

Plants and Wildlife

Plants

A total of 91 vascular plant species, consisting of 28 native species (31%) and 63 non-native species (69%), were recorded within the study area during surveys. A full list of plant species observed is provided in Appendix D-1 of Appendix D.

Wildlife

Wildlife species observed during the biological reconnaissance, and focused plant and gnatcatcher surveys, include common species typically observed in upland habitats and urban settings. A total of 34 wildlife species, consisting of 32 native species (94%) and 2 non-native species (6%), were recorded within the study area during surveys. Wildlife species commonly observed during the surveys are described by taxonomic group below, and a full list of wildlife species observed or detected is provided in Appendix D-2 of Appendix D.

Birds

The avian species observed during the surveys are very common in the habitats on the study area. The most common species observed was mourning dove (*Zenaida macroura*). Other commonly observed bird species include northern rough-winged swallow (*Stelgidopteryx serripennis*), barn swallow (*Hirundo rustica*), song sparrow (*Melospiza melodia*), California towhee (*Melozone crissalis*), Cassin's kingbird (*Tyrannus vociferans*), Anna's hummingbird (*Calypte anna*), European starling (*Sturnus vulgaris*), and red-tailed hawk (*Buteo jamaicensis*).

Reptiles and Amphibians

Reptiles observed within the study area included common side-blotched lizard (*Uta stansburiana*) and western fence lizard (*Sceloporus occidentalis*). No amphibians were detected during the survey, however, amphibians expected to occur include Pacific tree frog (*Pseudacris regilla*), and western toad (*Anaxyrus boreas*).

Insects

Three species of butterfly were detected during the survey: funeral duskywing (*Erynnis funeralis*), cabbage white (*Pieris rapae*), and anise swallowtail (*Papilio zelicaon*).

Mammals

Five mammal species were detected within the study area including: coyote (*Canis latrans*), desert cottontail (*Sylvilagus audubonii*), Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Otospermophilus beecheyi*), and eastern fox squirrel (*Sciurus niger*).

4.3.1.1 Special-Status Biological Resources

Special-Status Species

Appendix E of Appendix D provides tables of all special-status species whose geographic ranges fall within the general study area vicinity. Species potentially occurring based on habitat relationships are identified as having moderate or high potential to occur based on habitat conditions, and species for which there is little or no suitable habitat are identified as not expected to occur or having low potential to occur. Special-status species, and designated critical habitat areas, previously documented in the vicinity of the study area are depicted on Figure 4.3-2, CNDDB and USFWS Critical Habitat Occurrence.

Special-Status Plant Species

Special-status plants include those listed, or candidates for listing, as threatened or endangered by the USFWS and CDFW, and species identified as rare by the CNPS. Of particular concern are those species with a California Rare Plant Rank (CRPR) 1A, presumed extinct in California; CRPR 1B, rare, threatened, or endangered throughout its range; CRPR 2, rare or endangered in California, more common elsewhere; and CRPR 3, those appearing on a review list for plants that require more information. CRPR 4 species are those with limited distribution in California. For the purposes of this report, CRPR 4 species are not considered special-status and are omitted from further discussion.

Based on the results of the literature review and database searches, 36 special-status plant species were reported in the CNDDB, USFWS, and CNPS databases as occurring in the vicinity of the study area. Special-status plant species previously documented in the region and have a potential to occur on the study area are provided in Appendix E-1 of Appendix D. Appendix D analyzes the special-status plant species that were included in these databases and evaluated as part of this assessment. For each species evaluated, a determination was made regarding the potential for the species to occur on site based on information gathered during the field reconnaissance, including the location of the site, habitats present, current site conditions, and past and present land use.

There are several special-status plant species documented in the region that were determined to have no or low potential to occur within the study area based on an evaluation of elevation and existing vegetation communities within the study area. Of the 36 special-status plant species listed in the CNDDB (CDFW 2018a), CNPS (2018), and USFWS (2018) databases as occurring in the

vicinity of the study area, 11 are not expected to occur within the study area and 28 were determined to have a low potential to occur within the study area. These species are omitted from further discussion in this report. Table 4.3-2 includes a summary of the 6 special-status plant species determined to have a moderate to high potential to occur on the study area. The full evaluation of these species and a description of suitable habitats is included in Appendix E-1 of Appendix D. Dudek biologists conducted a focused botanical survey on July 10, 2018 and no federally- or state-listed plant species, or other special-status plant species listed in Table 4.3-2, were detected during survey. Narrow-leaved yerba santa (*Eriodictyon angustifolium*), a CRPR 2.3 species, was previously observed on the study area but was not observed during the focused botanical survey, and therefore is currently considered absent from the study area.

Additionally, there is no USFWS-designated critical habitat for special-status plant species within the study area (USFWS 2018).

Table 4.3-2
Special-Status Plant Species with a Moderate to High Potential to Occur within the Study Area

Scientific Name	Common Name	Federal/State/CRPR	Status within Study Area
Centromadia parryi ssp. *australis*	smooth tarplant	None/None/1B.1	Absent
Crossosoma californicum	Catalina crossosoma	None/None/1B.2	Absent
Dudleya multicaulis	many-stemmed dudleya	None/None/1B.2	Absent
Isocoma menziesii var. *decumbens*	decumbent goldenbush	None/None/1B.2	Absent
Nama stenocarpa	mud nama	None/None/2B.2	Absent
Sidalcea neomexicana	salt spring checkerbloom	None/None/2B.2	Absent

CRPR: California Rare Plant Rank

1B: Plants rare, threatened, or endangered in California and elsewhere
2B: Plants rare, threatened, or endangered in California, but more common elsewhere

Threat Rank

.1 Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
.2 Fairly endangered in California (20% to 80% of occurrences threatened)

Special-Status Wildlife Species

Special-status wildlife include those listed, or candidates for listing, as threatened or endangered by the USFWS and CDFW, and designated as species of special concern (SSC) by CDFW. Based on the results of the literature review and database searches, 28 special-status wildlife species were reported in the CNDDB and USFWS databases as occurring in the vicinity of the study area. Special-status wildlife species that were documented in the region are provided in Appendix E-2 of Appendix D. Appendix D evaluates the special-status wildlife species that were included in these databases and evaluated as part of this assessment. For each species evaluated, a determination was made regarding the potential for the species to occur on site based on

information gathered during the field reconnaissance, including the location of the site, habitats present, current site conditions, and past and present land use.

There are several special-status wildlife species that are documented in the region that were determined to have no or low potential to occur within the study area based on an evaluation of elevation and vegetation communities known to occur within the study area. Of the 28 special-status wildlife species listed in the CNDDB and USFWS databases as occurring in the vicinity of the study area, 23 are not expected to occur within the study area and 3 were determined to have a low potential to occur. These species are omitted from further discussion in this report. Two special-status wildlife species have at least a moderate to high potential to occur within the study area based on the soils, vegetation communities (habitat) present, elevation range, and previous known locations. These species are summarized in Table 4.3-3.

No special-status wildlife species were observed during biological surveys conducted on the study area. Additionally, there is no USFWS-designated critical habitat for any listed wildlife species within the study area (USFWS 2018).

Table 4.3-3
Special-Status Wildlife Species with a Moderate to High Potential to Occur within the Study Area

Scientific Name	Common Name	Federal/State	Status within Study Area
Birds			
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Absent
*Riparia riparia (*nesting)	bank swallow	None/ST	Absent

Notes:
Status Legend
Federal
BCC: USFWS—Birds of Conservation Concern
FT: Federally listed as threatened
State
SC: State Candidate for listing
SSC: California Species of Special Concern
ST: State listed as threatened

Coastal California Gnatcatcher

The coastal California gnatcatcher is listed as federally threatened and a California SSC that occurs in native coastal sage scrub habitats throughout coastal Southern California and Baja Mexico. Suitable habitat for this species occurs within the stands of coastal sage scrub habitat that occur scattered throughout the project site. This species has been previously recorded within 6 miles of the study area (CDFW 2018). Focused protocol surveys were conducted on the project site by ECORP in 2015 and Dudek in 2018, both of which resulted in negative findings of coastal California gnatcatcher (ECORP 2015; Appendix A of Appendix D). A permitted biologist

conducted non-breeding season surveys in 2015 and 2018, by walking transects through suitable habitat areas and playing taped vocalizations, according to current USFWS protocol (USFWS 1997). The results of the 2015 and 2018 surveys determined that coastal California gnatcatcher are not present within the study area.

Bank Swallow

The bank swallow is a state threatened species that occurs in riparian and other lowland habitats in California with vertical banks, bluffs, and cliffs with sandy soils. The majority of the breeding population occurs in northern Central Valley, and is more common in winter in Southern California. This species forages by hawking insects during long, gliding flights and feeds predominantly over open riparian areas, but also over brushland, grassland, wetlands, water, and cropland. It uses holes dug in cliffs and river banks for cover, and will also roost on logs, shoreline vegetation, and telephone wires. The bank swallow has a high potential to occur within the Dominguez Branch Channel in the study area, due to the presence of suitable habitat. Although focused surveys for this species were not conducted, this species was not observed during the biological reconnaissance or the focused coastal California gnatcatcher surveys conducted on the study area. However, due to the presence of suitable habitat within the Dominguez Branch Channel, there is a potential for this species to move onto the study area prior to construction.

Jurisdictional Waters

Waters of the United States

The extent of potential jurisdictional waters were mapped for the study area by ESA in 2018 (Appendix F of Appendix D). Additionally, an addendum to that delineation was prepared by Dudek in 2019 to determine the extent of potential jurisdiction within the Dominguez Channel located in the southwestern portion of the study area that was not included in the original delineation because it is considered an off-site resource. Waters of the United States that are subject to the jurisdiction of the U.S. Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act (CWA) include the Ordinary High Water Mark (OHWM) limits observed within the Dominguez Branch Channel and the Dominguez Channel located on the western portion of the study area.

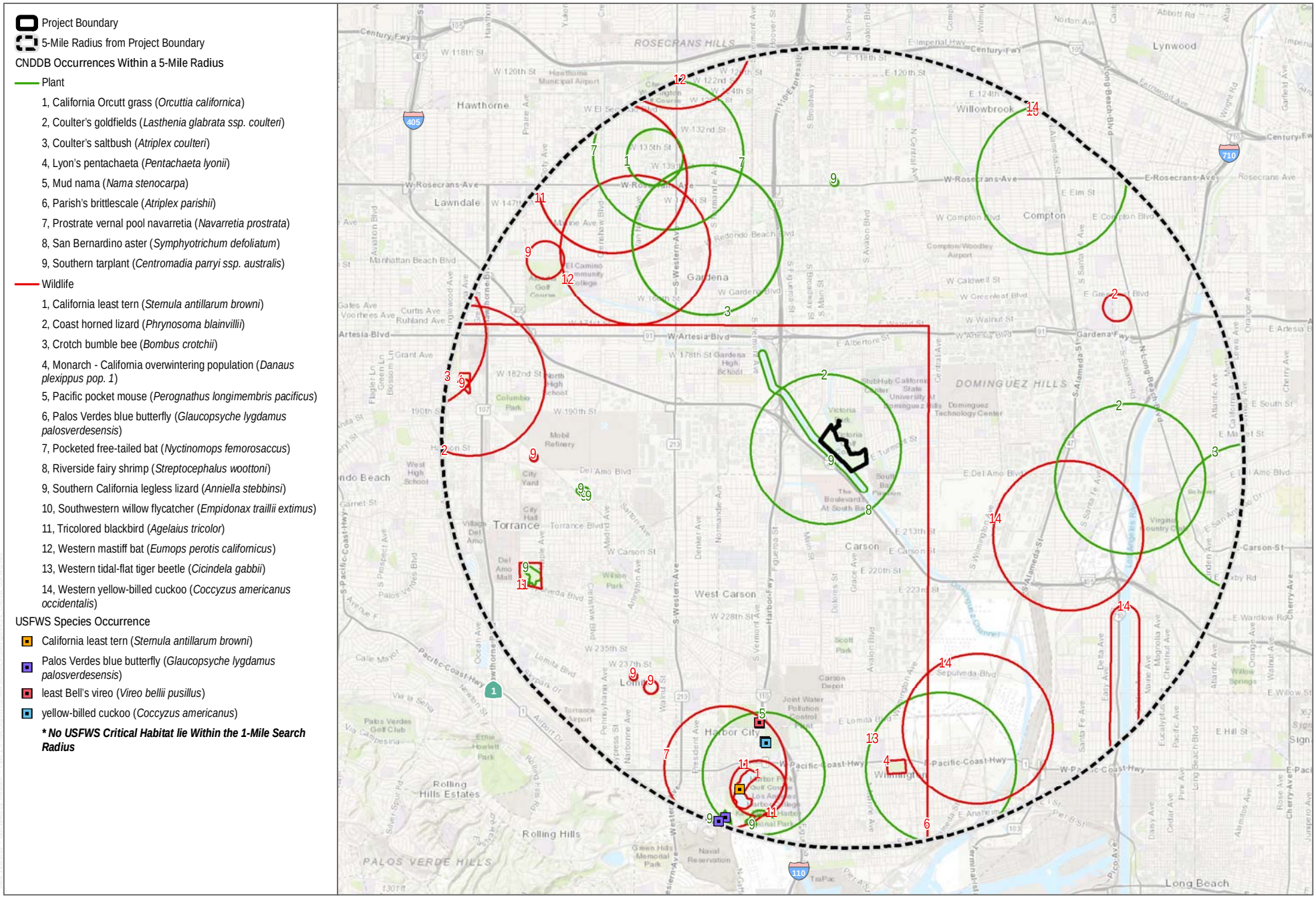


FIGURE 4.3-2

CNDDB and USFWS Critical Habitat Occurrence

The Creek at Dominguez Hills Project

INTENTIONALLY LEFT BLANK

Dominguez Branch Channel

The Dominguez Branch Channel on site is an ephemeral drainage feature that is hydrologically connected to the Dominguez Channel, a Relatively Permanent Water (RPW) that outlets into the Los Angeles Harbor, which is directly connected to the Pacific Ocean, a Traditional Navigable Water (TNW). This ephemeral drainage feature conveys upland runoff from the study area and urban development upstream of the site, downstream in a channelized and sometimes earthen-bottom trapezoidal feature, crossing below several roads through culverts, and eventually draining into the Pacific Ocean. The Dominguez Branch Channel is mapped as a riverine feature by the National Wetland Inventory (NWI), and based on the findings of the delineation survey is considered non-wetland waters of the United States (ESA 2018). As summarized in Table 4.3-4, a total of 2.26 acres of non-wetland waters of the United States was delineated within the survey area, comprising 1.63 acres within the project site and an additional 0.63-acre immediately off site to the north and south.

Dominguez Channel

The Dominguez Channel is a perennial, concrete-lined flood control channel that conveys flows from an approximately 130-square-mile area in the southern Los Angeles basin towards the Pacific Ocean. There is a clear hydrological connection between the Dominguez Channel and the Pacific Ocean downstream that is considered a TNW. The limits of potential ACOE jurisdiction was mapped for the channel bottom of the Dominguez Channel that perennially contains flowing surface water, and measured from the approximate toe of slope on the west bank to the toe of slope of the east bank. The average width for Waters of the United States within the Dominguez Channel is 130 feet. Due to the lack of any earthen substrate or hydrophytic vegetation, the Dominguez Channel does not contain the necessary three parameters (i.e., hydric soils and hydrophytic vegetation) to be considered a federal wetland. Therefore, the delineation determined there are approximately 9.98 acres of non-wetland Waters of the United States within the portion of the Dominguez Channel within the study area (Table 4.3-4).

The location of these drainage features is depicted on Figure 4.3-3, Sensitive Biological Resources.

Table 4.3-4
Potential ACOE/RWQCB Aquatic Resources Within the Study Area

Aquatic Resource Name	Aquatic Resources Classification		Aquatic Resource Size (acres)	Aquatic Resource Size (linear feet)
	Cowardin	*Location (latitude/longitude)*		
Dominguez Branch Channel	Riverine Intermittent Streambed Seasonally Flooded: Artificial Substrate (R4SBCr)	33.852172° -118.271869°	1.63 (on site)	2,704 (on site)
			0.63 (off site)	347 (off site)

Table 4.3-4
Potential ACOE/RWQCB Aquatic Resources Within the Study Area

Aquatic Resource Name	Aquatic Resources Classification		Aquatic Resource Size (acres)	Aquatic Resource Size (linear feet)
	Cowardin	*Location (latitude/longitude)*		
Dominguez Channel	Riverine Lower Perennial Unconsolidated Bottom (R2UBHr)	33.850429° -118.273589°	9.98 (off site)	8,700 (off site)
		Subtotal	**1.63 (on site) 10.67 (on site)**	**2,704 (on site) 9,047 (off site)**
		Total	**12.3**	**11,751**

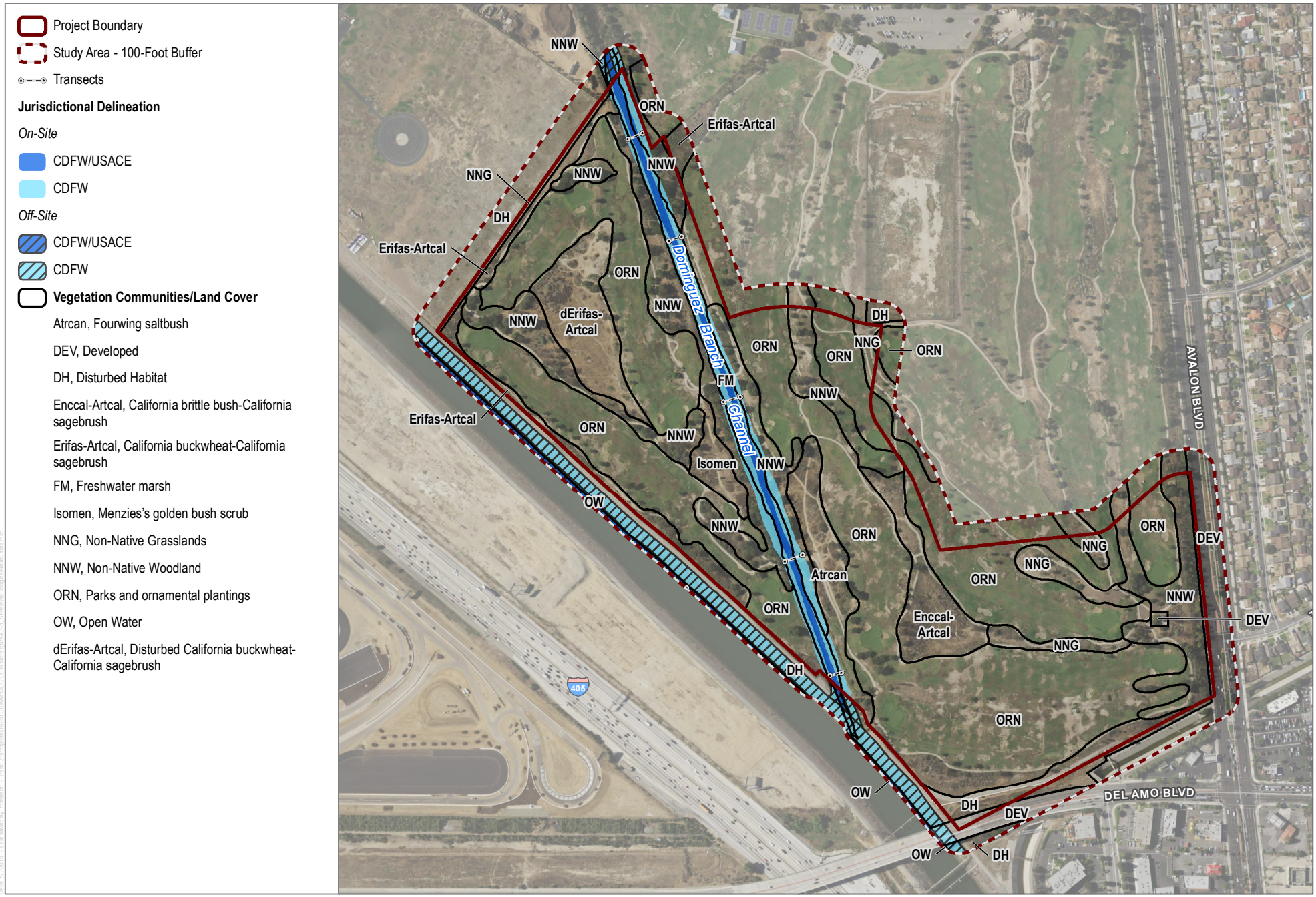
Notes: ACOE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board.

Waters of the State

The features described above as subject to ACOE's jurisdiction also fall under the authority of the Los Angeles Regional Water Quality Control Board (RWQCB) in accordance with Section 401 of the CWA. A total of 12.3 acres of non-wetland waters of the state was delineated within the study area, consisting of 1.63 acres on site and 10.67 acres off site.

California Fish and Game Code Section 1602 Jurisdiction

Areas under CDFW jurisdiction mapped on the study area include all non-wetland waters of the state, as well as upland banks and associated habitats. Areas within the Dominguez Branch Channel with potential CDFW jurisdiction were mapped to the outer limits of a defined bed and bank, and included portions of the non-native woodland canopy that were rooted within the Dominguez Branch Channel, for a total of 4.89 acres of potential CDFW jurisdiction within the study area (Table 4.3-5). The Dominguez Channel is a concrete-lined trapezoidal perennial flood control channel with potential CDFW jurisdiction mapped to the outer limits of the top of bank of the channel. The open water located within the channel bottom is considered a CDFW wetland due to the perennial presence of water and consists of 9.98 acres of unvegetated streambed. The channel banks that lack vegetation and are not regularly inundated are not considered a CDFW wetland and consists of 7.91 acres of unvegetated streambed.



SOURCE: Los Angeles County 2011; USDA 2016/2018

DUDEK

0 250 500 Feet

FIGURE 4.3-3

Sensitive Biological Resources

The Creek at Dominguez Hills Project

INTENTIONALLY LEFT BLANK

The total limits of CDFW jurisdiction within the study area include 21.88 acres, comprised of 3.52 acres of CDFW wetland on site, and 18.36 acres of CDFW wetland (9.98 acres) and non-wetland (7.91 acres) waters off site as described in Table 4.3-5 below.

Table 4.3-5
Potential CDFW Jurisdiction Within the Study Area

Aquatic Resource Name	Vegetation Community/ Land Cover	On site (acres)	Off site (acres)	Total (acres)
Dominguez Branch Channel	Fourwing Saltbush	0.13	0.0	0.13
	Freshwater Marsh	1.73	0.08	1.80
	California buckwheat-California sagebrush	0.02	0.0	0.01
	Non-Native Woodland	1.53	0.15	1.67
	Parks and ornamental plantings	0.11	0.06	1.09
	Disturbed habitat	0.0	0.18	0.18
Feature Subtotal		**3.52**	**0.47**	**3.99**
Dominguez Channel	Developed Land	0.0	7.91	7.91
	Open Water	0.0	9.98	9.98
Feature Subtotal		**0.0**	**17.89**	**17.89**
Total		**3.52**	**18.36**	**21.88**

Notes: CDFW = California Department of Fish and Wildlife.

4.3.1.2 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by assuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires). Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as stepping-stones for dispersal.

The study area is located within a developed portion of the City of Carson, and is bounded by development to the north, east, and west. The existing golf course within the study area contains a few buildings and structures, and mainly consists of open grass fairways surrounded by fencing. While local wildlife, particularly bird species, move through the study area and small to medium sized mammals occur within the study area, the existing uses on the upland portions of the study area and surrounding fencing do not facilitate movement for wildlife through a corridor.

An ephemeral drainage feature (the Dominguez Branch Channel) occurs in the western portion of the study area, which connects to a flood control channel to the north and the perennial Dominguez Channel to the south. While the majority of the study area does not function as a wildlife movement corridor due to the surrounding development, lack of connectivity with other undeveloped areas, and existing and historic uses on the site, the Dominguez Branch Channel could function as a corridor for local wildlife movement. The Dominguez Branch Channel may facilitate the movement of small to medium-sized mammals and birds from urban areas to the north towards the Dominguez Channel and eventually the Los Angeles Harbor further to the south.

4.3.1.3 Local Policies and Ordinances

The Los Angeles County Oak Tree Ordinance prohibits the cutting, destroying, removing, relocating, inflicting damage on, or encroaching into the protected zone of any tree of the oak tree genus without first obtaining a permit. No oak trees were observed in the study area during the biological reconnaissance and the focused botanical survey. Additionally, no oak trees have been documented on the study area during other previous surveys on the study area (ECORP 2015; ESA 2018).

4.3.1.4 Regional Resource Planning Context

The study area is located within the City of Carson, on land owned by the County of Los Angeles. The study area does not occur within any local or regional Natural Community Conservation Plans (NCCPs) or Habitat Conservation Plans (HCPs). Additionally, the study area does not occur within any local coastal plans or Significant Ecological Areas (SEAs) as defined and mapped by the County of Los Angeles.

4.3.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by the USFWS for most plant and animal species and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing the extinction of plants and wildlife. The FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under FESA, it is unlawful to "take" any listed species, and "take" is defined as, "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of Habitat Conservation Plans (HCPs) on private property without any other federal agency involvement.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was originally passed in 1918 as four bilateral treaties, or conventions, for the protection of a shared migratory bird resource. The primary motivation for the international negotiations was to stop the "indiscriminate slaughter" of migratory birds by market hunters and others. The MBTA protects over 800 species of birds (including their parts, eggs, and nests) from killing, hunting, pursuing, capturing, selling, and shipping unless expressly authorized or permitted.

Clean Water Act

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 requires a project operator for a federal license or permit that allows activities resulting in a discharge to waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The RWQCB administers the certification program in California. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by ACOE that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. ACOE implementing regulations are found at 33 CFR 320 and 330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the United States Environmental Protection Agency in conjunction with ACOE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Wetlands and Other Waters of the United States

Aquatic resources, including riparian areas, wetlands, and certain aquatic vegetation communities, are considered sensitive biological resources and can fall under the jurisdiction of several regulatory agencies. ACOE exerts jurisdiction over waters of the United States, including all waters that are subject to the ebb and flow of the tide; wetlands and other waters such as lakes, rivers, streams (including intermittent or ephemeral streams), mudflats, sandflats, sloughs, prairie potholes, vernal pools, wet meadows, playa lakes, or natural ponds; and tributaries of the above features. The extent of waters of the United States is generally defined as that portion that falls within the limits of the OHWM. Typically, the OHWM corresponds to the two-year flood event.

Wetlands, including swamps, bogs, seasonal wetlands, seeps, marshes, and similar areas, are defined by ACOE as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3[b]; 40 CFR 230.3[t]). Indicators of three wetland parameters (i.e., hydric soils, hydrophytic vegetation, and wetlands hydrology), as determined by field investigation, must be present for a site to be classified as a wetland by ACOE (ACOE 1987).

State

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code, Section 2050 et seq.) provides protection and prohibits the take of plant, fish, and wildlife species listed by the State of California. Unlike FESA, state-listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. Take is defined similarly to FESA and is prohibited for both listed and candidate species. Take authorization may be obtained by the project applicant from the CDFW under the CESA Section 2081, which allows take of a listed species for educational, scientific, or management purposes. In this case, private developers consult with CDFW to develop a set of measures and standards for managing the listed species, including full mitigation for impacts, funding of implementation, and monitoring of mitigation measures.

California Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the Fish and Game Code outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the "take" of any fully protected species, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock. Furthermore, it is the responsibility of the CDFW to maintain viable populations of all native species. Toward that end, the CDFW has designated certain vertebrate species as Species of Special Concern, because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

California Native Plant Protection Act

The Native Plant Protection Act of 1977 directed the CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and protect endangered and rare plants from take. The CESA expanded on the original Native Plant Protection Act and enhanced legal protection for plants, but

the Native Plant Protection Act remains part of the Fish and Game Code. To align with federal regulations, the CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in the CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the project proponent.

California Environmental Quality Act

California Environmental Quality Act (CEQA) requires identification of a project's potentially significant impacts on biological resources and ways that such impacts can be avoided, minimized, or mitigated. The act also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

CEQA Guidelines Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors." A rare animal or plant is defined in Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c).

CDFW has developed a list of "Special Species" as "a general term that refers to all of the taxa the California Natural Diversity Database (CNDDB) is interested in tracking, regardless of their legal or protection status." This is a broader list than those species that are protected under the FESA, CESA, and other Fish and Game Code provisions, and includes lists developed by other organizations, including for example the Audubon Watch List Species. Guidance documents prepared by other agencies, including the BLM Sensitive Species and USFWS Birds of Special Concern, are also included on this CDFW Special Species list. Additionally, CDFW has concluded that plant species included on the California Native Plant Society's (CNPS's) California Rare Plant Rank (CRPR) List 1 and 2, and potentially some List 3 plants, are covered by CEQA Guidelines Section 15380.

Section IV, Appendix G (Environmental Checklist Form), of the CEQA Guidelines requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service."

California Fish and Game Code Section 1602

Under these sections of the California Fish and Game Code, the project operator is required to notify CDFW prior to any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Pursuant to the code, a "stream" is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that supports or has supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial watercourses valuable to fish and wildlife are subject to CDFW jurisdiction. CDFW also has jurisdiction over dry washes that carry water during storm events.

Preliminary notification and project review generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement, which becomes part of the plans, specifications, and bid documents for the project.

California Wetland Definition

Unlike the federal government, California has adopted the Cowardin et al. (1979) definition of wetlands. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (at least 50% of the aerial vegetative cover); (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and saturated with water or covered by shallow water at some time during the growing season of each year.

Under normal circumstances, the federal definition of wetlands requires all three wetland identification parameters to be met, whereas the Cowardin definition requires the presence of at least one of these parameters. For this reason, identification of wetlands by State agencies consists of the union of all areas that are periodically inundated or saturated or in which at least seasonal dominance by hydrophytes may be documented or in which hydric soils are present.

Section 401 Clean Water Act

Under Section 401 of the CWA, the local RWQCB, Los Angeles RWQCB, must certify that actions receiving authorization under Section 404 of the CWA also meet State water quality standards. The RWQCB requires projects to avoid impacts to wetlands if feasible and requires that projects do not result in a net loss of wetland acreage or a net loss of wetland function and values. Compensatory mitigation for impacts to wetlands and/or waters of the state is required.

Porter-Cologne Water Quality Control Act

The RWQCB also has jurisdiction over waters deemed 'isolated' or not subject to Section 404 jurisdiction under the SWANCC decision. Dredging, filling, or excavation of isolated waters

constitutes a discharge of waste to waters of the state and prospective dischargers are required obtain authorization through an Order of Waste Discharge or waiver thereof from the RWQCB and comply with other requirements of Porter-Cologne Act.

Local

Los Angeles County General Plan

The *Los Angeles County General Plan* was adopted by the Board of Supervisors on October 6, 2015. The County General Plan Conservation and Natural Resources Element guides the long-term conservation of natural resources and preservation of available open space areas. Section III of the element describes the goals and policies for biological resources occurring within unincorporated county land. The main types of biological resources in the unincorporated areas are: regional habitat linkages; forests; coastal zone; riparian habitats, streambeds and wetlands; woodlands; chaparral; desert shrubland; alpine habitats; Significant Ecological Areas (SEAs); and Coastal Resource Areas (CRAs). The General Plan works to protect and enhance these resources, and ensure that the legacy of the unique biotic diversity is passed on to future generations. The following goals and policies from the Conservation and Natural Resources Element may be applicable to the project (County of Los Angeles 2015):

> **Goal:** Protection of Biological Resources
>
> **Policy C/NR 3.1:** Conserve and enhance the ecological function of diverse natural habitats and biological resources.
>
> **Policy C/NR 3.2:** Create and administer innovative County programs incentivizing the permanent dedication of SEAs and other important biological resources as open space areas.
>
> **Policy C/NR 3.3:** Restore upland communities and significant riparian resources, such as degraded streams, rivers, and wetlands to maintain ecological function—acknowledging the importance of incrementally restoring ecosystem values when complete restoration is not feasible.
>
> **Policy C/NR 3.4:** Conserve and sustainably manage forests and woodlands.
>
> **Policy C/NR 3.5:** Ensure compatibility of development in the National Forests in conjunction with the U.S. Forest Service Land and Resource Management Plan.
>
> **Policy C/NR 3.6:** Assist state and federal agencies and other agencies, as appropriate, with the preservation of special status species and their associated habitat and wildlife movement corridors through the administration of the SEAs and other programs.

Policy C/NR 3.7: Participate in inter-jurisdictional collaborative strategies that protect biological resources.

Goal: Site Sensitive Design

Policy C/NR 3.8: Discourage development in areas with identified significant biological resources, such as SEAs.

Los Angeles County Significant Ecological Areas

As part of the Conservation and Open Space and Land Use elements of the General Plan, the County has identified and adopted policies since 1970 for the establishment of Significant Ecological Areas (SEAs). These SEAs were developed to maintain biological diversity by establishing natural biological parameters (key species, habitat types, and linkages) and recommended management practices. The final boundaries and categories for the 21 SEAs (and 9 Coastal Resource Areas) were established in 2015 with the County Board of Supervisors approval of the General Plan 2035. The study area does not include any mapped SEAs, the nearest mapped SEA is located approximately 4 miles to the south within the Harbor Lake Regional Park SEA.

Los Angeles County Oak Tree Ordinance

The Los Angeles County Oak Tree Ordinance was established to recognize oak trees as significant historical, aesthetic, and ecological resources. The goal of the ordinance is to create favorable conditions for the preservation and propagation of this unique and threatened plant heritage. By making this part of the development process, healthy oak trees will be preserved and maintained. The Los Angeles County Oak Tree Ordinance applies to all unincorporated areas of the County.

Trees subject to County permit requirements include those defined by Title 22.56.2060:

> "…any tree of the oak genus which is (a) 25 inches or more in circumference (eight inches in diameter) as measured four and one-half feet above mean natural grade; in the case of an oak with more than one trunk, whose combined circumference of any two trunks is at least 38 inches (12 inches in diameter) as measured four and one half feet above mean natural grade."

Additionally, the Los Angeles County Oak Tree Ordinance defines the "Protected Zone" of a tree as, "that area within the dripline of an oak tree and extending therefrom to a point at least five feet outside the dripline, or 15 feet from the trunks of a tree, whichever distance is greater" (Title 22.56.2060).

For the purposes of determining tree impacts, trees that have protected zones that have been encroached upon would also be considered impacted.

Under the Los Angeles County Ordinance, a person must obtain a permit to cut, destroy, remove, relocate, inflict damage upon, or encroach into the protected zone of any tree of the oak tree genus (*Quercus)* that is 8 inches or more in diameter, 4.5 feet above mean natural grade, or in the case of oaks with multiple trunks, a combined diameter of 12 inches or more of the two largest trunks.

City of Carson General Plan (2004)

The City's General Plan, updated in 2004, provides a framework for all open space and conservation decisions within the City. The General Plan, Open Space and Conservation Element (Chapter 8), guides the ultimate pattern of development within the City. This chapter provides goals and policies to protect natural resources including areas required for the preservation of plant and animal life, areas of ecological and other scientific study value, rivers, streams, bays and estuaries, coastal beaches, and lake shores. The project is located on County-owned land, and all land use decisions are subject to the County General Plan. However, any off-site improvements would require approval by the City. The following goals and policies from the City General Plan Land Use Element may be applicable to the project:

Goal OSC-1: Enhancement of Carson's open space resources.

Policy OSC-1.1: Preserve and enhance the existing open space resources in Carson.

Policy OSC-1.2: Maintain existing landscaping along the City's major streets and expand the landscaping program along other arterial streets throughout the community.

Policy OSC-1.3: Require that adequate, usable and permanent private open space is provided in residential developments.

Policy OSC-1.4: Require access between open space and recreation areas and adjacent developments, where appropriate.

Policy OSC-1.5: Utilize electric transmission and other utility corridors for greenbelt and recreational uses where appropriate.

City of Carson Tree Preservation and Protection

The City of Carson manages all aspects of parkway trees to preserve aesthetics and maintain the natural environment of the community. Chapter 9 of the City Code outlines all the management practices of the City, best management practices (BMPs) for contractors, and penalties for violations of the City Code. No one is allowed to work on a parkway tree in the City without obtaining a permit first, and must follow the guidelines discussed in the City Code.

Any person, firm, partnership or corporation violating provisions of Chapter 9 of the City Code or failing to comply with its requirements may face a misdemeanor charge subject to a fine of $1,000, or the diminishment of the tree's value as set forth in the current edition of the *Guide for Plant Appraisal*, whichever is greater, and 6 months imprisonment. Each tree that is removed or trimmed on a parcel or property is considered a separate violation. Replacement of the trees in violation must be completed within 60 days of notice by the City. Violating any of the policies in Chapter 9 of the City Code during construction activities may result in an immediate stop-work order issued by the City.

A City of Carson Public Works Division Application for Permit to Remove Street Trees is required prior to the removal of any trees that meet the definitions described in Chapter 9 of the City's Tree Preservation and Protection Ordinance.

4.3.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to biological resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to biological resources would occur if the project would:

1. 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 Game or U.S. Fish and Wildlife Service.
2. 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 Game or U.S. Fish and Wildlife Service.
3. 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, hydrological interruption, or other means.
4. 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.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

As discussed in the Initial Study prepared for the proposed project (Appendix A, Initial Study and Notice of Preparation), project implementation 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. This threshold has been scoped out of this section, and as such, the following thresholds are evaluated in this EIR:

BIO-1 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 Game or U.S. Fish and Wildlife Service?

BIO-2 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 Game or U.S. Fish and Wildlife Service?

BIO-3 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, hydrological interruption, or other means?

BIO-4 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?

BIO-5 Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

4.3.4 Impacts Analysis

Approach to Analysis

This section addresses direct, indirect, and cumulative impacts to biological resources that would result from implementation of the proposed project.

- **Direct impacts** refer to complete loss of a biological resource. For purposes of this report, it refers to the area where vegetation clearing, grubbing, or grading replaces biological resources. Direct impacts were quantified by overlaying the proposed impact limits on the biological resources map of the study area. Direct impacts would occur from construction-related activities.
- **Indirect impacts** are reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the direct disturbance zone. Indirect impacts may affect areas outside the disturbance zone, including open space and areas within the study area. Indirect impacts may be short-term and construction-related, or long-term in nature and associated with development in proximity to biological resources.

The evaluation of proposed project impacts using the thresholds of significance presented above is organized by the resource potentially affected: special-status species, riparian and sensitive vegetation communities, jurisdictional waters and wetlands, and wildlife movement. The analysis presented below focuses on construction-related impacts on the proposed footprint for the redevelopment project, where existing golf course facilities will be demolished and constructed upon with new buildings and infrastructure. The entire project disturbance area will be graded for the new development, which includes new site access and internal paved access roads. The operational requirements of the proposed project will be similar to existing uses on the site and will result in negligible impacts to biological resources that would be present after construction is completed. Therefore, only construction-related impacts are analyzed in Section 4.3.4, Impacts Analysis. From this point forward, impacts will be analyzed in relation to the project site, with permanent impacts generally occurring within the boundaries of the project site and temporary impacts generally occurring within the surrounding 100-foot buffer.

Additionally, this chapter assumes that all areas within the project site boundary will be directly impacted by project activities. A 100% complete engineering design was not provided for this analysis, therefore, the impact discusses below assume a worst case scenario for project-related impacts.

BIO-1 Would the project have 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?

Special-Status Plants

The study area provides a moderate to high potential to support six special-status plant species including, smooth tarplant (*Centromadia parryi* ssp. *australis*), Catalina crossosoma (*Crossosoma californicum*), many-stemmed dudleya (*Dudleya multicaulis*), decumbent goldenbush (*Isocoma menziesii* var. *decumbens*), mud nama (*Nama stenocarpa*), and salt spring checkerbloom (*Sidalcea neomexicana*). No special-status plant species were observed in the study area during the biological reconnaissance and focused botanical survey. The surveys were conducted during the blooming period for all six species with a potential to occur on the study area, and therefore if present, these species would have been observed.

Direct Impacts

Special-status plant species are not expected to occur within the project footprint of disturbance. As a result, no significant direct impacts to special-status plants would occur with implementation of the proposed project.

Additionally, the proposed project would not occur within federally designated critical habitat for special-status plant species, and there would be no direct impacts to critical habitat.

Indirect Impacts

Special-status plant species are not expected to occur within the project footprint of disturbance. As a result, no significant indirect short-term or long-term impacts to special-status plant species would occur with implementation of the proposed project.

Special-Status Wildlife

The study area was initially determined to provide a moderate to high potential to support two special-status wildlife species known to occur in the region including, coastal California gnatcatcher (*Polioptila californica californica*) and bank swallow (*Riparia riparia*). Neither of these species were observed in the study area during the biological reconnaissance or focused surveys, thereby demonstrating the low potential for these species to occur. Additionally, the results of the 2015 and 2018 surveys determined that coastal California gnatcatcher are not present within the study area. Therefore, the study area is currently considered absent of coastal California gnatcatcher, and construction of the proposed project will result in no impacts to this species.

Direct Impacts

Although there is a low potential for special-status wildlife species to occur on the site, and none were observed during focused surveys, there is a potential for bank swallow to enter work areas just prior to the start of construction. If bank swallow is present during construction, potential direct impacts could occur, particularly within areas proposed for grading. The potential direct impact to bank swallow is discussed in the following text.

Bank Swallow

Although focused surveys for this species were not conducted, this species was not observed during the biological reconnaissance or the focused coastal California gnatcatcher surveys conducted on the study area. However, due to the presence of suitable habitat within the Dominguez Branch Channel, there is a potential for the project to result in potential direct impacts to bank swallow if it is found on the project site prior to construction. The bank swallow also has a potential to nest and forage on the project site and construction activities that occur during the avian breeding season may have a potential to directly impact an active nest and foraging habitat for this species.

Project implementation of **MM-BIO-1** would reduce potential impacts to bank swallow through pre-construction surveys and avoidance of individuals prior to construction. Impacts would be **less than significant with mitigation incorporated**.

Indirect Impacts

Short-term and long-term indirect impacts to special-status wildlife species associated with project construction activities (e.g., construction noise, increased human presence, etc.) would not likely result in significant impacts. Special-status wildlife species that could occur on the project site are adapted to the conditions generated by such activities and would not be indirectly impacted. Therefore, potential indirect impacts to special-status wildlife species will be considered **less than significant**.

Nesting Birds

Direct Impacts

The landscaped trees and native shrubs on the project site provide suitable nesting habitat for bird species protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game (CFG) Code 3500. Trimming, pruning, and/or removal of trees and native shrubs may occur as a result of construction of the project. Therefore, there may be a potential for a significant direct impact to occur to nesting birds, particularly during the general nesting season of February 1 through August 31. Project implementation of **MM-BIO-2** would reduce potential direct impacts. Impacts would be **less than significant with mitigation incorporated**.

Indirect Impacts

Noise generated by construction activities, including vegetation removal and grading, that are conducted during the avian breeding season (February 1 through August 31), could result in indirect impacts to nesting birds. Noise related to these activities has the potential to disrupt reproductive and feeding activities. Under the MBTA and CFG Code, indirect impacts to individual special-status and native birds, active nests, or the young of nesting special-status and native bird species would be considered significant, absent mitigation. Implementation of **MM-BIO-2** would reduce potential indirect impacts. Impacts would be **less than significant with mitigation incorporated**.

Additionally, an Initial Study/Mitigated Negative Declaration for a Topgolf driving range project in the City of San Jose identified the potential for migratory birds to be impacted by the introduction of a new fence barrier within the "bird collision zone" occurring within the first 60 feet above ground (City of San Jose 2016). The Initial Study/Mitigated Negative Declaration determined the potential impact to birds would result from bird strikes from the new fence, buildings, and infrastructure for the project. However, the proposed project would be constructed on an existing golf course facility that has a fenced driving range, and the proposed new facilities would not be substantially different than the existing conditions on site. Therefore, the proposed project would not result in a significant impact to nesting birds from the construction of a replacement fence around the proposed driving range.

BIO-2 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 Game or U.S. Fish and Wildlife Service?

Vegetation Communities and Land Covers

Direct Impacts

The proposed project will remove all existing upland vegetation communities identified on the project site to grade and construct the various buildings and use areas proposed by the project. The majority of the trees within the existing upland vegetation communities will also be removed by the project. These vegetation communities are not considered sensitive by CDFW or USFWS, particularly the coastal sage scrub communities, since these habitats are not occupied by coastal California gnatcatcher. No local or state regulations, including County SEAs, provide additional protection for the remainder of the upland habitats on the project site. Table 4.3-6 summarizes the acreage of direct permanent and temporary impacts to vegetation communities and land covers that occur within the project site.

Portions of the vegetation communities within the Dominguez Branch Channel in the western portion of the study area (i.e., freshwater marsh) may be directly impacted through habitat modification and/or trimming during removal and construction of a new vehicle bridge crossing. The bridge abutments may be installed within the portions of the drainage feature that support freshwater marsh and non-native woodland habitat that occurs on the slopes of the Dominguez Branch Channel. However, the majority of the freshwater marsh vegetation within the Dominguez Branch Channel is proposed to remain intact. Freshwater marsh that occurs within the Dominguez Branch Channel is considered a sensitive natural community because it is a native vegetation community associated with a potentially jurisdictional drainage feature. Therefore, if the final project design determines that freshwater marsh within the Dominguez Branch Channel would be impacted during construction of the proposed project, then these impacts would be considered significant. Implementation of **MM-BIO-3** would reduce potential impacts to **less than significant level with mitigation incorporated**.

Figure 4.3-4, Project Impacts, shows the general location of direct impact areas within the study area in relation to the biological resources documented on the study area.

Table 4.3-6
Impacts to Vegetation Communities and Land Covers within the Study Area

Vegetation Community and Land Use Type	Map Code	Direct Impacts	Indirect Impacts
Shrubland Alliances and Stands			
California buckwheat-California sagebrush association	Erifas-Artcal	2.53	0.09
California brittlebush-California sagebrush association	Enccal-Artcal	3.09	0.00

Table 4.3-6
Impacts to Vegetation Communities and Land Covers within the Study Area

Vegetation Community and Land Use Type	Map Code	Direct Impacts	Indirect Impacts
Disturbed California buckwheat-California sagebrush association	dErifas-Artcal	3.97	0.00
Fourwing saltbush alliance	Atrcan	2.99	0.55
Freshwater marsh alliance*	FM	3.31	0.25
Menzies's goldenbush alliance	Isomen	1.16	0.00
Subtotal Shrubland Alliances and Stands		*17.05*	*0.8*
Non-Natural Land Covers/Unvegetated Communities			
Open Water	OW	0.0	0.00
Developed	DEV	0.53	4.66
Disturbed habitat	DH	1.65	10.02
Non-native woodland	NNW	16.45	1.2
Non-native grassland	NNG	2.96	1.07
Parks and ornamental plantings	ORN	48.37	6.39
Subtotal Non-Natural Land Covers/Unvegetated Communities		*69.96*	*23.34*
Total		**87.01**	**24.14**

Notes:
* California Department of Fish and Wildlife Sensitive Vegetation Community.

Indirect Impacts

During construction activities, indirect edge effects may occur. Indirect edge effects are defined as side effects of the project that do not directly impact habitat, vegetation communities, species, or water quality, but might have an effect on the long-term vitality of these resources if left unmanaged. This includes dust, which could disrupt plant vitality in the short term, or construction-related soil erosion and water runoff. In the absence of BMPs, construction-related minimization measures to control dust, erosion, and runoff, and compliance with National Pollutant Discharge Elimination System (NPDES) requirements, indirect impacts to on-site riparian resources and upland communities could occur. However, standard construction BMPs and construction-related minimization measures to control dust, erosion, and runoff, including, but not limited to, straw bales and silt fencing, will be implemented to minimize these adverse effects. As a result, indirect impacts to sensitive vegetation communities would be **less than significant**.

BIO-3 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, hydrological interruption, or other means?

Jurisdictional Wetlands and Waters

Direct Impacts

The Dominguez Branch Channel on the western portion of the study area contains potential state and federal jurisdictional wetland and non-wetland waters as described in detail in Section 4.3.1.1, Sensitive Biological Resources. No federally protected wetlands occur on the project site that could be impacted by the proposed project due to the lack of all three parameters (i.e., hydrology, hydrophytic vegetation, and hydric soils) required to be considered a federal wetland. However, CDFW wetlands occur within the vegetated portions of the Dominguez Branch Channel due to the presence of surface hydrology and/or hydrophytic vegetation. The upland banks of the Dominguez Branch Channel are not considered CDFW wetlands.

The project is proposing to replace the existing golf-cart bridges that span over the Dominguez Branch Channel with bridges that can support a two-lane automobile access. It is assumed the footprint of the new bridges (i.e., the abutments placed near the top of slope of the drainage channel) will encroach into the mapped CDFW jurisdictional limits (non-wetland) of the Dominguez Branch Channel, which would be considered a significant direct impact. However, construction of the new bridges will not result in the placement of fill within the ACOE/RWQCB limits of the Dominguez Branch Channel (within the channel bottom), which would not be considered a significant direct impact.

Additionally, four storm drain outlets will be constructed within the jurisdictional limits of both the Dominguez Branch Channel on site (three), and the Dominguez Channel off site (one). The four storm drain outlets will be constructed within the CDFW non-wetland jurisdictional limits of both the Dominguez Branch Channel and the Dominguez Channel. The storm drains have been designed to avoid impacts to the bottom of both channels that would be considered ACOE- and RWQCB-jurisdictional areas. Project-related impacts from construction of the storm drain outlets within CDFW non-wetland areas would be considered a significant direct impact.

Table 4.3-7 summarizes the acreage of direct impacts that would occur to jurisdictional non-wetland waters within the study area through replacement of the bridges that span over the Dominguez Branch Channel, and the construction of storm drain outlets. Figure 4.3-4 shows the general location of direct impact areas within the study area. Removal and construction of new bridges over the Dominguez Branch Channel could have potentially significant direct impacts, including temporary and permanent impacts, on non-wetland waters under CDFW jurisdiction. No direct project-related impacts are anticipated to encroach into any areas potentially subject to ACOE and RWQCB

jurisdiction. Significant direct impacts to jurisdictional non-wetland waters would be mitigated to **less than significant with mitigation incorporated** through implementation of **MM-BIO-3.**

Table 4.3-7
Impacts to Jurisdictional Waters

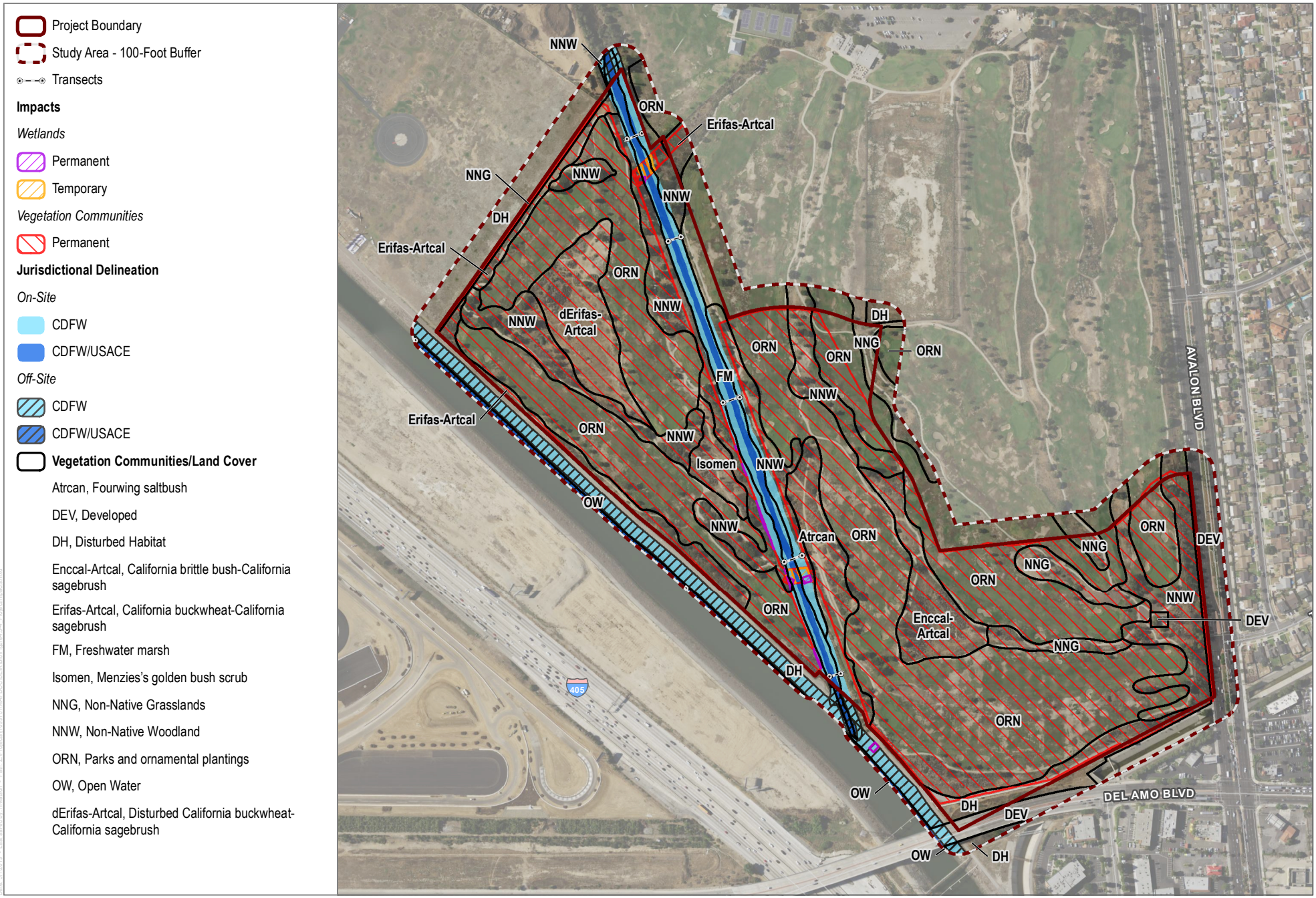
Feature	Permanent Impacts			Temporary Impacts	
	Length (feet)	*ACOE/RWQCB Waters (Non-Wetland) (acres)*	*CDFW Streambed (Non-Wetland) (acres)*	*ACOE/RWQCB Waters (Non-Wetland) (acres)*	*CDFW Streambed (Non-Wetland) (acres)*
Dominguez Branch Channel	0	0.0	0.08		0.11
Dominguez Channel	0	0.0	0.02	0.0	0.0
Total	**0**	**0.0**	**0.10**	**0.0**	**0.11**

Notes: ACOE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.

Indirect Impacts

Indirect impacts to jurisdictional waters could result primarily from shading on freshwater marsh habitat within the Dominguez Branch Channel, as well as adverse indirect edge effects during the construction of bridges and storm drains. The proposed bridges are wider than the existing bridges that currently span the Dominguez Branch Channel and as such, would create 3.31 acres of additional shade on the freshwater marsh habitat below the proposed bridges that would result in plant die off from increased daytime shade. Since the freshwater marsh habitat within the Dominguez Branch Channel is considered a sensitive vegetation community associated with a jurisdictional feature, project activities that decrease the amount of this habitat would be considered a significant indirect impact. Significant indirect impacts to CDFW jurisdictional wetland waters would be mitigated to **less than significant with mitigation incorporated** through implementation of **MM-BIO-3.**

During construction activities, edge effects may include construction-related soil erosion and water runoff. Potential long-term indirect impacts on jurisdictional waters within the site could result from increased human presence and vehicle traffic, trash, and pollution. Short-term and long-term indirect impacts to jurisdictional waters relating to construction within and adjacent to the Dominguez Branch Channel and Dominguez Channel would be considered significant. However, with implementation of construction and water quality BMPs, there would be no significant short-term or long-term indirect impacts to jurisdictional waters. Impacts would be considered **less than significant.**



SOURCE: Los Angeles County 2011; USDA 2016/2018

DUDEK

FIGURE 4.3-4

Project Impacts

The Creek at Dominguez Hills Project

INTENTIONALLY LEFT BLANK

The following BMPs shall be implemented during construction activities to further reduce the effects of project-related impacts:

- Sediment and erosion control measures should be developed and implemented in accordance with Regional Water Quality Control Board (RWQCB) Construction General Permit requirements in order to reduce the potential for the project to result in increased siltation of, or release of pollutants into tributaries to the Dominguez Channel.
- The footprint of disturbance should be limited to the maximum extent feasible, such as limiting access to the project area via pre-existing access routes to the greatest extent possible. Parking areas, staging, storage, excavation, and disposal site locations should be confined to the smallest areas possible and be positioned at previously disturbed areas to the greatest extent practical.
- To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered with tarp, plywood or similar materials at the close of each working day to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow for animals to escape, if necessary. Before such holes or trenches are backfilled, they should be thoroughly inspected for trapped animals. If trapped animals are observed, escape ramps or structures should be installed immediately to allow escape. If the trapped animal is injured and cannot use escape ramps or structures, a qualified biologist should be contacted to identify the appropriate next steps.

BIO-4 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?

Wildlife Corridors and Habitat Connectivity

Direct Impacts

As currently designed, the project is not proposing to significantly alter the Dominguez Branch Channel in the western portion of the study area. While the existing bridges spanning over the Dominguez Branch Channel would be replaced with new bridges, the function and value of the Dominguez Branch Channel will relatively remain the same. The proposed redevelopment consists of mixed-use recreational facilities and fields, which would still allow for a similar amount of upland wildlife movement through the site post-construction. No significant direct permanent impacts would occur to wildlife movement or use of native wildlife nursery sites associated with the proposed project. It is assumed existing wildlife corridor functions within the Dominguez Branch Channel would remain intact during and post construction. Project-related construction activities would not likely result in direct impacts to wildlife movement because no new structures

that would impede wildlife movement within the Dominguez Branch Channel are proposed. Additionally, work within the Dominguez Branch Channel is limited, and as currently designed, no construction equipment or activities are proposed within the Dominguez Branch Channel for a prolonged time that could cause a decrease in the use of the Dominguez Branch Channel for wildlife movement during construction. Therefore, direct impacts to wildlife corridors and habitat connectivity would be **less than significant**.

Indirect Impacts

There would be no permanent indirect impacts to wildlife movement as a result of the proposed project. Some indirect temporary impacts to localized wildlife movement could occur due to construction-related noise. However, these impacts would be temporary and would not be expected to significantly disrupt wildlife movement due to the proposed limited construction activities within the Dominguez Branch Channel and the ability for wildlife to continue to move through the Dominguez Branch Channel and upland portions of the study area during and post construction. Work activities are not currently proposed during the nighttime, requiring lighting that would need to be positioned away from the Dominguez Branch Channel. Additionally, due to the current existing uses on the site and amount of human presence, the conditions and uses surrounding the Dominguez Branch Channel post-construction would not be significantly different from existing uses, which decreases the potential for any minimal long-term indirect impacts. Therefore, **no indirect impacts** would occur to wildlife corridors or habitat connectivity.

BIO-5 Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Local Policies and Ordinances

Direct Impacts

Direct impacts are those associated with tree removal or encroachment within the tree-protected zone (canopy dripline plus 5 feet or 15 feet from trunk, whichever is greater). Tree removal is expected to be required when the trunk is located inside or within 2 feet of the proposed limits of grading. Encroachment is expected when soil and roots are disturbed within the tree-protected zone. Table 4.3-8 summarizes the number of trees, by species, expected to be subject to direct construction-related impacts. Direct tree impacts will result in the removal of 486 trees and the encroachment of an additional 22 trees (508 impacted trees total). None of the trees on site are protected by the Los Angeles County Oak Ordinance; as such, no County protected trees are impacted. However, 21 of the impacted trees are located on City right-of-way and are protected by the City of Carson's Tree Protection and Preservation Ordinance. Furthermore, it should be noted that 47 of the 508 impacted trees are dead. Project-related impacts to the 21 City-protected trees would be considered significant and require mitigation. Therefore, direct impacts associated

with trees, tree removal or encroachment within a tree-protected zone would be **less than significant with mitigation incorporated** through implementation of **MM-BIO-4.**

Table 4.3-8
Summary of Tree Impacts

Scientific Name	Common Name	Removal	Encroachment	Preservation	Indirect
Pinus halepensis	Aleppo pine	62	3	3	1
Fraxinus velutina	Arizona ash	—-	—	—	1
Acacia melanoxylon	Blackwood acacia	3	—	—	1
Sambucus nigra ssp. *caerulea*	Blue elderberry	1	—	—	—
Eucalyptus globulus	Blue gum	15	—	—	—
Schinus terebinthifolius	Brazilian pepper	19	2	2	3
Pinus canariensis	Canary Island pine	36	1	1	—
Ceratonia siliqua	Carob tree	1	—	—	—
Cupaniopsis anacardioides	Carrot wood	1	—	—	—
Ulmus parvifolia	Chinese elm	5	—	—	—
Eucalyptus rudis	Desert gum	1	—	—	—
Podocarpus gracilior	Fern pine	21 (21)*	—	—	—
Pinus pinea	Italian stone pine	97	—	—	—
Pinus bungeana	Lacebark	1	—	—	—
Callistemon citrinus	Lemon bottlebrush	2	14	14	2
Corymbia citriodora	Lemon-scented gum	32	2	2	1
Washingtonia robusta	Mexican fan palm	14	23	23	12
Fraxinus velutina	Modesto ash	2	10	10	4
Pinus eldarica	Mondell pine	68	1	1	—
Myoporum laetum	Myoporum	—	—	—	—
Olea europaea	Olive	15	3	3	—
Melaleuca linariifolia	Paperbark	4	—	—	—
Melaleuca quinquenervia	Paper-bark melaleuca	—	1	1	—
Schinus molle	Peruvian pepper	13	—	—	—
Eucalyptus camaldulensis	Red gum	4	2	2	—
Eucalyptus sideroxylon	Red ironbark	23	1	1	2
Salix laevigata	Red willow	1	—	—	—
Fraxinus uhdei	Shamel ash	1	—	—	—
Grevillea robusta	Silk oak	4	—	—	—
Corymbia maculate	Spotted gum	21	—	—	—
Eucalyptus robusta	Swamp mahogany	13	—	—	—
Platanus racemosa	Western sycamore	6	3	3	1
	Total	**486**	**22**	**63**	**27**

Notes: — = no data; *(X) Indicates number of parkway trees.

Indirect Impacts

Indirect impacts to trees are the result of changes to the site that may cause tree decline, even when the tree is not directly injured. Site-wide changes affecting trees include diverting runoff and stormwater, creating retention and detention ponds, relocating or making improvements to streams, lowering or raising water tables, altering the capacity for soil moisture recharge, removing vegetation, or damming underground water flow (Matheny and Clark 1998). Indirect tree impacts are expected for trees within 25 feet of the proposed project's limits of grading and are not subject to removal or encroachment. Indirect tree impacts for the site total 27 trees, which would not be considered significant because trees on site are not County-protected. However, if on-site trees are proposed to be protected in place, recommendations are included in the Oak Tree Report (Appendix C of Appendix D). Therefore, indirect impacts to local policies and ordinances would be **less than significant.**

4.3.5 Mitigation Measures

The following mitigation measures would be implemented during construction of the project to reduce potential direct and indirect impacts to biological resources identified in Section 4.3.4. The following measures will reduce potential project-related impacts to special-status wildlife, nesting birds, and jurisdictional waters to a less-than-significant level.

MM-BIO-1 Prior to construction, a qualified biologist shall conduct a preconstruction survey sweep within areas of suitable habitat for special-status species, specifically the bank swallow. The biologist shall look for special-status species that may be located within or immediately adjacent to project work areas (within 500-feet). If bank swallows or other special-status species are found, the biologist shall identify their location for avoidance, and establish a buffer of up to 500 feet depending on sensitivity of the species and proximity to disturbance areas. The buffer would remain in place for as long as work activities take place in proximity to the species, or until the species has completed nesting and left the nest, or until the species can be allowed to move to off-site areas.

If bank swallow is found and cannot be avoided by the project, additional mitigation will be required to comply with the California Endangered Species Act such as applying for an Incidental Take Permit (ITP) under Section 2081 of California Fish and Game Code. An ITP would require coordination with the California Department of Fish and Wildlife, payment of the application fee, and demonstration of measures to minimize and fully mitigate for proposed impacts. Additionally, impacts to occupied habitat for either species will require compensatory habitat-based mitigation through the purchase of mitigation credits at a minimum 1:1 ratio

from an approved mitigation bank. The ITP process may take an additional month to complete, but mitigation can be finalized after the project has started.

MM-BIO-2 Construction activities should avoid the migratory bird nesting season (typically February 1 through August 31), to reduce any potential significant impact to birds that may be nesting on the study area. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the project site and contiguous habitat within 500 feet of all impact areas must be conducted for protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act (16 USC 703–712) and California Fish and Game Code, Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans along with an appropriate no disturbance buffer, which will be determined by the biologist based on the species' sensitivity to disturbance (typically 300 feet for passerines and 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing.

MM-BIO-3 Direct impacts to jurisdictional waters shall be addressed through the regulatory application process to implement Section 1602 of the California Fish and Game Code. Direct temporary impacts resulting from temporary shoring of the Dominguez Branch Channel during construction of the new vehicle bridges includes 0.10 acre of non-wetland waters under California Department of Fish and Wildlife (CDFW) jurisdiction and shall be mitigated through the purchase of off-site mitigation credits. Additionally, direct permanent impacts resulting from construction of the storm drain outlets within the Dominguez Branch Channel and the Dominguez Channel up to 0.08 acre of non-wetland waters under CDFW jurisdiction shall also be mitigated through the purchase of off-site mitigation credits. Lastly, 3.31 acres of indirect permanent impacts to freshwater marsh habitat within the Dominguez Branch Channel resulting from increased shading impacts from construction of the proposed bridges shall also be mitigated through the purchase of off-site mitigation credits.

The project applicant shall purchase credits through an agency-approved mitigation bank or in-lieu fee program, such as the Soquel Canyon Mitigation Bank, or other agreement. A minimum ratio of 1:1 for establishment or reestablishment credits shall be required for impacts to jurisdictional wetland and non-wetland CDFW waters consisting of freshwater marsh habitat. The compensatory mitigation ratio is based on the existing relatively low-quality aquatic resources that occur on the

project site. However, the final mitigation ratio required will be determined through consultation with the regulatory resource agencies during the permitting process.

MM-BIO-4 To offset the loss of 21 City-protected trees, the project's landscape plan shall incorporate a minimum of 21 trees into the newly designed landscape. The replacement of 21 impacted City-protected trees with 21 trees shall result in a replacement ratio of 1:1. The 21 trees shall be replaced within the City's parkway along Avalon Boulevard. Should it be found that all 21 City-protected trees cannot be replaced in the parkway, they shall be planted in other locations as determined by the City of Carson. Additionally, the project's landscape plan is proposing to plant more than 21 trees within the project site for aesthetic purposes. Therefore, the project's proposed minimum replacement standards for the existing trees on the project site (both protected and unprotected trees) would exceed the amount typically required for replacement of protected trees.

4.3.6 Level of Significance After Mitigation

Implementation of these mitigation measures shall reduce to a **less than significant** level potential impacts to special-status wildlife species, nesting birds, jurisdictional waters, and trees protected under local policies and ordinances. Mitigation Measures **MM-BIO-1** through **MM-BIO-4** shall avoid direct impacts to individual special-status wildlife species, avoid bird nests during the nesting season (including nests, eggs, nestlings, and fledglings), compensate for impacts to jurisdictional non-wetland waters through regulatory permitting and compensatory habitat-based mitigation, and provide replacement trees for the loss of trees on the project site.

4.3.7 Cumulative Impacts

The geographic scope of cumulative impacts to biological resources is limited to the project site and the immediate surroundings that contain a limited amount of undeveloped land. The surrounding land uses consist predominantly of developed land from residential and commercial development. Although the majority of the project site does not contain developed land, the existing conditions are similar to a developed setting due to the long-term active recreational uses related to the golf course facility. Therefore, the existing biological resources on the project site are relatively limited. Additionally, no special-status species were determined to occur on any portions of the project site.

When considered with the potential cumulative impact of other related projects in the vicinity of the project site (Chapter 3), the construction of the proposed project would not contribute to a cumulatively considerable effect to biological resources in the region. The project is proposing mitigation to reduce potential impacts to a less-than-significant level for nesting birds, jurisdictional waters, and landscaped trees through avoidance and replacement mitigation. While

areas of undeveloped open space are very limited in the City of Carson, the loss of open areas of grass sod and landscaped trees on the project site is not cumulatively considerable given the lack of native habitats on the site. The Dominguez Branch Channel within the project site will be left relatively undisturbed, to allow wildlife to continue to use the drainage for refuge and movement towards the Dominguez Channel and eventually the Pacific Ocean. Therefore, the proposed project will not contribute to a cumulatively considerable impact to biological resources, particularly with implementation of project mitigation to reduce impacts to a less-than-significant level.

4.3.8 References

ACOE (U.S. Army Corps of Engineers). 1987. *Corps of Engineers Wetlands Delineation Manual.* Online ed. Environmental Laboratory, Wetlands Research Program Technical Report Y-87-1. Vicksburg, Mississippi: U.S. Army Engineer Waterways Experiment Station. January 1987. Accessed September 1, 2010. http://www.fedcenter.gov/Bookmarks/index.cfm?id=6403&pge_id=1606.

CDFW (California Department of Fish and Wildlife). 2018a. California Natural Diversity Database (CNDDB) RareFind 5 Online Database. Biogeographic Data Branch. Sacramento, California: California Natural Diversity Database. Accessed August 2018. http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

CDFW. 2018b. *Hierarchical List of Natural Communities with Holland Types*. Accessed August 2018. https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List.

CDFW. 2018c. *Natural Communities List Arranged Alphabetically by Life Form*. Accessed August 2018. https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List.

City of San Jose. 2016. *Initial Study Topgolf at Terra Project*. File GPT 16-001, PDC16-013. September 2016.

CNPS (California Native Plant Society). 2018. *Inventory of Rare and Endangered Plants*. Online ed. Version 8-01a. Sacramento, California: CNPS. Accessed August 2018. http://www.rareplants.cnps.org/detail/1599.html.

County of Los Angeles. 2015. *Los Angeles County General Plan*. Adopted October 6, 2015. Accessed August 21, 2018. http://planning.lacounty.gov/generalplan/generalplan.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States.* FWS/OBS-79/31. Prepared for U.S. Fish and Wildlife Service. December 1979. Reprinted 1992.

DTSC (Department of Toxic Substances Control). 2016. *Proposed Remedial Action Plan for Victoria Golf Course (former BKK Carson Landfill) Site Available for Public Review & Comment.*

ECORP (ECORP Consulting Inc.). 2015. DRAFT Biological Technical Report for The Links at Victoria Golf Course Los Angeles County, California. September 4, 2015.

Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, California Department of Fish and Game. October 1986.

Matheny, N., and J.R. Clark. 1998. *Trees and Development: A Technical Guide to Preservation of Trees During Land Development.* International Society of Arboriculture. June 1, 1998.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County.* March 2008. Accessed September 12, 2012. http://www.sdcanyonlands.org/pdfs/veg_comm_sdcounty_2008_doc.pdf.

Sawyer, J.O., T. Keeler-Wolf, and J. Evens. 2009. *A Manual of California Vegetation.* 2nd edition. Sacramento, California: California Native Plant Society.

USDA (U.S. Department of Agriculture). 2018a. Web Soil Survey. USDA Natural Resources Conservation Service, Soil Survey Staff. Accessed August 2018. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

USDA. 2018b. National Hydric Soils List. USDA Natural Resources Conservation Service. Accessed February 1, 2018. http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric.

USFWS (U.S. Fish and Wildlife Service). 1997. "Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol." Carlsbad, California: USFWS, Carlsbad Field Office. Revised July 28, 1997. http://www.fws.gov/pacific/ecoservices/endangered/recovery/documents/CCalGnatcatcher.1997.protocol.pdf.

USFWS. 2018. Information for Planning and Consultation. Accessed August 2018. https://ecos.fws.gov/ipac.

4.4 CULTURAL RESOURCES

This section describes the existing cultural resources of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of The Creek at Dominguez Hills project (project or proposed project). This analysis is based, in part, on a review of existing resources and applicable laws, regulations, and guidelines, as well as the Cultural Resources Study prepared by Dudek in September 2018 (Appendix E, Cultural Technical Report, of this environmental impact report (EIR)).

While the proposed project intends to develop only a portion of the existing golf course property, the Cultural Resources Study evaluates the golf course property as a whole. Therefore, the boundaries of the resource evaluated (the Links at Victoria Golf Course (Victoria Golf Course)) extend beyond the project site boundaries.

4.4.1 Existing Conditions

Plenitude Holdings LLC proposes to develop a new sports, recreation, fitness, and wellness destination (i.e., the project) on a portion of the approximately 170-acre Victoria Golf Course, located at 340 Martin Luther King, Jr. Street (formerly East 192nd Street) in the City of Carson (City). The approximately 87-acre project site is located northwest of the intersection of East Del Amo Boulevard and South Avalon Boulevard, in the southwesterly area of the golf course, as shown in Figure 3-1, Project Location, of Chapter 3, Project Description.

On February 28, 2018, Dudek completed a search of the California Historical Resources Inventory System (CHRIS) at the South Central Coast Information Center (SCCIC) for the project site and surrounding 0.5 miles. This search included mapped prehistoric, historical, and built-environment resources; Department of Parks and Recreation site records; technical reports; archival resources; and ethnographic references. Additional consulted sources included historical maps of the project site, the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Historic Property Data File, and the lists of California State Historical Landmarks, California Points of Historical Interest, and the Archaeological Determinations of Eligibility. The confidential records search results were included as Appendix A of Appendix E.

Previously Conducted Cultural Resource Studies

The SCCIC records indicate that nine previous cultural resources technical investigations have been conducted within 0.5 miles of the project site between 1974 and 2002. One of these previously conducted studies intersects the project site (Table 4.4-1).

Table 4.4-1
Previously Conducted Technical Studies Within 0.5 Miles of the Project Site

Report Number	Author	Year	Report Title	Proximity to Project Site
LA-00679	Weil, Edward B.	1980	Cultural Resource Evaluation of Proposed Improvements of 190th Street Carson, California	Outside
LA-01016	Schroth, Adella	1981	Archaeological Resources Assessment of Replacement Bus Operations and Maintenance Facility for Division 18 in the City of Carson, California	Outside
LA-03583	Bucknam, Bonnie M.	1974	The Los Angeles Basin and Vicinity: a Gazetteer and Compilation of Archaeological Site Information	Outside
LA-03809	Anonymous	1979	Historic Property Survey, Del Amo Blvd.-Figueroa St. to Avalon Blvd.	Intersects
LA-04512	Eggers, A.V.	1977	Cultural Resources Inventory of the City of Carson, California	Outside
LA-03204	Wlodarski, Robert J.	1995	The Results of a Phase 1 Archaeological Study for the Proposed Del Amo Boulevard Extension Project, City of Carson, Los Angeles County, California	Outside
LA-06194	White, Laura S.	2002	Records Search Results for the Carson Town Center Project Eda Grant, City of Carson, Los Angeles County, California	Outside
LA-06200	McKenna, Jeanette A.	2002	Cultural Resource Assessment/evaluation for Nextel Communications Site CA-7805-a, Carson, Los Angeles County, California	Outside
LA-11482	Racer, F.H.	n.d.	Camp Sites in Harbor District	Outside

Previously Recorded Cultural Resources

SCCIC records indicate that no cultural resources have been previously recorded within the project site. However, the SCCIC records indicate that one resource has been previously recorded within 0.5 miles of the project site. This resource is a prehistoric site that was recorded in 1939 and updated in 1951 (Table 4.4-2).

Table 4.4-2
Previously Recorded Cultural Resources Within 0.5 Miles of the Project Site

Primary Number	Trinomial	Period	NRHP/CRHR Status	Description	Recorded By/Year
P-19-000088	CA-LAN-88	Prehistoric	Recommended Eligible for the CRHR	Miscellaneous small prehistoric sites around border of Lagunas de Los Dominguez-area has been heavily developed since recordation.	Racer, F.H. (1939); Rozaire (1951)

Notes: NRHP = National Register of Historic Places; CRHR = California Register of Historical Resources.

Native American Coordination

Sacred Lands File Search and Tribal Outreach

Although the project site encompasses only a portion of the existing Victoria Golf Course, the cultural study associated with this EIR, evaluated the golf course as a whole. Therefore, an initial Sacred Lands File search request was submitted to the Native American Heritage Commission (NAHC) on March 8, 2018, for the larger Victoria Golf Course to ensure a thorough record of Native American resources was acquired for reporting purposes. Subsequently, a second Sacred Lands File request focusing only on the project site was submitted on September 4, 2018. The NAHC responded via email on September 11, 2018, reiterating the results of the initial request, which states that the results of the Sacred Lands File search failed to indicate the presence of Native American cultural resources for the project area. The NAHC also provided a list of six Native American groups and individuals who may have knowledge of cultural resources in the project area. On September 25, 2018, Dudek mailed letters to all six individuals listed on the NAHC consultation list detailing the proposed project, the project location, and requesting any information about potential tribal cultural resources within the project site (Table 4.4-3). This outreach was conducted for informational purposes only and did not constitute formal government-to-government consultation as specified by AB 52, which is discussed in detail in Section 4.15, Tribal Cultural Resources. Copies of the letters mailed to each individual are included in Appendix E.

Table 4.4-3
Native American Heritage Commission-Listed Native American Contacts

Native American Tribal Representatives	Method of Notification/Date	Response Received
Anthony Morales, Chairperson San Gabriel Band of Mission Indians	Certified Mail; September 25, 2018	None to date
Sandonne Goad, Chairperson Gabrielino-Tongva Nation	Certified Mail; September 25, 2018	None to date
Robert F. Dorame, Chairman Gabrielino Tongva Indians of California Tribal Council	Certified Mail; September 25, 2018	None to date
Linda Candelaria, Chairperson Gabrielino-Tongva Tribe	Certified Mail; September 25, 2018	None to date
Charles Alvarez, Council Member Gabrielino Tongva Tribe	Certified Mail; September 25, 2018	None to date
Andrew Salas, Chairperson Gabrieleno Band of Mission Indians – Kizh Nation	Certified Mail; September 25, 2018	Received September 24, 2018, via email from Admin Specialist. Response requests to be informed of any project ground disturbance.

Archival Research

Archival research for the project site involved extensive primary and secondary source review, review of historic maps, review of historic photographs, and in-person visits for building information. All archival research was conducted by Dudek Architectural Historian Sarah Corder, MFA, and Dudek Archaeologist Erica Nicolay, MA. Sources included the Los Angeles County Tax Assessor's Office, the City Public Library, the California State University Dominguez Hills archives and special collections, and the Golf Historical Society. A review of architectural drawings, historic aerial photographs, and maps was also conducted.

Previous Evaluations of the Links at Victoria Golf Course

In December 2016, Sapphos Environmental Inc. (Sapphos) prepared an historical significance evaluation for the County of Los Angeles Department of Public Works. This study, titled Historical Resources Evaluation for The Links at Victoria Golf Course, found that:

> The Links is one of the first municipal golf courses designed and constructed on a closed landfill, initiating a trend to repurpose otherwise unusable land into land of beneficial use to the public … The manmade landscape, setting, buildings, and structures do not retain sufficient historic integrity or meet the criteria for listing as a historic district; nor do any of the buildings, structures, or landscape qualify independently for listing in the National Register of Historic Places (NRHP), CRHR, and County Register.

The 2016 evaluation found all buildings and structures associated with The Links at Victoria Golf Course ineligible, and also found that "the driving range, putting greens and fairways, and clubhouse … have been substantially altered and do not retain sufficient integrity; therefore they are not eligible for listing as a historic district in the NRHP, CRHR, and County Register pursuant to Criterion A/1" (Sapphos 2016: 7-1). The report goes on to state that despite this finding, The Links, exclusive of the buildings and landscape, "possesses historical significance and is eligible for listing as an individual site in the CRHR and County Register pursuant to Criterion 1" (Sapphos 2016:6-23).

The Office of Historic Preservation guidelines (2002) state the following with regards to the integrity of historical resources:

> In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired, or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance. Simply, resources must retain enough of their

historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance.

As explained in more detail below, Dudek conducted a pedestrian survey of the project area on May 9, 2018, for historic-age built-environment resources and archaeological resources, and also conducted building development and archival research on the entire golf course property. The survey and research indicated that alterations to the buildings and golf course have significantly compromised the integrity of the subject property. Following the Office of Historical Preservation guidance above, because the subject property no longer retains integrity, it cannot convey its important historical associations and is not eligible for designation.

Cultural Resources Survey

Dudek conducted a pedestrian survey of the project area on May 9, 2018, for historic-age built-environment resources and archaeological resources. Exposed ground surface was inspected for archaeological resources; however, the project site has been impacted by landscaping associated with the golf course, and there are few places where native soil is present. Ground visibility within the project site ranges from good to poor. No archaeological resources were identified during the survey.

During the built environment portion of the survey, all buildings, structures, and golf course design elements constructed over 45 years ago were surveyed and recorded. The built environment component of the survey entailed documenting each building with notes and photographs, specifically noting character-defining features, spatial relationships, and any observed alterations. The survey area was photographed using a digital camera. All field notes, photographs, and records related to the current study are on file at the Dudek office in Pasadena, California.

4.4.2 Relevant Plans, Policies, and Ordinances

Federal

Although there is no federal nexus for this project, the golf course was evaluated in consideration of National Register of Historic Places (NRHP) designation criteria and integrity requirements.

National Register of Historic Places

The NRHP is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service, under the U.S. Department of the Interior, the NRHP was authorized under the National Historic Preservation Act, as amended. Its listings encompass all National Historic Landmarks and historic areas administered by the National Park Service.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are designed to guide federal agencies, state and local governments, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
>
> A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B. That are associated with the lives of persons significant in our past; or
>
> C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D. That have yielded, or may be likely to yield, information important in prehistory or history.

Integrity is defined in NRHP guidance, How to Apply the National Register Criteria for Evaluation, as "the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity" (NPS 1990). NRHP guidance further asserts that properties be completed at least 50 years ago to be considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be "exceptionally important" (criteria consideration G) to be considered for listing.

State

California Register of Historical Resources

In California, the term "historical resource" includes "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC Section 5020.1(j)). In 1992, the California legislature established the CRHR "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 Section 5024.1(a)). The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, enumerated as follows. According to Public Resources Code (PRC), Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity" and (ii) meets at least one of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) 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.

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

To understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 CCR 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Environmental Quality Act

The following California Environmental Quality Act (CEQA) statutes (PRC Section 21000 et seq.) and CEQA Guidelines (14 CCR 15000 et seq.) are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

> PRC Section 21083.2(g) defines "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 (PRC Section 21083.2(g)):
>
> (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.

- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) defines "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource"; it also defines the circumstances when a project would materially impair the significance of a historical resource.
- PRC Section 21074(a) defines "tribal cultural resources."
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- PRC Sections 21083.2(b) and 21083.2(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures. Preservation in place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context and may help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

Under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; 14 CCR 15064.5(b)). If a site is listed or eligible for listing in the CRHR, included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (PRC Section 21084.1; 14 CCR 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (PRC Section 21084.1; 14 CCR 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA 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" (14 CCR 15064.5(b)(1); PRC Section 5020.1(q)). In turn, the significance of an historical resource is materially impaired when a project does any of the following (14 CCR 15064.5(b)(2)):

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or

(B) 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 Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, 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

(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any historical resources, then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance would be materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.2(a)–(c)).

Impacts on non-unique archaeological resources are generally not considered significant environmental impacts (PRC Section 21083.2(a); 14 CCR 15064.5(c)(4)). However, if a non-unique archaeological resource qualifies as a tribal cultural resource (PRC Sections 21074(c) and 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed in PRC Section 5097.98.

California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the county coroner has examined the remains (Health and Safety Code Section 7050.5(b)). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the

coroner must contact the NAHC within 24 hours (Health and Safety Code Section 7050.5(c)). The NAHC will notify the "most likely descendant" (MLD). With the permission of the landowner, the most likely descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Local

Los Angeles County General Plan

The *Los Angeles County General Plan* was adopted by the Board of Supervisors on October 6, 2015, and provides the policy framework for how and where the unincorporated County will grow through the year 2035. The Conservation and Natural Resources Element provides strategies and policies regarding historic and cultural resources. The following policies may be applicable to the proposed project (County of Los Angeles 2015):

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 proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

Los Angeles County Historic Preservation Ordinance

22.52.3060 - Criteria for Designation of Landmarks and Historic Districts.

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. 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% 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.

4.4.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources would occur if the project would:

- Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.
- Disturb any human remains, including those interred outside of dedicated cemeteries.

Therefore, the EIR evaluates the following thresholds:

CUL-1 Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?

CUL-2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

CUL-3 Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

4.4.4 Impacts Analysis

CUL-1 Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?

The Victoria Golf Course was recorded and evaluated in consideration of NRHP and CRHR designation criteria and integrity requirements. As a result of the significance evaluation, the course and its associated buildings were found not eligible under all NRHP and CRHR designation criteria and integrity requirements. The development of the subject property began in 1966 with construction of the course and support buildings. Since its original development, the subject property has remained a County municipal golf course. While the proposed project intends to develop only a portion of the existing golf course property, as a resource, the golf course property was evaluated as a whole. Therefore, the boundaries of the resource evaluated (i.e., the Victoria Golf Course) extend beyond the project site boundaries. The following provides an evaluation of the Victoria Golf Course in consideration of NRHP and CRHR designation criteria and integrity requirements.

Criterion A/1: That are associated with events that have made a significant contribution to the broad patterns of our history.

The subject property is one of many municipal golf courses constructed around the mid-twentieth century. The County began the process to development municipal golf courses in 1938 with the Santa Anita Golf Course. By the time the Victoria Golf Course was developed, there were 14 other municipal golf courses operated by the County. While this is an interesting period of development for the County Department of Parks and Recreation golf division, the Victoria Golf Course was one of many developed in the Greater Los Angeles area between the 1950s and 1970s. Furthermore, the course is a modest example of municipal golf courses in Los Angeles and has been significantly altered since its original design and construction. Due to a lack of significant associations with events important to history, the subject property does not appear eligible under NRHP/CRHR Criterion A/1.

Criterion B/2: That are associated with the lives of persons significant in our past.

Archival research failed to indicate any associations with significant persons. For these reasons, the subject property does not appear eligible under NRHP/CRHR Criterion B/2.

Criterion C/3: That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

The Victoria Golf Course was designed by renowned golf course designer William F. Bell. Despite its association with this prolific golf course architect, the course has been heavily altered numerous times over the years and no longer retains requisite integrity of Bell's original design. Changes to the irrigation systems, regrading, reseeding, new plantings, and the addition of golf course paths that have altered the original use and traffic patterns within the course, and ultimately compromised the integrity of the course's original design and materials.

Original building plans for the clubhouse building and associated landscape design features indicate that the building was designed by architect Edwin H. Ripperdan and landscape designer Edward R. Lowell. Archival research failed to indicate any significant works by either designer; therefore, it appears that neither designer was a master architect or important creative individual. The buildings represents a modest example of the Mid-Century Modern style of architecture and does not serve as a significant example of the style. With regard to the clubhouse complex, which is outside the project boundaries, there is evidence of significant roof changes, replacement doors, replacement windows, reconfiguration of openings, infill openings, and landscape design changes. In addition, Outbuildings 1 and 2 have been significantly altered over the years, including replacement windows and the reconfiguring of openings. For all of these reasons, the subject property does not appear eligible under NRHP/CRHR Criterion C/3.

Criterion D/4: That have yielded, or may be likely to yield, information important in prehistory or history.

The golf course has not and is unlikely to yield any information important in prehistory or history given the disturbed nature of the site, and therefore does not appear eligible under NRHP/CRHR Criterion D/4.

Integrity Considerations

Since the initial development of the subject property as the Victoria Golf Course, the property's location has remained unchanged. When the golf course was developed, the surrounding area was already developed and appears to maintain a similar level of development; therefore, the subject property retains integrity of setting. However, the course and the clubhouse complex have experienced significant alterations since original construction that have compromised the integrity of design, materials, and workmanship. As previously mentioned, significant changes to the clubhouse complex and outbuildings have occurred since its construction. Therefore, these structures do not retain the requisite integrity of design, materials, and workmanship. These alterations have also diminished the feeling and association of the clubhouse complex.

The integrity of the golf course is also part of the subject property's overall integrity. The course was originally designed by renowned architect William F. Bell but was significantly altered multiple times over the years starting in the 1970s with work on specific fairways, renovation of the front nine holes, new irrigation systems, and the construction of additional paths. While these changes were significant to the overall design of the course, it was not until the late 1990s that the entire course was redesigned by Casy O'Callaghan. During the 1990s renovations, the course was regraded, fill dirt was added to elevate the course an average of 2 feet, new irrigation systems were added, 500 trees were planted on the site, new drainage systems were put in place, and alterations were made to the greens and the sand bunkers. Therefore, the 1970s renovations combined with the 1990s renovations have significantly altered the design, materials, workmanship, feeling, and association.

In summary, alterations to the subject property buildings and golf course have significantly compromised the integrity of the subject property. The property is not considered an historical resource for the purposes of CEQA, and no recommendations for management are required. The project would result in a **less-than-significant impact** on historical resources.

CUL-2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

As previously discussed, Dudek conducted a pedestrian survey of the project area on May, 9, 2018, for archaeological resources. Additionally, a CHRIS records search was conducted for the project site and within a 0.5-mile buffer around the site. No archaeological resources were identified

within the project site as a result of the CHRIS records search, Native American outreach, or intensive pedestrian survey.

The project site was previously used as a landfill for surrounding communities from 1948 to 1959. After this, the site was graded and landscaped to function as a golf course. Due to these factors, the likelihood of encountering archaeological resources on the project site is low. Additionally, no cultural resources have been previously recorded within the project site. However, the SCCIC records indicate that one resource has been previously recorded within 0.5 miles of the project site. This resource is a prehistoric site that was recorded in 1939 and updated in 1951. Since then, extensive development has likely destroyed any remnants of the site.

However, it is always possible that unanticipated discoveries could be encountered during ground-disturbing activities associated with the proposed project. If such unanticipated discoveries were encountered, impacts to encountered resources could be potentially significant. However, with implementation of mitigation measure **MM-CUL-1**, which requires that all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology, can evaluate the significance of the find, potentially significant impacts to archaeological resources would be reduced to less-than-significant levels. Therefore, impacts would be **less than significant with mitigation incorporated.**

CUL-3 Would the project disturb any human remains, including those interred outside of formal cemeteries?

Due to the project's prior use as a landfill and continued use as a golf course since 1966, the likelihood of disturbing human remains on the project site is low. In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the Los Angeles County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the County Coroner determines that the remains are, or are believed to be, Native American, they shall notify the NAHC in Sacramento within 24 hours. In accordance with California PRC, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descended from the deceased Native American. The most likely descendant shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains. **MM-CUL-2** has been included to ensure impacts associated with human remains would be less than significant. Therefore, impacts would be **less than significant with mitigation incorporated.**

4.4.5 Mitigation Measures

The following mitigation measures would ensure that the project has a less-than-significant impact on cultural resources.

MM-CUL-1 If archaeological resources (i.e., sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted. The archaeologist shall be empowered to temporarily stop or redirect grading activities to allow removal of abundant or large artifacts. Depending upon the significance of the find under the California Environmental Quality Act (CEQA) (14 CCR 15064.5(f); PRC, Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan and data recovery, may be warranted. The archaeologist shall also be required to curate specimens in a repository with permanent retrievable storage and submit a written report to the lead agency for review and approval prior to occupancy of the first building on the site. Once approved, the final report will be filed with the South Central Coast Information Center (SCCIC).

Once artifact analysis is completed, a final written report detailing the results of all research procedures and interpretation of the site shall be submitted to the lead agency for review and approval prior to occupancy of the first building on the site.

MM-CUL-2 In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found within the project site, the county coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the county coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the county coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant (MLD) of the deceased Native American. The MLD shall complete his/her inspection within 48 hours of being granted access to the site. The designated MLD would then determine, in consultation with the property owner, the disposition of the human remains.

4.4.6 Level of Significance After Mitigation

With adherence to **MM-CUL-1** and **MM-CUL-2**, impacts to cultural resources as a result of the proposed project would be **less than significant**.

4.4.7 Cumulative Impacts

Cumulative impacts on cultural resources would occur if the project and related projects, when taken as a whole, substantially diminish the number of historical or archaeological resources within the same or similar context or property type. It is anticipated that historical and cultural resources that are potentially affected by related projects would be subject to the same requirements of CEQA as the proposed project, and that the project applicants would mitigate for their impacts, if applicable. These determinations would be made on a case-by-case basis, and the effects of cumulative development on cultural resources would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. It is also worth noting that the cultural study evaluated the Victoria Golf Course as a whole, thus including the project site for the Carol Kimmelman Athletic and Academic Campus. The cultural study did not identify any historical or cultural resources on either project site. Therefore, the proposed project would not contribute to a cumulatively considerable impact associated with cultural resources.

4.4.8 References

County of Los Angeles. 2015. *Los Angeles County General Plan*. Adopted October 6, 2015. Accessed August 21, 2018. http://planning.lacounty.gov/generalplan/generalplan.

NPS (National Park Service, U.S. Department of the Interior). 1990. "How to Apply the National Register Criteria for Evaluation." *National Register Bulletin: Technical Information on the National Register of Historic Places: Survey, Evaluation, Registration, and Preservation of Cultural Resources*: 1–54. Accessed December 2018. https://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf.

OHP (Office of Historic Preservation). 2002. California Office of Historic Preservation Technical Assistance Series #3, California Register of Historical Resources Questions and Answers. http://ohp.parks.ca.gov/pages/1069/files/03%20cal_%20reg_%20q_and_a.pdf.

Sapphos (Sapphos Environmental Inc.). 2016. *Historical Resources Evaluation for the Links at Victoria Golf Course.* On file with the County of Los Angeles.

INTENTIONALLY LEFT BLANK

4.5 GEOLOGY AND SOILS

This section describes the existing geological setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of The Creek at Dominguez Hills project (project or proposed project). This analysis is based on the review of available public geologic resources, including the California Geological Survey (CGS), U.S. Geological Survey (USGS), California Department of Water Resources, and California Division of Oil, Gas, & Geothermal Resources (DOGGR); and applicable laws, regulations, and guidelines. In addition, the following documents provided pertinent geologic information, such that the environmental setting and environmental impacts related to the project could be determined:

- *Geotechnical Investigation and Grading Plan Review, The Creek at Dominguez Hills Project, 340 Martin Luther King, Jr. Street, Carson, California*, prepared by Carl Kim Geotechnical Inc. (Appendix F, Geotechnical Report)
- City of Carson General Plan (2004)

4.5.1 Existing Conditions

The approximately 87-acre site is part of the former 353-acre BKK landfill, which was operated as a cut and cover landfill. The permit for the landfill industrial waste was terminated in 1960 and the landfilled waste was covered with at least two feet of cover soil. The landfill was partitioned into two operable units: Operable Unit 1 (OU-1) to the southwest and Operable Unit 2 (OU-2) to the northeast, which are separated by the Dominguez Channel. OU-2 was approximately 271 acres in size, of which 180 acres were used for landfill purposes. Between 1962 and 1966, the current Links at Victoria Golf Course was planned and constructed within OU-2 by the County of Los Angeles. As part of the grading for the golf course, a part of which includes the project site, fill material was placed to ensure a minimum of 3 feet of nominally clean soil was in place over all areas of waste. The site is bisected by a tributary channel to the Dominguez Channel, referred to as the Dominguez Branch Channel.

Regional Geology

The project site is located within the northerly portion of the Peninsular Ranges geomorphic province, which extends from the Los Angeles Basin, south of the Santa Monica Mountains, to the tip of Baja California and includes the Los Angeles Basin, offshore islands (Santa Catalina, Santa Barbara, San Nicholas, and San Clemente), and continental shelf. The eastern boundary is the Colorado Desert Geomorphic Province. The province is made of elongated northwest trending mountain ranges, separated by straight-sided sediment floored valleys. Geologic units of the Peninsular Ranges geomorphic province consist of Jurassic- and Cretaceous-age basement

rocks, overlain by an estimated 32,000 feet of marine and non-marine sedimentary strata, ranging in age from the late Cretaceous Period to Holocene Epoch (City of Carson 2004; Norris and Webb 1990; CGS 2002).

The project site is also located in the West Coast Hydrologic Basin, within the southwestern block of the Los Angeles Basin. The block is roughly rectangular in shape, is 28 miles long from northwest to southeast, and is approximately 5 to 12 miles wide. Most of the block is a low plain extending from Santa Monica in the northwest to Long Beach in the southeast. The southwest portion of the block is marked by the Palos Verdes Hills, which rise to an elevation of approximately 1,300 feet mean sea level. The Palos Verdes Hills are the most prominent topographic feature of this block and is separated from the nearly flat plain to the north and northeast by the northwest trending Palos Verdes Fault. The West Coast Basin is bound on the northeast by the Newport-Inglewood Structural Zone, which is marked by a northwest trending zone of faults and folds that form a chain of low eroded scarps and elongated hills and terraces, which extend from Newport Bay to Beverly Hills (California DWR 1961).

The project site is located within the Gardena Valley/Dominguez Channel drainage system that dissects the Torrance Plain, which is a broad, relatively featureless area of the West Coast Basin. The Dominguez Channel drains to the southeast into Long Beach Harbor and San Pedro Bay. The drainage system generally follows the Gardena Syncline, a structural depression that parallels the northwest to southeast trending Newport-Inglewood Structural Zone to the north, and the Palos Verdes Fault to the south and southwest (California DWR 1961).

Local Geology

Based on a review of soil borings and cone penetrometer test soundings, subsurface materials at the project site generally consist of artificial fill over refuse, underlain by Quaternary age alluvial deposits, as described below.

- **Artificial Fill:** Most of the site is covered with approximately 3 to 10 feet of cover fill, consisting of admixtures of silt, clay, and sand. Greater depths of fill on the order of 13 to 18 feet are also locally present, including adjacent to the Dominguez Channel.
- **Landfill Refuse:** Refuse under the site consists of soil with varying amounts of materials such as wood, glass, plastic, metal, concrete, burned material, paper, tires, rotary drilling mud, and other industrial liquids. Refuse thickness varies from 0 to about 28 feet, with an average thickness of about 20 feet.
- **Quaternary Alluvium:** Quaternary alluvium consists generally of silt and clay with silty sand, sand, and clayey sand interbeds (Appendix F).

Faults and Seismicity

The primary seismic hazards for sites in the region consist of strong ground shaking and surface fault rupture. The California Geological Survey (CGS 2018a) classifies faults as:

- Holocene-active faults, which are faults that have moved during the past approximately 11,700 years. These faults are capable of surface rupture.
- Pre-Holocene faults, which are faults that have not moved in the past 11,700 years. These faults may be capable of surface rupture, but are not regulated under the Alquist–Priolo Special Studies Zones Act of 1972, which regulates construction of buildings to be used for human occupancy.
- Age-undetermined faults, which are faults where the recency of fault movement has not been determined.

Age-determined fault definitions are necessary to eliminate agency and practitioner confusion for fault investigation reports, as mandated by the Alquist–Priolo Earthquake Faulting Zones Act of 1972 and recently revised Special Publication 42 (CGS 2018a). The intent of the Alquist–Priolo Act (detailed in section 4.5.2, Relevant Plans, Policies, and Ordinances), is to prevent siting of structures across traces of active faults. There are numerous fault zones located in the project region, as illustrated in Figure 4.5-1, Regional Faults.

- **Newport Inglewood-Rose Canyon Fault Zone:** This fault, which is located approximately 1.8 miles northeast of the project site, extends from the southern edge of the Santa Monica Mountains southeastward to an area offshore of Newport Beach. This fault zone, commonly referred to as the Newport-Inglewood Uplift, includes the Baldwin Hills, Dominguez Hills, Signal Hill, Huntington Beach Mesa, and Newport Mesa. This fault, which is designated as an earthquake fault zone by the California Geological Survey, is considered Holocene-active and capable of generating a maximum probable earthquake of moment magnitude (Mw)6.0 to 7.2 (CGS 2015; SCEDC 2013; Appendix F; City of Carson 2004).
- **Avalon Compton Fault Zone**: This fault zone, which is located approximately 1.8 miles northeast of the project site, immediately east of Avalon Boulevard and north of the Redondo Beach/Artesia Freeway, is part of the Newport-Inglewood Fault Zone. Historically, the fault has had moderate to high seismic activity with numerous earthquakes greater than Richter magnitude 4.0 (City of Carson 2004).
- **San Andreas Fault Zone:** The San Andreas Fault Zone is California's most prominent structural geological feature, which runs northwest for most of the state. The southern segment is approximately 280 miles long and extends from the Mexican border into the Transverse Ranges west of Tejon Pass. Along this segment, there is no single traceable

fault line; rather a series of several branches of the fault. This fault zone, located 48 miles northeast of the project site, is considered capable of generating a maximum probable magnitude of Mw6.8 to 8.0 (SCEDC 2013; CGS 2010).

- **Palos Verdes Fault Zone:** The Palos Verdes Fault is an approximately 48-mile-long right-reverse fault, located approximately 5 miles southwest of the project site, along the northern front of the Palos Verdes Hills. This fault has most recently ruptured during Holocene time in the offshore areas and during late Quaternary time along the onshore portions of the fault. The Palos Verdes Fault Zone is capable of a maximum probable magnitude of Mw6.0 to 7.0 (SCEDC 2013, CGS 2010).
- **Lower Elysian Park Thrust Fault:** This fault zone is comprised of subsurface thrust faults that are not exposed at the surface and are considered to be responsible for causing the Mw5.9 to Mw6.0 1987 Whittier Narrows earthquake. This fault, located approximately 11 miles northeast of the project site, has most recently ruptured during Holocene time and is capable of a maximum probable magnitude of Mw6.0 to 7.2 (SCEDC 2013; CGS 2010).
- **Puente Hill Thrust Fault.** This fault is a blind thrust fault associated with the Lower Elysian Park Thrust Fault. The Santa Fe Springs section of the fault, located approximately 9 miles northeast of the project site, is Holocene-active. The Puente Hills Fault, which extends from northern Orange County under downtown Los Angeles and into Hollywood, was most recently responsible for the 2014 magnitude Mw5.1 earthquake, centered in La Habra, and indirectly (in conjunction with the Lower Elysian Park Fault) the 1987 magnitude Mw6.0 Whittier Narrows earthquake, centered in Whittier. This fault is capable of a maximum probable magnitude of Mw7.1 (USGS 2017a; Shaw et al. 2002).
- **Santa Monica Fault Zone:** The Santa Monica Fault extends east-west approximately 14 miles, through the vicinity of Pacific Palisades, Westwood, Beverly Hills, and Santa Monica, approximately 18 miles northwest of the site. This fault has most recently ruptured during Holocene time and is capable of a maximum probable magnitude of Mw6.0 to 7.0 (SCEDC 2013; CGS 2018b; CGS 2010).

Ground Shaking

As previously discussed, the project site is located in the seismically active southern California region and the closest fault is the Avalon-Compton Fault, considered to be within the Newport-Inglewood-Rose Canyon Fault Zone. This fault is located approximately 2 miles northeast of the project site and has the potential to cause severe ground shaking. The effects of an earthquake at the project site will depend on the distance of the seismic source and the duration of the seismic motion. Generally, long-period seismic waves, which are usually caused by earthquakes that occur at a distance of approximately 9 miles or more, can damage structures such as high rise

buildings, bridges, and freeway overpasses. Short period waves can be very destructive near the epicenter of large-scale seismic events. Detectable ground shaking at the project site could be caused by any of the Holocene-active or pre-Holocene faults listed above and shown in Figure 4.5-1. The Newport Inglewood-Rose Canyon, Whitter, Santa Monica, or Palos Verdes faults are most likely to cause ground accelerations at the site (City of Carson 2004).

The primary tool that seismologists use to evaluate ground-shaking hazard and characterize statewide earthquake risks is a probabilistic seismic hazard assessment, which considers the range of possible earthquake sources and estimates characteristic magnitudes to generate a probability map for ground shaking. A commonly used probabilistic seismic hazard assessment metric consists of the peak ground acceleration (PGA), which is expressed as the percentage of the acceleration of gravity (g), which has a 10% probability of being exceeded in 50 years (i.e., a 1 in 475 chance). Use of this probability level allows engineers to design structures to withstand ground motions that have a 90% chance of not occurring in the next 50 years. This methodology requires seismic design of structures to be more conservative than if those structures were designed solely for the most probable seismic events.

Based on generalized California Geological Survey maps, the PGA for the project area with a 10% chance of being exceeded in a 50-year period ranges from approximately 0.6g to 0.7g (CGS 1999a). Similarly, using the USGS Seismic Design Maps (USGS 2018a), the PGA calculated for the project area is 0.612g (percent of gravity). Carl Kim Geotechnical Inc. (Appendix F) selected a PGA of 0.61g, for the Maximum Considered Earthquake at the project site, which has a 2% chance of exceedance in 50 years, based on published acceleration parameters of the 2016 California Building Code (CBC). For perspective, with respect to mortgage loans, the USGS considers regions to have a high seismic risk if there is a 10% or greater probability of the maximum PGA being equal to or greater than 0.15g, at any point in a 50-year period (Fannie Mae 2017).

The PGA of 0.61g is based on the American Society of Civil Engineers' *Minimum Design Loads and Associated Criteria for Buildings and other Structures,* ASCE/SEI 7-10, in association with the 2016 CBC (Chapter 16, Structural Design). The projected PGA may change due to changes in the 2019 CBC, which will base PGAs on *Minimum Design Loads and Associated Criteria for Buildings and Other Structures,* ASCE/SEI 7-16 (ASCE 2017), as a result of updates in the 2014 USGS seismic source model. The seismic source model includes updated site factors that were modified based on research (including field data) and modeling performed between 1994 and 2013. A portion of the 2019 CBC was adopted at a committee meeting on December 4 and 5, 2018; however, these standards have not yet been published. Carl Kim Geotechnical Inc. (Appendix F) has included updated seismic design values, based on the more conservative values (PGA of 0.899g) found in the ASCE/SEI 7-16, which may be required during final design.

Liquefaction/Lateral Spreading

Liquefaction occurs when water-saturated granular soils transform from a solid to a liquid state because of a sudden shock or strain. Conditions that are necessary for liquefaction are the presence of generally loose granular sediments, shallow groundwater, and seismically induced ground shaking. Groundwater was encountered at depths of approximately 19 to 38 feet, which is within the landfill refuse mass. The historic high groundwater level at the site is anticipated to be as shallow as about 10 feet below ground surface near the Dominguez Channel and Dominguez Branch Channel (CGS 1998; Appendix F).

The Newport Inglewood-Rose Canyon Fault Zone is the primary source for potential ground stress from a seismic event in the project vicinity. Liquefaction could occur in areas of shallow groundwater. The alluvial or former slough areas of the City of Carson are particularly prone to liquefaction, which can result in the shifting of foundations, settling of roadways, and rupture of underground pipelines and cables. As illustrated in Figure 4.5-2, Seismic Hazards, the majority of the project site is located within a potential liquefaction zone (City of Carson 2004; CGS 1999b).

Lateral spreading is the finite, lateral movement of gently to sloping, saturated soils deposits, caused by earthquake-induced liquefaction. Based on the high likelihood of liquefaction to occur at the site, in combination with the presence of the adjoining Dominguez Channel, the potential for lateral spreading flow failure is high (Appendix F).

Landslides

The topography in the project area is relatively flat and not conducive to slope instability. Based on the State of California Seismic Hazards Zones Map for the Torrance Quadrangle, the site is not located in an area that is susceptible to earthquake induced landslides (CGS 1999b).

Subsidence

Land subsidence is a settling or sudden sinking of a geological surface owing to subsurface movement of earth materials. The principal causes in southern California are aquifer-system compaction, drainage and decomposition of organic soils, and oil and gas extraction. Effects of land subsidence include damage to buildings and infrastructure such as roads and canals, increased flood risk in low-lying areas, and lasting damage to groundwater aquifers and aquatic ecosystems (USGS 2017b). Based on a review of USGS subsidence maps, the southeastern portion of the site is located along the perimeter of an area of regional ground subsidence (i.e., the Los Angeles/Santa Ana Basin) due to groundwater withdrawal (USGS 2018b).

In addition, refuse within the former landfill underlying the site will continue to decay and induce subsidence. Initial estimates based on prior evaluation of nearby landfill redevelopment sites indicate that over 18 inches of ground surface settlement may occur (Appendix F).

SOURCE: Carl Kim Geotechnical, Inc. 2018

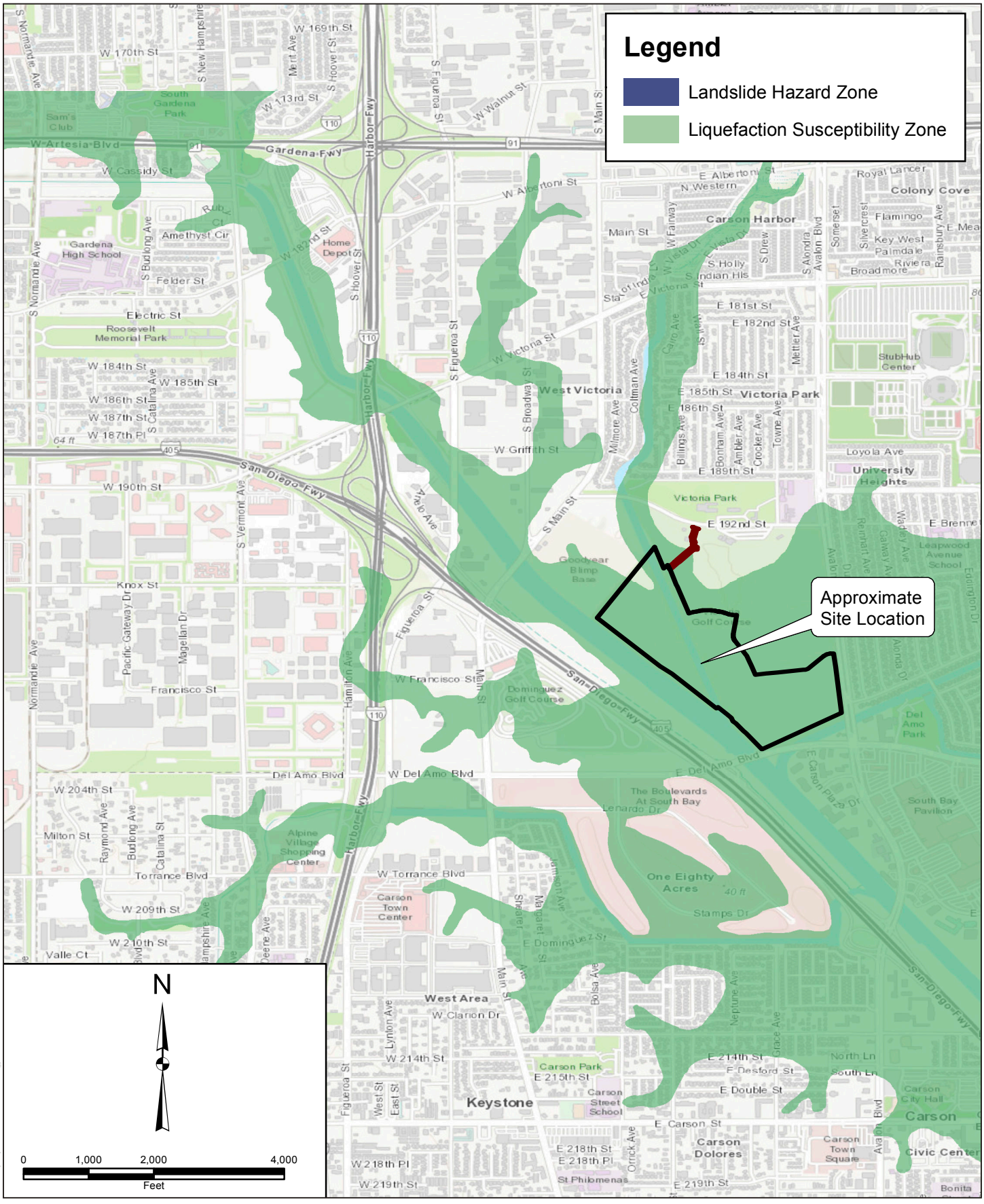
FIGURE 4.5-1

Regional Faults

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK



SOURCE: Carl Kim Geotechnical, Inc. 2018

FIGURE 4.5-2

Seismic Hazards

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

Expansive Soils

Expansive soils tend to swell with seasonal increases in soil moisture in the winter months and shrink as soils become drier in the summer months. Repeated shrinking and swelling of the soil can lead to stress and damage of structures, foundations, fill slopes, and other associated facilities. Expansive soils owe their characteristics to the presence of swelling clay minerals. As previously discussed, subsurface materials at the project site generally consist of artificial fill over refuse, underlain by Quaternary age alluvial deposits. A relatively impermeable clay layer was placed over the landfill deposits to prevent downward migration of stormwater runoff into the refuse. Based on available subsurface data, the near-surface soils are considered to have a medium expansion potential (Appendix F).

Paleontological Resources

The project site had been used as a landfill and was later graded and landscaped to function as a golf course. Additionally, the surrounding area has been heavily developed. The likelihood of encountering paleontological resources or unique geologic features on the project site is low. Nonetheless, a paleontological records search and geological review was conducted for the project site.

In general, this area is mapped as being underlain by Holocene (< 12,000 years ago) Quaternary alluvium (map unit Qa) and elevated Quaternary alluvium (map unit Qae) that is slightly older, elevated, and dissected (Dibblee et al. 1999). The paleontological records search conducted at the Natural History Museum of Los Angeles County (LACM) did not cite specific geological mapping; however, they did report old lagoonal deposits occurring within the majority of the project area (McLeod 2018). These deposits are associated with the Dominguez Channel, which runs northwest to southeast, due southwest of the project site. Surficial geological mapping by Dibblee et al. (1999) at a scale of 1:24,000 indicates the project area to be underlain by Holocene, or Recent (< 11,000 years old) alluvial deposits (map unit Qa) and elevated Quaternary alluvium (map unit Qae) that is slightly older and dissected. Presumably the Holocene alluvium overlies older, Pleistocene, or "Ice-Age" (approximately 2.6 million to 12,000 years old) deposits at an unknown depth (Dibblee et al. 1999; McLeod 2018). Younger, Holocene age alluvial deposits have a low paleontological resource sensitivity. However, older, Pleistocene age alluvial deposits, in addition to fine-grained lagoonal deposits (if encountered), have the potential to produce scientifically significant vertebrates and have a moderate to high paleontological resource sensitivity (McLeod 2018).

Past excavation activities in the area surrounding the project site have encountered paleontological resources in older Quaternary alluvial deposits. Jefferson (1991) reported numerous localities from this part of Los Angeles County that yielded Ice Age fossil amphibians,

reptiles, birds, and mammals. According to the records search results received from the LACM, the closest fossil locality to the project site within older Quaternary alluvial deposits is located near the intersection between 190th Street and Annalee Avenue (LACM 1643). This locality yielded a fossil specimen of mammoth (*Mammuthus*) from relatively shallow depths (8 to 10 feet below the ground surface, or bgs) (McLeod 2018). At slightly deeper depths (12 to 14 feet bgs), a fossil specimen of camel (*Camelops*) was found at locality LACM 3823, east of the I-110 and south of the project area, near the intersection of Sepulveda Boulevard and Figueroa Street. A second specimen of mammoth was discovered at locality LACM 1919 southeast of the project site, near the intersection of Wilmington Avenue and 223rd Street at a depth of 10 feet bgs. Localities LACM 1165, 3319, and 4129 were discovered along either side of Alameda Street, between Carson Street and Sepulveda Boulevard, which yielded fossil specimens of mammoth, camel, and bison at variable depths (McLeod 2018).

4.5.2 Relevant Plans, Policies, and Ordinances

Federal

U.S. Geological Survey Landslide Hazard Program

In fulfillment of the requirements of Public Law 106-113, the USGS created the Landslide Hazard Program in the mid-1970s. According to the USGS, the primary objective of the National Landslide Hazards Program is to reduce long-term losses from landslide hazards by improving our understanding of the causes of ground failure and suggesting mitigation strategies (USGS 2018c). The federal government takes the lead role in funding and conducting this research, whereas the reduction of losses due to geologic hazards is primarily a state and local responsibility.

State

The statewide minimum public safety standard for mitigation of earthquake hazards, as established through the CBC, Alquist–Priolo Earthquake Fault Zoning Act, and the Seismic Hazards Mapping Act, is that the minimum level of mitigation for a project should reduce the risk of ground failure during an earthquake to a level that does not cause the collapse of buildings for human occupancy.[1] But in most cases, this safety standard is not required to prevent or avoid the ground failure itself. It is not feasible to design all structures to completely avoid damage in worst-case earthquake scenarios. Accordingly, regulatory agencies have generally defined an "acceptable level" of risk as that which provides reasonable protection of the public safety; although it does not necessarily ensure continued structural integrity and functionality of a project (14 CCR 3721(a)). Nothing in these acts, however, precludes lead agencies from enacting more stringent requirements, requiring

[1] A "structure for human occupancy" is any structure used or intended for supporting or sheltering any use or occupancy, which is expected to have a human occupancy rate of more than 2,000 person-hours per year.

a higher level of performance, or applying these requirements to developments other than those that meet the acts' definitions of "project."

Alquist–Priolo Earthquake Fault Zoning Act

The Alquist–Priolo Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. In accordance with this act, the State Geologist established regulatory zones, called "earthquake fault zones," around the surface traces of active faults and has published maps showing these zones. Earthquake fault zones are designated by the CGS and are delineated along traces of faults where mapping demonstrates surface fault rupture has occurred within the past 11,700 years. Construction within these zones cannot be permitted until a geologic investigation has been conducted to prove that a building planned for human occupancy would not be constructed across an active fault. These types of site evaluations address the precise location and recency of rupture along traces of the faults and are typically based on observations made in trenches excavated across fault traces. The project is not located on a site designated to be an active earthquake fault zone.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (California Public Resources Code, Chapter 7.8, Section 2690 et seq.) directs the CGS to protect the public from earthquake-induced liquefaction and landslide hazards (note that these hazards are distinct from fault surface rupture hazard regulated by the Alquist–Priolo Act). This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones (i.e., zones of required investigation). Before a development permit may be granted for a site within a Seismic Hazard Zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design. Evaluation and mitigation of potential risks from seismic hazards within zones of required investigation must be conducted in accordance with CGS Special Publication 117A, adopted March 13, 1997, by the State Mining and Geology Board, as updated in 2008.

California Building Code

The CBC has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or those standards are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability, by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of

all building and structures within its jurisdiction. The 2016 edition of the CBC is based on the 2015 International Building Code, published by the International Code Conference.

Chapters 16 and 16A of the 2016 CBC include structural design requirements governing seismically resistant construction, including (but not limited to) factors and coefficients used to establish seismic site class and seismic occupancy category for the soil/rock at the building location and the proposed building design. Chapters 18 and 18A include (but are not limited to) the requirements for foundation and soil investigations (Sections 1803 and 1803A); excavation, grading, and fill (Sections 1804 and 1804A); damp-proofing and water-proofing (Sections 1805 and 1805A); allowable load-bearing values of soils (Sections 1806 and 1806A); the design of foundation walls, retaining walls, embedded posts and poles (Sections 1807 and 1807A), and foundations (Sections 1808 and 1808A); and design of shallow foundations (Sections 1809 and 1809A) and deep foundations (Sections 1810 and 1810A). Chapter 33 of the 2016 CBC includes (but is not limited to) requirements for safeguards at work sites to ensure stable excavations and cut or fill slopes (Section 3304).

Construction activities are subject to occupational safety standards for excavation and trenching, as specified in the California Safety and Health Administration regulations (Title 8 of the California Code of Regulations) and in Chapter 33 of the CBC. These regulations specify the measures to be used for excavation and trench work where workers could be exposed to unstable soil conditions. The proposed project would be required to employ these safety measures during excavation and trenching.

As indicated previously, the CBC is updated and revised every 3 years. The 2019 version of the CBC will be effective January 1, 2020. It is anticipated that the proposed project would use the most current CBC at the time of building permit issuance.

Occupational Safety and Health Administration Regulations

Excavation and trenching are among the most hazardous construction operations. In California, the California Occupational Safety and Health Administration (Cal/OSHA) has responsibility for implementing state standards that have been determined to be “as effective as” federal rules relevant to worker safety, including slope protection during construction excavations. Cal/OSHA’s requirements are more restrictive and protective than federal OSHA standards.

Local

Los Angeles County General Plan (2035)

The Los Angeles County (County) General Plan 2035 provides the policy framework for how and where the unincorporated portions of the county will grow through the year 2035. The current General Plan was adopted in 2015.

Geotechnical Hazards

The County General Plan Safety Element (Chapter 12) 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 man-induced slope instability. The following goals and policies must be adhered to in order to ensure compliance with the General Plan:

Goal S 1: An effective regulatory system that prevents or minimizes 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 siting and development standards.

Paleontological Resources

The Conservation and Natural Resources Element provides strategies and policies regarding historic, cultural and paleontological resources. The following policies may be applicable to the proposed 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 proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

4.5.3 Thresholds of Significance

In 2015, the California Supreme Court, in CBIA v. BAAQMD, held that CEQA generally does not require a lead agency to consider the impacts of the existing environment on the future residents or users of the project. The revised thresholds are intended to comply with this decision. Especially, the decision held that an impact from the existing environment to the project, including future users and/or residents, is not an impact for the purposes of CEQA. However, if the project, including future users and residents, exacerbates existing conditions that already exist, that impact must be assessed, including how it might affect future users and/or residents of the project.

In accordance with Appendix G of the CEQA Guidelines and the CBIA v. BAAQMD decision, a significant impact related to geology and soils would occur if the project would:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    a. 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.
    b. Strong seismic ground shaking.
    c. Seismic-related ground failure, including liquefaction.
    d. Landslides.
2. Result in substantial soil erosion or the loss of topsoil.
3. 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.
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating direct or indirect risks to life or property.
5. 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.
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

As discussed in the Initial Study prepared for the proposed project (Appendix A), impacts would be less than significant with respect to surface fault rupture and seismically-induced landslides, as the project site is not located within a State-designated Alquist–Priolo Fault Zone or potential seismically induced landslide area. Additionally, no impacts would occur associated with septic tanks or alternative wastewater disposal systems. As such, the EIR evaluates the following thresholds:

GEO-1 Would the project directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving:

a. Strong seismic ground shaking?

b. Seismic-related ground failure, including liquefaction?

GEO-2 Would the project result in substantial soil erosion or the loss of topsoil?

GEO-3 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?

GEO-4 Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating direct or indirect risks to life or property?

GEO-5 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

4.5.4 Impacts Analysis

GEO-1 Would the project directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and/or seismic-related ground failure, including liquefaction?

Strong Seismic Ground Shaking

As previously discussed, southern California is an active seismic region. Although the project site is not located within an Alquist–Priolo Earthquake Fault Zone, the site would be susceptible to potentially severe ground shaking during a seismic event. The PGA for the project site has been determined to be 0.61g (percent of gravity), for both the 2% and 10% chance of exceedance in 50 years, based on the 2016 CBC.

The project applicant would be required to design and construct the project in conformance with the most recently adopted CBC design parameters and Los Angeles County building codes, which includes completion of a site-specific geotechnical report. As previously discussed, Carl Kim Geotechnical Inc. (Appendix F) has included updated seismic design values, based on the 2019 CBC, as those more conservative values (including a PGA of 0.899g) may be required

during final design. Adherence to current building codes and engineering practices would ensure that the project would not expose people, property, or infrastructure to seismically induced ground shaking hazards that are greater than the average risk associated with locations in the southern California region. In addition, although the proposed project could be subject to severe seismic shaking, it would not increase or exacerbate the potential for earthquakes to occur and therefore would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismically induced ground shaking. As such, with conformance with building codes and standards, project impacts related to ground shaking are considered less than significant with implementation of MM-GEO-1.

Seismic-Ground Failure

The Newport Inglewood-Rose Canyon Fault Zone is the primary source for potential ground stress from a seismic event in the project vicinity. The alluvial or former slough areas of the City of Carson are particularly prone to liquefaction, lateral spreading, and seismically induced settlement, which can result in the shifting of foundations, settling of roadways, and rupture of underground pipelines and cables. As illustrated in Figure 4.5-2, the majority of the project site is located within a potential liquefaction zone. However, the project would conform to the seismic design requirements as outlined within the CBC, which contains universal standards for proper site preparation and grading practices, adequate design of foundation, and guidelines for the appropriate selection and use of construction materials. These standards also include completion of a site-specific geotechnical investigation.

All proposed structures would be placed on pile foundations (rather than deep dynamic compaction), thus minimizing the potential for damage as a result of seismically induced ground failure. The local agency that enforces the CBC with respect to the project site is the Los Angeles County Public Works Building and Safety Division, which reviews applications for building permits for compliance with the CBC. Grading plans would also be reviewed for compliance with state and local standards related to seismicity.

Because the site would be required to comply with state and local building and grading standards, substantial adverse effects from seismically induced ground failure, including liquefaction, would be avoided or reduced to acceptable levels. In addition, although the proposed project could be subject to seismically induced ground failure, the project would not increase or exacerbate the potential for earthquakes to occur and therefore would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismically induced ground failure. Project impacts related to liquefaction and other forms of seismically induced ground failure are considered **less than significant with implementation of MM-GEO-1**.

GEO-2 Would the project result in substantial soil erosion or the loss of topsoil?

During project construction there is the potential for construction activities to generate soil erosion and/or loss of topsoil. However, the project Applicant would be required to comply with SCAQMD Rule 403 – Fugitive Dust, to minimize wind and water erosion at the site, as well as prepare and implement a Stormwater Pollution Prevention Plan (SWPPP), in accordance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Associated with Construction Activity and Land Disturbance Activities. The site-specific SWPPP would be prepared prior to earthwork activities and would be implemented during project construction. The SWPPP would include Best Management Practices (BMPs) and erosion control measures to prevent pollution in stormwater discharge.

Typical BMPs that could be used during construction include erosion/sediment control measures, such as silt fences, fiber rolls, gravel bags, stormwater inlet protection, soil stabilization measures, street sweeping, etc. More details specific to surface water requirements can be found in Section 4.9, Hydrology and Water Quality. The SWPPP would be subject to review and approval by the County of Los Angeles for compliance with the Los Angeles County Public Works Construction Site Best Management Practices Manual (PW 2010). Additionally, all project construction activities are required to comply with the Los Angeles County grading permit regulations, which require the implementation of grading and dust control measures, including a wet weather erosion control plan if construction occurs during the rainy season, as well as inspections to ensure that sedimentation and erosion is minimized.

Through compliance with these existing regulations, the project would not result in any significant impacts related to soil erosion during the construction phase. Additionally, during operations, most of the project site would be developed with impervious surfaces and landscaping, and all stormwater flows would be directed to storm drain features, resulting in no contact with bare soil surfaces. Therefore, project impacts related to soil erosion or the loss of topsoil are considered **less than significant**. No mitigation is required.

GEO-3 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?

Landslides

According to the State of California Seismic Hazard Zones map for the Torrance Quadrangle (CGS 1999b), the site is not located in an area potentially susceptible to earthquake induced landslides. Based on the relatively flat topography of the site and surrounding areas, the potential for slope instability is considered low. In addition, based on the relatively flat topography, project construction would not initiate a landslide or increase the potential for landslides to occur. Therefore, potential impacts associated with landslides are considered **less than significant**. No mitigation is required.

Liquefaction, Lateral Spreading, and Collapse

As described above for GEO-1, the alluvial or former slough areas of the City of Carson are particularly prone to liquefaction, which can result in the shifting of foundations, settling of roadways, and rupture of underground pipelines and cables. As illustrated in Figure 4.5-2, the majority of the project site is located within a potential liquefaction zone. However, the project would conform to the seismic design requirements as outlined within the CBC, which contains universal standards for proper site preparation and grading practices, adequate design of foundation, and guidelines for the appropriate selection and use of construction materials. All proposed structures would be placed on pile foundations (rather than deep dynamic compaction), thus minimizing the potential for damage as a result of seismically induced ground failure.

Because the site would be required to comply with state and local building and grading standards, substantial adverse effects from seismically induced ground failure, including liquefaction, lateral spreading, and collapse, would be avoided or reduced to acceptable levels. In addition, although the proposed project could be subject to seismically induced ground failure, including liquefaction, lateral spreading, and collapse, the project would not increase or exacerbate the potential for earthquakes to occur and therefore would not cause instability in on-site geologic units or soil. Potential impacts associated with liquefaction, lateral spreading, and soil collapse are considered **less than significant with implementation of MM-GEO-1**.

Subsidence

As discussed in Section 4.5.1, effects of land subsidence include damage to buildings and infrastructure such as roads and canals, increased flood risk in low-lying areas, and lasting damage to groundwater aquifers and aquatic ecosystems. Based on a review of USGS subsidence maps, the southeastern portion of the site is located along the perimeter of an area of regional subsidence (i.e., the Los Angeles/Santa Ana Basin) due to groundwater withdrawal. Given the trends in water conservation and controlled groundwater pumping, the hazard for regional ground subsidence from groundwater lowering in the project area is low. In addition, although oil and gas extraction occurs in the region (i.e., the Dominguez Oil Field, located 0.5 miles northeast of the project site (California DOGGR 2018), water injection and water flooding operations, as part of secondary recovery operations, are believed to have largely mitigated subsidence hazards in the greater Los Angeles area.

Refuse within the former landfill underlying the site will continue to decay and induce subsidence. Initial estimates based on prior evaluation of nearby landfill redevelopment sites indicate that over 18 inches of ground surface settlement may occur. All proposed structures and building floor slabs would be placed on pile foundations, extending through the existing fill and refuse and into the underlying natural soil, thus minimizing the potential for damage as a result of subsidence.

In addition, project construction would not exacerbate the potential for subsidence to occur, as any project-related dewatering would have a minimal impact on localized shallow groundwater levels. Therefore, potential impacts associated with subsidence are considered **less than significant with implementation of MM-GEO-1**.

GEO-4 Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating direct or indirect risks to life or property?

As discussed in Section 4.5.1, subsurface materials at the project site generally consist of artificial fill over refuse, underlain by Quaternary age alluvial deposits. A relatively impermeable clay layer was placed over the landfill deposits to prevent downward migration of stormwater runoff into the refuse. Based on available subsurface data, the near-surface soils are considered to have a medium expansion potential. However, the project would be designed and constructed in conformance with the CBC and County of Los Angeles Building and Safety Division regulations, which include completion of a site-specific geotechnical investigation. Typical remedial methods for expansive soil including overexcavating the upper 2 feet of expansive soils beneath proposed areas of concrete and replacing with non-expansive soil. Thus, the project would not create direct or indirect risk to individuals and/or property. In addition, the project would not exacerbate existing expansive soil conditions. Project impacts related to expansive soils are considered **less than significant with implementation of MM-GEO-1**.

GEO-5 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The project site had been used as a landfill and was later graded and landscaped to function as a golf course. Additionally, the surrounding area has been heavily developed. The likelihood of encountering paleontological resources or unique geologic features on the project site is low. No paleontological resources were identified within the project area as a result of the institutional records search and desktop geological review. Furthermore, the project site is located within an area that has been previously developed and is underlain by fill materials. As such, it is not anticipated that unique geologic features would be encountered by the project. While the project area has been heavily disturbed by existing land use at the site, intact paleontological resources may be present below the fill material. Given the proximity of past fossil discoveries in the surrounding area and the potential for intact, undisturbed Pleistocene age deposits at depth, the project site is moderately to highly sensitive for supporting paleontological resources. In the event that intact paleontological resources are located on the project site, ground-disturbing activities associated with construction of the project, such as grading during site preparation, have the potential to destroy a unique paleontological resource or site. Without mitigation, the potential damage to paleontological resources during construction would be a potentially significant impact. However, upon implementation of **MM-GEO-2**, potentially significant

impacts to paleontological resources would be reduced to less-than-significant levels. Therefore, impacts would be **less than significant with mitigation incorporated.**

4.5.5 Mitigation Measures

The following mitigation measures would ensure that the project has a less-than-significant impact on geology and soils.

MM-GEO-1 During final design, grading, and construction, the Applicant shall implement all recommendations provided in the site-specific geotechnical investigation, *Geotechnical Investigation and Grading Plan Review, The Creek at Dominguez Hills Project, 340 Martin Luther King, Jr. Street, Carson, California*, prepared by Carl Kim Geotechnical Inc.

MM-GEO-2 Prior to commencement of any grading activity on site, the applicant shall retain a qualified paleontologist acceptable to the County. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed project. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP 2010). The qualified paleontologist shall attend the preconstruction meeting and be on site during all rough grading and other significant ground-disturbing activities in previously undisturbed older Quaternary alluvial deposits (including old lagoonal deposits). These deposits may be encountered at depths as shallow as 5-10 feet below ground surface. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontology monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find. If determined to be significant, the paleontological resources shall be stabilized, labeled, and prepared to the point of identification before accessioning into an appropriate paleontological repository with retrievable storage. Following the paleontological monitoring program, a final monitoring report shall be submitted to the lead agency for review and approval. The report should summarize the monitoring program and include geological observations and any paleontological resources recovered during paleontological monitoring for the proposed project.

4.5.6 Level of Significance After Mitigation

With adherence to **MM-GEO-1 and MM-GEO-2**, impacts to geology and soils as a result of the proposed project would be **less than significant**.

4.5.7 Cumulative Impacts

Geologic Hazards

Geotechnical impacts related to future development in the cities of Carson and Gardena involve hazards related to site-specific soil conditions, erosion, and ground shaking during earthquakes. As listed in Table 3-3, Related Projects, there are nine related projects located within proximity to the project site. The geology and soils impacts for each project are specific to its site and users, and would not be in common or contribute to (or be shared with, in an additive sense) the impacts on other project sites. In addition, development on each project site is subject to uniform site development and construction standards, including those contained in the CBC and applicable building codes, which are designed to protect public safety. Therefore, the proposed project would not contribute to any significant cumulative geology and soils impacts and impacts are considered **less than significant**. No mitigation is required.

Paleontological Resources

The geographic scope of the cumulative paleontological resources analysis is the region surrounding the project site, which is located in a predominantly developed area, consisting of churches, schools, multi-family residential uses, commercial uses, and medical/healthcare related buildings. Cumulative impacts to paleontological resources evaluate whether the impacts of the proposed project and other related cumulative projects, when taken as a whole, substantially diminish the number of paleontological resources within the same or similar context or property type. Ongoing development and growth in the broader project area may result in a cumulatively significant impact to paleontological resources due to the continuing disturbance of deeper (i.e., for subterranean garages) subsurface soils, which could potentially contain significant buried paleontological resources. As a result, MM-GEO-2 is required to help ensure that, in the event of an unanticipated find of a significant paleontological resource, the resource is protected, researched, and potentially preserved (if subsequently deemed warranted) to maintain integrity and significance.

It is anticipated that paleontological resources that are potentially affected by related projects would also be subject to the same requirements of CEQA as the proposed project and mitigate for their impacts, if applicable. The determinations of significance would be made on a case-by-case basis, and the effects of cumulative development on paleontological resources would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. Therefore, the proposed project would not contribute to a cumulatively considerable impact associated with paleontological resources and impacts are considered **less than significant**. No mitigation is required.

4.5.8 References

California DOGGR (Division of Mines, Geology, & Geothermal Resources). 2018. "Interactive Web Maps – Data Viewer." Accessed November 12, 2018. https://maps.conservation.ca.gov/doggr/#webmaps.

California DWR (Department of Water Resources). 1961. *Bulletin No. 104, Planned Utilization of the Ground Water Basins of the Coastal Plan of Los Angeles County, Appendix A, Ground Water Geology*. June 1961.

CGS (California Geological Survey). 1998. *Seismic Hazard Zone Report for the Torrance 7.5-Minute Quadrangle, Los Angeles County, California*, Seismic Hazard Zone Report 035. Accessed November 5, 2018. http://gmw.conservation.ca.gov/SHP/EZRIM/Reports/SHZR/SHZR_035_Torrance.pdf.

CGS. 1999a. *Seismic Shaking Hazard Maps of California*. Map Sheet 48.

CGS. 1999b. *Earthquake Zones of Required Investigation, Torrance Quadrangle*. Accessed October 2018. http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/TORRANCE_EZRIM.pdf.

CGS. 2002. California Geomorphic Provinces: Note 36. 4 pp.

CGS. 2010. Fault Activity Map of California. Compiled by C.W. Jennings and W.A. Bryant. Geologic Data Map Sheet No. 6. Scale 1:750,000.

CGS. 2015. "CGS Information Warehouse: Regulatory Maps." Accessed October 2018. http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps.

CGS. 2018a. *Earthquake Fault Zones, A Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California*. Special Publication 42, Revised 2018.

CGS. 2018b. *The Alquist–Priolo Earthquake Fault Zoning (AP) Map*. Released January 11, 2018. http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/BEVERLY_HILLS_EZRIM.pdf.

City of Carson. 2004. *City of Carson General Plan*. Adopted October 11, 2004. Accessed December 2018. http://ci.carson.ca.us/communitydevelopment/generalplan.aspx.

Dibblee, T.W., H.E. Ehrenspeck, P.L. Ehlig, and W.L. Bartlett. 1999. Geologic map of the Palos Verdes Peninsula and vicinity, Redondo Beach, Torrance, and San Pedro quadrangles, Los Angeles County, California: Dibblee Geological Foundation, Dibblee Foundation Map DF-70, scale 1:24,000.

Fannie Mae. 2017. *United States Geological Survey (USGS) Peak Ground Acceleration (PGA) Calculator Tutorial (Beta – Unified Hazard Tool).* Accessed November 11, 2018. https://www.fanniemae.com/content/job_aid/usgs-peak-ground-acceleration-pga-calculator-tutorial.pdf.

Jefferson, G.T. 1991. A Catalog of Late Quaternary Vertebrates from California. Natural History Museum of Los Angeles County, Technical Reports 7:1–174. Unpublished revision: 18 May 2012.

McLeod, S.A. 2018. Vertebrate Paleontology Records Check for Paleontological Resources for the Proposed Creek at Dominguez Hills Project, Dudek Project # 10991, in the City of Carson, Los Angeles County, Project Area. Unpublished Records Search Results Letter from the Natural History Museum of Los Angeles County, Los Angeles, California.

Norris, R.M., and R.W. Webb. 1990. *Geology of California*. 2nd ed. New York, NY: John Wiley & Sons.

PW (Los Angeles County Public Works). 2010. *Construction Site Best Management Practices (BMPs) Manual*. August 2010. Accessed November 11, 2018. http://dpw.lacounty.gov/cons/specs/BMPManual.pdf.

SCEDC (Southern California Earthquake Data Center). 2013. "Significant Earthquakes and Faults." Accessed November 8, 2018. http://scedc.caltech.edu/significant/sanandreas.html.

Shaw, J.H., A. Plesch, J.F. Dolan, T.L. Pratt, and P. Fiore. 2002. "Puente Hills Blind-Thrust System, Los Angeles, California." *Bulletin of the Seismological Society of America*, 92(8): 2946–2960. Accessed December 10, 2018. http://activetectonics.asu.edu/bidart/bibliography/bssa/bssa_92_8/shaw_plesch_dolan_pratt_fiore_2002.pdf.

SVP (Society of Vertebrate Paleontology). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. 11 p. Accessed January 28, 2019.

USGS (U.S. Geological Survey). 2017a. "Quaternary Fault and Fold Database of the United States – Puente Hills Blind Thrust System, Los Angeles Section (Class A) No. 185a." Accessed December 10, 2018. https://earthquake.usgs.gov/cfusion/qfault/show_report_AB_archive.cfm?fault_id=185&section_id=a.

USGS. 2017b. "California Water Science Center – Land Subsidence." Accessed November 12, 2018. https://ca.water.usgs.gov/land_subsidence.

USGS. 2018a. "U.S. Seismic Design Maps." Accessed November 9, 2018. https://earthquake.usgs.gov/designmaps/us/application.php?.

USGS. 2018b. "Areas of Land Subsidence in California." Accessed November 12, 2018. https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html.

USGS. 2018c. "Landslide Hazards." Accessed November 9, 2018. https://www.usgs.gov/natural-hazards/landslide-hazards.

4.6 GREENHOUSE GAS EMISSIONS

This section describes the existing setting of the project site related to greenhouse gas emissions (GHG) and climate change, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of The Creek at Dominguez Hills project (project or proposed project). This section also includes a discussion of the potential energy impacts of projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (14 CCR 15000 et seq.). The section is also related to the potential impacts to energy consumption, including electricity, natural gas, and gasoline, from implementation of the proposed project.

4.6.1 Existing Conditions

Climate change refers to any significant change in measures of Earth's climate, such as temperature, precipitation, and wind patterns, lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human-caused, can cause changes in Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2017a).

The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process, as follows: short-wave radiation emitted by the sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and greenhouse gases (GHGs) in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales, and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of that warming since the mid-20th century, and is the most significant driver of observed climate change (EPA 2017a; IPCC 2013). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the

climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system, which is discussed further in Potential Effects of Climate Change, later in this section.

Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code Section 38505(g) for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3) (see also California Environmental Quality Act (CEQA) Guidelines Section 15364.5).[1] Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as HFCs, PFCs, and SF_6, which are associated with certain industrial products and processes. The following paragraphs provide a summary of the most common GHGs and their sources.[2]

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities, and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are the combustion of fuels such as coal, oil, natural gas, and wood, and changes in land use.

Methane. CH_4 is produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

[1] Climate-forcing substances include GHGs and other substances such as black carbon and aerosols. This discussion focuses on the seven GHGs identified in California Health and Safety Code Section 38505, so impacts associated with other climate-forcing substances are not evaluated herein.

[2] The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change's (IPCC) Second Assessment Report (1995), IPCC's Fourth Assessment Report (2007), California Air Resources Board's "Glossary of Terms Used in GHG Inventories" (CARB 2018b), and U.S. Environmental Protection Agency's "Glossary of Climate Change Terms" (EPA 2016).

Nitrous Oxide. N_2O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N_2O as a propellant (such as in rockets, racecars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are powerful synthetic GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric ozone-depleting substances (e.g., chlorofluorocarbons (CFCs), hydrochlorofluorocarbon (HCFCs), and halons). The most prevalent fluorinated gases are the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to ozone-depleting substances for many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, with HFCs, to the ozone-depleting substances. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.
- **Sulfur Hexafluoride:** SF_6 is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF_6 is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** NF_3 is used in the manufacture of a variety of electronics, including semiconductors and flat-panel displays.

Chlorofluorocarbons. CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere), and the production of CFCs was prohibited in 1987, due to the chemical destruction of stratospheric ozone.

Hydrochlorofluorocarbons. HCFCs are a large group of compounds whose structure is very close to that of CFCs—containing hydrogen, fluorine, chlorine, and carbon atoms—but including one or more hydrogen atoms. Like HFCs, HCFCs are used in refrigerants and propellants. HCFCs were also used in place of CFCs for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter, which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is short-lived and varies spatially, which makes it difficult to quantify its global warming potential. Diesel particulate matter emissions are a major source of black carbon and are toxic air contaminants that have been regulated and controlled in California for several decades to protect public health. Because of the California Air Resources Board's (CARB's) regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California were reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014).

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere, and maintains a climate that is necessary for life.

Ozone. Tropospheric ozone, which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric ozone, which is created by the interaction between solar ultraviolet radiation and molecular oxygen (O_2), plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric ozone due to chemical reactions that may be enhanced by climate change results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat, and can cool the atmosphere by reflecting light

Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo (i.e., the reflection of radiation)) (EPA 2016). The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons (MT) of carbon dioxide equivalent (CO_2e).

The current version of the California Emissions Estimator Model (CalEEMod) (Version 2016.3.2) assumes that the GWP for CH_4 is 25 (so emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the IPCC Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the proposed project.

Sources of GHG Emissions

Global Inventory

Anthropogenic GHG emissions worldwide in 2016 (the most recent year for which data is available) totaled approximately 49,300 million metric tons (MMT) of CO_2e, excluding land use change and forestry (PBL 2017). Six countries—China, the United States, the Russian Federation, India, Japan, and Brazil—and the European community accounted for approximately 65% of the total global emissions, or approximately 32,255 MMT CO_2e (PBL 2017). Table 4.6-1 presents the top GHG-emissions-producing countries.

Table 4.6-1
Six Top Greenhouse Gas Producer Countries and the European Union

Emitting Countries (listed in order of emissions)	Greenhouse Gas Emissions (MMT CO_2e)
China	13,010
United States	6,430
European Union	4,430
India	3,650
Russian Federation	2,220
Japan	1,400
Brazil	1,115
Total	**32,255**

Source: PBL 2017.
Note: MMT CO_2e = million metric tons of carbon dioxide equivalent.

National and State Inventories

Per the U.S. Environmental Protection Agency's (EPA) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2016 (EPA 2018), total U.S. GHG emissions were approximately 6,511.3 MMT CO_2e in 2016. The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 81.6% of total GHG emissions (5,310.9 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 93.5% of CO_2 emissions in 2016 (4,966.0 MMT CO_2e). Relative to 1990, gross United States GHG emissions in 2016 are higher by 2.4%, down from a high of 15.7% above 1990 levels in 2007. GHG emissions decreased from 2015 to 2016 by 1.9% (126.8 MMT CO_2e), and, overall, net emissions in 2016 were 11.1% below 2005 levels (EPA 2018).

According to California's 2000–2016 GHG emissions inventory (2018 edition), California emitted 429.40 MMT CO_2e in 2016, including emissions resulting from out-of-state electrical generation (CARB 2018a). 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 GWP substances, and recycling and waste. The California GHG emissions source categories (as defined in CARB's 2008 Climate Change Scoping Plan: A Framework for Change (Scoping Plan) (CARB 2008)) and their relative contributions in 2016 are presented in Table 4.6-2.

Table 4.6-2
Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[a]
Transportation	169.38	39%
Industrial uses[b]	89.61	21%
Electricity generation[c]	68.58	16%
Residential and commercial uses	39.36	9%
Agriculture	33.84	8%
High GWP substances	19.78	5%
Recycling and waste	8.81	2%
Totals	**429.40**	**100%**

Source: CARB 2018a.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent; GWP = global warming potential.
Emissions reflect 2016 California GHG inventory.

[a] Percentage of total has been rounded and total may not sum due to rounding.

[b] The Aliso Canyon natural gas leak event released 1.96 MMT CO_2e of unanticipated emissions in 2015 and 0.53 MMT CO_2e in 2016. These leak emissions will be fully mitigated according to legal settlement and are tracked separately from routine inventory emissions.

[c] Includes emissions associated with imported electricity, which account for 26.28 MMT CO_2e.

Between 2000 and 2016, per capita GHG emissions in California have dropped from a peak of 14.0 MT per person in 2001 to 10.8 MT per person in 2016, representing a 23% decrease. In addition, total GHG emissions in 2016 were approximately 12 MMT CO_2e less than 2015 emissions. 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 MT CO_2e (CARB 2018a).

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 Intergovernmental Panel on Climate Change Synthesis Report (IPCC 2014) indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred

include warming of the atmosphere and ocean, diminished amounts of snow and ice, rising sea levels, and ocean acidification (IPCC 2014).

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, frequency of severe weather events, and electricity demand and supply. The primary effect of global climate change has been a 0.2°Celsius (0.36°Farenheit) rise in average global tropospheric temperature per decade, determined from meteorological measurements worldwide between 1990 and 2005. Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. A warming of approximately 0.2°C per decade is projected, and there are identifiable signs that global warming could take place.

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The average temperatures in California have increased, leading to more extreme hot days and fewer cold nights. Shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year. Sea levels have risen, and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010).

An increase in annual average temperature is a reasonably foreseeable effect of climate change. Observed changes over the last several decades across the western United States reveal clear signals of climate change. Statewide average temperatures increased by approximately 1.7°F from 1895 to 2011, with warming the greatest in the Sierra Nevada (CCCC 2012). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1°F to 8.6°F, depending on emissions levels. Springtime warming—a critical influence on snowmelt—will be particularly pronounced. Summer temperatures will rise more than winter temperatures, and the increases will be greater in inland California compared to the coast. Heat waves will be more frequent, hotter, and longer. There will be fewer extremely cold nights (CCCC 2012). A decline in the Sierra Nevada snowpack, which accounts for approximately half of the surface water storage in California, by 30% to as much as 90% is predicted over the next 100 years (CAT 2006).

Model projections for precipitation over California continue to show the Mediterranean pattern of wet winters and dry summers, with seasonal, year-to-year, and decade-to-decade variability. For the first time, however, several of the improved climate models shift toward drier conditions by the mid- to late 21st century in central, and most notably, Southern California. By the late century, all projections show drying, and half of them suggest that 30-year average precipitation will decline by more than 10% below the historical average (CCCC 2012).

The following is a summary of current and future climate change impacts to resource areas in California, as discussed in *Safeguarding California: Reducing Climate Risk* (CNRA 2014).

Agriculture. The impacts of climate change on the agricultural sector are far more severe than the typical variability in weather and precipitation patterns that occur year to year. Some of the specific challenges faced by the agricultural sector and farmers include more drastic and unpredictable precipitation and weather patterns; extreme weather events that range from severe flooding to extreme drought to destructive storm events; significant shifts in water availably and water quality; changes in pollinator lifecycles; temperature fluctuations, including extreme heat stress and decreased chill hours; increased risks from invasive species and weeds, agricultural pests, and plant diseases; and disruptions to the transportation and energy infrastructure supporting agricultural production. These challenges and associated short-term and long-term impacts can have both positive and negative effects on agricultural production. Nonetheless, it is predicted that current crop and livestock production will suffer long-term negative effects resulting in a substantial decrease in the agricultural sector if not managed or mitigated (CNRA 2014).

Biodiversity and Habitat. The state's extensive biodiversity stems from its varied climate and assorted landscapes, which have resulted in numerous habitats where species have evolved and adapted over time. Specific climate change challenges to biodiversity and habitat include species migration in response to climatic changes, range shifts, and novel combinations of species; pathogens, parasites, and disease; invasive species; extinction risks; changes in the timing of seasonal life-cycle events; food web disruptions; and threshold effects (i.e., a change in the ecosystem that results in a "tipping point" beyond which irreversible damage or loss can be recouped). Habitat restoration, conservation, and resource management across California and through collaborative efforts among public, private, and nonprofit agencies has assisted in the effort to fight climate change impacts on biodiversity and habitat. One of the key measures in these efforts is ensuring species' ability to relocate as temperature and water availability fluctuate due to of climate change (CNRA 2014).

Energy. The energy sector provides California residents with a supply of reliable and affordable energy through a complex, integrated system. Specific climate change challenges for the energy sector include temperature rise, fluctuating precipitation patterns, increasing extreme weather events, and sea-level rise. Increasing temperatures and reduced snowpack negatively impact the availability of a steady flow of snowmelt to feed hydroelectric reservoirs. Higher temperatures also reduce the capacity of thermal power plants, since power plant cooling is less efficient at higher ambient temperatures. Increased temperatures will also increase electricity demand associated with air conditioning. Natural gas infrastructure in coastal California is threatened by sea-level rise and extreme storm events (CNRA 2014).

Forestry. Forests occupy approximately 33% of California's 100 million acres and provide key benefits such as wildlife habitat, absorption of CO_2, renewable energy, and building materials. The most significant climate-change-related risk to forests is accelerated risk of wildfire and more frequent and severe droughts. Droughts have resulted in more large-scale vegetation mortality, and, combined with increasing temperatures, have led to an overall increase in wildfire risks. Increased wildfire intensity subsequently increases public safety risks, property damage, fire suppression and emergency response costs, watershed and water quality impacts, and vegetation conversions. These factors contribute to decreased forest growth, geographic shifts in tree distribution, loss of fish and wildlife habitat, and decreased carbon absorption. Climate change may result in increased establishment of non-native species, particularly in rangelands where invasive species are already a problem. Invasive species may be able to exploit temperature or precipitation changes, or quickly occupy areas denuded by fire, insect mortality, or other climate change effects on vegetation (CNRA 2014).

Ocean and Coastal Ecosystems and Resources. Sea-level rise, changing ocean conditions, and other climate-change stressors are likely to exacerbate long-standing challenges related to ocean and coastal ecosystems, in addition to threatening people and infrastructure located along the California coastline and in coastal communities. Sea-level rise, in addition to more frequent and severe coastal storms and erosion, are threatening vital infrastructure such as roads, bridges, power plants, ports, airports, gasoline pipes, and emergency facilities, as well as negatively impacting coastal recreational assets such as beaches and tidal wetlands. Water quality and ocean acidification threaten the abundance of seafood and other plant and wildlife habitats throughout California and globally (CNRA 2014).

Public Health. Climate change can impact public health through various environmental changes and is the largest threat to human health in the 21st century. Changes in precipitation patterns affect public health primarily through potential for altered water supplies and extreme events such as heat, floods, droughts, and wildfires. Increased frequency, intensity, and duration of extreme heat and heat waves are likely to increase the risk of mortality due to heat-related illness, and exacerbate existing chronic health conditions. Other extreme weather events are likely to negatively impact air quality and increase or intensify respiratory illness such as asthma and allergies. Additional health effects that may be impacted by climate change include cardiovascular disease, vector-borne diseases, mental health impacts, and malnutrition. Increased frequency of these ailments is likely to subsequently increase the direct risk of injury and/or mortality (CNRA 2014).

Transportation. Residents of California rely on airports, seaports, public transportation, and an extensive roadway network to gain access to destinations, goods, and services. Although the transportation industry is a source of GHG emissions, it is also vulnerable to climate change risks. Particularly, sea-level rise and erosion threaten many coastal California roadways, airports, seaports, transit systems, bridge supports, and energy and fueling infrastructure. Increasing temperatures and

extended periods of extreme heat threaten the integrity of the roadways and rail lines. High temperatures cause road surfaces to expand, which leads to increased pressure and pavement buckling. High temperatures can also cause rail breakages, which could lead to train derailment. Other forms of extreme weather events, such as extreme storm events, can negatively impact infrastructure, which can impair movement of people and goods, and potentially block evacuation routes and emergency access roads. Increased wildfires, flooding, erosion, landslides, mudslides, and rockslides can all profoundly impact the transportation system and pose a serious risk to public safety (CNRA 2014).

Water. Water resources in California support residences, plants, wildlife, farmland, landscapes, and ecosystems, and bring trillions of dollars in economic activity. Climate change could seriously impact the timing, form, and amount of precipitation; runoff patterns; and the frequency and severity of precipitation events. Higher temperatures reduce the amount of snowpack and lead to earlier snowmelt, which can impact water supply availability, natural ecosystems, and winter recreation. Water supply availability during the intense dry summer months is heavily dependent on the snowpack accumulated during winter. Increased risk of flooding has a variety of public health concerns, including water quality, public safety, property damage, displacement, and post-disaster mental health problems. Prolonged and intensified droughts can also negatively groundwater reserves and result in increased overdraft and subsidence. Droughts can also negatively impact agriculture and farmland throughout the state. The higher risk of wildfires can lead to increased erosion, which can negatively impact watersheds and result in poor water quality. Water temperatures are also prone to increase, which can negatively impact wildlife that rely on a specific range of temperatures for suitable habitat (CNRA 2014).

In March 2016, the California Natural Resources Agency released Safeguarding California: Implementation Action Plans, a document that shows how California is acting to convert the recommendations contained in the 2014 Safeguarding California plan into action (CNRA 2016). Additionally, in May 2017, the California Natural Resources Agency released the draft Safeguarding California Plan: 2017 Update, which is a survey of current programmatic responses for climate change, and contains recommendations for further actions (CNRA 2017). The California Natural Resources Agency released its Safeguarding California Plan: 2018 Update in January 2018, which provides a roadmap for state agencies to protect communities, infrastructure, services, and the natural environment from climate change impacts. The 2018 Safeguarding California Plan includes 69 recommendations across 11 sectors and more than 1,000 ongoing actions and next steps developed by scientific and policy experts across 38 state agencies (CNRA 2018). As with previous state adaptation plans, the 2018 Update addresses acceleration of warming across the state; more intense and frequent heat waves; greater riverine flows; accelerating sea-level rise; more intense and frequent drought; more severe and frequent wildfires; more severe storms and extreme weather events; shrinking snowpack and less overall precipitation; and ocean acidification, hypoxia, and warming

4.6.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2010, fuel economy standards were set at 27.5 miles per gallon (mpg) for new passenger cars and 23.5 mpg for new light trucks. Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Massachusetts vs. EPA

On April 2, 2007, in *Massachusetts v. EPA*, the Supreme Court directed the EPA Administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA Administrator is required to follow the language of Section 202(a) of the federal Clean Air Act. On December 7, 2009, the Administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- The Administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."
- The Administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act.

On December 19, 2007, President George W. Bush signed the Energy Independence and Security Act of 2007. Among other key measures, the act would do the following, which would aid in the reduction of national GHG emissions:

1. Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.

2. Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
3. Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Federal Vehicle Standards

In response to the previously discussed U.S. Supreme Court ruling, the Bush Administration issued Executive Order (EO) 13432 in 2007 directing EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016 (EPA 2010).

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry-fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks previously described, in 2011, EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6% to 23% over the 2010 baselines.

In August 2016, EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018–2027 for certain trailers, and model years 2021–2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The

final standards are expected to lower CO_2 emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

In August 2018, The EPA and NHTSA released a notice of proposed rulemaking called Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). This rule would modify the existing Corporate Average Fuel Economy (CAFE) standards and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026. SAFE standards are expected to uphold model year 2020 standards through 2026 (NHTSA 2018).

Clean Power Plan and New Source Performance Standards for Electric Generating Units.

On October 23, 2015, EPA published a final rule (effective December 22, 2015) establishing the Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO_2 emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units, and (2) stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the Clean Power Plan pending resolution of several lawsuits. Additionally, in March 2017, President Trump directed the EPA Administrator to review the Clean Power Plan in order to determine whether it is consistent with current executive policies concerning GHG emissions, climate change and energy.

Council on Environmental Quality Guidance

On August 5, 2016, the Council on Environmental Quality (CEQ) released final guidance for federal agencies on considering the impacts of GHG emissions in National Environmental Protection Act (NEPA) reviews (CEQ 2016). This guidance supersedes the draft GHG and climate change guidance released by CEQ in 2010 and 2014. The final guidance applies to all proposed federal agency actions, including land and resource management actions. This guidance explains that agencies should consider both the potential effects of a proposed action on climate change, as indicated by its estimated GHG emissions, and the implications of climate change for the environmental effects of a proposed action. The guidance recommends that agencies quantify a proposed agency action's projected direct and indirect GHG emissions, taking into account

available data and GHG quantification tools that are suitable for the proposed agency action. This guidance was withdrawn by the CEQ on April 5, 2017 as published in the Federal Register Volume 82, Number 64, Section 16576 (CEQ 2017).

State

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. The following text describes executive orders, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

State Climate Change Targets

EO S-3-05. EO S-3-05 (June 2005) established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010, GHG emissions should be reduced to 1990 levels by 2020, and GHG emissions should be reduced to 80% below 1990 levels by 2050.

AB 32 and CARB's Climate Change Scoping Plan. In furtherance of the goals established in EO S-3-05, the Legislature enacted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020.

Under AB 32, CARB is responsible for and is recognized as having the expertise to carry out and develop the programs and requirements necessary to achieve the GHG emissions reduction mandate of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions from specified sources. This program is used to monitor and enforce compliance with established standards. CARB also is required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. AB 32 relatedly authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emissions limitation, emissions reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for 2020, consistent with the determined 1990 baseline (427 MMT CO_2e). CARB's adoption of this limit is in accordance with Health and Safety Code Section 38550.

Further, in 2008, CARB adopted the Climate Change Scoping Plan: A Framework for Change (Scoping Plan) in accordance with Health and Safety Code Section 38561. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The Scoping Plan evaluates

opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction features by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the Scoping Plan are the following (CARB 2008):

- Expanding and strengthening existing energy efficiency programs and building and appliance standards.
- Achieving a statewide renewable energy mix of 33%.
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions.
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard.
- Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the state's long-term commitment to AB 32 implementation.

In the Scoping Plan, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 28.5% from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020 absent GHG-reducing laws and regulations, referred to as "business-as-usual"). For purposes of calculating this percent reduction, CARB assumed that all new electricity generation would be supplied by natural gas plants, that no further regulatory action would impact vehicle fuel efficiency, and that building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the Scoping Plan's Functional Equivalent Document, CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7% (down from 28.5%) from the business-as-usual conditions (CARB 2011). When the 2020 emissions level projection also was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (RPS) (12% to 20%) (CPUC 2015), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16% (down from 28.5%) from the business-as-usual conditions.

In 2014, CARB adopted the First Update to the Climate Change Scoping Plan: Building on the Framework (First Update). The stated purpose of the First Update is to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050" (CARB 2014). The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80% below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050" (CARB 2014). Those six areas are energy, transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure), agriculture, water, waste management, natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal.

CARB's research efforts presented in the First Update indicate that it has a "strong sense of the mix of technologies needed to reduce emissions through 2050" (CARB 2014). Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

As part of the First Update, CARB recalculated the state's 1990 emissions level using more recent GWPs identified by the IPCC. Using the recalculated 1990 emissions level (431 MMT CO_2e) and the revised 2020 emissions level projection identified in the 2011 Final Supplement (CARB 2011), CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15% (instead of 28.5% or 16%) from the business-as-usual conditions (CARB 2014).

On January 20, 2017, CARB released its 2017 Climate Change Scoping Plan Update (Second Update) for public review and comment (CARB 2017). This update presents CARB's strategy for achieving the state's 2030 GHG target as established in Senate Bill (SB) 32 (discussed below), including continuing the Cap-and-Trade Program through 2030, and includes a new approach to reduce GHGs from refineries by 20%. The Second Update incorporates approaches to cutting short-lived climate pollutants (SLCPs) under the Short-Lived Climate Pollutant Reduction Strategy (a planning document that was adopted by CARB in March 2017), acknowledges the need for reducing emissions in agriculture, and highlights the work underway to ensure that California's natural and working lands increasingly sequester carbon. During development of the Second Update, CARB held a number of public workshops in the natural and working lands, agriculture, energy, and transportation sectors to inform development of the 2030 Scoping Plan. When

discussing project-level GHG emissions reduction actions and thresholds, the Second Update states, "achieving no net increase in GHG emissions is the correct overall objective, but it may not be appropriate or feasible for every development project. An inability to mitigate a project's GHG emissions to zero does not necessarily imply a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA" (CARB 2017). The Second Update was approved by CARB's Governing Board on December 14, 2017.

EO B-30-15. EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing statewide GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80% below 1990 levels by 2050, as set forth in EO S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to CARB's Scoping Plan to express the 2030 target in terms of MMT CO_2e. The executive order also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. EO B-30-15 does not require local agencies to take any action to meet the new interim GHG reduction target.

SB 32 and AB 197. SB 32 and AB 197 (enacted in 2016) are companion bills that set a new statewide GHG reduction targets, make changes to CARB's membership, increase legislative oversight of CARB's climate-change-based activities, and expand dissemination of GHG and other air-quality-related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to CARB as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and toxic air contaminants from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

SB 605 and SB 1383. SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of SLCPs in the state, and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of SLCPs (40% below 2013 levels by 2030 for CH_4 and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its Short-Lived Climate Pollutant Reduction Strategy (SLCP Reduction Strategy) in March 2017. The SLCP Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, CH_4, and fluorinated gases.

Building Energy

Title 24, Part 6. Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Although not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure that new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code (PRC) Section 25402(b)(1)). The regulations receive input from members of industry and the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (PRC Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (PRC Section 25402(d)) and cost effectiveness (PRC Sections 25402(b)(2) and (b)(3)). These standards are updated to consider and incorporate new energy-efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The current Title 24 standards are the 2016 Title 24 Building Energy Efficiency Standards, which became effective January 1, 2017. The 2019 Title 24 Building Energy Efficiency Standards, which will be effective January 1, 2020, will further reduce energy used and associated GHG emissions compared to current standards. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards will use approximately 53% less energy than those under the 2016 standards (CEC 2018). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018).

Title 24, Part 11. In addition to CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code is commonly referred to as CALGreen, and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality (24 CCR Part 11). The CALGreen 2016 standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, and schools and hospitals. The CALGreen 2016 standards became effective on January 1, 2017. The mandatory standards require the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings.

- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance.
- Diversion of 65% of construction and demolition waste from landfills.
- Mandatory inspections of energy systems to ensure optimal working efficiency.
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations.
- Low-pollutant-emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards.

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15% improvement in energy requirements, stricter water conservation, 65% diversion of construction and demolition waste, 10% recycled content in building materials, 20% permeable paving, 20% cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30% improvement in energy requirements, stricter water conservation, 75% diversion of construction and demolition waste, 15% recycled content in building materials, 30% permeable paving, 25% cement reduction, and cool/solar-reflective roofs.

The California Public Utilities Commission (CPUC), CEC, and CARB also have a shared, established goal of achieving zero net energy for new construction in California. The key policy timelines are that all new residential construction in California will be zero net energy by 2020, and all new commercial construction in California will be zero net energy by 2030 (CPUC 2013).[3] As most recently defined by CEC in its 2015 Integrated Energy Policy Report, a zero net energy code building is "one where the value of the energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building" using the CEC's time-dependent valuation metric (CEC 2015).

Title 20. Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low-voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20

[3] It is expected that achievement of the zero net energy goal will occur via revisions to the Title 24 standards.

presents protocols for testing each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

SB 1. SB 1 (2006) established a $3 billion rebate program to support the goal of the state to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016. SB 1 added sections to the Public Resources Code, including Chapter 8.8, California Solar Initiative, that require building projects applying for ratepayer-funded incentives for photovoltaic systems to meet minimum energy efficiency levels and performance requirements. Section 25780 established that it is a goal of the state to establish a self-sufficient solar industry in which solar energy systems are a viable mainstream option for homes and businesses within 10 years of adoption, and to place solar energy systems on 50% of new homes within 13 years of adoption. SB 1, also termed "GoSolarCalifornia," was previously titled "Million Solar Roofs."

AB 1470. This bill established the Solar Water Heating and Efficiency Act of 2007. The bill made findings and declarations of the Legislature relating to the promotion of solar water heating systems and other technologies to reduce natural gas demand. The bill defined several terms for purposes of the act. The bill required the CEC to evaluate the data available from a specified pilot program, and, if it made a specified determination, to design and implement a program of incentives for the installation of 200,000 solar water heating systems in homes and businesses throughout the state by 2017.

AB 1109. Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general purpose lighting to reduce electricity consumption by 50% for indoor residential lighting and by 25% for indoor commercial lighting.

Renewable Energy and Energy Procurement

SB 1078. SB 1078 (2002) established the RPS program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010.

SB 1368. SB 1368 (2006) requires the CEC to develop and adopt regulations for GHG emissions performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the CPUC. This effort will help protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants whose GHG emissions are as low as or lower than new

combined-cycle natural gas plants by requiring imported electricity to meet GHG performance standards in California and by requiring that the standards be developed and adopted in a public process.

SB X1 2. SB X1 2 (2011) expanded the RPS by establishing that 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years be secured from qualifying renewable energy sources. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

SB 350. SB 350 (2015) further expanded the RPS by establishing that 50% of the total electricity sold to retail customers in California per year by December 31, 2030, be secured from qualifying renewable energy sources. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

SB 100. SB 100 (2018) increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030 be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the State that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Executive Order B-55-18. On September 10, 2018, Governor Brown signed EO B-55-18, to achieve carbon neutrality by moving the State of California to 100% clean energy by 2045. This EO also includes specific measures to reduce GHG emissions via clean transportation, energy efficient buildings, directing cap-and-trade funds to disadvantaged communities, and better management of the state's forestland.

Mobile Sources

AB 1493. In a response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 was enacted in July 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009

and all subsequent model years. CARB adopted the standards in September 2004. In 2009–2012, standards resulted in a reduction of approximately 22% in GHG emissions compared to emissions from the 2002 fleet, and in 2013–2016, standards resulted in a reduction of approximately 30%.

EO S-1-07. Issued on January 18, 2007, EO S-1-07 sets a declining low-carbon fuel standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the low-carbon fuel standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. Carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste.

SB 375. SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations (MPO) are then responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, an MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), an SCS does not regulate the use of land; supersede the land use authority of cities and counties; or require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In September 2010, CARB adopted the SB 375 targets for the regional MPOs. The targets for the Southern California Association of Governments (SCAG) are an 8% reduction in emissions per capita by 2020 and a 13% reduction by 2035 below 2005 levels. Achieving these goals through adoption of an SCS is the responsibility of the MPOs. SCAG's RTP/SCS was adopted by the SCAG Regional Council in April 2012. The plan quantified a 9% reduction in emissions per capita by 2020 and a 16% reduction by 2035 (SCAG 2012). On June 4, 2012, the CARB executive officer issued an executive order accepting SCAG's quantification of GHG reductions and the determination that implementation of the SCS would achieve the GHG emissions reduction targets established by CARB. On April 4, 2016, the SCAG Regional Council adopted the 2016 RTP/SCS, which builds on the progress made in the 2012 RTP/SCS. The updated RTP/SCS quantified an 8% reduction in emissions per capita by 2020, an 18% reduction by 2035, and a 21% reduction by 2040 below 2005 levels (SCAG 2016a).

Advanced Clean Cars Program. In January 2012, CARB approved the Advanced Clean Cars program, an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single, coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2011). To improve air quality, CARB implemented new emission standards to reduce smog-forming emissions beginning with 2015 model-year vehicles. It is estimated that by 2025, cars will emit 75% less smog-forming pollution than the average new car sold before 2012. To reduce GHG emissions, CARB, in conjunction with the EPA and NHTSA, adopted new GHG standards for model years 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% by 2025. The Zero Emissions Vehicle (ZEV) program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in 2018 to 2025 model years. The Clean Fuels Outlet regulation will ensure that fuels such as electricity and hydrogen are available to meet the fueling needs of the new advanced technology vehicles as they come to the market.

EO B-16-12. EO B-16-12 (2012) directs state entities under the governor's direction and control to support and facilitate development and distribution of ZEVs. This executive order also sets a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80% less than 1990 levels by 2050. In furtherance of this executive order, the governor convened an Interagency Working Group on ZEVs that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet.

AB 1236. AB 1236 (2015), as enacted in California's Planning and Zoning Law, requires local land use jurisdictions to approve applications for the installation of electric vehicle charging stations, as defined, through the issuance of specified permits unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact on public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provides for appeal of that decision to the planning commission. The bill required local land use jurisdictions with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, to create an expedited and streamlined permitting process for electric vehicle charging stations. Prior to this statutory deadline, in August 2016, the County of Los Angeles Board of Supervisors adopted Ordinance No. 10437 (N.S.) adding a section to the Los Angeles County Code related to the expedited processing of electric-vehicle charging-station permits consistent with AB 1236.

SB 350. In 2015, SB 350, the Clean Energy and Pollution Reduction Act, was enacted into law. As one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see Public Utilities Code Section 740.12).

Solid Waste

AB 939 and AB 341. In 1989, AB 939, known as the Integrated Waste Management Act (PRC Sections 40000 et seq.), was passed because of the increase in waste stream and decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed of, and jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by 2000.

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes will assist the state in reaching the 75% goal by 2020.

Water

EO B-29-15. In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the executive order extended through February 28, 2016, although many of the directives have since become permanent water-efficiency standards and requirements. The executive order includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increased the requirements for landscape water use efficiency and broadened its applicability to include new development projects with smaller landscape areas.

Other State Regulations and Goals

SB 97. SB 97 (Dutton) (August 2007) directed the Governor's Office of Planning and Research to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Office of Planning and Research (OPR) issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The California Natural Resources Agency adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines in the California Code of Regulations (CCR), a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis, or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4(a)). The CEQA Guidelines require a lead agency to consider the extent to which a project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)). The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through implementation of project features or off-site measures. The adopted amendments do not establish a GHG emissions threshold, but allow a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The California Natural Resources Agency also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009a).

With respect to GHG emissions, the CEQA Guidelines state in CCR Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions, or by relying on "qualitative analysis or other performance based standards" (14 CCR 15064.4(a)). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: the extent a project may increase or reduce GHG emissions compared to the existing environmental setting; whether project emissions exceed a threshold of significance that the lead agency determines applies to the project; and the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

EO S-13-08. EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the executive order directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 2009a), and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014 (CNRA 2014). To assess the state's vulnerability to climate change, the report summarizes key climate change impacts to the state for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016 (CNRA 2016). A draft of the Safeguarding California Plan: 2017 Update was prepared to communicate current and needed actions that state government should take to build climate change resiliency (CNRA 2017).

2015 State of the State Address. In January 2015, Governor Brown in his inaugural address and annual report to the Legislature established supplementary goals that would further reduce GHG emissions over the next 15 years. These goals include an increase in California's renewable energy portfolio from 33% to 50%, a reduction in vehicle petroleum use for cars and trucks by up to 50%, measures to double the efficiency of existing buildings, and measures to decrease emissions associated with heating fuels.

2016 State of the State Address. In his January 2016 address, Governor Brown established a statewide goal to bring per-capita GHG emissions down to 2 MT per person, which reflects the goal of the Global Climate Leadership Memorandum of Understanding (Under 2 Memorandum of Understanding) to limit global warming to less than 2°C by 2050. The Under 2 Memorandum of Understanding agreement pursues emission reductions of 80% to 95% below 1990 levels by 2050 and/or reach a per-capita annual emissions goal of less than 2 MT by 2050. A total of 187 jurisdictions representing 38 countries and 6 continents, including California, have signed or endorsed the Under 2 Memorandum of Understanding (Under 2 Coalition 2017).

Local

The following local/regional regulations pertaining to GHG emissions would apply to the proposed project.

Southern California Association of Governments

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG serves as the federally designated MPO for the Southern California region, and is the largest MPO in the United States. With respect to air quality planning, GHG emissions, and other regional issues, SCAG prepared the 2012 RTP. Specifically, the 2012 RTP/SCS links the goals of sustaining mobility with the goals of fostering economic development; enhancing the environment; reducing energy consumption; promoting transportation-friendly development patterns; and encouraging all residents affected by socioeconomic, geographic, and commercial limitations to be provided with fair access. Consistent with SB 375 direction, the 2012 and 2016 RTP/SCSs do not require that local general plans, specific plans, or zoning be consistent with SB 375, but provide incentives for consistency for governments and developers. See Section 4.2, Air Quality, of this EIR for additional discussion on SCAG.

Los Angeles County General Plan

The *Los Angeles County General Plan* was adopted by the Board of Supervisors on October 6, 2015. The following policies from the Air Quality Element may be applicable to the project (County of Los Angeles 2015a):

Policy AQ-3.1: Facilitate the implementation and maintenance of the Community Climate Action Plan to ensure that the County reaches its climate change and greenhouse gas emission reduction goals.

Policy AQ-3.2: Reduce energy consumption in County operations by 20% by 2015.

Policy AQ-3.3: Reduce water consumption in County operations

Policy AQ-3.4: Participate in local, regional and state programs to reduce greenhouse gas emissions.

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.

Policy AQ-3.7: Support and expand urban forest programs within the unincorporated areas.

Policy AQ-3.8: Develop, implement, and maintain countywide climate change adaptation strategies to ensure that the community and public services are resilient to climate change impacts.

County of Los Angles Community Climate Action Plan

Adopted as part of the County's General Plan 2035 in August 2015, the County's Community Climate Action Plan (CCAP) (County of Los Angeles 2015b), which was prepared following CEQA Guidelines Section 15183.5, provides a framework for reducing GHG emissions and managing resources to best prepare for a changing climate. With respect to evaluation of projects under CEQA, the CCAP states, "Projects that demonstrate consistency with the strategies, actions, and emission reduction targets contained in the CCAP would have a less than significant impacts on climate change" (County of Los Angeles 2015b). The County's CCAP also suggests best practices for implementation and makes recommendations for measuring progress.

The County's CCAP is intended to address the main sources of the emissions that cause climate change, which include emissions from the energy consumed in buildings and for transportation, as well as the solid waste sent to landfills. The purpose of the County's CCAP is to guide the development, enhancement, and implementation of actions that would reduce the County's GHG emissions by 11% below existing (2010) levels by 2020. However, because the proposed project's first year of operation would be 2021 the project would not be able to tier from the County's CCAP. The project's consistency

with the CCAP is discussed in Section 4.6.4, Impacts Analysis, but is not used to determine significance of the project because the proposed project is outside the applicable timeframe for the CCAP.

4.6.3 Project Design Features

The project includes the following project design features (PDF) that would reduce GHG emissions. As a conservative approach, the reductions from PDF-GHG-1 through PDF-GHG-3 were not quantified due to the lack of clarity on the precise quantity of reductions associated with these design measures.

PDF-GHG-1 The project shall employ the following design features to reduce the demand for energy use and GHG emissions:

- All installed appliances (e.g., washer/dryers, refrigerators, dishwashers) shall be Energy Star rated or equivalent.
- Prior to the issuance of permits, the project applicant or its designee shall submit building plans that demonstrate that all outdoor lighting shall be light-emitting diodes (LED) or other high-efficiency lightbulbs.
- The applicant will provide information on energy efficiency, energy efficient lighting and lighting control systems, energy management, and existing energy incentive programs to building tenants.
- The proposed project shall provide electrical outlets at building exterior areas.
- Prior to the issuance of nonresidential building permits, the project applicant or its designee shall submit building plans illustrating nonresidential structures meet the U.S. Green Building Council standards for cool roofs. This is defined as achieving a 3-year solar reflective index (SRI) of 64 for a low-sloped roof and 32 for a high-sloped roof.
- Prior to the issuance of building permits, the project applicant or its designee shall submit building plans illustrating that outdoor pavement, such as walkways and patios, use paving materials with 3-year SRI of 0.28 or initial SRI of 0.33.

  The applicant will install duct insulation to a minimum level of R-6 and modestly enhanced window insulation (for a 5% improvement over the 2016 Title 24 requirement) consistent with County of Los Angeles criteria.
- The applicant will include the following design elements:
  - Construction of modest cool roof, defined as Cool Roof Rating Council (CRRC) Rated 0.15 aged solar reflectance and 0.75 thermal emittance

- Use of HVAC equipment with a seasonal energy efficiency ratio (SEER) of 12 or higher
- Installation of water heaters with an energy factor of 0.92 or higher
- Include some form of daylighting (e.g., skylights, windows) in rooms with exterior walls that would normally be occupied
- Include high-efficiency artificial lighting in at least 50% of unit fixtures
- Include waterless urinals and high-efficiency faucets and toilets throughout the project

PDF-GHG-2 The project applicant shall consider the use of a solar photovoltaic rooftop system to reduce the electric demand from the local grid where feasible.

PDF-GHG-3 The project's landscape non-potable water system shall meet "purple" pipe standards.

4.6.4 Thresholds of Significance

GHG Emission Thresholds

The significance criteria used to evaluate the project impacts to GHGs/climate change are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to greenhouse gas emissions would occur if the project would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Neither the State of California, Los Angeles County, nor the South Coast Air Quality Management District (SCAQMD) has adopted 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).

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements to avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water

quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies, and/or other regulatory strategies to reduce GHG emissions.

In the absence of any adopted numeric threshold, the significance of the project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b) by considering whether the project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. For this project, as a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions is the 2016 RTP/SCS, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the state's long-term climate goals. This analysis also considers consistency with regulations or requirements adopted by the Scoping Plan.

This threshold was applied to the proposed project's emissions to determine whether they would result in a cumulatively considerable contribution to the cumulative impacts of global climate change.

4.6.5 Impacts Analysis

GHG-1 Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHG-2 Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Construction Emissions

Construction of the project would result in GHG emissions that would primarily be associated with the use of off-road construction equipment, on-road hauling and vendor trucks, and worker vehicles. CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in Section 4.2. Construction of the project is anticipated to commence in July 2019 and would last approximately 18 months, ending in December 2020. On-site sources of GHG emissions include off-road equipment and off-site sources include trips from worker vehicles, vendor trucks, and haul trucks. Table 4.6-3 presents construction emissions for the proposed project in 2019 and 2020 from on-site and off-site emissions sources.

Table 4.6-3
Estimated Annual Construction GHG Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2019	5,012.93	0.61	0.00	5,028.26
2020	15,291.74	0.89	0.00	15,313.89
			Total	**20,342.15**
			Amortized construction emissions	*678.07*

Notes: GHG = greenhouse gas; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.
See Appendix C for complete results.

As shown in Table 4.6-3, the estimated total GHG emissions during construction of would be approximately 5,028 MT CO_2e in 2019 and 15,314 MT CO_2e in 2020. Estimated project-generated construction emissions amortized over 30 years would be approximately 678 MT CO_2e per year. As with project-generated construction criteria air pollutant emissions, GHG emissions generated during construction of the project would be short term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions.

Operational Emissions

Operation of the proposed 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); solid waste disposal; generation of electricity associated with water supply, treatment, and distribution; and wastewater treatment. Annual GHG emissions from these sources were estimated using CalEEMod. Additionally, to account for operational emissions from the existing golf course, annual GHG emissions were estimated for the 77-acre site in CalEEMod using default emissions factors. Operational GHG emissions from the existing golf course are subtracted from the estimated emissions of the proposed project to produce a net emission estimate for the project.

Area Sources

CalEEMod was used to estimate GHG emissions from the project's area sources. Area sources for the project include operation of gasoline-powered landscape maintenance equipment, which produce minimal GHG emissions. CalEEMod defaults were utilized to calculate emissions from area sources. Consumer product use and architectural coatings result in VOC emissions, which are analyzed in air quality analysis only (see Section 4.2, Air Quality), and little to no GHG emissions.

Mobile Sources

Mobile source and on-site road vehicular emissions associated with the project were modeled using the trip-generation rates from the project's traffic impact analysis (TIA; Appendix J to this environmental impact report (EIR)). For more details regarding mobile source emissions assumptions, refer to the Impacts Analysis discussion in Section 4.2 of this EIR.

Energy Sources

The estimation of operational energy emissions was based on CalEEMod land use defaults and total area (i.e., square footage) of the project's land uses. The energy use from nonresidential land uses is calculated in CalEEMod based on the California Commercial End-Use Survey database. Emissions are calculated by multiplying the energy use by the utility carbon intensity (pounds of GHGs per kilowatt-hour for electricity or 1,000 British thermal units for natural gas) for CO_2 and other GHGs. Annual natural gas and electricity emissions were estimated in CalEEMod using the emissions factors for Southern California Edison (SCE), which would be the energy source provider for the project.

CalEEMod default energy intensity factors (CO_2, CH_4, and N_2O mass emissions per kilowatt hour) for SCE is based on the value for SCE's energy mix in 2012. As explained in Section 4.6.2, SB X1 2 established a target of 33% from renewable energy sources for all electricity providers in California by 2020 and SB 350 calls for further development of renewable energy, with a target of 50% by 2030. The CO_2 emissions intensity factor for utility energy use in CalEEMod was adjusted consistent with the project's anticipated operational year (2020) and the 33% RPS generated by eligible renewable sources by December 31, 2020.

Solid Waste

The project would generate solid waste, and therefore, result in CO_2e emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste. Project compliance with statewide solid waste diversion goals, including the 75% diversion rate by 2020 consistent with AB 341 (25% increase from the solid waste diversion requirements of AB 939, Integrated Waste Management Act), would reduce project-generated GHG emissions associated with solid waste disposal.

Water and Wastewater

Supply, conveyance, treatment, and distribution of water for the project require the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the project requires the use of electricity for conveyance and treatment, along with GHG emissions generated during wastewater treatment. Water consumption estimates for both indoor and outdoor water use and associated electricity consumption from water use and wastewater generation were estimated using CalEEMod default values.

In regards to indoor water use, the project would install low-flow bathroom faucets and low-flow toilets. In regards to outdoor water, the project would install water-efficient devices and landscaping in accordance with applicable ordinances, including use of drought-tolerant species appropriate to the climate and region. To account for the project's indoor and outdoor water conservation features discussed above, it was assumed that the project would apply a water conservation strategy resulting in a 30% reduction in indoor water and outdoor use per the project's sustainability report.

The estimated operational GHG emissions from project area sources, energy consumption, motor vehicles, solid waste, water consumption, and wastewater treatment associated with the proposed project at full buildout in 2020 are shown in Table 4.6-4. Details of the emissions calculations are provided in Appendix C, Air Quality Analysis.

Table 4.6-4
Estimated Annual Operational GHG Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Existing				
Area	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00
Mobile	378.59	0.06	0.00	380.19
Solid waste	14.54	0.56	0.00	36.01
Water Supply and Wastewater	324.76	0.01	<0.01	325.93
Total	**717.89**	**0.94**	**0.00**	**742.13**
Proposed				
Area	0.07	0.00	0.00	0.07
Energy	4,065.74	0.14	0.05	4,083.62
Mobile	14.285.45	0.82	0.00	14,306.05
Solid waste	176.71	10.44	0.00	437.79
Water supply and wastewater	242..89	1.59	0.04	294..37
Total	**18,578.75**	**12.99**	**0.09**	**19,121.90**
			Amortized construction emissions	678.07
			Operation + amortized construction total	**19,799.97**
			Net Emissions (Project minus Baseline)	19,057.84

Source: Appendix C.
Notes: GHG = greenhouse gas; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; SCAQMD = South Coast Air Quality Management District.
See Appendix C for detailed results.

As shown in Table 4.6-4, estimated net annual project-generated operational emissions in 2020 plus amortized project construction emissions would be approximately 19,058 MT CO_2e per year.

Consistency with the County of Los Angeles Community Climate Action Plan

The County's CCAP includes 26 local community actions to reduce GHG emissions from the County's community activities are grouped into five strategy areas, listed below. Following each strategy area, a qualitative analysis as to how each strategy relates to the proposed project is provided. The proposed project would become operational outside of the applicable timeline to tier from the County's CCAP; therefore, consistency with the County's was not utilized to determine significance of GHG impacts, and this discussion is provided for disclosure purposes.

1. **Green Building and Energy.** As discussed in Section 3.5.3, Sustainability Design, the proposed project would pursue LEED Gold certifications for buildings 1 and 7, and LEED silver certifications for all other buildings. The LEED certifications would require that all buildings be Certified Green buildings and be consistent with the Green Building and Energy strategies of the CCAP.
2. **Land Use and Transportation.** As part of the project's LEED Gold and Silver certifications, the proposed project would provide bicycle facilities and a walkable site design. These features would support the CCAP's actions for bicycle and pedestrian network development.
3. **Water Conservation and Wastewater.** As part of the LEED certification, the project would be required to reduce indoor and outdoor water usage by approximately 30% percent.
4. **Waste Reduction, Reuse, and Recycling.** As part of the LEED certification, the proposed project would be required reduce both construction and operational waste and implement recycling programs. These measures would support the CCAP's actions for waste reduction.

Therefore, the proposed project would be consistent with Los Angeles County's CCAP.

Consistency with the SCAG's 2016–2040 Regional Transportation Plan

SCAG's 2016 RTP/SCS is a regional growth-management strategy that targets per-capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California region. The 2016 RTP/SCS incorporates local land use projections and circulation networks in city and county general plans. The 2016 RTP/SCS reaffirms the land use policies that were incorporated into the 2012 RTP/SCS. These foundational policies, which guided the development of the 2016 RTP/SCS's strategies for land use, include the following:

- Identify regional strategic areas for infill and investment;
- Structure the plan on a three-tiered system of centers development;[4]

[4] Complete language: "Identify strategic centers based on a three-tiered system of existing, planned, and potential, relative to transportation infrastructure. This strategy more effectively integrates land use planning and transportation investment." A more detailed description of these strategies and policies can be found on pp. 90–92 of the SCAG 2008 Regional Transportation Plan, adopted in May 2008.

- Develop "Complete Communities";
- Develop nodes on a corridor;
- Plan for additional housing and jobs near transit;
- Plan for changing demand in types of housing;
- Continue to protect stable, existing single-family areas;
- Ensure adequate access to open space and preservation of habitat; and
- Incorporate local input and feedback on future growth.

The 2016 RTP/SCS recognizes that transportation investments and future land use patterns are inextricably linked, and continued recognition of this close relationship will help the region make choices that sustain existing resources and expand efficiency, mobility, and accessibility for people across the region. In particular, the 2016 RTP/SCS draws a closer connection between where people live and work, and it offers a blueprint for how Southern California can grow more sustainably. The 2016 RTP/SCS also includes strategies focused on compact infill development and economic growth by building the infrastructure the region needs to promote the smooth flow of goods and easier access to jobs, services, educational facilities, healthcare and more.

The 2016 RTP/SCS indicates the SCAG region was home to about 18.3 million people in 2012 and currently includes approximately 5.9 million homes and 7.4 million jobs.[5] By 2040, the integrated growth forecast projects that these figures will increase by 3.8 million people, with nearly 1.5 million more homes and 2.4 million more jobs (SCAG 2016a).

The 2016 RTP/SCS is expected to reduce per-capita transportation emissions by 8% by 2020 and 18% by 2035. Furthermore, although there are no per-capita GHG emission reduction targets for passenger vehicles set by CARB for 2040, the 2016 RTP/SCS's GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2040 (SCAG 2016b). The 2016 RTP/SCS would result in an estimated 21% decrease in per-capita GHG emissions by 2040. By meeting and exceeding the then applicable SB 375 targets for 2020 and 2035, as well as achieving an approximately 21% decrease in per-capita GHG emissions by 2040 (an additional 3% reduction in the 5 years between 2035 [18%] and 2040 [21%]), the 2016 RTP/SCS was expected to fulfill and exceed its portion of SB 375 compliance with respect to meeting the state's GHG emission reduction goals.

[5] The SCAG 2016 RTP/SCS is based on year 2012 demographic data with growth forecasts developed for 2020, 2035, and 2040.

In March 2018, CARB updated the SB 375 targets to require an 8% reduction by 2020 and a 19% reduction by 2035 in per capita passenger vehicle GHG emissions (CARB 2018c). As this reduction target was updated after publication of the 2016 RTP/SCS, it is expected that the next iteration of the RTP/SCS will be updated to include this target.

Typically, a project would be consistent with the RTP/SCS if the project does not exceed the underlying growth assumptions within the RTP/SCS. Because the project is consistent with the County's existing general plan and zoning code, this project would be consistent with the underlying assumptions within the RTP/SCS. In addition, the major goals of the 2016 RTP/SCS are outlined in Table 4.6-5, along with the project's consistency with them.

Table 4.6-5
Project Consistency with the SCAG 2016 RTP/SCS

RTP/SCS Measure	Proposed Project Consistency
Preserve the Transportation System We Already Have	Does not apply. The project would not inhibit SCAG from preserving the existing transportation system.
Expand Our Regional Transit System to Give People More Alternatives to Driving Alone	Does not apply. The project would not inhibit SCAG from preserving expanding the regional transportation system.
Expand Passenger Rail	Does not apply. The project would not inhibit SCAG from expanding the passenger rail system.
Improve Highway and Arterial Capacity	Does not apply. The project would not inhibit SCAG from improving highway and arterial capacity.
Manage Demands on the Transportation System	Does not apply. The project would not inhibit SCAG from managing the demands on the transportation system.
Optimize the Performance of the Transportation System	Does not apply. The project would not inhibit SCAG from optimizing the performance of the transportation system.
Promoting Walking, Biking and Other Forms of Active Transportation	Does not apply. The project would not inhibit SCAG from promoting walking, biking, and other forms of active transportation.
Strengthen the Regional Transportation Network for Goods Movement	Does not apply. The project would not inhibit SCAG from strengthening the regional transportation network for goods movement.
Leverage Technology	Does not apply. The project would not inhibit SCAG from leveraging technology for the transportation system.
Improve Airport Access	Does not apply. The project would not inhibit SCAG from improving airport access.
Focus New Growth Around Transit	Does not apply. The project would not inhibit SCAG from focusing new growth around transit corridors.
Improve Air Quality and GHG	Inconsistent. The project would result in criteria air pollutant and GHG emissions during construction and operation.
Preserve Natural Lands	Consistent. The project would not impact natural lands during construction or operation.

Source: SCAG 2016a.

As shown in Table 4.6-5, the project would not conflict with most of the goals within SCAG's 2016 RTP/SCS.

In addition to demonstrating the region's ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2016 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2016 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use. With regard to individual developments, such as the proposed project, the strategies and policies set forth in the 2016 RTP/SCS can be grouped into the following three categories: (1) reduction of vehicle trips and VMT, (2) increased use of alternative fuel vehicles, and (3) improved energy efficiency.

Consistency with VMT Reduction Strategies and Policies

The 2016 RTP/SCS evaluated performance outcomes for a Base Year, Baseline, and Plan to evaluate how the 2016 RTP/SCS is expected to perform when fully implemented and one performance measure was estimated daily VMT per capita. The 2016 RTP/SCS estimated a daily 22.8 Total VMT per capita for the 2012 Base Year and a daily 20.5 Total VMT per capita for the 2040 Plan Year for the SCAG region as a whole. For Los Angeles County, the 2012 Base Year projected daily Total VMT per capita is 21.5 and 18.4 daily Total VMT per capita for the 2040 Plan Year. The proposed project's consistency with this aspect of the 2016 RTP/SCS is demonstrated via the proposed project's characteristics.

The proposed project's location, access to other nearby destinations, pedestrian connections, and bicycle amenities would encourage non-auto modes of transportation such as walking, bicycling, carpooling, vanpool, transit, etc. The proposed project is located within bicycling and walking distance from a residential community, public schools, additional recreational uses, and commercial areas. Victoria Community Regional Park and Towne Avenue Elementary School are located immediately north of the site. Additionally, Cal State Dominguez Hills is located within 1.2 miles northeast of the site. The proposed project would serve as a recreation amenity in close proximity to many existing potential patrons. Within the City of Carson, the Department of Parks and Recreation has identified 1.53 acres of local and regional recreation parks per 1,000 residents, which falls below the countywide parkland ratio of 3.3 acres per 1,000 residents (DPR 2016). The project site would provide additional recreational facilities for the existing community, improving access to open space for underserved communities. The proposed project site would be accessible to pedestrians and cyclists via sidewalks and bike routes on the surrounding street system and is well served by transit. The proposed project would include the addition of a sidewalk on the south side of Martin Luther King along the proposed project frontage to increase accessibility for pedestrians and would have safe and convenient bicycle parking. The proposed project will include bus turn-out and parking areas to facilitate bus travel to and from the site.

Increased Use of Alternative Fueled Vehicles Policy Initiative

The second goal of the 2016 RTP/SCS, with regard to individual development projects such as the proposed project, is to increase alternative fueled vehicles to reduce per-capita GHG emissions. This 2016 RTP/SCS policy initiative focuses on accelerating fleet conversion to electric or other near zero-emission technologies. The proposed project will include bus turn-out and parking areas to facilitate such bus travel to and from the site.

Due to state and local regulations and incentives, buses rapidly are being converted to either natural gas-fired, for which much of the natural gas is renewable with a negative carbon footprint, or battery-powered. Even for those buses that are diesel-powered, use of the two major types of sustainable diesel fuel (biodiesel and renewable diesel) has grown rapidly since 2010, jumping from less than 1% to approximately 15% (CABA 2019). Renewable diesel and biodiesel are made from second-use materials (feedstocks) such as vegetable oils, used cooking oil, and animal fats. These feedstocks are renewable, rather than petroleum based.

Energy Efficiency Strategies and Policies

The third important focus within the 2016 RTP/SCS, for individual developments such as the proposed project, involves improving energy efficiency (e.g., reducing energy consumption) to reduce GHG emissions. The 2016 RTP/SCS goal is to actively encourage and create incentives for energy efficiency, where possible. As discussed herein, the proposed project would pursue LEED Silver and Gold certifications for buildings. Further, PDF-GHG-1 to PDF-GHG-3 would require the design of buildings to incorporate a number of sustainability features. Accordingly, the proposed project would be consistent with the 2016 RTP/SCS energy efficiency strategies and policies.

Based on the analysis above and in Table 4.6-5, the proposed project would be consistent with the 2016 RTP/SCS.

Consistency with CARB's Scoping Plan

As discussed in Section 4.6.2, the Scoping Plan (approved by CARB in 2008 and updated in 2014 and 2017) provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.[6] Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on

[6] The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009b).

area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., LCFS), among others.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. Table 4.6-6 highlights measures that have been, or will be, developed under the Scoping Plan and the proposed project's consistency with Scoping Plan measures. To the extent that these regulations are applicable to the proposed project, its inhabitants, or uses, the proposed project would comply will all regulations adopted in furtherance of the Scoping Plan to the extent required by law.

Table 4.6-6
Proposed Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	Consistent. The proposed project's employees would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Low-Carbon Fuel Standard	T-2	Consistent. Motor vehicles driven by the proposed project's employees would use compliant fuels.
Regional Transportation-Related GHG Targets	T-3	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Advanced Clean Transit	Proposed	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Last-Mile Delivery	Proposed	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Reduction in VMT	Proposed	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low-Friction Oil 4. Solar-Reflective Automotive Paint and Window Glazing	T-4	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Ship Electrification at Ports (Shore Power)	T-5	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Goods Movement Efficiency Measures 1. Port Drayage Trucks 2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification	T-6	Not applicable. The proposed project would not prevent CARB from implementing this measure.

Table 4.6-6
Proposed Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
4. Goods Movement System-wide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction		
Heavy-Duty Vehicle GHG Emission Reduction • Tractor-Trailer GHG Regulation • Heavy-Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I)	T-7	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Proposed Project	T-8	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Medium and Heavy-Duty GHG Phase 2	Proposed	Not applicable. The proposed project would not prevent CARB from implementing this measure.
High-Speed Rail	T-9	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	Consistent. The project will comply with energy-efficiency standards for electrical appliances and other devices in Title 24, Part 6, of the California Code of Regulations in effect at the time of building construction.
Energy Efficiency (Natural Gas)	CR-1	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	Not applicable. Applicable for residential projects only.
Combined Heat and Power	E-2	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Renewable Portfolios Standard (33% by 2020)	E-3	Not applicable. The electricity used by the proposed project will benefit from reduced GHG emissions resulting from increased use of renewable energy sources.
Renewable Portfolios Standard (50% by 2050)	Proposed	Not applicable. The proposed project would not prevent CARB from implementing this measure.
SB 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Water Sector		
Water Use Efficiency	W-1	Consistent. The proposed project would include water efficient landscaping and buildings would be LEED Certified.

Table 4.6-6
Proposed Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
Water Recycling	W-2	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Water System Energy Efficiency	W-3	Not applicable. This is applicable for the transmission and treatment of water. The proposed project would not prevent CARB from implementing this measure.
Reuse Urban Runoff	W-4	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Renewable Energy Production	W-5	Not applicable. Applicable for wastewater treatment systems. Not applicable for the project. The proposed project would not prevent CARB from implementing this measure.
Green Buildings		
1. State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	Consistent. The project will be required to be constructed in compliance with state green building standards in effect at the time of building construction.
2. Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	Consistent. The project's buildings would meet green building standards in effect at the time of design and construction.
3. Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	Consistent. The project will be constructed in compliance with green building standards in effect at the time of building construction.
4. Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-1	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Industry Sector		
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Oil and Gas Extraction GHG Emission Reduction	I-2	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Reduce GHG Emissions by 20% in Oil Refinery Sector	Proposed	Not applicable. The proposed project would not prevent CARB from implementing this measure.
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Refinery Flare Recovery Process Improvements	I-4	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Work with the local air districts to evaluate amendments to their existing leak detection and repair rules for industrial facilities to include methane leaks	I-5	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Recycling and Waste Management Sector		
Landfill Methane Control Measure	RW-1	Not applicable. The proposed project would not prevent CARB from implementing this measure.

Table 4.6-6
Proposed Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
Increasing the Efficiency of Landfill Methane Capture	RW-2	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Mandatory Commercial Recycling	RW-3	During both construction and operation of the project, the project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During construction, all wastes would be recycled to the maximum extent possible.
Increase Production and Markets for Compost and Other Organics	RW-3	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Anaerobic/Aerobic Digestion	RW-3	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Extended Producer Responsibility	RW-3	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Environmentally Preferable Purchasing	RW-3	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Forests Sector		
Sustainable Forest Target	F-1	Not applicable. The proposed project would not prevent CARB from implementing this measure.
High GWP Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Servicing	H-1	Not applicable. The proposed project would not prevent CARB from implementing this measure.
SF_6 Limits in Non-Utility and Non-Semiconductor Applications	H-2	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Reduction of Perfluorocarbons (PFCs in Semiconductor Manufacturing	H-3	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Limit High GWP Use in Consumer Products	H-4	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	Not applicable. The proposed project would not prevent CARB from implementing this measure.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	Not applicable. The proposed project would not prevent CARB from implementing this measure.
SF_6 Leak Reduction Gas Insulated Switchgear	H-6	Not applicable. The proposed project would not prevent CARB from implementing this measure.
40% reduction in methane and hydrofluorocarbon (HFC) emissions	Proposed	Not applicable. The proposed project would not prevent CARB from implementing this measure.
50% reduction in black carbon emissions	Proposed	Not applicable. The proposed project would not prevent CARB from implementing this measure.

Table 4.6-6
Proposed Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Proposed Project Consistency
Agriculture Sector		
Methane Capture at Large Dairies	A-1	Not applicable. The proposed project would not prevent CARB from implementing this measure.

Source: CARB 2008 and CARB 2017.
Notes: CARB = California Air Resources Board; CCR = California Code of Regulations; GHG = greenhouse gas; GWP = global warming potential; SB = Senate Bill; SF_6 = sulfur hexafluoride

Based on the analysis in Table 4.6-6, the proposed project would be consistent with the applicable strategies and measures in the Scoping Plan.

The project would not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in EO S-03-05 and SB 32, or the carbon neutrality goal for 2045 identified in EO B-55-18. EO S-03-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. SB 32 establishes for a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. EO B-55-18 establishes an additional statewide policy goal to achieve carbon neutrality as soon as possible and no later than 2045 and to achieve and maintain net negative emissions thereafter.

In November 2018, CARB published the 2018 Progress Report that analyzes the progress made toward meeting the regional SB 375 GHG emissions reduction targets. The report finds that "California is not on track to meet GHG reductions expected under SB 375" (CARB 2018a). It notes that while the state has hit its 2020 target ahead of schedule due to improvements in the energy sector, "meeting future targets will require a greater contribution from the transportation sector" (CARB 2018a). CARB recommends reducing the growth of single-occupancy vehicle travel to achieve California's 2030 emissions target.

Although this project will increase overall travel to the project site, a relevant portion of the travel generated is expected to be multi-occupancy, consistent with SCAG's and CARB's goals and recommendations. As indicated above, the proposed project's characteristics, such as location, access to other nearby destinations, pedestrian connections, and bicycle amenities, will reduce VMT. Further, much of the VMT will be via buses that rapidly are being converted to either natural gas-fired, for which much of the natural gas is renewable with a negative carbon footprint, and battery-powered. Even for those buses that are diesel-powered, use of the two major types of

sustainable diesel fuel (biodiesel and renewable diesel) has grown rapidly since 2010, jumping from less than 1% to approximately 15% (CABA 2019). Accordingly, the proposed project will help meet SCAG and CARB goals to increase alternative fueled vehicles, which reduces per-capita GHG emissions and impacts would be **less than significant**.

4.6.6 Mitigation Measures

Impacts from GHG emissions would be less than significant. No mitigation measures are required.

4.6.7 Level of Significance After Mitigation

As discussed in Section 4.6.5, the proposed project would result in less-than-significant impacts related to GHG emissions, and no mitigation measures are required. The proposed project would comply with applicable regulatory requirements as discussed throughout the analysis above and would implement PDF-GHG-1 through PDF-GHG-3 to reduce GHG emissions. Through compliance with state mandates and other applicable regulatory requirements, impacts with regard to GHG emissions would be **less than significant.**

4.6.8 Cumulative Impacts

As explained earlier, the analysis of a project's GHG emissions is inherently a cumulative analysis because climate change is a global issue and the emissions from individual projects are negligible in a global context. Accordingly, the analysis above takes into account the potential for the proposed project to contribute to a cumulative impact of global climate change. This section illustrates that implementation of the proposed project's regulatory requirements and proposed project design features, including state mandates, would contribute to GHG reductions. These reductions support state goals for GHG emissions reductions.

The analysis shows that the proposed project is consistent with the 2016 RTP/SCS goals to reduce regional GHG emissions from the land use and transportation sectors by 2020 and 2035. The proposed project is also consistent with CARB's Scoping Plan, particularly its emphasis on the identification of emission reduction opportunities that promote economic growth while achieving greater energy efficiency and accelerating the transition to a low-carbon economy. Given the proposed project's consistency with statewide and regional plans adopted for the purpose of reducing GHG emissions, it is concluded that the proposed project's incremental contribution to GHG emissions and their effects on climate change would not be cumulatively considerable. For these reasons, the proposed project's cumulative contribution to global climate change is less than significant.

4.6.9 References

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

24 CCR Part 6. California Energy Code. Sacramento, California: California Building Standards Commission. March 2010. ISBN 978-1-58001-976-7. Effective January 1, 2011. Accessed August 2016. http://www.documents.dgs.ca.gov/bsc/Title_24/documents/2010/Part%206/2010-CA-Energy.pdf.

CABA (California Advanced Biofuels Alliance). 2019. *A Roadmap for Eliminating Petroleum Diesel in California by 2030.* January 2019. Accessed March 2019. https://docs.wixstatic.com/ugd/8efc2e_7d851f40477e4f128da0718d47276e6f.pdf.

CAPCOA (California Air Pollution Control Officers Association). 2008. *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from projects Subject to the California Environmental Quality Act*. January 2008.

CARB (California Air Resources Board). 2008. *Climate Change Scoping Plan: A Framework for Change*. December 2008. http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm.

CARB. 2011. *The Advanced Clean Cars Program*. Accessed August 2018. https://www.arb.ca.gov/msprog/acc/acc.htm.

CARB. 2014. *First Update to the Climate Change Scoping Plan Building on the Framework Pursuant to AB 32 – The California Global Warming Solutions Act of 2006*. May 2014. Accessed August 2017. http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

CARB. 2017. *The 2017 Climate Change Scoping Plan Update*. January 20. Accessed July 2017. https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf.

CARB. 2018a. *California Greenhouse Gas Inventory for 2000–2016 by Category as Defined in the 2008 Scoping Plan.* Last updated June 22, 2018. https://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_sum_2000-16.pdf.

CARB. 2018b. "Glossary of Terms Used in Greenhouse Gas Inventories." June 22, 2018. Accessed August 2018. http://www.arb.ca.gov/cc/inventory/faq/ghg_inventory_glossary.htm.

CARB. 2018c. "SB 375 Regional Greenhouse Gas Emissions Reduction Targets." Final. Accessed March 2019. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets.

CAT (California Climate Action Team). 2006. *Climate Action Team Report to the Governor Schwarzenegger and the Legislature*. Sacramento, California. March 2006. Accessed August 2017. http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF.

CAT. 2010. *Climate Action Team Biennial Report*. Sacramento, California. April 2010. Accessed August 2016. http://www.energy.ca.gov/2010publications/CAT-1000-2010-004/CAT-1000-2010-004.PDF.

CCCC (California Climate Change Center). 2012. *Our Changing Climate 2012: Vulnerability & Adaptation to the Increasing Risks from Climate Change in California*. July 2012. Accessed August 2017. http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf.

CEC (California Energy Commission). 2015. "2016 Building Efficiency Standards Frequently Asked Questions." Accessed August 2017. http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf.

CEC. 2018. "Tracking Progress: Statewide Energy Demand." Accessed December 2018. https://www.energy.ca.gov/renewables/tracking_progress/documents/statewide_energy_demand.pdf.

CEQ (Council on Environmental Quality). 2016. *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews.* August 1. Accessed November 2016. https://www.whitehouse.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf.

CEQ. 2017. *Withdrawal of Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews*. April 5. Accessed September 2017. https://www.gpo.gov/fdsys/pkg/FR-2017-04-05/pdf/2017-06770.pdf.

CNRA (California Natural Resources Agency). 2009a. *2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008.* Accessed August 2017. http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf.

CNRA. 2009b. *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. http://resources.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf.

CNRA. 2014. *Safeguarding California: Reducing Climate Risk.* An Update to the 2009 California Climate Adaptation Strategy. July 2014. Accessed May 2017. http://resources.ca.gov/docs/climate/Final_Safeguarding_CA_Plan_July_31_2014.pdf.

CRNA. 2016. Safeguarding California: Implementing Action Plans. March 2016. http://resources.ca.gov/docs/climate/safeguarding/Safeguarding%20California-Implementation%20Action%20Plans.pdf.

CNRA. 2017. Draft Report Safeguarding California Plan: 2017 Update, California's Climate Adaptation Strategy. May 2017. http://resources.ca.gov/wp-content/uploads/2017/05/DRAFT-Safeguarding-California-Plan-2017-Update.pdf.

CNRA. 2018. *Safeguarding California Plan: 2018 Update*. January. Accessed February 2018. http://resources.ca.gov/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf.

CPUC (California Public Utilities Commission). 2013. "California's Zero Net Energy Policies and Initiatives." September 18, 2013. http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=10718.

CPUC (California Public Utilities Commission). 2015. Renewables Portfolio Standard. SB 350 Clean Energy and Pollution Reduction Act of 2015. Approved October 7, 2015.

County of Los Angeles. 2015a. *Los Angeles County General Plan*. Adopted October 6, 2015. Accessed August 21, 2018. http://planning.lacounty.gov/generalplan/generalplan.

County of Los Angeles 2015b. Unincorporated Los Angeles County Community Climate Action Plan 2020. Accessed November 2018. August 2015.

DPR (Department of Parks and Recreation). 2016. *Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment*. May 9, 2016. Accessed February 2019. https://lacountyparkneeds.org/wp-content/uploads/2016/06/FinalReport.pdf.

EPA (U.S. Environmental Protection Agency). 2010. *EPA and NHTSA Finalize Historic National Program to Reduce Greenhouse Gases and Improve Fuel Economy for Cars and Trucks*. April 2010. Accessed May 2017. https://www3.epa.gov/otaq/climate/regulations/420f10014.pdf.

EPA. 2016. "Glossary of Climate Change Terms." August 9, 2016. Accessed May 2017. https://www3.epa.gov/climatechange/glossary.html.

EPA. 2017a. "Climate Change." Last updated January 19, 2017. Accessed December 2018. https://www.epa.gov/climatechange.

EPA. 2018. *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990–2016.* EPA 430-R-18-003. https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf.

EPA and NHTSA (U.S. Environmental Protection Agency and National Highway Traffic Safety Administration). 2016. Regulations and Standards: Heavy-Duty. EPA and DOT Finalize Greenhouse Gas and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles. Last updated on August 30, 2016. https://www3.epa.gov/otaq/climate/regs-heavy-duty.htm.

IPCC (Intergovernmental Panel on Climate Change). 1995. *IPCC Second Assessment Synthesis of Scientific-Technical Information Relevant to Interpreting Article 2 of the U.N. Framework Convention on Climate Change*.

IPCC. 2007. *IPCC Fourth Assessment Synthesis of Scientific-Technical Information Relevant to Interpreting Article 2 of the U.N. Framework Convention on Climate Change*.

IPCC. 2013. *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. http://www.ipcc.ch/report/ar5/wg1.

IPCC. 2014. *Climate Change 2014 Synthesis Report: A Report of the Intergovernmental Panel on Climate Change.* Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Accessed August 2017. http://www.ipcc.ch/report/ar5/syr.

NHTSA (National Highway Traffic Safety Administration). 2018. The Safer Affordable Fuel-Efficient 'SAFE' Vehicles Rule. Accessed October 2018. https://www.nhtsa.gov/corporate-average-fuel-economy/safe.

OPR (Governor's Office of Planning and Research). 2008. *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review.* Technical Advisory. Sacramento, California: OPR. June 19, 2008. Accessed December 9, 2013. http://opr.ca.gov/docs/june08-ceqa.pdf.

PBL (PBL Netherlands Environmental Assessment Agency). 2017. Trends in Global CO_2 and Total Greenhouse Gas Emissions, 2017 Report. Accessed June 2018.

SCAG (Southern California Association of Governments). 2012. *2012–2035 Regional Transportation Plan/Sustainable Communities Strategy*. Adopted April 2012. Accessed August 2017. http://rtpscs.scag.ca.gov/Pages/2012-2035-RTP-SCS.aspx.

SCAG. 2016a. *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*. Adopted April 7, 2016. Accessed August 2017. http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.

SCAG. 2016b. "Figure 3.8.4-1." In *Final Program Environmental Impact Report for 2016 RTP/SCS*. April 2016.

SCAQMD (South Coast Air Quality Management District). 2008. *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*. October 2008.

SCAQMD. 2010. "Greenhouse Gases CEQA Significance Thresholds Working Group Meeting No. 15." September 28, 2010. Accessed August 2017. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2.

SCE (Southern California Edison). 2017. 2016 Power Content Label. Accessed December 2018. https://www1.sce.com/wps/wcm/connect/19d14fdf-d332-43e5-8273-1dade7a617d6/PRIME_SCE_2016_Power_Content_Label_Final.pdf?MOD=AJPERES.

Under 2 Coalition. 2017. Global Climate Leadership Memorandum of Understanding. 2017. https://www.gov.ca.gov/wp-content/uploads/2017/09/Under_2_MOU.pdf.

INTENTIONALLY LEFT BLANK

4.7 HAZARDS AND HAZARDOUS MATERIALS

This section describes the existing hazardous materials within the vicinity of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of The Creek at Dominguez Hills Project (project or proposed project). The analysis is based, in part, upon the following sources:

- *Environmental Conditions Summary The Creek at Dominguez Hills, 340 Martin Luther King Junior Street, Carson, California*, prepared by Roux Associates Inc., February 2019 (Appendix G).
- *Remedial Action Plan for Soil and Landfill Gas Media, Former BKK Landfill, Carson Dump Operable Unit 2* (Burns & McDonnell 2016).

4.7.1 Existing Conditions

Site Location

The proposed project site is owned by the County of Los Angeles (County) and is located in the City of Carson. The project site, which is approximately 87 acres within the southwesterly area of the existing 178-acre Links at Victoria Golf Course (Victoria Golf Course), is northeast of the Dominguez Channel and east of the junction of Interstate 405 (I-405) and I-110. As shown in Figure 4.7-1, Potential Project Site Hazards, the project site is bounded by the Goodyear Blimp Airship Base to the northwest, the northern portion of the Victoria Golf Course to the north, South Avalon Boulevard to the east, and Del Amo Boulevard and a Mobile gas station and U-Haul truck rental lot to the south, across from a storm drainage ditch.

The project site is situated on the coastal plain of Los Angeles County, with elevations ranging between 10 and 35 feet above mean sea level (amsl). The coastal plain typically slopes gently westward, toward the Pacific Ocean. The project site is located in the West Coast Basin of the Los Angeles Basin physiographic region. The West Coast Basin is underlain by a series of marine and continental deposits, ranging in age from Holocene to Middle Miocene. The deposits overlie a basement complex of pre-Cretaceous igneous and metamorphic rock (Appendix G).

Groundwater at the project site within the Upper Bellflower Aquitard is first encountered at a depth of approximately 11.5 to 23.5 feet below ground surface (bgs) in on-site groundwater monitoring wells (Leighton 2014). The Upper Bellflower hydrogeologic unit is characterized by fine-grained sediments consisting of variable admixtures of dense to stiff, unsaturated, clay, silt, and very fine-grained sand. Porosity and permeability are very low (Appendix G).

Current Land Uses

The proposed project site is currently accessed from the northern adjoining property (Victoria Golf Course) along Martin Luther King, Jr. Street (formerly E 192nd Street). The project site is predominantly developed as a portion of the Victoria Golf Course, including grass fairways and greens and concrete cart paths. Two concrete pedestrian/golf cart bridges cross the branch channel. A small restroom building is located along the southeastern edge of the project site. At least three landfill gas monitoring probes are located along the eastern edge of the project site, along South Avalon Boulevard. At least five groundwater monitoring wells are located around the west, south, and east perimeter of the project site. The Dominguez Branch Channel transects the property from the northwestern corner southward to the Dominguez Channel, which borders the site to the south. The Dominguez Channel receives permitted discharges from up to 79 entities with a combined discharge of up to 75 million gallons per day. Historically the Los Angeles Regional Water Quality Control Board has issued hundreds of citations for violations connected to organic and inorganic impacts to water quality in the channel. The 100- and 500-year floodplains for the Dominguez Channel and associated branch channel cover a substantial proportion of the project site.

Previous Land Uses

As stated in the Environmental Conditions Summary (ECS) (Appendix G) and soil and landfill gas Remedial Action Plan (RAP) (Burns & McDonnell 2016), the project site and vicinity were historically marshland and agricultural land until the 1940s when residential and industrial development occurred in the vicinity. The Dominguez Channel was first established around 1923 as an engineered improvement to a natural existing drainage. The channel originally extended from the northwestern corner of the project site, ran almost parallel to the southern property boundary, then exited the project site and continued southeastward. It was historically used for regulated and unregulated disposal of liquid wastes from multiple nearby industrial operations. Contemporary accounts describe various odors and discoloration of the channel. The channel was upgraded between 1961 and 1966, resulting in the current channel design and layout. The current layout is a trapezoidal channel with a reported lining that is either in-situ or locally mined clay, and filter blanket and revetment along the channel slopes. The upgrade resulted in the channel being relocated along the southern border of the subject property. The channel continues to be used for management of surface and permitted discharges.

Beginning in approximately 1948, the project site, and adjoining property to the north, west, and south of the project site was used as an approximately 353-acre Class II and III landfill, which was known as the Main Street Dump, Carson Dump, and the Ben K. Kazarian (BKK) Landfill. The Class II municipal solid waste portion of the BKK landfill operated from 1948 to 1959. During this time, the landfill was estimated to have accepted 3 to 5 million tons of waste; there was no liner or leachate collection system in place. Wastes permitted included inert solid fill, household

and commercial refuse (e.g., paper, wood, rubber, and paint sludge), garbage, liquid and semi-liquid industrial waste residue and grit from separation chambers at the Hyperion Sewer Treatment Plant (Appendix G). The California Department of Toxic Substances Control (DTSC) is overseeing remediation of the former landfill. A soil and landfill gas RAP (Burns & McDonnell 2016) was approved by DTSC in 2016. Prior to preparing the RAP, DTSC decided to divide the entire former landfill site into two Operable Units (OUs) focused on separate remediation areas. The entire Victoria Golf Course site (including the project site) is defined as OU-2. OU-1 includes the portion of the former BKK Landfill located on the south side of the Dominguez Channel, which now includes the I-405 freeway and part of the Porsche Experience Center. The RAP is focused specifically on OU-2, and addresses affected environmental media where a potential or known exposure pathway to contaminants of potential concern (COPC) may exist, except groundwater. Details of the RAP are discussed in the Remedial Action Plan section.

A shooting range called the Rancho Angeles Trap and Skeet Club was established in a leased area in the northern portion of the project site in the mid-1960s. The project site (as well as the land to the north and east), were leased by the County in 1966. The landfill and shooting range were redeveloped into the Victoria Golf Course in the same year.

Current and Former Surrounding Land Usage

The adjoining property to the north is currently the northern portion of Victoria Golf Course, and was formerly part of the BKK Landfill (see "Previous Land Uses"). Historically, adjoining properties to the north, northwest, west, southwest, and south were operated as landfills, but have since been redeveloped or are currently being redeveloped, including the Goodyear Blimp Airship Base (northwest), Porsche Experience Center (southwest), Interstate 405 Freeway (west and southwest), golf courses (north), and other mixed commercial and industrial uses. Residential neighborhoods are located to the north beyond the golf course and east beyond South Avalon Boulevard.

The nearest schools are Towne Avenue Elementary School, located 0.32 miles north/northeast of the project site, as well as Leapwood Avenue Elementary School, located 0.36 mile east/northeast of the project site. In addition, the northern entrance to the project site would be at Martin Luther King, Jr. Street, directly across from Victoria Park (public park), and a jogging/walking path will extend north of the project site and connect to Martin Luther King, Jr. Street. Both of these locations are less than 0.25 miles from Towne Avenue Elementary School.

The closest public airports to the project site are the Compton/Woodley Airport, 2.74 miles northeast of the project site.

Remedial Action Plan

Many of the former landfills in the project site vicinity, including OU-1 of the BKK Landfill on the southwest adjacent side of the project site, have been or are presently being redeveloped. Redevelopment includes the Interstate-405 Freeway, golf courses, residential neighborhoods, and other mixed uses. The former BKK Landfill itself and many of the former landfills in the project vicinity have been or are presently being investigated and remediated under governmental oversight, and remediation activities are likely to continue. As a result of regional historical landfilling and industrial activities, soil, groundwater and soil vapor in the region have been impacted with hazardous substances and petroleum products. Extensive environmental investigation has been performed on site and off site since 1955 to assess the nature and extent of potential impacts related to historical operation of the project site and off-site areas. Investigations have included evaluation of soil, groundwater, soil gas, ambient air, and surface water.

Beginning in approximately 2006, under the direction of the DTSC, remedial investigation activities were implemented at the project site. Historical environmental assessments performed for OU-2 have identified methane, perchlorate, semivolatile organic compounds (SVOCs), fuel-related constituents, cyanide, sulfides, carbon monoxide, and volatile organic compounds (VOCs) as contaminants of concern (COCs), and have been compiled in a Remedial Investigation Feasibility Study (RIFS) report (Leighton 2014). The environmental assessments and remedial investigations led to the development of a RAP (Burns & McDonnell 2016). The RAP did not identify environmental threats that constituted an immediate and substantial danger to human health or the environment, and therefore no interim or emergency response actions were taken because of the findings. The County and other responsible parties have been and will continue to be responsible for implementing the RAP as approved by DTSC. To the extent that the proposed project requires new or additional measures imposed by DTSC, not expressly discussed in the RAP nor due to historical contamination, those measures will be the responsibility of the project applicant.

The overall approach presented in the RAP is to continue to contain hazardous chemicals of potential concern (COPCs) in place. The RAP encompasses surface water and soil run-off, the landfill soil cover and waste zone, and the underlying native soil. It addresses all affected environmental media where a complete or potential exposure pathway for COPCs could result in potential human or ecological health risks that exceed target risk levels as determined by the Human Health Risk Assessment (HHRA) and Screening Level Ecological Risk Assessment (SLERA). Final COPCs identified by the HHRA include arsenic, antimony, lead, benzo(a)pyrene, PCB Aroclors 1248 and 1254, and methane.

SOURCE: Los Angeles County 2011; Leighton 2011; Bing Maps 2018

DUDEK

0 300 600 Feet

FIGURE 4.7-1

Potential Project Site Hazards

The Creek at Dominguez Hills Project

INTENTIONALLY LEFT BLANK

The RAP recommended an overall remedy for OU-2, which includes the project site. This approach was designed to protect groundwater by minimizing infiltration of water to the waste zone, prevent direct human contact with the waste zone or contaminated soil, and provide adequate protection to prevent inhalation or combustion of landfill gas. DTSC approved the recommendations of the RAP in 2016 (DTSC 2016a). A CEQA Notice of Exemption issued by DTSC for the Victoria Golf Course/Former BKK Carson Landfill (DTSC 2016b) outlines the approved project activities:

- Institutional Controls for each of the OU-2 properties to prohibit sensitive land uses (e.g., residential, school, hospital, daycare uses), comply with Operations, Monitoring and Maintenance plans, and require evaluation and consideration of potential health risks and potential fire/explosion hazards posed by landfill gas at the site, including the need for mitigation measures, with respect to construction of new buildings or any intrusive land activity that may compromise the soil cap.
- Property-Specific Operations, Monitoring & Maintenance (OM&M) Plans:
    - Soil cap: OM&M Plans that, at a minimum, contain best management practice specifications and/or schedules for soil cover inspection and maintenance with a focus on areas that are known or determined to have soil cover less than 3 feet thick; emergency response procedures for natural events that could degrade the soil cover (i.e., earthquakes, flooding); maintaining soil cover thickness and establishing physical properties of imported soil; providing for surface drainage to prevent soil erosion, and to eliminate standing water that could percolate into the waste zone; establishing soil and landfill gas (LFG) sampling requirements to support excavation work; establishing acceptable guidance for landscape irrigation; and identifying permitting and notification requirements for managing excavations in accordance with California Occupational Safety and Health Act standards.
    - Landfill Gas Monitoring: Per agreed upon implementation schedule, conduct regular surface monitoring per Air Quality Management District (AQMD) Rule 1150.1; conduct regular perimeter LFG monitoring in accordance with AQMD Rule 1150.1 for closed or inactive landfills; and conduct on-site building perimeter well/probe and vent riser monitoring. Appropriate mitigation actions will be undertaken if indicated by monitoring data.
- Location-specific Remedial Response Actions for Soil Areas of Concern and Methane:
    - Isolate soil Area of Elevated Concentration (AEC) location 236 (within the former MB Landscape Nursery portion of OU-2) by surface paving area of approximately 25 square yards.
    - Implement location-specific institutional controls for soil AEC locations 34, 236, and UB-B/22 and implement property-specific OM&M plans (see Figure 4.7-1 for locations).

- Install methane alarms in all enclosed-space slab-on-grade buildings.
- Install methane barriers at subsurface point source locations including, but not limited to, irrigation control valve boxes if methane accumulations exceed 1.25% in air.

The remedial actions noted above do not all apply to the project site. Location 236 is located on the northern corner of the Goodyear Blimp Airship Base, which is northwest of the project site. To the extent that the proposed project requires new or additional measures imposed by DTSC, not expressly discussed in the RAP nor due to historical contamination, those measures will be the responsibility of the project applicant.

Other Potential Hazards

The site is surrounded by a historically industrial area with numerous documented and potential sources of contamination. Roux Associates understands that DTSC received a grant from the U.S. Environmental Protection Agency (EPA) to investigate potential sources of chlorinated VOCs that have the potential to impact groundwater upgradient from the landfill in the vicinity of Main Street.

Pressurized oil pipelines are located in the utility easement to the southeast of the site, the utility corridor south of OU-1, and the South Avalon Boulevard right-of-way. The closest oil pipeline running parallel to the southeast boundary of the project site may be at a distance of approximately 50 feet. No indication of a release from any of the pipelines was identified.

The southern portion of the site appeared to be used for agricultural purposes between 1952 and 1959. Although not documented, the use of organochlorine pesticides was commonplace for such operations at that time. From a more contemporary perspective, it is known that pesticides and herbicides have been used to control and optimize vegetation at the golf course. Furthermore, the Montrose Chemical Superfund Site located approximately 1.3 miles west of the site was documented to have released the pesticide DDT to much of the surrounding area (including the project site) through aerial dispersion. To date, concentrations of DDT encountered in shallow soil at the project site have been below EPA industrial regional screening levels and were determined not to pose a significant health risk per the human health risk assessment (HHRA).

Site-Specific Regulatory Oversight

DTSC provides regulatory oversight of the implementation of the RAP. Plenitude Holdings, LLC (Plenitude) entered into an agreement with DTSC in February 2018. The agreement allows DTSC to provide advice and review of the proposed re-purposing of a portion of the Victoria Golf Course (Plenitude 2018). DTSC, being the responsible regulatory agency in charge of overseeing the remediation and long-term management of the former BKK Landfill, will provide feedback and assistance on proposed approaches related to development of the project site, including alterations to the existing landfill cap, soil/waste relocation management, human health risk assessment

concepts, and remedial design concepts. The agreement also indicates that a voluntary cleanup agreement will be developed in the future. DTSC oversight will provide appropriate mitigation to potential significant hazards created by the former landfill during the construction and operation of the project site. It will also assist in mitigation of potential significant hazards to public health and the environment. Plenitude will be responsible for building protection systems and any new or additional measures required by DTSC, distinct from those expressly identified in the current RAP that are resulting from its development of the project site.

4.7.2 Relevant Plans, Policies, and Ordinances

Federal

National Emission Standards for Hazardous Air Pollutants

The EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP) requires that a thorough asbestos survey be performed prior to demolition or renovation activities that may disturb asbestos-containing materials (ACM). This requirement may be enforced by federal, state, and local regulatory agencies, and specifies that all suspect ACMs be sampled to determine the presence or absence of asbestos prior to any renovation or demolition activities that may disturb them to prevent potential exposure to workers, building occupants, and the environment.

Federal Resource Conservation and Recovery Act

The Federal Resource Conservation and Recovery Act (RCRA) of 1976 (42 USC 6901–6992) established a program administered by the EPA for regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (PL 98-616), which affirmed and extended the "cradle-to-grave" system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act. Under the authority of RCRA, the regulatory framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste, is found in 40 CFR, Parts 260–299. California is delegated authority from the EPA to enforce RCRA and its own Hazardous Waste Control Act (see below) in California. The EPA retains enforcement authority.

RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. The 1984 federal Hazardous and Solid Waste Amendments to RCRA are focused on waste minimization and phasing out land disposal of hazardous waste, as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for EPA, more stringent hazardous waste management standards, and a comprehensive UST program.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA) of 1986

Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as "Superfund," on December 11, 1980. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous substances at these sites, and established a trust fund to provide for cleanup when no financially responsible party could be identified. The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA on October 17, 1986. SARA stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites, required Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations, provided new enforcement authorities and settlement tools, increased state involvement in every phase of the Superfund program, increased the focus on human health problems posed by hazardous waste sites, encouraged greater citizen participation in making decisions on how sites should be cleaned up, and increased the size of the trust fund to $8.5 billion. The EPA has a State Memorandum of Agreement with California, under which the EPA will not generally assert jurisdiction under CERCLA where the State indicates that it will be responsible for regulating the site. The State (DTSC) has taken responsibility for the Victoria Golf Course site.

Risk Assessment and Regional Screening Levels

The EPA and DTSC use risk assessments to characterize the nature and magnitude of health risks to humans and ecological receptors from chemical contaminants and other stressors that may be present in the environment. The environmental risk assessments typically fall into one of two areas: Human Health and Ecological. The risk assessment is, to the highest extent possible, a scientific process. In general terms, risk depends on the following three factors: how much of a chemical is present in an environmental medium (air, soil, water), how much contact (exposure) a person or ecological receptor has with the contaminated environmental medium, and the inherent toxicity of the chemical. The EPA developed Regional Screening Levels (RSLs), which provide a unified set of screening level/preliminary remediation goals for all regions of the EPA for screening chemical contaminants at superfund sites. These tables, which include 813 listed chemicals, are intended to promote national consistency. The RSLs are calculated using the latest toxicity values, default exposure assumptions and physical and chemical properties. An online calculator is also available where default parameters can be changed to reflect site-specific risks. The RSL Generic Tables are considered ready for use, and contain both the screening level calculation and the toxicity values used to create the generic RSL. The RSLs are considered by the EPA to be protective for humans (including sensitive groups) over a lifetime. Under most circumstances, the presence of a chemical in soil, soil gas, or indoor air at concentrations below the corresponding RSLs can be assumed to not pose a significant health risk

to people who may live (residential RSLs) or work (commercial/industrial RSLs) at the site. The EPA RSL tables were most recently updated in November 2018.

The California DTSC Human and Ecological Risk Office (HERO) incorporated the EPA RSLs into the HERO human health risk assessment. The HERO review of the EPA RSLs determined that the revised RSLs (which replaced the EPA Preliminary Remediation Goals (PRGs) in 2008) included some levels that were substantially higher, and therefore less protective, than the previous PRGs. HERO therefore created Human Health Risk Assessment (HHRA) Note 3, which incorporates HERO recommendations and DTSC-modified screening levels (DTSC-SLs) based on review of the EPA RSLs. HERO reference tables 1, 2, and 3 provide recommended screening levels for compounds in soil, tap water, and air, respectively. The DTSC-SL should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities. DTSC-SLs for soil and tap water are identified in the tables when the value is at least three-fold more stringent than the corresponding EPA RSL, and an air DTSC-SL is identified when it is more stringent than the corresponding EPA RSL by any degree. DTSC also accepts use of the EPA online screening calculator to calculate site-specific screening levels that are more protective of CalEPA and EPA toxicity values and applied assumptions are consistent with HERO recommendations. HERO Note 3 was most recently updated in June 2018.

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates hazardous materials transportation under Title 49 of the United States Code (USC). State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation. These agencies also govern permitting for hazardous materials transportation. Title 49 CFR reflects laws passed by Congress as of January 2, 2006.

Federal Response Plan

The Federal Response Plan of 1999, as amended in 2003 (FEMA 2003) is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

Federal Aviation Regulations

The Federal Aviation Regulations (FARs) are prescribed by the Federal Aviation Administration (FAA), governing all aviation activities in the United States. Any structure that is located within proximity to an airport or other criteria, is required file with the FAA per Code of Federal Regulations Title 14, Part 77.9. The FAA's major functions regarding hazards include the following: (1) developing and operating a common system of air traffic control and navigation for both civil and military aircraft, (2) developing and implementing programs to control aircraft noise and other environmental effects of civil aviation, (3) regulating U.S. commercial space transportation, and (4) conducting reviews to determine that the safety of persons and property on the ground are protected.

International Fire Code

The International Fire Code (IFC), created by the International Code Council, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code use a hazard classification system to determine what measures are required to protect against structural fires. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, IFC employs a permit system based on hazard classification. The IFC is updated every 3 years.

Occupational and Safety Health Act

Congress passed the Occupational and Safety Health Act to ensure worker and workplace safety. Its goal was to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. In order to establish standards for workplace health and safety, the Occupational and Safety Health Act also created the National Institute for Occupational Safety and Health as the research institution for the Occupational Safety and Health Administration (OSHA). OSHA is a division of the U.S. Department of Labor that oversees the administration of the Occupational and Safety Health Act and enforces standards in all 50 states. Because California has an approved State Plan, only California Occupational Safety and Health Administration (Cal/OSHA) standards apply to the project site.

State

California Occupational Safety and Health Administration

California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA

standards are required to be "as effective as" federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 330 et seq.). The regulations specify requirements for employee training, availability of safety equipment, accident prevention programs, and hazardous substance exposure warnings. The employer is also required, among other things, to have an Illness and Injury Prevention Program (IIPP).

Cal/OSHA Asbestos and Carcinogen Unit

Cal/OSHA Asbestos and Carcinogen Unit enforces asbestos standards in construction, shipyards, and general industry. This includes identification and removal requirements of asbestos in buildings, as well as health and safety requirements of employees performing work under the Asbestos-In-Construction regulations 8 CCR 1529. Only a Cal/OSHA-Certified Asbestos Consultant (CAC) can provide asbestos consulting (as defined by the Business and Professions Code, 7180–7189.7, and triggered by the same size and concentration triggers as for registered contractors). These services include building inspection, abatement project design, contract administration, supervision of site surveillance technicians, sample collection, preparation of asbestos management plans, and clearance air monitoring.

California Department of Public Health

The California Department of Public Health enforces lead laws and regulations related to the prevention of lead poisoning in children, prevention of lead poisoning in occupational workers, accreditation and training for construction-related activities, lead exposure screening and reporting, disclosures, and limitations on the amount of lead found in products. Accredited lead specialists are required to find and abate lead hazards in a construction project and to perform lead-related construction work in an effective and safe manner.

California Hazardous Waste Control Act

The DTSC is responsible for the enforcement of the Hazardous Waste Control Act (California Health and Safety Code, Section 25100 et seq.), which creates the framework under which hazardous wastes are managed in California. The law provides for the development of a state hazardous waste program that administers and implements the provisions of the federal RCRA cradle-to-grave waste management system in California. It also provides for the designation of California-only hazardous waste and development of standards that are equal to, or in some cases more stringent than, federal requirements.

According to 22 CCR 66001 et seq., substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous waste. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, contaminated, or is being stored prior to proper disposal.

Toxic substances may cause short-term or long-lasting health effects ranging from temporary effects to permanent disability or death. For example, toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substance involved). Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances (e.g., gasoline, hexane, and natural gas) are hazardous because of their flammable properties. Corrosive substances (e.g., strong acids and bases such as sulfuric (battery) acid or lye) are chemically active and can damage other materials or cause severe burns upon contact. Reactive substances (e.g., explosives, pressurized canisters, and pure sodium metal, which react violently with water) may cause explosions or generate gases or fumes.

Other types of hazardous materials include radioactive and biohazardous materials. Radioactive materials and wastes contain radioisotopes, which are atoms with unstable nuclei that emit ionizing radiation to increase their stability. Radioactive waste mixed with chemical hazardous waste is referred to as "mixed wastes." Biohazardous materials and wastes include anything derived from living organisms. They may be contaminated with disease-causing agents, such as bacteria or viruses (22 CCR 66261.1 et seq.).

California Health and Safety Code and Code of Regulations

In California, the handling and storage of hazardous materials is regulated by Division 20, Chapter 6.95, of the California Health and Safety Code (Section 25500 et seq.). Under Sections 25500–25543.3, facilities handling hazardous materials are required to prepare a hazardous materials business plan. Hazardous materials business plans contain basic information about the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state.

Chapter 6.95 of the Health and Safety Code establishes minimum statewide standards for Hazardous Materials Business Plans. Each business shall prepare a Hazardous Materials Business Plan if that business uses, handles, or stores a hazardous material (including hazardous waste) or an extremely hazardous material in disclosable quantities greater than or equal to the following:

- 500 pounds of a solid substance
- 55 gallons of a liquid
- 200 cubic feet of compressed gas
- A hazardous compressed gas in any amount (highly toxic with a Threshold Limit Value of 10 parts per million or less)
- Extremely hazardous substances in threshold planning quantities (California Health and Safety Code, Section 25503.5).

In addition, in the event that a facility stores quantities of specific acutely hazardous materials above the thresholds set forth by California code, facilities are also required to prepare a risk management plan and California accidental release prevention plan. The risk management plan and accidental release prevention plan provide information about the potential impact zone of a worst-case release and require plans and programs designed to minimize the probability of a release and mitigate potential impacts.

California Building Standards Code

The 2016 California Building Standards Code (Cal. Code Regs., Title 24) was published July 1, 2016, with an effective date of January 1, 2017. The California Building Standards Code, is a compilation of three types of building criteria from three different origins: (1) Building standards that have been adopted by state agencies without change from building standards contained in national model codes; (2) Building standards that have been adopted and adapted from the national model code standards to meet California conditions; and (3) Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

State Fire Regulations

The California Fire Code (CFC) is Part 9 of Title 24 of the California Code of Regulations, which include regulations concerning building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training. The state fire marshal enforces these regulations and building standards in all state-owned buildings, state-occupied buildings, and state institutions throughout California. It was created by the California Building Standards Commission and is based on the International Fire Code created by the International Code Council. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazard classification system to determine what protective measures are required to protect fire and life safety (24 CCR, Part 9). These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years and was most recently updated in 2016, with an effective date of January 1, 2017.

California Emergency Services Act

Under the Emergency Services Act (California Government Code, Section 8550 et seq.), the State of California developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an integral part of the plan, which is administered by the Governor's Office of Emergency Services. The Office of Emergency Services coordinates the responses of other agencies, including the EPA, California Highway Patrol, Regional Water Quality Control Boards, air quality management districts, and county disaster response offices.

California Accidental Release Prevention Program

Similar to the EPA Risk Management Program, the California Accidental Release Prevention (CalARP) Program (19 CCR 2735.1 et seq.) regulates facilities that use or store regulated substances, such as toxic or flammable chemicals, in quantities that exceed established thresholds. The overall purpose of CalARP is to prevent accidental releases of regulated substances and reduce the severity of releases that may occur. The CalARP Program meets the requirements of the EPA Risk Management Program, which was established pursuant to the Clean Air Act Amendments.

California Department of Resources Recycling and Recovery

The California Department of Resources Recycling and Recovery (CalRecycle) regulates landfills under Title 27 of the California Code of Regulations (Title 27). State law provides that CalRecycle operate locally through a Local Enforcement Agency (LEA). The LEA for the former BKK Landfill is the Los Angeles County Department of Health and Services.

Section 21190 of Title 27 applies to development projects within 1,000 feet of a landfill, as well as development on top of landfill waste. The developer must demonstrate that the proposed development will not pose a threat to public health and safety and the environment. Section 21190 of Title 27 also requires that construction maintains the integrity of the landfill's final cover, drainage and erosion control systems, and gas monitoring and control systems. Subsection (e) of Section 21190 requires a number of structural improvements for development on top of landfilled areas during the post-closure period. These requirements include the following: automatic methane gas sensors; prohibition of enclosed basement construction; construction so as to mitigate the effects of gas accumulation and differential settlement; and periodic methane gas monitoring inside all buildings. Utility connections must be designed with flexible connections and utility collars and must not be installed in or below any low permeability layer of final cover. In addition, Title 27 requires that poling not be installed in or through any bottom liner, unless approved by the Regional Water Quality Control Board.

Local

Los Angeles County Uniform Building Code

The Los Angeles County Uniform Building Code (LAC-UBC), Section 110.3, requires that a permit shall not be issued for a building or structure located within 1,000 feet of landfills containing rubbish or other decomposable materials unless the fill is isolated by a natural or artificial protective system or unless designed according to recommendations contained in a report prepared by a licensed engineer. The LAC-UBC also requires that protection be provided to prevent damage to the structure, floors, underground piping and utilities due to uneven settlement of the materials deposited within the landfill. In addition, Section 110.4 of the LAC-UBC addresses methane gas hazards. This section requires that buildings or structures adjacent to or within 25 feet of active or abandoned oil or gas wells must be designed according to recommendations of a licensed civil engineer and approved by the City's Building Official.

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) is the air pollution control agency for the project site. SCAQMD is responsible for controlling emissions primarily from stationary sources of air pollution within all of Orange County and the urban portions of Los Angeles, Riverside and San Bernardino counties (District). There are about 28,400 such businesses (anything from large power plants and refineries to corner gas stations) operating under SCAQMD permits. In addition, many consumer products, such as house paint and furniture varnish, are also considered stationary sources. Emission standards for mobile sources, such as automobiles, construction equipment, ships, trains and airplanes, are established by state or federal agencies, rather than by local agencies such as SCAQMD.

SCAQMD develops and adopts an Air Quality Management Plan, which serves as the blueprint to bring the District into compliance with federal and state clean air standards. Rules are adopted to reduce emissions from various sources, including specific types of equipment, industrial processes, paints and solvents, even consumer products. Permits are issued to many businesses and industries to ensure compliance with air quality rules. SCAQMD staff conducts periodic inspections to ensure compliance with these requirements. SCAQMD continuously monitors air quality at 38 locations throughout the four-county area. This also allows SCAQMD to notify the public whenever air quality is unhealthful.

Under state law and district rules, every piece of equipment that emits or controls air pollution must have a permit to operate from the local air district (SCAQMD). The equipment cannot be constructed without a SCAQMD permit to construct. SCAQMD staff must issue the permit if the equipment will comply with all emission limitations in district rules.

Certified Unified Program Agency

A CUPA is a local agency certified by California EPA to implement the local Unified Program. The CUPA can be a county, city, or joint powers authority. A participating agency is a local agency designated by the local CUPA to administer one or more Unified Programs within their jurisdiction on behalf of the CUPA. A designated agency is a local agency that has not been certified by California EPA to become a CUPA but is the responsible local agency that would implement the six unified programs until they are certified.

The Los Angeles County Fire Department Health Hazardous Materials Division (LACFD) is the primary local agency with responsibility for implementing federal and state laws pertaining to hazardous materials management. The LACFD maintains records regarding location and status of hazardous materials sites within jurisdiction and administers programs that regulate and enforce the transport, use, storage, and manufacturing, and remediation of hazardous materials.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program was created in 1993 by Senate Bill 1082 to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities of environmental and emergency management programs. The program is implemented at the local government level by CUPAs. The program consolidates, coordinates, and makes consistent the following hazardous materials and hazardous waste programs (program elements):

- Hazardous Waste Generation (including on-site treatment under Tiered Permitting)
- Aboveground Petroleum Storage Tanks (only the spill prevention, control, and countermeasure (SPCC) plan)
- USTs
- Hazardous Material Release Response Plans and Inventories
- California Accidental Release Prevention Program
- Uniform Fire Code Hazardous Material Management Plans and Inventories

The LACFD has CUPA jurisdiction over the City of Carson.

Los Angeles County General Plan

The Los Angeles County General Plan was adopted by the Board of Supervisors on October 6, 2015. The County has adopted a Safety Element as a component of the City's General Plan to reduce the potential risk of death, injuries, and economic damage resulting from natural and man-

made hazards. The Safety Element identifies and evaluates potential hazards, that exist within the City and aims to reduce the potential risk that could result from such hazards and contains goals, policies, and implementation actions to reduce the impacts of these hazards.

The Safety Element indicates that the County Fire Department operates the Health Hazardous Materials Division whose mission is to protect the public health and the environment from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and waste through coordinated efforts of inspection, emergency response, enforcement, and site mitigation oversight.

4.7.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts related to hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hazards and hazardous material would occur if the project would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. 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.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
4. 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.
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two 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.
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

As discussed in the Initial Study prepared for the proposed project (Appendix A, Initial Study and Notice of Preparation), the project would not be located within an airport land use plan area or within 2 miles of a public airport; therefore there is no impact to safety of people residing or

working in the area. Impacts associated with interference with an adopted emergency response or evacuation plan and exposure to wildfires would be less than significant. As such, this EIR evaluates the following thresholds related to hazards and hazardous materials:

HAZ-1 Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

HAZ-2 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?

HAZ-3 Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school?

HAZ-4 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 result, would it create a significant hazard to the public or the environment?

4.7.4 Impacts Analysis

HAZ-1 Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction of the proposed project would involve demolition, grading, remedial earthwork excavation, and construction of new buildings and structures. Operation of the proposed facilities would involve use of hazardous chemicals such as commercially available cleaning products, landscaping chemicals and fertilizers, and various other commercially available substances. The potential for the project to result in impacts under construction and operation is discussed in the following text.

Construction

Plans indicate that there will be alterations to the existing landfill cap and there will be relocation of soil/waste; however, DTSC will be consulted regarding planning and approach for these activities. Potentially hazardous materials used during construction include substances such as paints, sealants, solvents, adhesives, cleaners, and diesel fuel. There is potential for these materials to spill or to create hazardous conditions. However, the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard. These activities would also be short-term or one-time in nature. Project construction workers would be trained in safe handling and use of hazardous materials.

To prevent adverse hazardous conditions, existing local, state, and federal laws—such as those listed under Section 4.7.2, Relevant Plans, Policies, and Ordinances—are to be enforced at the construction sites. In addition, Plentitude will be consulting with DTSC regarding construction activities per their agreement. Compliance with existing regulations and the Plentitude-DTSC agreement would ensure that construction workers and the general public are not exposed to unacceptable risks related to hazardous materials during demolition and construction activities. Transportation of potentially hazardous materials will be in accordance with US DOT hazardous material transportation regulations. Cal/OSHA has regulations concerning the use of hazardous materials, including requirements for safety training, exposure warnings, availability of safety equipment, and preparation of emergency action/prevention plans. For example, all spills or leakage of petroleum products during construction activities are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable state and local regulations for the cleanup and disposal of that contaminant. All contaminated waste encountered would be required to be collected and disposed of at an appropriately licensed disposal or treatment facility. The transportation of hazardous wastes off site will be in accordance with US DOT hazardous material transportation regulations and RCRA regulations for manifesting and transporting hazardous wastes.

Furthermore, strict adherence to all emergency response plan requirements set forth by Los Angeles County Fire Department would be required throughout the duration of project construction.

MM-HAZ-1 requires a hazardous materials contingency plan be developed and followed during construction. Management of hazardous materials will be in accordance with local, state, and federal regulations, and a hazardous materials business plan will be developed as required by regulation. Upon compliance with federal, state, and County regulatory requirements and **MM-HAZ-1**, construction activities in accordance with the proposed project would not pose substantial hazards to the public or the environment, and impacts would be **less than significant with mitigation**.

Operations

Hazardous chemicals would be used in compliance with existing regulations and guidelines of OSHA, Cal/OSHA, National Institute for Occupational Safety and Health (NIOSH), US DOT, the US EPA, California Department of Public Health, and LACFD. The use, storage, and transport of hazardous materials and hazardous wastes in compliance with the use of these substances is subject to all applicable federal, state, and local health and safety laws and regulations that are intended to minimize health risk to the public and the environment associated with hazardous materials. As such, these proposed land uses would not result in a foreseeable significant hazard to public health or the environment by routine use, transport, and disposal of hazardous chemicals. Therefore, impacts for this phase of the proposed project are **less than significant**.

HAZ-2 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?

As discussed in Section 4.7.1, Existing Conditions, the site is a portion of a former landfill facility, with potential impacts to soil and groundwater from buried hazardous and non-hazardous wastes. The potential for the project to result in impacts under construction and operation is discussed in the following text.

Construction

Construction activities would involve demolition of a portion of the existing golf course and associated facilities; site preparation, including grading, compaction, and importing of fill material; remedial earthwork excavation, including alterations to the existing landfill cap and relocation of soil/waste; and construction of the proposed facilities. Demolition of the existing facilities increase the potential for release of hazardous materials into the environment.

As discussed in Remedial Action Plan under Section 4.7.1, the RAP encompasses surface water runoff and soil impacts, and the remedial investigation conducted as part of the RAP included the Dominguez Branch Channel and former Dominguez Channel.

Site grading for the project is expected to overlap known waste containment zones. The average depth to the top of waste is 7.34 feet bgs (elevation of 19.13 feet amsl), with an average waste thickness of 14.94 feet (Table 3.9.1-1, Burns & McDonnell 2016). In addition, areas outside the waste profile also have surface soil contamination identified within the top 10 feet of soil (Burns & McDonnell 2016). Plans indicate that there will be alterations to the existing landfill cap and there will be relocation of soil/waste to support utility corridors and other subsurface site features. Waste removed will be relocated to specified waste receiving areas on site. These areas will have the soil cover removed, the relocated waste will be placed into the excavation, and the soil cap will be replaced in compliance with the RAP. There may be certain locations or constraints that could require the installation of alternate cover systems using geosynthetics such as geomembranes, geotextiles, geocomposites and/or geosynthetic clay liners. Alternative liner systems outside proposed building footprints would be installed during the grading activity and those under proposed structures would be installed following the construction of piles. It is conservatively estimated that up to 160,000 cubic yards of waste would be relocated and reconsolidated on site. Relocation efforts would be conducted in accordance with DTSC and SCAQMD requirements. Excavations where waste was removed will be backfilled with compacted site or imported soils.

Shallow groundwater at the project site is expected between 11.5 and 23.5 feet bgs. Therefore, the excavation plan will also contain procedures for proper management of groundwater and potential

exposure to contaminated groundwater. This will provide characterization and mitigation of potential groundwater contamination.

One building is present on the project site: a bathroom located along the eastern edge of the project site, near the southeastern corner of the golf course. The date of construction and materials of construction are not known at the time of this evaluation. There is a potential for ACM and/or lead based paints (LBP) to be present in the building materials. Prior to demolition of the building, an assessment will be completed to determine if ACM or LBP are present, and proper mitigation measures will be taken to properly remove and dispose of these materials, if they exist.

Mitigation Measure **MM-HAZ-1** requires a hazardous materials contingency plan to be put in place during construction for the identification and management of hazardous soils and groundwater, should they be encountered. **MM-HAZ-2** ensures proper identification and management of potential LBP and ACM. Mitigation Measure **MM-HAZ-3** ensures that construction activities do not interfere with the County's implementation of the DTSC-approved actions identified in the RAP. **MM-HAZ-4** requires localized sampling, analysis, and management of soils as required prior to excavation and grading. With adherence to **MM-HAZ-1**, **MM-HAZ-2**, **MM-HAZ-3**, and **MM-HAZ-4**, construction impacts would be **less than significant with mitigation**.

Operations

An LFG extraction and treatment system may be installed as part of the proposed project to minimize the potential migration of methane to the surface and/or off site. This may be in addition to LFG monitoring required by the RAP (as implemented by the County), and would be the responsibility of the project applicant. As required by County code, all proposed on-site buildings would be provided with a building protection system (BPS) under the building foundation to minimize the future potential of methane and/or VOC vapor intrusion in to the buildings. As a precautionary measure, the passive BPS would be designed to have the capability of turning active if the need arises in the future. The BPS would be designed and constructed to tie into the foundation systems and installed prior to vertical construction. The BPS would be designed in accordance with the County of Los Angeles Building Codes standards and applicable DTSC requirements.

Operation of the proposed facilities would involve use of hazardous chemicals such as commercially available cleaning products, landscaping chemicals and fertilizers, and various other commercially available substances. Hazardous chemicals would be used in compliance with existing regulations of OSHA, Cal/OSHA, National Institute for Occupational Safety and Health (NIOSH), US DOT, the EPA, California Department of Public Health, and Los Angeles County Fire Department. In addition, the County and other responsible parties at OU-2 will continue to implement the DTSC-approved RAP. To the extent that the proposed project requires new or additional measures imposed by DTSC not expressly identified in the RAP nor due to historical

contamination, those measures would be the responsibility of the project applicant. **MM-HAZ-3** ensures operations will not interfere with the County's implementation. These ongoing measures will prevent foreseeable upset and accident conditions associated with operations at the project site. With conformance to federal, state, and local regulations, impacts would be considered **less than significant with mitigation.**

HAZ-3 Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school?

The nearest school is Towne Avenue Elementary School, located on the northwest corner of South Avalon Boulevard Blvd and Martin Luther King, Jr. Street, approximately 0.32 miles from the nearest point of the project site boundary. In addition, there is a proposed entrance to the project site that will enter on Martin Luther King, Jr. Street, across from Victoria Park. This entrance will be less than one-quarter mile from Towne Avenue Elementary. There is also a proposed jogging/walking path that will extend beyond the main project site boundary northward towards Martin Luther King, Jr. Street. The northern terminus of the walking path will be less than one-quarter mile from Towne Elementary School. Both the jogging/walking path and the northern entrance will pass through the northern adjoining property to connect to the street.

Construction

As stated in HAZ-2, wastes encountered during construction will be relocated and reintegrated into the landfill waste zone on site. Potentially hazardous materials used during construction shall not be in such quantities or stored in such a manner as to pose a significant safety hazard. Hazardous materials used during construction are not expected to be acutely hazardous. These activities shall also be short-term or one-time in nature. Project construction workers shall be trained in safe handling and use of hazardous materials.

Applicable existing local, state, and federal laws shall be enforced at the construction sites. In addition, Plentitude will be consulting with DTSC regarding construction activities per their agreement. Compliance with existing regulations and the Plentitude–DTSC agreement would ensure that construction workers and the general public are not exposed to any risks related to hazardous materials during demolition and construction activities. Transportation of potentially hazardous materials will be in accordance with US DOT hazardous material transportation regulations. Cal/OSHA has regulations concerning the use of hazardous materials, including requirements for safety training, exposure warnings, availability of safety equipment, and preparation of emergency action/prevention plans. All contaminated waste encountered would be required to be collected and disposed of at a permitted disposal or treatment facility. Off-site transportation of hazardous wastes will be in

accordance with US DOT hazardous material transportation regulations and RCRA regulations for manifesting and transporting hazardous wastes.

As stated in HAZ-2, an assessment will be completed prior to building demolition to determine if ACM or LBP are present, and appropriate mitigation measures will be taken to properly remove and dispose of these materials, if they exist.

Furthermore, strict adherence to all emergency response plan requirements set forth by Los Angeles County Fire Department would be required throughout the duration of project construction.

MM-HAZ-1 requires a hazardous materials contingency plan be developed and followed during construction. Management of hazardous materials will be in accordance with local, state, and federal regulations, and a hazardous materials business plan will be developed as required by regulation. **MM-HAZ-2** ensures proper identification and management of potential LBP and ACM. Mitigation Measure **MM-HAZ-3** ensures that construction activities do not interfere with the County's implementation of the DTSC-approved actions identified in the RAP. **MM-HAZ-4** requires localized sampling, analysis, and management of soils as required prior to excavation and grading. With adherence to **MM-HAZ-1**, **MM-HAZ-2**, **MM-HAZ-3**, and **MM-HAZ-4**, construction impacts would be **less than significant with mitigation**.

Operations

As stated in HAZ-2, a LFG extraction and treatment system may be installed by the project applicant as part of the proposed project to minimize the potential migration of methane to the surface and/or off site. This will minimize the potential for methane and/or VOCs emissions to impact nearby properties. Any new or additional LFG monitoring, which is additional to what is expressly identified in the DTSC-approved RAP, shall be the responsibility of the project applicant. Operation of the proposed facilities would involve use of hazardous chemicals such as commercially available cleaning products, landscaping chemicals and fertilizers, and various other commercially available substances. These products are not anticipated to be acutely hazardous. Hazardous chemicals shall be used in compliance with existing regulations of OSHA, Cal/OSHA, National Institute for Occupational Safety and Health (NIOSH), US DOT, the EPA, California Department of Public Health, and Los Angeles County Fire Department. In addition, the County will continue to implement the RAP, and **MM-HAZ-3** ensures operations will not interfere with the County's implementation. These ongoing measures will prevent foreseeable upset and accident conditions associated with operations at the project site. With conformance to federal, state, and local regulations, operational impacts would be considered **less than significant with mitigation.**

HAZ-4 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 result, would it create a significant hazard to the public or the environment?

The project site was identified in the ECS (Appendix G) in several regulatory databases for historical use as a landfill, which accepted construction, domestic, and hazardous waste. The potential for the project to result in impacts under construction and operation is discussed further in the following text.

Construction

The project site has been the subject of numerous environmental investigations and studies to identify impacts at the project site. Many COPCs have been identified as part of these investigations. The HHRA conducted as part of the RAP identified the following COPCs: antimony, arsenic, lead, benzo(a)pyrene, PCB Aroclors 1248 and 1254, and methane.

Several properties within a 0.5-mile radius of the project site were identified in the ECS (Appendix G), including several adjoining and nearby landfills that were also reported to have received significant volumes of hazardous wastes. Historical operations at these facilities have resulted in impacts to soil, soil vapor, and groundwater in the project site vicinity. The following sites are related to former landfill operations in the area.

- Goodyear Airship Facility, adjoining the project site to the northwest, is listed as a closed designated waste landfill, and is included in the RAP for OU-2 (Burns & McDonnell 2016). The Goodyear facility was also impacted by, and is a current responsible party with regard to, the BKK Landfill. Impacts of this former BKK landfill are discussed in HAZ-2 above. The Goodyear facility also has two documented leaking USTs (LUSTs) that were granted closure by the regulatory agency, citing source removal, poor overall water quality, and lack of nearby receptors as contributing to the low-risk status. Based on this information, this location is unlikely to have additional impacts to the project site.
- Broadway & Main Landfill, 19101–19145 S. Broadway, is located approximately 0.25 miles northwest of the project site, on the northwest side of the Goodyear facility. This location has a land use restriction due to high concentrations of methane. The land use restriction is proposed to limit construction of buildings and future intrusive work. Construction and operation of the project site is not expected to impact this location.
- "LA-405 Dominguez Golf Course," located at the Right-of-Way between Del Amo Blvd and Main Street, was developed into the I-405 Freeway. The location is within Operable Unit 1 (OU-1) of the former BKK Main Street Landfill, which is south of the Dominguez Channel from the project site. A soil investigation conducted in 2007 revealed minimal soil impacts, but groundwater contamination (VOCs, PAHs, TPH, cyanide, and formaldehyde)

was identified in shallow groundwater (28 to 36 feet bgs) (GeoMatrix 2007). Based on groundwater studies conducted at the project site, shallow groundwater flows in a southwesterly direction (Burns & McDonnell 2016). Therefore, this location is expected to be hydraulically down gradient of the project site. Based on this information, this location is unlikely to have additional impacts to the project site.

- Dominguez Golf Course, located at 19800 Main Street, is part of OU-1 of the former BKK Landfill. The site has been redeveloped as the Porsche Experience Center, and a landfill cover system and landfill gas extraction and treatment system was installed. Based on groundwater studies conducted at the project site, shallow groundwater flows in a southwesterly direction (Burns & McDonnell 2016). Therefore, this location is expected to be hydraulically down gradient of the project site. Based on this information, this location is unlikely to have additional impacts to the project site.

As discussed in HAZ-2, regional shallow groundwater contamination has been identified due to historical and ongoing industrial use of the area, and numerous documented and potential sources of groundwater contamination.

As previously discussed in Response HAZ-2, the site reconnaissance combined with extensive environmental investigation revealed that the overall approach presented in the RAP will protect groundwater, prevent direct human contact with the waste zone or contaminated soils, and provide adequate protection to prevent inhalation or combustion of landfill gas. The County and other responsible parties will continue to implement the RAP as approved by DTSC, and **MM-HAZ-3** ensures construction and operations will not interfere with the County's implementation. To the extent that the proposed project requires new or additional measures imposed by DTSC not expressly discussed in the RAP nor due to historical contamination, those measures will be the responsibility of the project applicant. In addition, **MM-HAZ-1** requires a hazardous materials contingency plan to be put in place during construction for the identification and management of hazardous soils and groundwater, should they be encountered. With these measures in place, the proposed project would not create a significant hazard to the public or the environment. Impacts would be considered **less than significant with mitigation**.

Operations

As previously stated in Response HAZ-2, hazardous chemicals would be used in compliance with existing regulations of OSHA, Cal/OSHA, National Institute for Occupational Safety and Health (NIOSH), US DOT, the EPA, California Department of Public Health, and Los Angeles County Fire Department. The use, storage, and transport of hazardous materials and hazardous wastes in compliance with the use of these substances is subject to all applicable federal, state, and local health and safety laws and regulations that are intended to minimize the potential for releases of hazardous materials. Thus, minimizing the potential health risk to the public and the environment

associated with hazardous materials. These ongoing measures will prevent foreseeable upset and accident conditions associated with operations at the project site. With conformance to federal, state, and local regulations, impacts would be considered **less than significant.**

4.7.5 Mitigation Measures

Implementation of the following mitigation measures would reduce identified impacts of hazards and hazardous materials to less than significant:

MM-HAZ-1 Prior to construction, a Site-Specific Hazardous Materials Contingency Plan (HMCP) shall be developed by the project applicant and followed during demolition, excavation, and construction activities for the project. The HMCP shall identify known areas of impacts, include training procedures for identification of contaminated media, as well as the proper handling and notification procedures should contaminated media be encountered. Contaminated media may include soil, groundwater, surface water, and solid waste. Contaminated media shall be managed in accordance with local and state regulations. The HMCP shall include health and safety measures for workers and the general public, including procedures for limiting access for properly trained personnel to contaminated areas.

MM-HAZ-2 Prior to demolition or renovation of project site structures that were built before 1980, a lead-based paint and asbestos survey shall be conducted by a California Department of Public Health (DPH) Certified Asbestos Consultant and/or Certified Site Surveillance Technician and a California DPH Certified Lead Inspector/Risk Assessor or Sampling Technician. A report documenting material types, conditions and general quantities will be provided, along with photos of positive materials and diagrams. Demolition or renovation plans and contract specifications shall incorporate any abatement procedures for the removal of material containing asbestos or lead-based paint. All abatement work shall be done in accordance with federal, state, and local regulations, including those of the Environmental Protection Agency (which regulates disposal), Occupational Safety and Health Administration, U.S. Department of Housing and Urban Development, California Occupational Safety and Health Administration (which regulates employee exposure), and the South Coast Air Quality Management District.

MM-HAZ-3 Specified programs are recommended in the Remedial Action Plan (RAP) and approved by the California Department of Toxic Substances Control, which are designed to minimize potential impacts to public and employee health and safety and the environment, including institutional controls, Operations, Monitoring & Maintenance plans, and perimeter monitoring. The County of Los Angeles and other responsible parties of OU-2 have been and will continue to be responsible for

implementing the RAP as approved by DTSC. Construction and operation shall occur in such a way as to not interfere with the implementation of the RAP.

MM-HAZ-4 Due to past uses as a shooting range, prior to grading permit issuance, soil shall be sampled and analyzed for lead in areas where grading and subsurface excavation are expected to occur within the former footprint of the shooting range. As previous localized surface sampling has confirmed the presence of contamination in surface soils less than 10 feet below ground surface, sampling shall be conducted in accordance with California Department of Toxic Substances Control guidance documents. The soil testing will confirm the presence or absence of localized contamination associated with past uses on the project site.

Any soils qualifying as hazardous waste shall be managed in accordance with the Hazardous Materials Contingency Plan.

4.7.6 Level of Significance After Mitigation

With adherence to **MM-HAZ-1** through **MM-HAZ-4**, impacts associated with hazards and hazardous materials would be reduced to **less-than-significant** levels.

4.7.7 Cumulative Impacts

The geographic scope of the cumulative hazards and hazardous materials analysis is the immediate project area, including surrounding land uses and other nearby properties. Adverse effects of hazards and hazardous materials tend to be localized; therefore, impacts from nearby projects would be limited, if any, and the project site would be primarily affected by proposed project activities.

Cumulative impacts related to hazards and hazardous materials would result from projects developed together to increase exposure to hazards and hazardous materials. In this scenario, two related projects are being constructed within the footprint of OU-2 of the former BKK Landfill, and one related project is being constructed within the footprint of the Cal Compact Landfill to the south. Each of these projects is less than one half mile from the proposed project. The related projects include residential and mixed use, similar to that of the proposed project. It can be assumed that construction of the three nearby projects, also on former landfills, may follow similar construction plans, as their planned site use is similar.

Potential impacts due to hazards and hazardous materials for the proposed project shall be mitigated using the mitigation measures **MM-HAZ-1** through **MM-HAZ-4**. These measures, in part, require implementation of specific programs recommended in the RAP and approved by DTSC for the former BKK Landfill. These programs are designed to minimize potential impacts to public and employee health and safety and the environment. As DTSC has regulatory

jurisdiction over both the former BKK Landfill and the Cal Compact Landfill, it can be assumed that oversight upon development of these three related projects will continue.

The remaining related projects, while not within the footprint of the former BKK Landfill or nearby Cal Compact landfill, may have potentially unique hazardous material considerations. It is expected that future development within the area will comply with federal, state, and local laws and regulations applicable to hazardous materials. Upon compliance with federal, state, and county regulatory requirements, and approval from DTSC for development on a former landfill, construction and operation activities within the proposed project and related projects would not pose substantial hazards to the public or the environment, and cumulative impacts would be **less than significant.**

Due to the proximity of the project site to the Goodyear Blimp Airship Base, the applicant would coordinate with the Federal Aviation Administration (FAA) as needed and would be required to conform to any requirements that may be imposed by the FAA. It can be assumed that related projects will be required to conform with similar FAA requirements, should the related projects be determined to be a potential impact to the Goodyear Blimp Airship Base. Upon compliance with applicable FAA requirements and upon consultation with the FAA, as needed, cumulative impacts would be **less than significant**.

4.7.8 References

Burns & McDonnell. 2016. *Remedial Action Plan for Soil and Landfill Gas Media, Former BKK Landfill, Carson Dump, Operable Unit 2.* Prepared for The Department of Toxic Substances Control. Prepared by Burns McDonnell. June 2016.

DTSC (Department of Toxic Substances Control). 2016a. Final Remedial Action Plan for Soil and Landfill Gas Media – Former BKK Landfill (Victoria Golf Course Site), Carson Dump, Operable Unit 2, Carson, California, Dated June 2016. Letter from DTSC to County of Los Angeles. June 22, 2016.

DTSC. 2016b. California Environmental Quality Act Notice of Exemption to Office of Planning and Research from DTSC. Project Title: Victoria Golf Course/Former BKK Landfill, Operable Unit-2 for Soil and Landfill Gas Media. June 22, 2016.

FEMA (Federal Emergency Management Agency). 2003. *Federal Emergency Response Plan*. Interim. 9230.1-PL. January 2003.

GeoMatrix. 2007. *Site Investigation Report – Responsible Party Support and Field Testing, LA-405, Dominguez Golf Course*. GeoMatrix. August 7, 2007. Accessed on EnviroStor website September 18, 2018. https://www.envirostor.dtsc.ca.gov/public.

Leighton. 2014. *Final Remedial Investigation and Feasibility Study for Soil and Soil Gas Media, Former BKK Landfill, Carson Dump Operable Unit 2*. Prepared by Leighton Consulting, Inc. June 10, 2014. Accessed on EnviroStor website September 18, 2018. https://www.envirostor.dtsc.ca.gov/public.

Plenitude (Plenitude Holdings LLC). 2018. Contract No.: 17-T4431 between Department of Toxic Substances Control and Plenitude Holdings LLC. February 2018 to June 2019.

INTENTIONALLY LEFT BLANK

4.8 HYDROLOGY AND WATER QUALITY

This section describes the existing hydrology and water quality of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of The Creek at Dominguez Hills project (project or proposed project). The analysis is based on a review of existing resources and applicable laws, regulations, and guidelines. The information presented in this section was collected from a number of publicly available sources and technical reports, including a drainage/hydrology report that fulfills the requirements of the Los Angeles County Hydrology Manual; a Low Impact Development (LID) report that fulfills the requirements of the Los Angeles County Public Works' (PW's) LID Manual; and a geotechnical report that fulfills the requirements of the California Building Code (see Section 4.5, Geology and Soils). Reports used are listed below:

- *Preliminary Hydrology Study, The Creek at Dominguez Hills,* prepared by Tait & Associates Inc. (Appendix H-1, Hydrology Report)
- *Preliminary Low Impact Development Plan (LID), The Creek at Dominguez Hills*, prepared by Tait & Associates Inc. (Appendix H-2, LID Plan)
- *Preliminary Geotechnical Consultation Report, The Creek at Dominguez Hills Project, 340 Martin Luther King, Jr. Street, Carson, California*, prepared by Carl Kim Geotechnical Inc. (Appendix F, Geotechnical Report)
- *Remedial Action Plan for Soil and Landfill Gas Media, Former BKK Landfill, Carson Dump Operable 2* (Burns & McDonnell 2016)

4.8.1 Existing Conditions

The project site is located in the City of Carson, on the southwesterly portion of the Links at Victoria Golf Course (Victoria Golf Course), but is owned by the County of Los Angeles (County). The project site overlies a portion of the former BKK Landfill, which was approximately 353 acres and was operated as a cut and cover landfill. The permit for the landfill industrial waste was terminated in 1960 and the landfilled waste was covered with at least two feet of cover soil. The California Department of Toxic Substances Control (DTSC) partitioned the landfill into two operable units, with respect to soil and groundwater remediation, including Operable Unit 1 (OU-1) to the southwest and Operable Unit 2 (OU-2) to the northeast, which are separated by the Dominguez Channel. OU-2 was approximately 271 acres in size, of which 180 acres were used for landfill purposes. Between 1962 and 1966, the current Victoria Golf Course was planned and constructed within OU-2 by the County. As part of the grading for the golf course, a part of which is the project site, fill material was placed to ensure a minimum of three feet of nominally clean soil was in place over all areas of waste (Appendix H-1, 2; Burns & McDonnell 2016).

Regional Climate

The Los Angeles Region is characterized by moist air from the Pacific Ocean that is carried inland until it is forced upward by the mountains. Precipitation generally occurs from November through March, followed by dry periods during summer months. Differences in topography are responsible for variations in temperature, humidity, precipitation, and cloud cover throughout the region and Los Angeles basin. The coastal plains and islands, with mild rainy winters and warm dry summers, are noted for their subtropical Mediterranean climate. The inland slopes and basins of the Transverse Ranges, on the other hand, are characterized by more extreme temperatures and little precipitation. Precipitation in the region generally occurs as rainfall, although snowfall can occur at high elevations (LARWQCB 2014).

Most of the precipitation in the region occurs during the few annual major storm events. In wet years, mountain areas can exceed 40 inches of rain while in dry years, coastal lowlands can receive as little as 5 inches. The average annual rainfall for Los Angeles County is 15.7 inches. However, large variations exist within Los Angeles County, as indicated by average annual rainfall of 34.2 inches at Cogswell Dam, in the San Gabriel Mountains, and average annual rainfall of 13.71 inches for the coastal plain part of the County. These variations in precipitation are expected to increase as the impacts of climate change become more pronounced (LARWQCB 2014).

Regional Hydrology and Drainage

The project site is located within the Dominguez Channel Watershed tributary to the Los Angeles Inner Harbor (Appendix H-1), and is also located within the Los Angeles-San Gabriel Hydrological Unit (LARWQCB 2014). The Dominguez Channel Watershed is comprised of approximately 110 square miles of land in the southern portion of Los Angeles County and drains portions or all of the Cities of Inglewood, Hawthorne, El Segundo, Gardena, Lawndale, Redondo Beach, Torrance, Carson, and Los Angeles. The remaining land areas within the watershed drain to several debris basins and lakes, or directly to the Los Angeles and Long Beach harbors. An estimated 96% of its total area is developed and the overall watershed land use is predominantly residential. Rather than being defined by the natural topography of its drainage area, the Dominguez watershed boundary is defined by a complex network of storm drains and smaller flood control channels (PW 2018).

Based on PW's Torrance Isohyet map 1-H1.4, the project site soils are classified as area 16, defined as Yolo Loam, which is known to have a high clay content. Based on a geotechnical report completed for the site, subsurface materials consist of artificial undocumented fill, overlying refuse, which in turn overlies Quaternary age alluvial deposits. The topography of the site is relatively flat, with slopes varying from 0% to 10%, and elevations ranging from 15 to 30 feet above mean sea level. The project is governed by a Remedial Action Plan, updated in 2016,

which includes a cap requirement to prevent infiltration of irrigation and stormwater into the underlying soils. Therefore, the site has a characteristic of being an impervious site even though the site is open space with trees, grass, and shrubs (Appendix F; Appendix H-1, 2).

Existing drainage on-site consists of overland flow across a golf course terrain, draining toward three outfall locations, as shown on Figure 4.8-1, Existing Drainage Conditions. One outfall is the Dominguez Channel, which is to the west of the project site and consists of a soft-bottom channel with concrete sides. The Dominguez Channel is maintained by the County. There are two existing storm drain headwalls that discharge into the Dominguez Channel. The second outfall consists of various discharge locations flowing into the Dominguez Branch Channel, which is an earthen channel that extends through the project site from the northern border to the southeastern border of the site. The Dominguez Branch Channel confluences with the Dominguez Channel near the southwestern corner of the project site. The third outfall is a drain line within Avalon Boulevard, consisting of a reinforced concrete pipe within the roadway, just to the east of the project site. This drain line is owned and maintained by the Los Angeles County Flood Control District. An existing storm drain lateral serves the project site and connects to the storm drain that extends in a southerly direction within Avalon Boulevard (Appendix H-1, 2).

Surface Water Quality

The project site is located in the Dominguez Channel and Los Angeles/Long Beach Harbors Watershed Management Area (WMA), which is characterized by a generally low topographic gradient. The Dominguez Channel drains a highly industrialized area with numerous sources of pollution resulting from polycyclic aromatic hydrocarbons (PAHs) and contains remnants of persistent legacy pesticides, including dichlorodiphenyltrichloroethane (DDT), as well as polychlorinated biphenyls (PCBs), all of which contribute to poor sediment quality both within the channel and in downstream Inner Harbor areas. Although highest in the Dominguez Channel Estuary and Inner Harbor Consolidated Slip sediments, DDT has historically been present throughout the harbor. Oil pumping has a historical presence in the area and there are existing wells still in operation. Metals remain elevated at some locations in the sediments of the Inner Harbor.

Under Clean Water Act Section 303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. The Environmental Protection Agency (EPA) has approved a 303(d) list of water quality impairments for several water bodies located downstream of the project site, including the Dominguez Channel Estuary, Los Angeles/Long Beach Inner Harbor, Los Angeles/Long Beach Outer Harbor (inside the breakwater), and San Pedro Bay Near/Offshore Zone. The Dominguez Channel Estuary is 8.2 miles in length, spanning from the downstream end of the lined portion of the Dominguez Channel to the Los Angeles Harbor, just south of Anaheim Street and west of Highway 710 (City of Los Angeles 2015). The approved list of water quality impairments for these water bodies includes a wide variety of industrial, toxic substances (see Table B.2 of Appendix H-2).

In accordance with state policy for water quality control, the Los Angeles Regional Water Quality Control Board (LARWQCB) employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan for the Los Angeles Region has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. The existing and proposed beneficial uses of waterbodies downstream of the project site (described above) include: municipal and domestic supply (MUN); warm freshwater habitat (WARM), wildlife habitat (WILD), threatened or endangered species (RARE), recreation (REC-1, REC-2), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Marine Habitat (MAR), Migration of Aquatic Organisms (MIGR), Rare, and Spawning, Reproduction, and/or Early Development (SPWN), and navigation and uses for shipping or transportation by private, military, or commercial vessels (NAV) (City of Los Angeles 2015).

Under Clean Water Act Section 303(d), the State of California is also required to develop total maximum daily load (TMDLs), which define how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. The Dominguez Channel, Dominguez Channel Estuary, and Los Angeles Inner/Outer Harbor previously had TMDLs for PCBs, metals, toxicity, pesticides, pyrene, ChemA, phenanthrene, benzo(a)pyrene, and other organics. However, these TMDLs were delisted from the 303(d) list in 2012 (California Water Board 2016), indicating that water quality has improved downstream of the project site.

Enhanced Watershed Management Program

Based on the *Enhanced Watershed Management Program Work Plan, Dominguez Channel Watershed Management Area* (City of Los Angeles 2015), available receiving water monitoring data was used to evaluate potential stormwater and non-stormwater discharge data. Water quality data were obtained from the PW, the Port of Los Angeles, and the City of Los Angeles Department of Public Works, Bureau of Sanitation. Monitoring data were available from the Dominguez Channel, Dominguez Channel Estuary, the Consolidated Slip (of the Los Angeles Inner Harbor), the Inner Harbor, Outer Harbor, Fish Harbor, and the Wilmington Drain. The assessment of discharge quality is considered tentative pending completion of a Coordinated Integrated Monitoring Program. The data were compared to water quality criteria to evaluate the number of exceedances. Water quality data from the Dominguez Channel and Torrance lateral included exceedances of dissolved metal, toxicity, diazinon, ammonia, cyanide, dissolved oxygen, E. coli, and fecal coliform. Point sources include stormwater and urban runoff flowing through MS4s, as well as other MS4 discharges, such as those from refineries, generating plants, port operations, and the Terminal Island Water Reclamation Plant, which discharges into the Outer Harbor. Nonpoint sources include contaminated sediments already in receiving waters and atmospheric deposition.

DRAFT

Existing Hydrology Summary Table, 50-year storm

Subarea	Area (ac)	Length (ft)	Slope (ft/ft)	% Impervious	Peak Flow (cfs)
A1	5.45	880	0.009	5%	11.2
A2	7.68	725	0.006	5%	16.6
A3	6.82	600	0.004	5%	15.7
B1	1.02	250	0.038	5%	3.3
B2	5.38	400	0.021	5%	17.3
B3	2.6	340	0.01	5%	8.4
B4	1.7	240	0.032	5%	5.5
C1	7.92	690	0.012	5%	19.5
C2	10.22	780	0.011	5%	23.5
C3	3.53	470	0.016	5%	10.2
C4	20.31	1280	0.01	5%	37.6
D1	16.63	900	0.015	5%	36.0

SOURCE: Tait & Associates, Inc. 2019

FIGURE 4.8-1

Existing Drainage Conditions

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

The Dominguez Channel Watershed Management Area also contains two Superfund sites, which have historically been large contributors of organic pollutants, including the Montrose Chemical Corporation site and the Del Amo Facility site. The Montrose site manufactured DDT from 1947 to 1982 and the compound is still present in soils around the site. Stormwater runoff from this site, if exposed, can contain DDT from these soils. However, the site is currently paved and includes a maintenance plan under Initial Action, taken under USEPA oversight in 1985. The Del Amo facility was once the center of large-scale production of synthetic rubber, which included a styrene plant and a butadiene plant. Groundwater and soils in the area are contaminated with volatile organic compounds (VOCs), PAHs, and minor amounts of pesticides, PCBs, and heavy metals. Most of the Del Amo facility has been redeveloped into an industrial business park and surficial soils are generally not exposed (City of Los Angeles 2015).

The water quality issues identified for the Dominguez Channel and Los Angeles Harbor are expected to be addressed with BMPs to address existing TMDLs. Regional stormwater management plans were evaluated in an effort to identify whether planned projects met Enhanced Watershed Management Plan criteria for regional projects and represent feasible implementation options. The Dominguez Channel Watershed Management Plan Group then incorporated applicable BMPs into the Enhanced Watershed Management Plan, thus replacing the previous plans, to address the various TMDLs. The Enhanced Watershed Management Plan identifies projects to be implemented, including 1) Minimum Control Measures, excluding implementation of LID ordinances for new and re-development; 2) LID ordinance implementation for new and re-development processed, 3) regional projects, and 4) distributed projects, which are primarily green streets (City of Los Angeles 2015).

The Enhanced Watershed Management Plan is part of an adaptive management process of the MS4 permit, which states that every two years the plan will adapt to become more effective, based on progress achievements, re-evaluation of water quality priorities, and availability of new information. Currently, most of the projects identified in the Enhanced Watershed Management Plan are not explicitly funded from a dedicated revenue source. Obtaining funds for all of the activities identified in the plan is anticipated to take many years. A compliance schedule has been developed to address water quality issues, based on TMDL categories (City of Los Angeles 2015). As previously discussed, most of the TMDLs were delisted from the 303(d) list in 2012 (California Water Board 2016), indicating that water quality has improved downstream of the project site.

The Dominguez Channel Watershed Management Area Group has also established an outfall monitoring program associated with non-stormwater discharges, which is intended to be a collaborative effort between all of the agencies in the group. As specified in the Coordinated Integrated Monitoring Program, the Dominguez Channel Watershed Management Area Group will report non-stormwater discharges that occur in their jurisdiction and actions taken to evaluate if those discharges are persistent, exempt and, if non-exempt, actions taken

and/or BMPs implemented to eliminate those discharges. Per Part III.2 of the MS4 Permit, "exempt non-stormwater discharges often include non-emergency firefighting activities, discharges from drinking water supplies, dewatering of lakes, landscape irrigation, swimming-pool discharges, decorative fountain dewatering, car washes, and street/sidewalk washing" (City of Los Angeles 2015).

Groundwater Resources

The project site overlies the eastern portion of the West Coast Basin, which is characterized by groundwater that originates in subsurface flow from the Central Basin (to the east) and groundwater injection along a seawater barrier system. The West Coast Basin in the project area includes aquifers within the Recent (i.e., Holocene to Pleistocene) Series, and the underlying Pleistocene Lakewood and San Pedro formations. The Recent Series in the project area, comprised of Recent alluvium, includes the Semiperched Aquifer, the Bellflower Aquiclude, and the Gaspur Aquifer. The majority of the major drainage courses flowing through the West Coast Basin have been developed into a comprehensive system of dams, flood control channels, and percolations ponds that are used for recharging the basin. An estimated 90% of rainfall and runoff in Los Angeles County either percolates naturally into the ground or is captured in the flood control reservoirs for later release to recharge the groundwater basins (California DWR 1961; City of Carson 2004).

At the project site, groundwater has been reported at depths of approximately 30 feet below ground surface, which is within the landfill refuse mass. The historic high groundwater level reported by the California Geological Survey is approximately 20 feet below ground surface (Appendix F).

Groundwater Quality

As previously discussed, the project site is located within remedial site OU-2, as designated by the DTSC. To date, remedial investigations have focused on soil and soil gas contamination, with respect to potential human or ecological health risks at the site. A Remedial Action Plan associated with soil and soil gas contamination was completed in June 2016. Based on 1,148 samples collected at the site, 93 chemicals of potential concern were identified, including 37 VOCs, 4 aldehydes, 16 semi-volatile organic compounds (SVOCs), 2 PCBs, 2 chlorinated herbicides, 5 organochlorine pesticides, total petroleum hydrocarbons (TPH), 24 metals, cyanide, and hexavalent chromium. These chemicals were identified in the leachate (i.e., water that has percolated from the bottom of the landfill), surface water runoff samples, landfill soil cover, native soil samples, and soil gas/landfill gas samples. A Human Health Risk Assessment identified seven chemicals of concern, including antimony, arsenic, benzo(a)pyrene, lead, PCBs, and methane. Potential threats to groundwater resources and potential groundwater response actions will be addressed separately from the 2016 Remedial Action Plan (Burns & McDonnell 2016).

Flood Hazards

Historically, flooding problems in the project vicinity have occurred in low lying areas and in areas where slopes are very flat and peak storm flows are unable to be quickly conveyed into the stormwater collection system. Based on the City of Carson Standardized Emergency Management System (SEMS) Multi-Hazard Functional Plan, the City is not subject to inundation associated with dam failure. The limits of the 100-year storm within the City are limited to the Dominguez Channel, located adjacent to the project site. In the event of a 500-year storm, the entire City would be flooded. Areas outside the 100-year storm limits may also flood due to deficient storm water conveyance (City of Carson 2004).

Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the project site (Panel 06037C1935F), the Dominguez Channel and Dominguez Branch Channel (shown as Victoria Creek on Figure 4.8-1) is classified as Zone A, a Special Flood Hazard Area (without base flood elevation). In addition, portions of on-site areas adjacent to these channels are classified as Zone X, where there is 0.2% annual chance of flooding (Figure 4.8-2, Flood Hazards) (FEMA 2008). Within the designation of Zone X, there is no federal obligation on lenders to require flood insurance.

The FEMA flood hazard designations are not current with respect to the proposed project. A 2009 Los Angeles County Flood Control District (LACFCD) study determined that the Dominguez Channel is deficient and cannot adequately convey the 100-year flood (i.e., 1% annual chance flood), due to deficiencies in the channel levee. The area within Zone X is behind a levee that FEMA has Provisionally Accredited to protect the area from a 100-year flood, provided the levee in the future addresses FEMA's issues with the levee. It is therefore possible that FEMA will in the future newly map the Zone X area as Zone A, a Special Flood Hazard Area (i.e., 1% annual chance flood) (LACDPW 2018; Su, pers. comm. 2019). Based on a Dominguez Channel levee certification preliminary map of Special Flood Hazard Areas, prepared by LACFCD (2016) (Figure 4.8-3, Levee Failure Flood Map), portions of the project site would be located within a Special Flood Hazard Area, in the event the areas behind the levee are remapped as Zone A. This approximated flood zone includes portions of project building sites, including all or portions of proposed Buildings 1, 2, 3, 4, and the zip-line building (Figure 3-2, Site Plan).

4.8.2 Relevant Plans, Policies, and Ordinances

The primary statutes that govern the activities under the project that may affect water quality are the federal CWA (33 USC 1251 et seq.) and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) (California Water Code, Section 13000 et seq.). These acts provide the basis for water quality regulation in the project area.

Federal

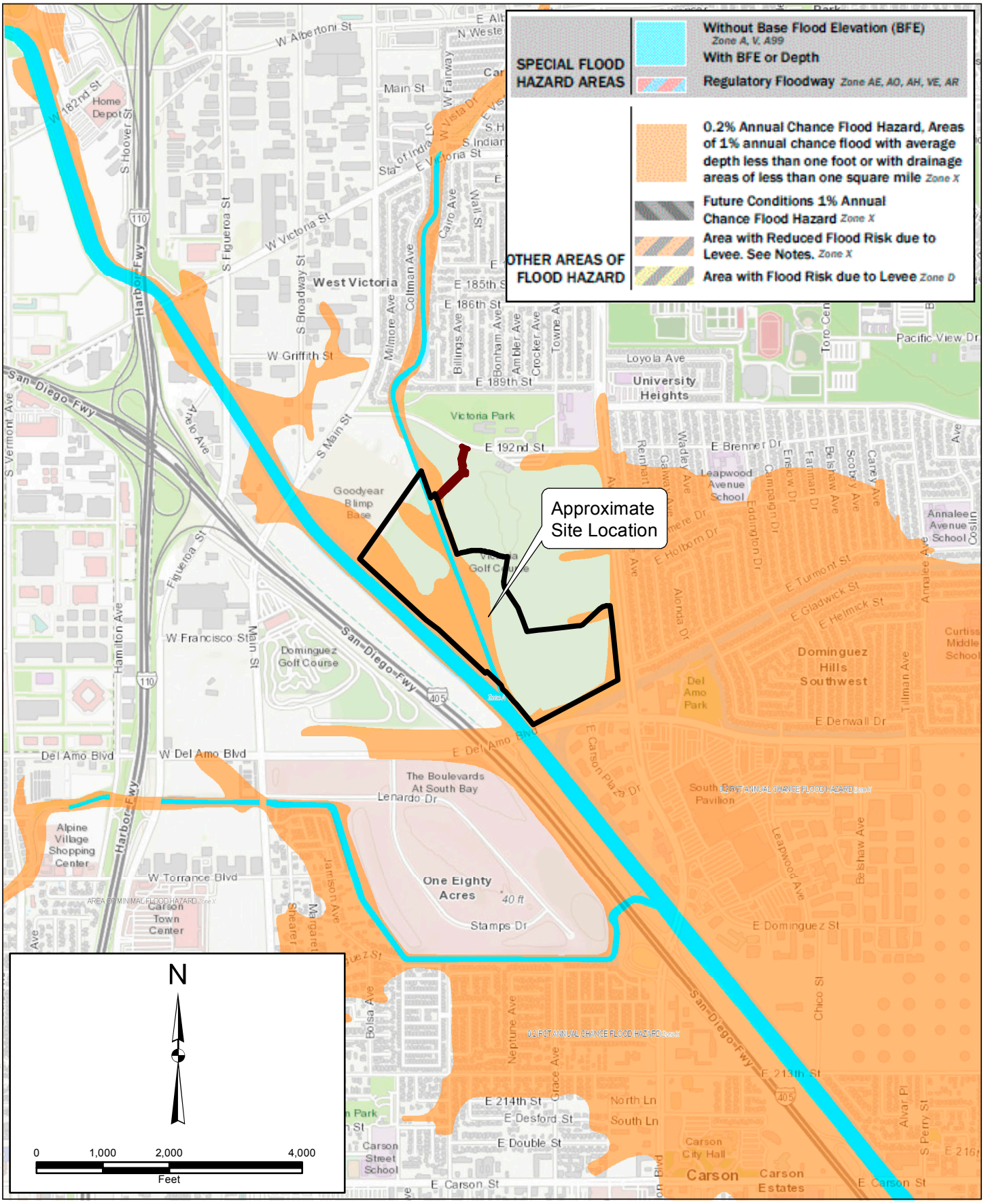
Clean Water Act

Increasing public awareness and concern for controlling water pollution led to enactment of the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the CWA (33 USC 1251 et seq.). The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The CWA established basic guidelines for regulating discharges of pollutants into the waters of the United States. The CWA requires that states adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA.

Section 303 of the CWA (Beneficial Use and Water Quality Objectives)

The Los Angeles RWQCB is responsible for the protection of the beneficial uses of waters within the proposed project area in Los Angeles County. The RWQCB uses its planning, permitting, and enforcement authority to meet its responsibilities adopted in the Basin Plan to implement plans, policies, and provisions for water quality management.

In accordance with state policy for water quality control, the RWQCB employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan for the Los Angeles Region has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. Under CWA Section 303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. A TMDL defines how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. The RWQCB has developed TMDLs for select reaches of water bodies.



SOURCE: FEMA 2008 and Carl Kim Geotechnical, Inc. 2018

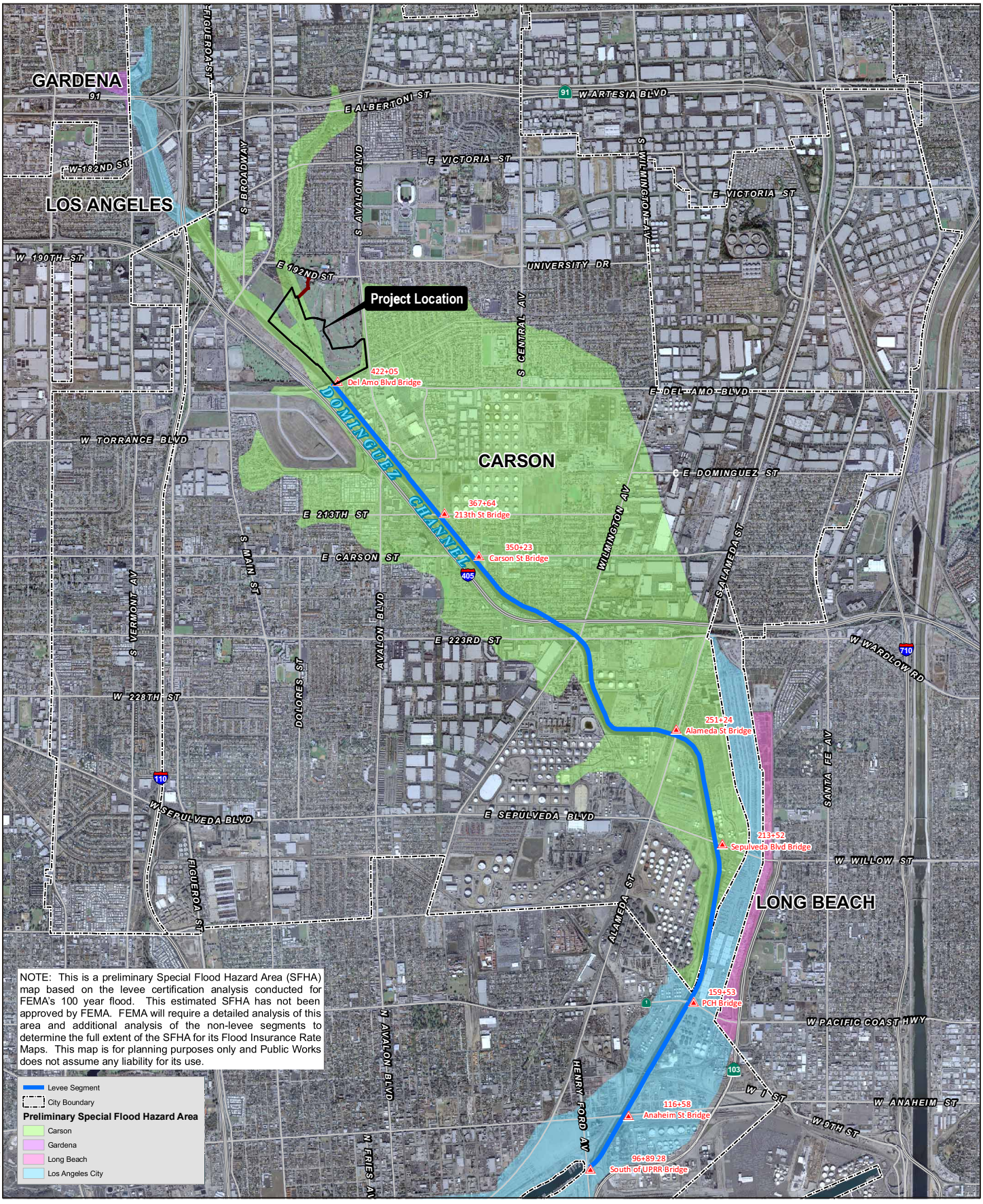
FIGURE 4.8-2

Flood Hazards

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK



NOTE: This is a preliminary Special Flood Hazard Area (SFHA) map based on the levee certification analysis conducted for FEMA's 100 year flood. This estimated SFHA has not been approved by FEMA. FEMA will require a detailed analysis of this area and additional analysis of the non-levee segments to determine the full extent of the SFHA for its Flood Insurance Rate Maps. This map is for planning purposes only and Public Works does not assume any liability for its use.

Levee Segment
City Boundary

Preliminary Special Flood Hazard Area

Carson
Gardena
Long Beach
Los Angeles City

SOURC: LACFCD 2016

FIGURE 4.8-3

Levee Failure Flood Map

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

Section 401 of the CWA (Water Quality Certification)

Section 401 of the CWA requires that an applicant for any federal permit (e.g., a U.S. Army Corps of Engineers [ACOE] Section 404 permit) obtain certification from the state, requiring that discharge to waters of the United States would comply with provisions of the CWA and with state water quality standards. For example, an applicant for a permit under Section 404 of the CWA must also obtain water quality certification per Section 401 of the CWA. Section 404 of the CWA requires a permit from the ACOE prior to discharging dredged or fill material into waters of the United States, unless such a discharge is exempt from CWA Section 404. For the project area, the Los Angeles RWQCB must provide the water quality certification required under Section 401 of the CWA. As discussed in Section 4.3, Biological Resources, an ACOE Section 404 permit is expected to be required for the proposed project site. Water quality certification under Section 401 of the CWA, and the associated requirements and terms, is required in order to minimize or eliminate the potential water quality impacts associated with the action(s) requiring a federal permit.

Section 402 of the CWA (NPDES)

The CWA was amended in 1972 to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permit program, as authorized by Section 402 of the CWA, was established to control water pollution by regulating point sources that discharge pollutants into waters of the United States (33 USC 1342). In the state of California, the EPA has authorized the State Water Resources Control Board (SWRCB) permitting authority to implement the NPDES program.

Regulations (Phase II Rule) that became final on December 8, 1999, expanded the existing NPDES Program to address stormwater discharges from construction sites that disturb land equal to or greater than 1.0 acre and less than 5.0 acres (small construction activity). The regulations also require that stormwater discharges from small municipal separate storm sewer systems (MS4s) be regulated by an NPDES General Permit for Storm Water Discharges Associated with Construction Activity, Order No. 99-08-DWQ. The Construction General Permit (CGP) requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which describes Best Management Practices (BMPs) the discharger would use to protect stormwater runoff. 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 water body listed on the 303(d) list for sediment. Routine inspection of all BMPs is required under the provisions of the CGP. On September 2, 2009, the SWRCB issued a new NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002), that became effective July 1, 2010.

Section 404 of the Clean Water Act

Section 404 of the CWA established a permitting program to regulate the discharge of dredged or filled material into waters of the U.S., which include wetlands adjacent to national waters (33 USC 1344). This permitting program is administered by the ACOE and enforced by the Environmental Protection Agency (EPA). For more information on Section 404 of the CWA, see Section 4.3, Biological Resources, of this Environmental Impact Report (EIR).

Safe Drinking Water Act

Congress passed the Safe Drinking Water Act in 1974 to protect public health by regulating the nation's public drinking water supply. The Act authorizes EPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water.

Per Section 1424(e) of the Safe Drinking Water Act, EPA established the Sole Source Aquifer Program in 1977 to help prevent contamination of groundwater from federally funded projects. The Sole Source Aquifer Program allows for EPA environmental review of any project that is financially assisted by federal grants or federal loan guarantees to determine whether such projects would have the potential to contaminate a sole source aquifer (EPA 2018). The Wellhead Protection Program was developed as a part of the Ground Water Protection Strategy for States and Tribes under the 1986 Amendments to the Safe Drinking Water Act. The Wellhead Protection Program includes delineation of Wellhead Protection Program areas, detection of possible contamination, remediation and monitoring of contamination, contamination prevention, and public education and participation.

National Flood Insurance Program

The National Flood Insurance Act of 1968 established the National Flood Insurance Program in order to provide flood insurance within communities that were willing to adopt floodplain management programs to mitigate future flood losses. The Act also required the identification of all floodplain areas within the U.S. and the establishment of flood-risk zones within those areas. FEMA is the primary agency responsible for administering programs and coordinating with communities to establish effective floodplain management standards. FEMA is responsible for preparing FIRMs that delineate the areas of known special flood hazards and their risk applicable to the community. The program encourages the adoption and enforcement by local communities of floodplain management ordinances that reduce flood risks. In support of the program, FEMA identifies flood hazard areas throughout the United States on FEMA flood hazard boundary maps.

State

Port-Cologne Water Quality Control Act

The Porter-Cologne Act of 1967 (California Water Code, Section 13000 et seq.) is the basic water quality control law for California. This act requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect state waters. The SWRCB establishes statewide policy for water quality control and provides oversight of the RWQCBs' operations. In addition to other regulatory responsibilities, the RWQCBs have the authority to conduct, order, and oversee investigation and cleanup where discharges or threatened discharges of waste to waters of the state could cause pollution or nuisance, including impacts to public health and the environment. The criteria for the proposed project area are contained in the Los Angeles Basin Plan, adopted by the LARWQCB on September 11, 2014. Additionally, the following regulatory tools are unique to the Porter-Cologne Act:

Dredge/Fill Activities and Waste Discharge Requirements

Actions that involve, or are expected to involve, discharge of waste are subject to water quality certification under Section 401 of the CWA (e.g., if a federal permit is being sought or granted) and/or waste discharge requirements (WDRs) under the Porter-Cologne Act. Chapter 4, Article 4 of the Porter-Cologne Act (California Water Code, Sections 13260–13274), states that persons discharging or proposing to discharge waste that could affect the quality of waters of the state (other than into a community sewer system) shall file a Report of Waste Discharge with the applicable RWQCB. For discharges directly to surface water (waters of the United States), an NPDES permit is required, which is issued under both state and federal law. For other types of discharges, such as waste discharges to land (e.g., spoils disposal and storage), erosion from soil disturbance, or discharges to waters of the state (such as isolated wetlands), WDRs are required and are issued exclusively under state law. WDRs typically require many of the same BMPs and pollution control technologies as required by NPDES-derived permits. Further, the WDRs' application process is generally the same as for CWA Section 401 water quality certification, though in this case it does not matter whether the particular project is subject to federal regulation.

National Pollution Discharge Elimination System (NPDES) Permits

In California, the SWRCB and its RWQCBs administer the NPDES permit program. The NPDES permit system was established in the CWA to regulate both point source discharges and nonpoint source discharges to surface waters of the U.S. The NPDES program consists of characterizing receiving water quality, identifying harmful constituents, targeting potential sources of pollutants, and implementing a comprehensive stormwater management program. Construction and industrial activities are typically regulated under statewide general permits that are issued by the SWRCB. The RWQCB also issues WDRs that serve as NPDES permits under the authority delegated to the

RWQCBs, under the CWA. In November 1990, under Phase I of the urban runoff management strategy, the EPA published NPDES permit application requirements for municipal, industrial, and construction stormwater discharges. With regard to municipalities, the permit application requirements were directed at jurisdictions owning or operating MS4s serving populations of 100,000 or more, or contributing significant pollutants to waters of the U.S.

California Water Code

The California Water Code includes 22 kinds of districts or local agencies with specific statutory provisions to manage surface water. Many of these agencies have statutory authority to exercise some forms of groundwater management. For example, a Water Replenishment District (Water Code Section 60000 et seq.) is authorized to establish groundwater replenishment programs and collect fees for that service, while a Water Conservation District (Water Code Section 75500 et seq.) can levy groundwater extraction fees. Through special acts of the Legislature, 13 local agencies have been granted greater authority to manage groundwater. Most of these agencies, formed since 1980, have the authority to limit export and even control some in-basin extraction upon evidence of overdraft or the threat of an overdraft condition. These agencies can also generally levy fees for groundwater management activities and for water supply replenishment.

Assembly Bill 3030 - Groundwater Management Act

In 1992, AB 3030 was passed which greatly increased the number of local agencies authorized to develop a groundwater management plan and set forth a common framework for management by local agencies throughout California. These agencies could possess the same authority as a water replenishment district to "fix and collect fees and assessments for groundwater management" (Water Code Section 10754), provided they receive a majority of votes in favor of the proposal in a local election (Water Code Section 10754.3).

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—Assembly Bill 1739 (Dickinson), Senate Bill (SB) 1168 (Pavley), and SB 1319 (Pavley)—collectively known as the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, sustainability should be achieved by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through SGMA, the California Department of Water Resources provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably, and requires those GSAs to adopt Groundwater Sustainability Plans for

crucial groundwater basins in California. A GSA has not been established for the West Coast Basin, as it is not considered a high priority basin (California DWR 2018).

Local

Municipal NPDES Permit

The City of Carson is a co-permittee under the "Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within the County of Los Angeles", issued by the RWQCB, Los Angeles Region (Order No. 96-054), dated July 15, 1996. This permit also serves as an NPDES permit under the Federal CWA (NPDES No. CAS614001), as well as WDRs under California law (the Municipal NPDES Permit), and as a co-permittee under the Municipal NPDES Permit, the City is required to adopt ordinances and implement procedures with respect to the entry of non-stormwater discharges into the MS4s.

Part 1, Section I of the Municipal NPDES Permit requires the City to effectively prohibit non-stormwater discharges from within its boundaries, into that portion of the MS4 that it owns or operates. Part 2, Section 1.E of the Municipal NPDES Permit requires the City to demonstrate that it possesses the legal authority necessary to control discharges to and from those portions of the MS4 over which it has jurisdiction, so as to comply with the Municipal NPDES permit and to specifically prohibit certain discharges identified in the Municipal NPDES Permit.

The Municipal NPDES Permit contemplates the development of a Countywide Storm Water Management Plan and then a Watershed Management Area Plan, in which the City will participate. In turn, the City requires the development and the implementation of programs for, among other things, the elimination of illicit connections and illicit discharges, development planning, development construction, and public information and education requirements, which may require the later adoption of additional legal authority to implement such programs as they are developed by the Permittees and approved by the Regional Board.

Los Angeles County Low Impact Development Manual

The County of Los Angeles prepared the 2014 LID Standards Manual to comply with the requirements of the NPDES MS4 Permit for stormwater and non-stormwater discharges from the MS4, within the coastal watersheds of Los Angeles County (CAS004001, Order No. R4-2012-0175), also known as the Los Angeles Water Quality Ordinance. This permit covers 84 cities and the unincorporated areas of Los Angeles County. Under the Permit, the LACFCD is designated as the Principal Permittee and the County, along with 84 incorporated cities, is designated as Permittees. In compliance with the Permit, the Permittees have implemented a stormwater quality management program (SQMP), with the ultimate goal of accomplishing the requirements

of the Permit and reducing the amount of pollutants in stormwater and urban runoff, wherein new development/redevelopment projects are required to prepare a LID report.

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. The LID Standards Manual addresses the following objectives and goals (LACDPW 2014):

- Lessen the adverse impacts of stormwater runoff from development and urban runoff on natural drainage systems, receiving waters, and other water bodies;
- 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.

4.8.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to hydrology and water quality are based on Appendix G of the CEQA Guidelines, including would the project:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
3. 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:
    a. Result in substantial erosion or siltation on- or off-site?
    b. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
    c. 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?
    d. Impede or redirect flood flows?
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As discussed in the Initial Study prepared for the proposed project (Appendix A), impacts related to potential inundation by seiche or tsunami would be less than significant and therefore have not been analyzed. As such, with respect to hydrology and water quality, the EIR evaluates the following environmental thresholds:

HYD-1 Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

HYD-2 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?

HYD-3 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:

a. Result in substantial erosion or siltation on- or off-site?

b. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

c. 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?

d. Impede or redirect flood flows?

HYD-4 Would the project in flood hazard zones, risk release of pollutants due to project inundation?

HYD-5 Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

4.8.4 Impacts Analysis

HYD-1 Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction General Permit

The proposed project would comply with the provisions of the CGP, which is NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002). Because the proposed project is greater than 1 acre in size, the applicant would be required to submit a Notice of Intent to the LARWQCB in order to obtain

approval to complete construction activities under the CGP. This permit would include a number of design, management, and monitoring requirements for the protection of water quality and the reduction of construction phase impacts related to stormwater (and some non-stormwater) discharges. Permit requirements would include the preparation of a SWPPP, implementation and monitoring of BMPs, implementation of best available technology for toxic and non-conventional pollutants, implementation of best conventional technology for conventional pollutants, and periodic submittal of performance summaries and reports to the LARWQCB. The SWPPP would apply to the project as a whole and would include reference to the major construction areas, materials staging areas, and haul roads.

Typical BMPs that could be incorporated into the SWPPP include the following:

- Diverting off-site runoff away from the construction site
- Vegetating landscaped/vegetated swale areas as soon as feasible following grading activities
- Placing perimeter straw wattles to prevent off-site transport of sediment
- Using drop inlet protection (filters and sand bags or straw wattles), with sandbag check dams within paved areas
- Regular watering of exposed soils to control dust during demolition and construction
- Implementing specifications for demolition/construction waste handling and disposal
- Using contained equipment wash-out and vehicle maintenance areas
- Maintaining erosion and sedimentation control measures throughout the construction period
- Stabilizing construction entrances to avoid trucks from imprinting soil and debris onto City roadways
- Training, including for subcontractors, on general site housekeeping

Violations of WDRs and water quality standards would be minimized through compliance with applicable regulations and policies.

Low Impact Development Features

Project design, construction, and operation would be completed in accordance with the Los Angeles Water Quality Ordinance (CAS004001, Order No. R4-2012-0175), with the goal of reducing the amount of pollutants in stormwater and urban runoff. A LID report prepared for the project (Appendix H-2) fulfills the requirements of this ordinance. Based on the LID report, all building roof drains, except one, would discharge at grade to proprietary bio-treatment BMPs (Filterra Units) prior to entering the on-site storm drain system. Stormwater runoff in the western portion of the site, west of the Dominguez Branch Channel (shown as Victoria Creek on Figure 4.8-4, Proposed Drainage Conditions), would surface- and pipe-flow to bio-filtration basins proposed to comply with LID requirements, prior to discharge into the Dominguez Channel

(Outfalls #1.1 and #1.2) and Dominguez Branch Channel (Outfalls #2.1 and #2.2). Stormwater runoff from the eastern portion of the site, east of the Dominguez Branch Channel, would surface-flow to several LID treatment basins and then pipe-flow to one of two outfall locations (Outfalls #1.3 and #2.3). In Subarea E, in the western portion of the proposed golf facility, a spreader would be utilized such that the stormwater flow would be sheet flow, mimicking the existing conditions in which turf absorbs and slows the runoff. In the northern-most portion of the project, a new road would be constructed, connecting the project to Martin Luther King, Jr. Street (formerly 192nd Street) to the north. This area would street-flow north to Martin Luther King, Jr. Street (Outfall #4), where stormwater runoff would be treated with proprietary bio-treatment BMPs (Filterra Units) prior to discharging to the public storm drain system or street.

Based on the LID report, the project would minimize impervious areas, by implementing the following designs where applicable and feasible:

- Use minimum allowable roadway and sidewalk cross sections, driveway lengths, and parking stall sizes;
- Use two-track/ribbon alleyways/driveways or shared driveways;
- Include landscape islands in cul-de-sac streets;
- Reduce building and parking lot footprints, including constructing taller buildings;
- Use pervious pavement material, such as modular paving blocks, turf blocks, porous concrete, and asphalt, brick, and gravel or cobble, to accommodate overflow parking, if feasible (no infiltration, systems would be lined if implemented);
- Cluster buildings and paved areas to maximize pervious area;
- Maximize tree preservation or tree planting; and
- Use vegetated swales to convey stormwater runoff instead of paved gutters.

Additional BMPs to be implemented would address other water quality concerns during construction and post construction such as inadvertent release of pollutants (e.g., hydraulic fluids and petroleum); improper management of hazardous materials; trash and debris; and improper management of portable restroom facilities (e.g., regular service). In accordance with the LID Standards Manual, project source controls to improve water quality would be provided for outdoor material storage areas, outdoor trash storage/waste handling areas, outdoor loading/unloading dock areas, and building materials areas. Source controls would also include storm drain messages and signage and beneficial landscape irrigation practices (Appendix H-2).

Also in accordance with the LID Standards Manual, stormwater runoff associated with the design storm would be detained on site, such that post-storm runoff would be less than or equal to existing conditions. Stormwater detention would occur as a result of the increased stormwater travel time on

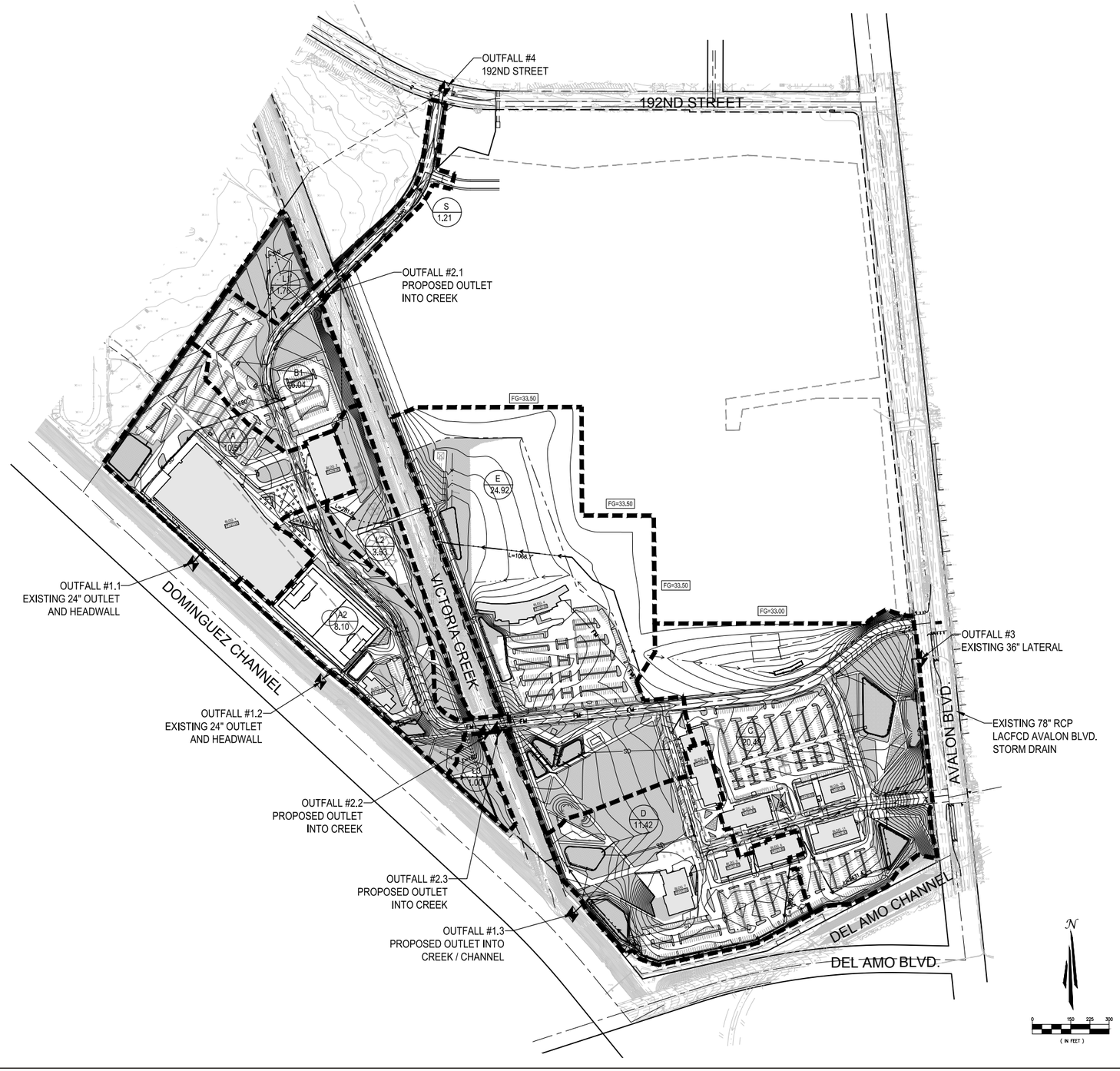
site, due to the circuitous route of the proposed shallow-sloped storm drain system, in combination with biofiltration. The Stormwater Quality Design Volume (SWQDv) is defined as the greater of:

- The 0.75-inch, 24-hour rain event, or
- The 85th percentile, 24-hour rain event, as determined from the Los Angeles County 85th percentile precipitation isohyetal map.

The 85th percentile, 24-hour rain event is 0.89 inches, which is greater than 0.75 inches; therefore, a rainfall depth of 0.89 inches has been used for the SWQDv (Appendix H-2).

Because the project site overlies the former BKK Landfill, stormwater infiltration into on-site soils would not be acceptable, as such infiltration could result in migration of toxic chemicals in the refuse and associated soils into groundwater. Based on the Remedial Action Plan completed for OU-2, one of the primary remedial action objectives is to protect the groundwater resources of the West Coast Basin by minimizing the potential for future loading to groundwater. Because the proposed drainage design would not capture 100% of the SWQDv through infiltration and/or runoff harvesting, alternative compliance measures (in compliance with the LID Standards Manual) would be implemented. On-site biofiltration of 1.5 times the volume of the SWQDv would be included in the drainage design (Appendix H-2).

The landfill soil cover cap in its present condition appears to be effectively containing chemicals of concern and also appears to effectively inhibit the migration of irrigation and rain water into the landfill cells, with minimal leachate generation (Burns & McDonnell 2016). In addition, bioretention basins and permeable pavement areas would be lined with an underdrain system, which would be connected to the storm drain system, to further reduce downward percolation of stormwater runoff. On-site drainage areas would be designed to implement engineered biofiltration basins into each area to capture 100% of all runoff (Appendix H-2).



SOURCE: Tait & Associates, Inc. 2019

FIGURE 4.8-4

Proposed Drainage Conditions

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

Dominguez Channel Enhanced Watershed Management Plan

The Dominguez Channel Watershed Management Area Group developed the Dominguez Channel Enhanced Watershed Management Plan (City of Los Angeles 2015), pursuant to the requirements set forth by Order No. R4-2012-0175, MS4 NPDES Permit (MS4 Permit). The agencies participating in this plan are the Cities of El Segundo, Hawthorne, Inglewood, Lomita, and Los Angeles, the unincorporated areas of the County of Los Angeles, and the LACFCD. Based on a Notice of Preparation comment letter from the City of Carson, dated September 27, 2018, the City is also participating in the Dominguez Channel Enhanced Watershed Management Plan, which outlines a series of mitigation measures required to improve water quality, including the construction of regional stormwater detention and groundwater recharge areas. The four primary projects of the plan include (1) Minimum Control Measures, excluding implementation of LID ordinances for new and re-development; (2) LID ordinance implementation for new and re-development processed; (3) regional projects; and (4) distributed projects, which are primarily green streets.

Water quality enhancement proponents of the project, including implementation of a SWPPP, stormwater BMPs, and LID design, would minimize potential off-site surface water quality impacts and contribute to a reduction in water quality impacts within the overall Dominguez Channel Watershed, which is the goal of the Dominguez Channel Enhanced Watershed Management Plan. As a result, surface water quality impacts are considered **less than significant** and no mitigation is required.

Groundwater Quality

As previously discussed, the project site is located within remedial site OU-2, as designated by the DTSC. To date, remedial investigations have focused on soil and soil-gas contamination, with respect to potential human or ecological health risks at the site. A Remedial Action Plan associated with soil and soil-gas contamination was completed in June 2016. Based on 1,148 samples collected at the site, 93 chemicals of potential concern were identified, including 37 VOCs, four aldehydes, 16 SVOCs, two PCBs, two chlorinated herbicides, five organochlorine pesticides, TPH, 24 metals, cyanide, and hexavalent chromium. These chemicals were identified in the leachate (i.e., water that has percolated from the bottom of the landfill), surface water runoff samples, landfill soil cover, native soil samples, and soil gas/landfill gas samples. A Human Health Risk Assessment identified seven chemicals of concern, including antimony, arsenic, benzo(a)pyrene, lead, PCBs, and methane. Potential threats to groundwater resources and potential groundwater response actions will be addressed by the DTSC separately from the 2016 Remedial Action Plan.

The proposed project would not include a groundwater treatment facility. The Remedial Investigation/Feasibility Study, Remedial Action Plan, and site remediation would be completed under the guidance of the DTSC concurrent and subsequent to project construction. Because the project site overlies the former BKK Landfill, stormwater infiltration into on-site soils would not be acceptable, as such infiltration could result in migration of toxic chemicals in the refuse and associated soils into groundwater.

The landfill soil cover cap in its present condition appears to be effectively containing chemicals of concern and also appears to effectively inhibit the migration of irrigation and rain water into the landfill cells, with minimal leachate generation (Burns & McDonnell 2016). This soil cover cap would be disrupted during grading and construction, as utility corridors would require excavation, waste relocation, and reconstruction of the landfill cap along those corridors. Therefore, landfill cap disruption would be temporary, with no long-term groundwater quality impacts associated with potential infiltration of stormwater runoff into the underlying refuse.

In addition, bioretention basins and permeable pavement areas would be lined with an underdrain system, which would be connected to the storm drain system, to further reduce downward percolation of stormwater runoff. On-site drainage areas would be designed to implement engineered biofiltration basins into each area to capture 100% of all runoff (Appendix H-2). As a result, project related impacts to groundwater quality would be **less than significant,** and no mitigation is required.

HYD-2 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?

As previously discussed, the project site overlies the former BKK landfill, for which a soil and soil-gas Remedial Action Plan was completed in 2016, for the DTSC. A groundwater Remedial Investigation/Feasibility Study and associated Remedial Action Plan will be completed separately. On-site groundwater would not be used as part of the project. As described in Section 4.16, Utilities and Service Systems, water service for the project site would be provided by Cal Water. Reclaimed water used by the project would be provided through the West Basin Municipal Water District. As described under UTL-2, Cal Water's Dominguez District and West Basin Municipal Water District are expected to have sufficient water supplies to serve the anticipated demand from the proposed project.

In addition, the project would not interfere substantially with groundwater recharge, as the existing landfill has been capped with an impermeable clay cap, thus preventing groundwater recharge. The cap would be maintained in its current state as part of the project. As a result, impacts are considered **less than significant,** and no mitigation is required.

HYD-3 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:

a. Result in substantial erosion or siltation on- or off-site?

Project grading would result in a drainage pattern that mimics the existing conditions and conforms to the intended discharge locations indicated on the City of Carson's existing Dominguez Channel hydrology map. As discussed for Threshold HYD-1, stormwater runoff in the western portion of the site, west of the Dominguez Branch Channel (shown as Victoria Creek on Figure 4.8-4, Proposed Drainage Conditions), would surface- and pipe-flow to bio-filtration basins proposed to comply with LID requirements, prior to discharge into the Dominguez Channel (Outfalls #1.1 and #1.2) and Dominguez Branch Channel (Outfalls #2.1 and #2.2). Stormwater runoff from the eastern portion of the site, east of the Dominguez Branch Channel, would surface-flow to several LID treatment basins and then pipe-flow to one of two outfall locations (Outfalls #1.3 and #2.3). In Subarea E, in the western portion of the proposed golf facility, a spreader would be utilized such that the stormwater flow would be sheet flow, mimicking the existing conditions in which turf absorbs and slows the runoff. In the northern-most portion of the project, a new road would be constructed, connecting the project to Martin Luther King, Jr. Street (formerly 192nd Street) to the north. This area would street-flow north to Martin Luther King, Jr. Street (Outfall #4), where stormwater runoff would be treated with proprietary bio-treatment BMPs (Filterra Units) prior to discharging to the public storm drain system or street (Appendix H-1).

The three connections to the Dominguez Branch Channel would be located immediately below the proposed bridges over the creek for proposed road A. There are two proposed connections located at the proposed Road A southern bridge (Outfalls #2.2 and #2.3) and one connection located at the proposed Road A northern bridge (Outfall #2.1). The connection at the northern bridge is an 18-inch reinforced concrete pipe (RCP) storm drain that will connect to the creek via a proposed reinforced headwall/flared end. The connections at the southern bridge consist of one 18-inch RCP and one 30-inch RCP located at west and east sides of the proposed bridge, respectively. Both storm drains are proposed to connect to the channel via a reinforced head wall/flared end. Immediately downstream of these headwalls riprap rock will be installed to help prevent erosion within these localized storm drain outlets. The connection at Dominguez Channel is located immediately downstream of the Dominguez Branch Channel (Outfall #1.3) and it is proposed as a 24-inch RCP that will connect to a head wall/flared end with riprap rock at the outlet. The proposed headwalls will include energy dissipators as needed once the final hydraulic analysis is completed, thus reducing the potential for downstream erosion and associated siltation.

Following project construction, the site would be completely covered with structures, paving, landscaping, and biofiltration basins. As a result, substantial erosion or siltation on site would not

occur. The 50-year, 24-hour storm event has been analyzed for the existing and proposed conditions. Because the project site is currently used as a golf course, it has a 5% impervious cover. Therefore, existing peak flow analyses assumed a 0.05% impervious area for the entire site and proposed peak flow analyses assumed 0.1% to 0.9% impervious area, depending on the subarea.

The existing conditions consist of sheet flow overland to the Dominguez Branch Channel and inlets along Avalon Boulevard and Dominguez Channel. With proposed on-site routing through storm drain pipes or pavement swales, the time of concentration would increase. With this increased time, the rainfall intensity would decrease, resulting in a decreased peak flow condition. Also, the lined biofiltration basins would slow the runoff, with the runoff filtering through the soil media in the lined basin. On-site routing such as this would ensure that post-development peak flow of the 50-year, 24-hour storm event remains below the existing 50-year storm event flow (Appendix H-1). As a result, the potential for substantial downstream erosive scour and associated siltation of downstream waterways would not increase as a result of the project. Impacts are considered **less than significant,** and no mitigation is required.

b. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

As described for Impact 3a), the proposed drainage system would mimic existing conditions and would not increase the rate or amount of surface runoff associated with a 50-year, 24-hour storm event. As a result, flooding on- or off-site would not occur. Impacts are considered **less than significant,** and no mitigation is required.

c. 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?

As described for Impact 3a), the proposed drainage system would mimic existing conditions and would not increase the rate or amount of surface runoff associated with a 50-year, 24-hour storm event. Therefore, the project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems. In addition, as described for HYD-1, water quality enhancement proponents of the project, including implementation of a SWPPP, stormwater BMPs, and LID design, would minimize potential off-site surface water quality impacts and contribute to a reduction in water quality impacts within the overall Dominguez Channel Watershed, which is the goal of the Dominguez Channel Enhanced Watershed Management Plan. As a result, impacts are considered **less than significant,** and no mitigation is required.

d. Impede or redirect flood flows?

Based on the FEMA FIRM for the project site (Panel 06037C1935F), the Dominguez Channel and Dominguez Branch Channel (shown as Victoria Creek on Figure 4.8-1) is classified as Zone A, a Special Flood Hazard Area (without base flood elevation). In addition, portions of on-site areas adjacent to these channels are classified as Zone X, where there is 0.2% annual chance of flooding (Figure 4.8-2). Within the designation of Zone X, there is no federal obligation on lenders to require flood insurance.

A 2009 LACFCD study determined that the Dominguez Channel is deficient and cannot adequately convey the 100-year flood (i.e., 1% annual chance flood), due to deficiencies in the channel levee. The area within Zone X is behind a levee that FEMA has Provisionally Accredited to protect the area from a 100-year flood, provided the LACFCD in the future addresses FEMA's issues with the levee. It is therefore possible that FEMA will in the future newly map the Zone X area as Zone A, a Special Flood Hazard Area (i.e., 1% annual chance flood) (LACDPW 2018; Su, pers. comm. 2019). Based on a Dominguez Channel levee certification preliminary map of Special Flood Hazard Areas, prepared by LACFCD (2016) (Figure 4.8-3, Levee Failure Flood Map), portions of the project site would be located within a Special Flood Hazard Area, in the event the areas behind the levee are remapped as Zone A. This approximated flood zone includes portions of project building sites, including all or portions of Buildings 1, 2, 3, 4, and the zip-line building (Figure 3-2, Site Plan).

However, the proposed project would include approximately 200,000 cubic yards of fill, which would elevate the project grade in the vicinity of proposed structures. Specifically, buildings 1, 3, and 4, as well as the building for the zip-line operations, would be located in the existing Zone X flood plain. The proposed project would include:

- Building 1 would be between 1 foot and 5 feet higher than existing elevation (5 feet above existing elevation at Dominoes Channel Property Line);
- Building 3 would be between 2 feet and 3 feet higher than existing elevation (3.5 feet above existing elevation at Dominoes Channel Property Line);
- Building 4 would be between 4 feet and 8 feet higher than existing elevation (10 feet above feet existing elevation at Dominoes Channel Property Line); and
- Zip-line building would be about 2 feet lower than existing elevation (4.5 feet above existing elevation at Dominoes Channel Property Line) (Flores, pers. comm. 2018).

In addition, as described for Impact 3a and 3c, project grading would result in a drainage pattern that mimics the existing conditions and conforms to the intended discharge locations indicated on the City of Carson's existing Dominguez Channel hydrology map. As a result, the project

would not substantially alter the existing drainage pattern of the site. Regardless of whether the proposed project elevations in the vicinity of these structures would be within Zone X (i.e., 0.2% annual chance of flooding) or Zone A, a Special Flood Hazard Area (i.e., i.e., 1% annual chance of flooding), these structures would not impede or redirect flood flows such that there would be any adverse downstream flooding-related impacts. The proposed drainage system would not increase the rate or amount of surface runoff associated with a 50-year, 24-hour storm event. Flood related impacts would be **less than significant** and no mitigation is required.

HYD-4 Would the project, in a flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation?

As discussed for Impact HYD-3a, the proposed project would not increase the rate or amount of surface runoff associated with the 50-year, 24-hour storm event, nor would it substantially alter the existing drainage pattern of the site. In addition, as discussed for Impact HYD-3d, portions of the project site are located in FEMA Zone X and may in the future be located within Zone A, a Special Flood Hazard Area. However, proposed structures located within Zone X would be elevated 1 to 8 feet higher than current grade, thus reducing the risk of flooding. In addition, the proposed project would not be industrial in nature, thus minimizing the potential for release of pollutants due to possible project inundation. As described in Section 4.7, Hazards and Hazardous Materials, any small quantities of hazardous chemicals would be used in compliance with existing regulations and guidelines. The use, storage, and transport of hazardous materials and hazardous wastes would be subject to all applicable federal, state, and local health and safety laws and regulations that are intended to minimize health risk to the public and the environment associated with hazardous materials. As a result, flood-related hazardous materials impacts would be **less than significant,** and no mitigation is required.

HYD-5 Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As discussed for Impact HYD-1, water quality enhancement proponents of the project, including implementation of a SWPPP, stormwater BMPs, and LID design, would minimize potential off-site surface water quality impacts and contribute to a reduction in water quality impacts within the overall Dominguez Channel Watershed, which is the goal of the Dominguez Channel Enhanced Watershed Management Plan. As a result, the project would not conflict with or obstruct this regional water quality control plan.

With respect to groundwater management, SGMA empowers local agencies to form GSAs to manage basins sustainably, and requires those GSAs to adopt Groundwater Sustainability Plans for crucial groundwater basins in California. A GSA has not been established for the West Coast Basin, as it is not considered a high priority basin. As a result, the project would not conflict with or

obstruct this sustainable groundwater management plan. Impacts are considered **less than significant,** and no mitigation measures are required.

4.8.5 Mitigation Measures

Impacts to hydrology and water quality would be **less than significant**. No mitigation measures are required.

4.8.6 Level of Significance after Mitigation

Impacts from the proposed project would be less than significant, and no mitigation is required.

4.8.7 Cumulative Impacts

Water Quality

The geographic context for the analysis of cumulative impacts associated with water quality is the Dominguez Channel Watershed, which is already largely urbanized with impervious surfaces. The analysis accounts for all anticipated cumulative growth within this geographic area, which includes the list of related projects within the cities of Carson, Torrance, and Gardena, as provided in Table 3-3, Related Projects. Cumulative development in these cities could add new sources of stormwater runoff. Construction activities associated with development could temporarily increase the amount of exposed surfaces that could contribute to sediments in stormwater runoff. Additionally, materials associated with construction activities could be deposited on surfaces and carried to receiving waters in stormwater runoff.

Continued development and redevelopment within the area could also increase the amount of impervious surfaces that could increase stormwater runoff rates and amounts, as well as changes in land use that may increase the amount of pollutants in stormwater runoff. However, all cumulative development would be subject to existing regulatory requirements to protect water quality and minimize increases in stormwater runoff. For example, Part 1, Section I of the Municipal NPDES Permit requires the City of Carson to effectively prohibit non-stormwater discharges from within its boundaries, into that portion of the MS4 that it owns or operates. Part 2, Section 1.E of the Municipal NPDES Permit requires the City to demonstrate that it possesses the legal authority necessary to control discharges to and from those portions of the MS4 over which it has jurisdiction, so as to comply with the Municipal NPDES permit and to specifically prohibit certain discharges identified in the Municipal NPDES Permit. The Cities of Gardena and Torrance maintain similar permit requirements to reduce pollutants in stormwater runoff.

Every 2 years, the LARWQCB must reevaluate water quality within its geographic region and identify those water bodies not meeting water quality standards. For those impaired water bodies, a TMDL must be prepared and implemented to reduce pollutant loads to levels that would not

contribute to a violation of water quality standards. All development within the Dominguez Channel Watershed would be subject to the water quality standards outlined in the Basin Plan and has to comply with any established TMDLs. The continuing review process would ensure that cumulative development within the watershed would not substantially degrade water quality.

In addition, the proposed project would comply with existing and future regulations to protect water quality, including the Construction General Permit. Compliance with existing regulations would prevent violation of water quality standards and minimize the potential for contributing additional sources of polluted runoff. Therefore, project impacts associated with water quality standards and polluted runoff would be less than significant, and the proposed project would not contribute considerably to cumulative impacts. As a result, cumulative water quality impacts would be less than significant and no mitigation is required.

Drainage

The geographic context for the analysis of cumulative impacts related to storm drainage is the Dominguez Channel Watershed, which is already largely urbanized with impervious surfaces. Cumulative development within the Cities of Carson, Torrance, and Gardena could potentially increase the amount of impervious surfaces that could cause or contribute to storm drain system capacity exceedance, alter the existing storm drain system, and/or require construction of new or expanded facilities. New development within the watershed would be subject to the environmental review process that would analyze potential impacts associated with stormwater runoff to the storm drain system, and would have to comply with current state and local environmental regulations, such as the Construction General Permit, California Fish and Game Section 1602, the CWA Section 404 permit process, and others.

Additionally, the Los Angeles County Flood Control District controls and monitors flows within its system. The proposed project would be required to obtain a permit from the County of Los Angeles to ensure that allowable capacity flow to the Dominguez Channel is not exceeded. Potential impacts to drainage associated with the proposed project would be less than significant, and the proposed project would not contribute considerably to cumulative impacts. Therefore, cumulative drainage-related impacts would be **less than significant,** and no additional mitigation is required.

4.8.8 References

Burns & McDonnell. 2016. *Remedial Action Plan for Soil and Landfill Gas Media, Former BKK Landfill, Carson Dump, Operable Unit 2, 340 East 192nd St., 19202 South Main St., and 19200 South Main St., City of Carson, California 90248*. Prepared for the Department of Toxic Substances Control, June 2016.

California DWR (Department of Water Resources). 1961. *Bulletin No. 104, Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County, Appendix A, Ground Water Geology*. June 1961.

California DWR. 2018. "SGMA Portal." Accessed November 20, 2018. https://sgma.water.ca.gov/portal.

California Water Board. 2016. "TMDL – The Integrated Report, 303(d) List of Water Quality Limited Segments and 305(b) Surface Water Quality Assessment." Accessed November 15, 2018. https://www.waterboards.ca.gov/rwqcb5/water_issues/tmdl/impaired_waters_list/#intrpt2014_2016.

City of Carson. 2004. *City of Carson General Plan*. Adopted October 11, 2004. Accessed December 2018. http://ci.carson.ca.us/communitydevelopment/generalplan.aspx.

City of Los Angeles. 2015. *Enhanced Watershed Management Program for the Dominguez Channel Watershed Management Area Group*. City of Los Angeles Stormwater Program, June 2015. Accessed November 16, 2018. https://www.lastormwater.org/wp-content/files_mf/dominguezchanneldraftewmpmainreport.pdf.

EPA (U.S. Environmental Protection Agency). 2018. "Sole Source Aquifers for Drinking Water," accessed December 20, 2018. https://www.epa.gov/dwssa.

FEMA (Federal Emergency Management Agency). 2008. "FEMA Flood Map Service Center: Search by Address." Accessed November 15, 2018. https://msc.fema.gov/portal/search#searchresultsanchor.

Flores, N. 2018. Flood issue information. Email communication between N. Flores (Engineering Designer, Los Angeles County Flood Control District) and T. Mir (Project Manager, Dudek). December 17, 2018.

LACDPW (Los Angeles County Department of Public Works). 2014. *Low Impact Development Standards Manual*, February 2014. Accessed November 11, 2018. https://dpw.lacounty.gov/ldd/lib/fp/Hydrology/Low%20Impact%20Development%20Standards%20Manual.pdf.

LACDPW. 2016. *Los Angeles County Comprehensive Floodplain Management Plan, Final*. Prepared by Tetra Tech for the Watershed Management Division, September 2016. Accessed February 21, 2019. https://dpw.lacounty.gov/wmd/nfip/FMP/documents/Los%20Angeles%20County%20FMP%20Final%20-%20No%20appendices.pdf.

LACDPW. 2018. Comment letter on project Environmental Impact Report Notice of Preparation. Prepared September 27, 2018.

LARWQCB (Los Angeles Regional Water Quality Control Board). 2014. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties.*

PW (Los Angeles County Public Works). 2018. "Dominguez Watershed Current Conditions." Accessed November 14, 2018. http://www.ladpw.org/wmd/watershed/dc/current_cond.cfm.

Su, D. 2019. Clarification of flood issue. Email communication between D. Su (Senior Civil Engineering Assistant, Los Angeles County Flood Control District) and J. Vandervis (Engineer, Tait & Associates Inc.), January 25, 2019.

4.9 LAND USE AND PLANNING

This section describes the existing land use and planning setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of The Creek at Dominguez Hills project (project or proposed project). The analysis is based on a review of existing resources and applicable laws, regulations, and guidelines. The information presented in this section was collected from a number of publicly available sources, including the *Los Angeles County General Plan* and the *City of Carson General Plan*.

Land use impacts can be direct or indirect. Direct impacts result in land use incompatibilities, the division of neighborhoods or communities, or interference with other land use plans, including habitat and wildlife conservation plans. This section focuses on direct land use impacts. Indirect impacts are secondary effects resulting from land use policy implementation, such as an increase in demand for public utilities or services, or increased traffic on roadways. Indirect impacts are addressed in other topical sections of this draft environmental impact report (EIR).

4.9.1 Existing Conditions

The project site is located at 340 Martin Luther King Jr. Street (formerly East 192nd Street) in the City of Carson (City). The approximately 87-acre project site sits on the southwesterly portion of the approximately 170-acre Links at Victoria Golf Course (Victoria Golf Course). The golf course is located south of an existing County park, Victoria Park, and Towne Avenue Elementary School, west of a residential community, north of commercial uses, and east of the Dominguez Channel and Interstate (I-) 405. The project site is owned by the County of Los Angeles (County). The County has leased the project site to Plenitude Holdings LLC (Plenitude) since September 2015.

As the project site is located on land owned by the County, all land use decisions pertaining to the proposed project are under the jurisdiction of the County. As owner of the project site, the County is responsible for all of the proprietary decisions regarding any proposed development of the project site, and will act as the permitting authority for any such development pursuant to its sovereign immunity from local zoning and permitting. Government Code Section 53090 and 53091 "recognize an intergovernmental immunity from building and zoning regulations" (*Lawler v. City of Redding*, 7 Cal. App. 4th 778 1992). When the County is engaging in such sovereign activities as the development of its property, it is not subject to local regulations (*Hall v. City of Taft*, 47 Cal. 2nd 177 1956). "The immunity of a county's governmental and proprietary activities from a city's building and zoning ordinances under common law and under Government Code section 53090 *et seq*., will extend to the activities of a private developer lessee using the county land for the operation of a commercial enterprise, where the purpose of the

lease is to implement the public purposes and uses for which the property was granted to the county" (57 Ops.Cal.Atty.Gen. 124 1974). The County's lessees are also exempt from Carson's building and zoning regulations to the extent that the proposed development furthers the purposes of the County Board of Supervisors (*Great Western Shows Inc. v. County of Los Angeles* 2002). The project site is the subject of an Exclusive Negotiating Agreement (ENA) between the County and Plenitude, the current operator of the golf course. The County Board of Supervisors unanimously authorized the ENA on November 21, 2017, in order to explore alternate uses for the project site with the objective of potentially converting the property into a more accessible economically viable recreational facility to better serve the local community, citing both the high needs for parks within the City of Carson and the underperforming history of the Victoria Golf Course. Therefore, the proposed project would not be subject to land use-related regulations of the City General Plan or Zoning Code. However, any off-site improvements required under the proposed project would be subject to City regulations.

Surrounding Land Uses

The project site is surrounded by residential, commercial, and industrial land uses. It is bounded by the Goodyear Blimp Airship Base to the northwest, the Dominguez Channel waterway to the west, Del Amo Boulevard to the south, and Avalon Boulevard to the east. The balance of the Victoria Golf Course property borders the project site to the north. The StubHub Center and Cal State Dominguez Hills are both located within 1 mile northeast of the project site. A detailed description of land uses surrounding the project site is provided as follows:

North: The remainder of the Victoria Golf Course property is immediately to the north of the project site. This portion is proposed to be separately redeveloped by the Carol Kimmelman Center, LLC with tennis, soccer, and facilities dedicated to after-school youth development programming.

South: Commercial uses exist to the south, across East Del Amo Boulevard. The Dominguez Channel and Interstate (I-) 405 also extend south of the project site.

East: South Avalon Boulevard and low-density single-family residential uses are found to the east.

West: The Goodyear Blimp Airship Base is located immediately northwest of the project site. Additionally, the Dominguez Channel, I-405, and undeveloped land between I-405 and the golf course are to the west of the project site.

Land Use and Zoning

As described above, the project site is situated on land owned by the County, and therefore all land use decisions pertaining to the proposed project fall under the jurisdiction of the County, and the proposed project would not be subject to land use-related regulations of the City General

Plan or Zoning Code. However, any off-site improvements required under the proposed project would be subject to City regulations; therefore, both County of Los Angeles and City of Carson land use and zoning information is included.

The County General Plan, Parks and Recreation Element, designates the site as a "special use facility"[1] (County of Los Angeles 2015a). Additionally, the County Planning and Zoning map designates the project site's use type as Recreational (County of Los Angeles 2009). The City General Plan land use designation is Recreational Open Space (City of Carson 2004), and a zoning designation of OS-ORL, Open Space–Organic Refuse Landfill, City Zoning Code (Section 9151.12) (City of Carson 2018) (see Figures 4.9-1, City of Carson General Plan Land Use, and 4.9-2, City of Carson Zoning Designations). The Carson Vision Plan, adopted by the City in 2016, identifies an opportunity to reposition the property as an amenity for both Carson residents and the South Bay community.

Prior to the site's current use as a golf course, it was the site of the former Ben K. Kazarian Carson Dump, which operated as a Class II[2] landfill from 1948 to 1959. The Victoria Golf Course has been in operation on the site since 1966, which the County leased to Plenitude in September 2015. In January 2018, the County entered into an Exclusive Negotiating Agreement with Plenitude to explore potential future public recreational uses of a portion of Victoria Golf Course and amended Plenitude's lease agreement to allow for the reconfiguration of the leased premises in the event that new or different uses are approved by the County.

4.9.2 Relevant Plans, Policies, and Ordinances

Federal

No federal laws, plans, or policies related to land use are applicable to the proposed project.

State

California Planning and Zoning Law

The California Planning and Zoning Law (Government Code Sections 65000–66499.58) provides the legal framework for California cities' and counties' local planning and land use. Under state planning law, each city and county must adopt a comprehensive, long-term general plan. State law gives cities and counties freedom in how a jurisdiction may create a general plan, but there are fundamental requirements that must be met. These requirements include the inclusion of the mandatory elements described in the Government Code. Each of the elements must contain text and descriptions setting forth objectives, principles, standards, policies, and

[1] Special use facilities are generally single purpose facilities that serve greater regional recreational or cultural needs.
[2] Class II landfill sites are facilities that may accept designated and nonhazardous wastes.

plan proposals; diagrams and maps that incorporate data and analysis; and mitigation measures. The process of adopting or amending a general plan requires public participation. Both the County of Los Angeles and City of Carson have adopted general plans and zoning standards that may apply to the project.

Title 27 California Code of Regulations

Title 27 of the California Code of Regulations contains measures for environmental protection. More specifically, Article 2, Subchapter 5 contains the Closure and Post-Closure Maintenance Standards for Disposal Sites and Landfills. Given the historic use of the property as the Ben K. Kazarian Carson Dump, the project would be required to comply with all applicable regulations and coordinate with the appropriate agencies for approval to ensure the project site is designed and maintained to protect public health and safety, and the environment.

California Public Park Preservation Act

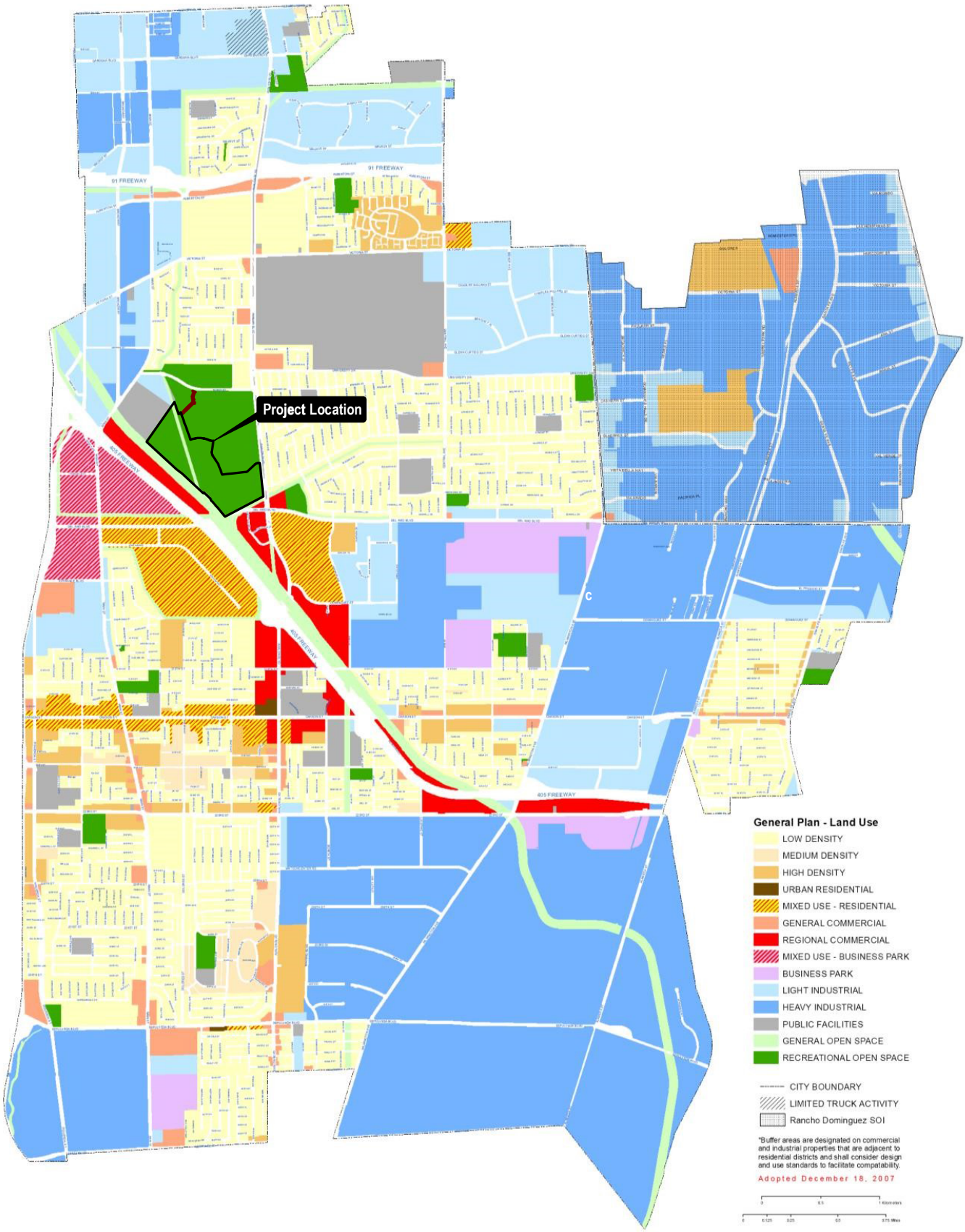
The primary instrument for protecting and preserving parkland is California's Public Park Preservation Act of 1971, California Public Resources Code Sections 5400 through 5409 (the Act). Under the Act, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation, land, or both, are provided to replace the parkland acquired.

The Act only applies when a public agency both acquires real property that is in use as a public park and the public agency uses the property for non-park purposes. In this case, no public agency is acquiring the park. Therefore, the Act does not apply. In addition, the land would continue to be used for park purposes.

Local

Southern California Association of Governments

SCAG is the Metropolitan Planning Organization for six Southern California counties, including Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. As an association of local governments and agencies, SCAG addresses regional issues. SCAG is responsible for researching and creating plans for transportation, growth management, hazardous waste management, and air quality.



SOURCE: City of Carson 2018

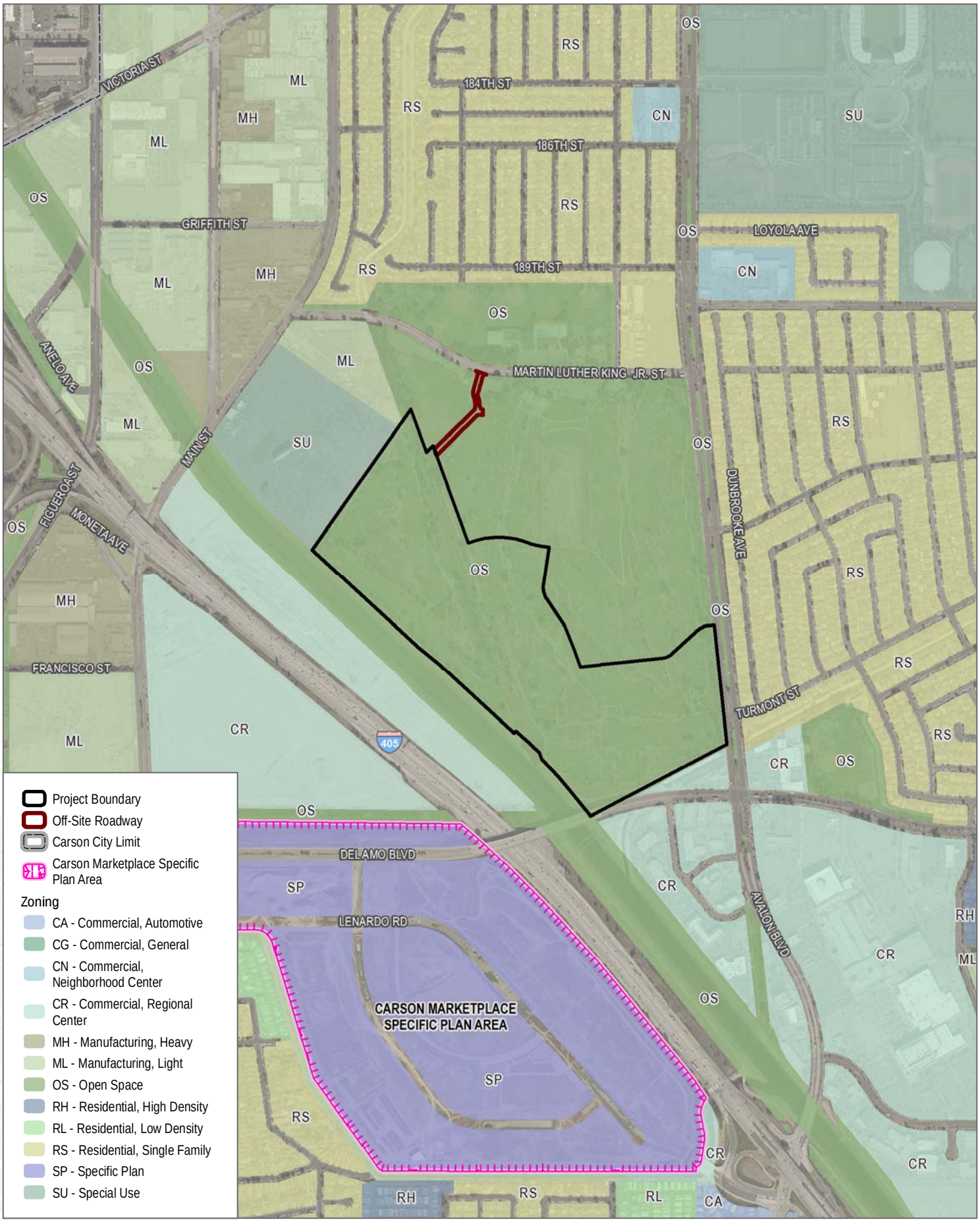
FIGURE 4.9-1

City of Carson General Plan Land Use

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK



SOURCE: City of Carson 2017; Bing Maps 2018

DUDEK

0 500 1,000 Feet

FIGURE 4.9-2

City of Carson Zoning Designations

The Creek at Dominguez Hills Project

INTENTIONALLY LEFT BLANK

SCAG 2016 Regional Transportation Plan/Sustainable Communities Strategy

SCAG develops long-range plans to address regional issues, including the RTP/SCS. The RTP/SCS is a long-range visioning plan that addresses future mobility and housing needs in conjunction with economic, environmental and public health goals. The RTP/SCS represents a collective vision for the future of the region and is developed with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the six member counties.

The RTP/SCS establishes goals for the region and identifies transportation investments that address the region's growing population, as well as strategies to reduce traffic congestion and GHG emissions. In addition, the RTP/SCS is supported by a combination of transportation and land use strategies that help the region achieve state GHG emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support our vital goods movement industry, and utilize resources more efficiently.

The goals of the RTP/SCS are as follows:

- Align plan investments and policies with improving regional economic development and competitiveness.
- Maximize mobility and accessibility for all people and goods in the region.
- Ensure travel safety and reliability for all people and goods in the region.
- Preserve and ensure a sustainable regional transportation system.
- Maximize the productivity of our transportation system.
- Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).
- Actively encourage and create incentives for energy efficiency, where possible.
- Encourage land use and growth patterns that facilitate transit and active transportation.
- Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.

SCAG Regional Comprehensive Plan

SCAG's 2008 Regional Comprehensive Plan addresses regional issues such as housing, traffic/transportation, water, and air quality. It serves as an advisory document to local agencies for preparing local plans and addressing local issues of regional importance.

Los Angeles County General Plan

The *Los Angeles County General Plan* was adopted by the Board of Supervisors on October 6, 2015. The General Plan 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. The following land use goals and policies may be applicable to the proposed project (County of Los Angeles 2015b):

> **Goal LU-4:** Infill development and redevelopment that strengthens and enhances communities.
>
> **Policy LU-4.1:** Encourage infill development in urban and suburban areas on vacant, underutilized, and/or brownfield sites.
>
> **Goal LU-5:** Vibrant, livable and healthy communities with a mix of land uses, services and amenities.
>
> **Policy LU-5.2:** Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs.
>
> **Policy LU-5.3:** Support a mix of land uses that promote bicycling and walking, and reduce VMTs [vehicle miles traveled].
>
> **Policy LU-5.7:** Direct resources to areas that lack amenities, such as transit, clean air, grocery stores, bikeways, parks, and other components of a healthy community.
>
> **Goal LU-7:** Compatible land uses that complement neighborhood character and the natural environment.
>
> **Goal LU-9:** Land use patterns and community infrastructure that promote health and wellness.
>
> **Policy LU-9.1:** Promote community health for all neighborhoods.
>
> **Policy LU-9.2:** Encourage patterns of development that promote physical activity.
>
> **Goal LU-10:** Well-designed and healthy places that support a diversity of built environments.
>
> **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-10.4: Promote environmentally-sensitive and sustainable design.

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.

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.

Policy LU-10.9: Encourage land uses and design that stimulate positive and productive human relations and foster the achievement of community goals.

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 utilize sustainable design techniques.

Policy LU-11.1: Encourage new development to employ sustainable energy practices, such as utilizing passive solar techniques and/or active solar technologies.

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.

Policy LU-11.3: Encourage development to optimize the solar orientation of buildings to maximize passive and active solar design techniques.

City of Carson General Plan and Zoning Code

As discussed above, the County is responsible for all of the proprietary decisions regarding any proposed development of the project site, and will act as the permitting authority for any such development pursuant to its sovereign immunity from local zoning and permitting. The following section is provided for information only.

City of Carson General Plan

The City's General Plan, updated in 2004, provides a framework for all zoning and land use decisions within the City. The City has begun a General Plan update that is expected to be adopted in late 2019. The General Plan, Land Use Element, guides the ultimate pattern of development within the City. However, because the project is located on County-owned land, the

County is responsible for all of the proprietary decisions regarding any proposed development of the project site, and the proposed project would not be subject to land use-related regulations of the City's General Plan. Any off-site improvements would require approval by the City. The following goals and policies from the City General Plan Land Use Element are included for information only. Goals and policies from the Open Space and Conservation Element, Transportation and Infrastructure Element, Parks, Recreation and Human Services Element, and the City's Bikeways Master Plan have also been included in the consistency analysis in Table 4.9-1, Proposed Project's Consistency with Applicable Land Use Plans.

Goal LU-1: Productive reuse of "brownfield" sites.

Policy LU-5.1: Coordinate Redevelopment and Planning activities and resources to maximize commercial opportunities.

Policy LU-5.2: Implement and expand strategies to market, attract, and/or retain retail commercial areas and encourage businesses to participate.

Policy LU-5.3: Identify unique economic opportunities, such as niche markets, that will allow the City to capitalize on its location, its cultural diversity, and the tourism industry in the region.

Goal LU-6: A sustainable balance of residential and non-residential development and a balance of traffic circulation throughout the City.

Policy LU-6.1: Monitor development trends in Carson to ensure that future development/redevelopment provides for the needs of the community.

Policy LU-6.4: Coordinate redevelopment and planning activities and resources to balance land uses, amenities, and civic facilities.

Policy LU-9.7: Maintain and upgrade the City's parks, eliminating evidence of vandalism, wear and deterioration.

Goal LU-11: Development of one or more "Signature Project" to create a focal point or points for the City.

Policy LU-11.1: Target potential sites or areas for the development of signature projects.

Policy LU-11.2: Encourage development of desired uses such as quality retail, restaurant uses, and entertainment in targeted areas.

Goal LU-12: Create a visually attractive appearance throughout Carson.

Policy LU-12.3: Review landscape plans for new development to ensure that landscaping relates well to the proposed land use, the scale of structures, and the surrounding area.

Policy LU-12.5: Improve City appearance by requiring landscaping to screen, buffer and unify new and existing development. Mandate continued upkeep of landscaped areas.

Policy LU-15.1: Encourage the location of housing, jobs, shopping, services and other activities within easy walking distance of each other.

Policy LU-15.4: Develop a center focus within the community that combines commercial, civic, cultural and recreational uses.

Policy LU-15.5: Ensure that the design of public spaces encourages the attention and presence of people at all hours of the day and night.

Policy LU-15.7: Provide for the efficient use of water through the use of natural drainage, drought tolerant landscaping, and use of reclaimed water, efficient appliances and water conserving plumbing fixtures (City of Carson 2004).

City of Carson Municipal Code

The City Municipal Code contains the Zoning Code within Chapter 1 of Article IX. Part 5 of the Zoning Code regulates Open Space (OS) zone and special uses. The topics covered in the Zoning Code that relate to land use are summarized as follows. As discussed above, the County will act as the permitting authority for any such development pursuant to its sovereign immunity from local zoning and permitting, and the following municipal code sections are included for information only.

9151.1 Uses Permitted

This section discusses the uses permitted in the open space zone, as well as uses that require special approval or consideration. Recreational uses are generally either automatically permitted, permitted upon approval of a conditional use permit, or eligible for consideration as special use to be permitted under additional regulations adopted pursuant to CMC 9151.6.

9151.2 Uses Permitted on Organic Refuse Landfill (ORL) Sites

This section discusses the uses permitted on Organic Refuse Landfill (ORL) sites without the approval of a conditional use permit. Outdoor recreational facilities that do not involve buildings or structures are one of the uses exempt from the provisions of this section. However, conditional use permits may be granted and shall be subject to specific conditions as outlined in subsection C of this section. The Commission or the Council may impose additional conditions.

9153 Conditional Use Criteria

This section indicates that the use shall not detract from the intended open space character of the area.

9156 Site Development Standards

This section describes the standards for buildings and structures in the OS Zone. Additionally, other site development standards regarding signs, utilities and site planning and design are also discussed in this section.

4.9.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to land use and planning are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to land use and planning would occur if the project would:

1. Physically divide an established community.
2. 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.
3. Conflict with any applicable habitat conservation plan or natural community conservation plan.

As discussed in the Initial Study prepared for the proposed project (Appendix A, Initial Study and Notice of Preparation), the project would not physically divide an established community. Additionally, the project would have no impact on any applicable habitat conservation plan or natural community conservation plan. As such, this section of the draft EIR only evaluates the following threshold related to land use:

LU-1 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?

4.9.4 Impacts Analysis

LU-1 Would the project 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?

As the project would occur on land owned by the County, all land use decisions pertaining to the proposed project fall under the jurisdiction of the County. However, due to the proposed project's location within the City of Carson, both the County and the City land use plans have

been analyzed for consistency purposes. Additionally, off-site improvements required to implement the project would be subject to City regulations.

The analysis of land use consistency considers whether the proposed project would cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulations that are applicable to the proposed project. The following land use consistency analysis focuses on goals and policies from SCAG's RTP/SCS, the County General Plan, the City General Plan and Bikeway Master Plan.

The RTP/SCS goals for the region aim to address the region's growing population, as well as reduce traffic congestion and GHG emissions. The project would ensure consistency with these goals by implementing off-site circulation improvements, providing multi-modal access to the site, encouraging active transportation, and providing landscaped open space within an urban setting.

The County designates the project site's use type as Recreational (County of Los Angeles 2009). The proposed project would modify an existing golf course and re-purpose the site with golf amenities such as an enhanced driving range experience and may also include additional amenities such as pitch and putt areas and other golf practice facilities; additional recreational uses would include a zipline and ropes course, active and passive open space areas, a jogging/walking path, and sports and wellness facilities. Ancillary commercial uses would be available as amenities to recreational users of the project. The proposed project would continue the recreational use of the project site. As such, the project is consistent with the County land use designation.

The County General Plan further designates the site as a special use facility. Special use facilities are a category of recreational use within the County's regional park system. Additional information regarding recreational and park uses within the County are included in Section 4.13, Recreation. To address compatibility with adjacent uses, special use facilities require adequate public access and sufficient buffers from adjacent residential, commercial and industrial land. Special use facilities can meet passive (e.g., historic and cultural facilities, natural areas, habitat preservation areas, arboreta and botanical gardens, and nature centers) and active (e.g., golf courses and driving ranges, equestrian centers, off-highway vehicle parks, water parks) recreational uses. The General Plan does not specify size criteria or service radius areas associated with special use facilities (County of Los Angeles 2015a).

The proposed project aligns with the special use facilities designation. The proposed project would incorporate natural areas, jogging/walking path, golf features, multi-use indoor sports complex, youth learning experience facility, and indoor skydiving facility. Ancillary commercial uses would be complimentary to the recreational use and provide services like restaurants for the

users of the recreational features. These recreational uses are generally consistent with the uses allowed by the special use facility designation, such as golf courses and water parks.

Table 4.9-1 contains a consistency analysis discussion for applicable County General Plan goals and policies from SCAG's RTP/SCS and the County General Plan.

The project would not be subject to City regulations. As stated in Government Code Sections 53090 and 53091, the County and the proposed project would not be subject to local regulations, including building and zoning regulations. Nonetheless, the City's land use and zoning designations for the site have been taken into consideration in order to analyze the project's compatibility with the surrounding communities. In addition, any off-site improvements would be subject to approval by the City. The City designates the land use on the project site as Recreational Open Space, and it is zoned as Open Space–Organic Refuse Landfill (OS–ORL), as shown on Figure 4.9-1 and Figure 4.9-2, respectively (City of Carson 2004; City of Carson 2018). Although the project would not comply with the existing City zoning and land use designation for the site, the project would largely maintain the recreational and open space character of the site.

The City has begun a General Plan update, however, any potential changes to the City General Plan as a result of the project would not be considered a significant impact, and the project would not be contingent upon these changes. Nonetheless, Table 4.9-2 contains a consistency analysis discussion for applicable City General Plan goals and policies as well as the City Bikeway Master Plan.

Table 4.9-1
Proposed Project's Consistency with Applicable Land Use Plans

Policy/Goal	Discussion	Consistency
SCAG RTP/SCS		
Align plan investments and policies with improving regional economic development and competitiveness.	The existing golf course has not turned an economic profit in many years. The project would re-establish the project site as an active element within regional economic development. The wider variety of recreational and ancillary opportunities offered by the project would increase economic competitiveness of the project site. The project would provide new economic opportunities and create a unique destination that would attract a variety of visitors from throughout the region.	Consistent
Maximize mobility and accessibility for all people and goods in the region.	The proposed project would provide a recreational facility in an area that is lacking park facilities. The proposed project would maximize mobility and accessibility for residents in the project vicinity by providing multimodal access to the project site, including bike lanes, sidewalks and a jogging/walking path. Pedestrian and bicycle facilities within the project vicinity that would increase site accessibility include sidewalks on Avalon Boulevard and Main Street and bike lanes on Avalon Boulevard, Figueroa Street, and Del Amo Boulevard. The project would also be regionally accessible via nearby freeways	Consistent

Table 4.9-1
Proposed Project's Consistency with Applicable Land Use Plans

Policy/Goal	Discussion	Consistency
	(I-405, I-110, and SR-91) and nearby public transit systems. The project area is served by multiple bus transit providers including Long Beach Transit, Torrance Transit, and Los Angeles Metro, as well as the Carson Circuit local bus system. Within the immediate area of the project site, bus stops are currently located at Avalon Boulevard/Elsmere Drive and Avalon Boulevard/Del Amo Boulevard. See Section 4.14, Transportation, for further details.	
Ensure travel safety and reliability for all people and goods in the region.	Access to the project site and parking lots would be provided via two east–west roadways extending westerly from Avalon Boulevard into the project site and one north–south roadway extending southwesterly from Martin Luther King Jr. Street into the project site. The proposed project would include a jogging/walking path and bicycle facilities that would improve the safety of pedestrians, bicyclists, and motorists within the project vicinity. Off-site improvements to circulation would also improve travel safety and reliability. Dual left-turn pocket lanes would be added on Avalon Boulevard at the project access roads. The northernmost access driveway along Avalon Boulevard would include a signalized intersection, allowing ingress and egress to and from the project site from both northbound and southbound traffic on Avalon Boulevard. The access road extending from Martin Luther King Jr. Street would be located opposite Victoria Park. A new traffic signal would be installed at this intersection to allow ingress and egress to and from the project from both eastbound and westbound traffic on Martin Luther King Jr. Street. See Section 4.14, Transportation, for further discussion of proposed improvements.	Consistent
Preserve and ensure a sustainable regional transportation system.	The proposed project is not directly related to ensuring a sustainable regional transportation system. As such, this policy is not applicable.	Not applicable
Maximize the productivity of our transportation system.	The project is not directly related to maximizing the productivity of the transportation system. As such, this policy is not applicable.	Not applicable
Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).	The project would protect the environment and health of residents by encouraging active transportation. As previously discussed, the project would include a jogging/walking path and bicycle facilities that would promote active transportation within the project vicinity. Pedestrian and bicycle facilities within the project vicinity include sidewalks on Avalon Boulevard and Main Street and bike lanes on Avalon Boulevard, Figueroa Street, and Del Amo Boulevard. See Section 4.14, Transportation, for further details. Additionally, through enhanced landscaping, the project site would be maintained as an area of open space and green space, which is beneficial to local air quality.	Consistent
Actively encourage and create incentives for energy efficiency, where possible.	The project would pursue a sustainability strategy that would incorporate LEED certification for select buildings.[2] Opportunities for Net Zero Energy targets are currently being explored for the	Consistent

Table 4.9-1
Proposed Project's Consistency with Applicable Land Use Plans

Policy/Goal	Discussion	Consistency
	sports facilities. The proposed buildings would have flat roofs without shading from trees, making them optimal candidates for Net Zero Energy targets.	
Encourage land use and growth patterns that facilitate transit and non-motorized transportation	Those in the immediate project vicinity would be able to utilize non-motorized transportation to access the site via bike lanes, sidewalks, and a 2-mile-long internal jogging/walking path. Pedestrian and bicycle facilities within the project vicinity include sidewalks on Avalon Boulevard and Main Street and bike lanes on Avalon Boulevard, Figueroa Street, and Del Amo Boulevard. The project site would have bicycle facilities available, such as multiple locations with safe and convenient bicycle parking, wide paths that allow biking, and bike routes on internal roads. There would be a 1-mile bicycle loop within the project site, with 0.5 miles on the non-vehicular Creek Promenade and 0.5 miles on the shared vehicular road through the western portion of the park. The project would also be regionally accessible via public transit systems. The project area is served by multiple bus transit providers including Long Beach Transit, Torrance Transit, and Los Angeles Metro, as well as the Carson Circuit local bus system. Within the immediate area of the project site, bus stops are currently located at Avalon Boulevard/Elsmere Drive and Avalon Boulevard/Del Amo Boulevard. See Section 4.14, Transportation, for further details.	Consistent
Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	The project is not directly related to the security of the regional transportation system. As such, this policy is not applicable.	Not applicable
County of Los Angeles General Plan		
Land Use Goals/Policies		
LU 4: Infill development and redevelopment that strengthens and enhances communities.	The project proposes to redevelop an existing golf course into a recreation destination with a variety of amenities. Redevelopment of the site would strengthen and enhance the community by providing new opportunities for recreation and community engagement.	Consistent
LU-4.1: Encourage infill development in urban and suburban areas on vacant, underutilized, and/or brownfield sites.	Prior to its current use as a golf course, the project site previously operated as a Class II landfill from 1948 to 1959. As a former dump, the California Department of Toxic Substances Control is overseeing the remediation of the site due to the presence of methane, perchlorate, volatile organic compounds, and other contaminants of concern. The brownfield site became a golf course in 1966. As it currently exists, the golf course is underutilized and has not turned an economic profit in many years.[1] Redevelopment of the site into a sports, recreation, fitness, and wellness destination would revitalize the site and bring economic and commercial opportunities to the area.	Consistent

Table 4.9-1
Proposed Project's Consistency with Applicable Land Use Plans

Policy/Goal	Discussion	Consistency
LU 5: Vibrant, livable, and healthy communities with a mix of land uses, services, and amenities.	The proposed project would bring a variety of recreational opportunities, services, and amenities to the surrounding community. The proposed project would feature recreational and fitness opportunities along with ancillary uses that are open to the public. The proposed recreational and open space land use would complement and enhance the surrounding urban landscape, contributing to a vibrant, livable and healthy community.	Consistent
Policy LU 5.2: Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs.	The proposed project would include public facilities at various scales and would include a variety of commercial and retail services that would serve the recreation facilities. Such services would include restaurants and food services, recreational opportunities such as indoor skydiving, a youth learning center, a driving range, fitness studios (such as yoga, Pilates, and spinning), and a clubhouse. The variety of opportunities offered would contribute to the County's goal of meeting regional and local needs for parks and recreation facilities.	Consistent
LU 5.3: Support a mix of land uses that promote bicycling and walking, and reduce VMTs [vehicle miles traveled].	The proposed project is located in close proximity to residential and commercial land uses, as well as a university. As a recreational facility, the project would promote bicycling and walking. The project would serve as a recreation destination in close proximity to many potential patrons. Additionally, the project includes a jogging/walking path that would extend from the entrance of the project site near Avalon Boulevard and Turmont Street, which is immediately adjacent to residential neighborhoods and close to commercial land uses. The project site would have bicycle facilities available, such as multiple locations with safe and convenient bicycle parking, wide paths that allow biking, and bike routes on internal roads. There would be a 1-mile bicycle loop within the project site, with 0.5 miles on the non-vehicular Creek Promenade and 0.5 miles on the shared vehicular road through the west portion of the park. The project would also be regionally accessible via public transit systems.	Consistent
LU 5.7: Direct resources to areas that lack amenities such as transit, clean air, grocery stores, bikeways, parks, and other components of a healthy community.	Los Angeles County is a highly urbanized area with a lack of greenspace and recreational opportunities. The City of Carson has 1.53 park acres per 1,000 residents, which is below the County average of 3.3 acres per 1,000 residents (LADPR 2018). The proposed project would create recreational opportunities that are available to a wider variety of residents than its current use as a golf course. By including a jogging/walking path, bicycle facilities and other components that encourage a healthy lifestyle, as well as ancillary uses such as food services, the proposed project would serve as an amenity to the surrounding communities and the region.	Consistent
LU 7: Compatible land uses that complement neighborhood character and the natural environment.	The proposed project would be located adjacent to a residential neighborhood and commercial land uses. The project would provide recreation opportunities for the surrounding communities and the region. The project would complement the	Consistent

Table 4.9-1
Proposed Project's Consistency with Applicable Land Use Plans

Policy/Goal	Discussion	Consistency
	neighborhood character and the natural environment through well-planned landscaping that would create a park-like environment across from the single-family homes on Avalon Boulevard. Streets within the project site would be tree-lined, and landscaped medians would provide additional character to the project site. The project would preserve and enhance the Dominguez Branch Channel that passes through the project site, as well as the associated riparian habitat. Additional measures to beautify the area around the Dominguez Branch Channel would be implemented, such as enhancing the riparian habitat and creating a woodland play area and walkways. Throughout the project site, landscaping and at least 35 acres of publically accessible open space would emphasize a park-like character and would feature recreation and fitness opportunities that are open to the public.	
LU 9: Land use patterns and community infrastructure that promote health and wellness.	The proposed project would provide a new recreation destination that would promote health and wellness in the surrounding communities and the region.	Consistent
LU 9.1: Promote community health for all neighborhoods.	The proposed project would promote community health for all surrounding neighborhoods and the region by providing recreational opportunities within a park-like environment. As a unique recreation destination, the project would serve the surrounding area and the entire region.	Consistent
LU 9.2: Encourage patterns of development that promote physical activity.	The proposed project would promote physical activity by being located in close proximity to residential and commercial land uses. The primary purpose of the project would be recreation, which in itself promotes physical activity. Specifically, the proposed project would provide recreational opportunities, including outdoor park space, a multi-use indoor sports complex, skydiving, golf, and ziplining activities, and a 2-mile-long jogging/walking path. Additionally, the project would include safe and convenient bicycle parking at multiple locations, wide paths that allow cycling, and bike routes on internal roads.	Consistent
LU 10: Well-designed and healthy places that support a diversity of built environments.	The project would add diversity to the built environment by providing a well-designed recreation destination that promotes health and wellness. In addition to the recreational activities previously described, the proposed project would also provide a sports wellness center.	Consistent
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.	The proposed project would consider the built environment of the surrounding area in the design, scale, and architectural style of the buildings associated with the project. Buildings would reflect the appropriate features of the surrounding area such as massing, materials, color, detailing, and ornament.	Consistent

Table 4.9-1
Proposed Project's Consistency with Applicable Land Use Plans

Policy/Goal	Discussion	Consistency
LU 10.4: Promote environmentally sensitive and sustainable design.	A Low Impact Development (LID) Plan that aims to minimize land disturbance, minimize impervious areas, and protect and restore natural areas has been developed for the project.[3] Further, the project would pursue a sustainability strategy that would incorporate LEED certification for select buildings.[2] The project would aim to achieve LEED Gold for Buildings 1 and 7, and LEED Silver for the remainder of the buildings (Plenitude 2018). The LEED framework would ensure water conservation, the use of sustainable materials, construction best practices and promote health and well-being. Additionally, the use of recycled water would be integral to the project's operational sustainability measures. The protection of the Dominguez Branch Channel and Dominguez Channel would also be prioritized through prevention of runoff or sedimentation, management of invasive plants and preserving the surrounding vegetation and established trees where feasible. This strategy would promote environmentally sensitive and sustainable design, align the project with the County's sustainability goals, and ensure efficient energy and water use while promoting community health.	Consistent
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 interaction.	The project would include well-planned landscaping, signage, and other features to define the unique character of the project and complement the character of the surrounding community. Landscaped areas would adjoin the buildings, including outdoor furniture and gathering spaces where visitors would be able to eat and gather in a relaxed outdoor environment. A master sign program will be submitted to the County for approval that would include on-site outdoor media to create a sense of place and enhance the experience.	Consistent
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.	Proposed elements within the project site would serve as public spaces that would enhance the pedestrian environment within the site. There would be a number of outdoor plazas and gathering areas. Outdoor community-based events in the community park, outdoor eating areas, and a jogging/walking path would enhance the pedestrian environment and encourage active transportation to, from, and within the project site. The proposed project would include safe and convenient bicycle parking at multiple locations, wide paths that allow cycling, and bike routes on internal roads.	Consistent
LU 10.9: Encourage land uses and design that stimulate positive and productive human relations and foster the achievement of community goals.	The proposed project would stimulate positive and productive human relations by offering a unique sports and recreation destination for the surrounding community and region. Recreation and sports stimulate positive and productive human interactions by nature. By creating a destination for these activities, the project would promote health and enhance the sense of community. The Carson Vision Plan, adopted by the City of Carson in 2016, identifies an opportunity to reposition the property as an amenity for both City of Carson residents and the South Bay community, allowing the project to foster the	Consistent

Table 4.9-1
Proposed Project's Consistency with Applicable Land Use Plans

Policy/Goal	Discussion	Consistency
	achievement of community goals.	
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.	The buildings associated with the project would be architecturally distinctive. The schematic design proposes using dynamic colors and modern architectural concepts to create distinct buildings and focal points within the project site.	Consistent
LU 11: Development that utilize sustainable design techniques	A LID Plan that aims to minimize land disturbance, minimize impervious areas, and protect and restore natural areas has been developed for the project.[3] Further, the project would pursue a sustainability strategy that would incorporate LEED certification for select buildings.[2] The project would aim to achieve LEED Gold for Buildings 1 and 7, and LEED Silver for the remainder of the buildings (Plenitude 2018). The LEED framework would ensure water conservation, the use of sustainable materials, construction best practices, and promote health and well-being. Additionally, the use of recycled water would be integral to the project's operational sustainability measures. The protection of the Dominguez Branch Channel and Dominguez Channel would also be prioritized through prevention of runoff or sedimentation, management of invasive plants, and preserving the surrounding vegetation and established trees where feasible. This strategy would promote environmentally sensitive and sustainable design, align the project with the County's sustainability goals, and ensure efficient energy and water use while promoting community health.	Consistent
LU 11.1: Encourage new development to employ sustainable energy practices such as utilizing passive solar techniques and/or active solar technologies.	See response to LU-11.	Consistent
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.	The project would aid in reducing the urban heat island effect by including substantial tree canopy cover and green open space and utilizing a variety of light-colored paving materials, including natural gray concrete, colored aggregate concrete, colored rubber, and gray unit pavers.	Consistent
LU 11.3: Encourage development to optimize the solar orientation of buildings to maximize passive and active solar design techniques.	The project would optimize the solar orientation of buildings to the greatest extent possible to maximize passive and active solar design techniques. Opportunities for Net Zero Energy targets are currently being explored for the sports facilities. The proposed buildings would have flat roofs without shading from trees, making them optimal candidates for Net Zero Energy targets.	Consistent

Notes: I- = Interstate; LEED = Leadership in Energy and Environmental Design.

1 In recent years, Victoria Golf Course has decreased rounds of play to 47,349, while the average rounds of play at the County's high-performing courses is 92,400. In addition, Victoria Golf Course generated $19,407 for County Department of Parks and Recreation's operating budget in Fiscal Year 2016/2017 compared with an average of $1,387,930 revenue generated by the County's high performing courses

2 100% Schematic Design Sustainability Narrative prepared by Integral Group Inc.

3 Low Impact Development Plan prepared by Tait and Associates Inc.

Table 4.9-2
Proposed Project's Consistency with Applicable City of Carson General Plan Policies

City of Carson General Plan (Included for informational purposes only)		
Land Use Element Goals/Policies		
LU-1: Productive reuse of "brownfield" sites.	Currently, the project site is used as a County golf course; however, it has been underperforming for many years and rounds of golf play have been decreasing.[1] Redeveloping the site into a recreation destination would ensure a more productive use of the property and create new opportunities for a wider segment of the community compared to the current golf use.	Consistent
LU-5.1 Coordinate redevelopment and planning activities and resources to maximize commercial opportunities.	The proposed project would maximize the commercial opportunities on site by providing unique recreational opportunities that would be available to the public.	Consistent
LU-5.2 Implement and expand strategies to market, attract, and/or retain retail commercial areas and encourage businesses to participate.	The proposed project would provide unique retail commercial opportunities through the proposed marketplace portion of the project, which would offer multi-tenant usage for a variety of fitness and recreational related uses, such as yoga, Pilates, and spinning. In addition, the marketplace would include numerous food and beverage options showcasing a variety of cuisines and prepared foods, meats and seafood, produce, and baked goods.	Consistent
LU-5.3 Identify unique economic opportunities, such as niche markets, that will allow the City to capitalize on its location, its cultural diversity, and the tourism industry in the region.	The proposed project would be a unique economic opportunity, as the closest recreation centers are located outside of the City and none are of the same magnitude as the proposed project. The project would allow the City to capitalize on its location, cultural diversity, and the tourism industry by offering a unique amenity that is not otherwise found in the area.	Consistent
LU-6: A sustainable balance of residential and non-residential development and a balance of traffic circulation throughout the City.	The project site would serve as a buffer between the residential area to the east and the nearby commercial and industrial land uses. The project would help to provide a sustainable balance of residential and non-residential development. The proposed project would also contribute to maintaining a balance of traffic circulation throughout the City by utilizing existing public roadways as well as implementing internal roadways. Off-site improvements to circulation would also ensure a balance of traffic circulation. Dual left-turn pocket lanes would be added on Avalon Boulevard at the project access roads. The northernmost access driveway along Avalon Boulevard would include a signalized intersection, allowing ingress and egress to and from the project site from both northbound and southbound traffic on Avalon Boulevard. The access road extending from Martin Luther King Jr. Street would be located opposite Victoria Park. A new traffic signal would be installed at this intersection to allow ingress and egress to and from the project from both eastbound and westbound traffic on Martin Luther King Jr. Street. See Section 4.14, Transportation, for further discussion of proposed improvements.	Consistent
LU-6.1 Monitor development trends in the City of Carson to ensure that future development/redevelopment provides	Redevelopment of the project site would provide for the needs of the community by providing much needed public park and recreation space that is available to a wider segment of the	Consistent

Table 4.9-2
Proposed Project's Consistency with Applicable City of Carson General Plan Policies

City of Carson General Plan (Included for informational purposes only)		
for the needs of the community.	community compared to the current golf use.	
LU-6.4 Coordinate redevelopment and planning activities and resources to balance land uses, amenities, and civic facilities.	The proposed project would contribute to balancing land uses, amenities and civic facilities in the City by maintaining a recreational open space land use designation and providing unique recreational facilities and amenities. Additionally, the proposed community center would be suitable for community-serving uses, meetings, and forums such as mommy and me and CPR certification classes, book clubs and other social gatherings, health fairs, etc. The community center would also be available for County-sponsored meetings, County department conferences, and public forums. In addition, the community center and community park could hold special events.	Consistent
LU-9.7 Maintain and upgrade the City's parks, eliminating evidence of vandalism, wear and deterioration.	Maintenance of the project site would be the responsibility of a third party contractor hired by the project applicant. The contractor would be responsible for providing necessary upgrades, and preventing or eliminating evidence of vandalism, wear, and deterioration.	Consistent
LU-11: Develop one or more "Signature Project" to create a focal point or points for the City.	The proposed project could serve as a Signature Project to serve as a focal point in the City by providing unique recreational, sports, and open space opportunities.	Consistent
LU-11.1 Target potential sites or areas for the development of signature projects.	The City of Carson has recognized the opportunity to reposition the project site as an amenity for both City of Carson residents and the South Bay community. The project could be a Signature Project, providing a unique recreation destination.	Consistent
LU-11.2 Encourage development of desired uses such as quality retail, restaurant uses, and entertainment in targeted areas.	The proposed project would include a variety of opportunities, including recreation, retail, restaurants, and food vendors. As previously discussed, the City of Carson has recognized the opportunity to reposition the project site as an amenity for both City of Carson residents and the South Bay community.	Consistent
LU-12: Create a visually attractive appearance throughout the City of Carson.	The proposed project would aid in creating a visually attractive appearance in the City by including well-planned landscaping and aesthetically pleasing buildings and facilities.	Consistent
LU-12.3 Review landscape plans for new development to ensure that landscaping relates well to the proposed land use, the scale of structures, and the surrounding area.	The proposed project would provide landscape plans for review. The landscape plans would ensure landscaping relates well to the proposed land use, the scale of structures, and the surrounding area by utilizing landscaping that thrives in California's climate, complements the surrounding land uses, and creates a park-like setting within the project site.	Consistent
LU-12.5 Improve City appearance by requiring landscaping to screen, buffer, and unify new and existing development. Mandate continued upkeep of landscaped areas.	The proposed project would improve City appearance by including well-planned landscaping. Beginning at the Turmont Street entrance, a wide landscaped buffer would front Avalon Boulevard and create a park-like environment across from the single-family homes on the east side of Avalon Boulevard. Moving into the project site, tree-lined streets would greet visitors. At entry points, landscape medians would provide an additional depth to the landscape. Throughout the project site, areas would have	Consistent

Table 4.9-2
Proposed Project's Consistency with Applicable City of Carson General Plan Policies

City of Carson General Plan (Included for informational purposes only)		
	a park-like character with trees that provide shade and with plantings that thrive in the Southern California climate. Much of the perimeter of the project site would be tree-lined, providing an appropriate amount of screening and buffering between land uses. Maintenance of the project site would be the responsibility of a third party contractor hired by the project applicant.	
LU-15.1 Encourage the location of housing, jobs, shopping, services, and other activities within easy walking distance of each other.	The project site is located in walking distance from surrounding residential and commercial land uses. The project site would be accessible to pedestrians via sidewalks. Internal circulation would include a 2-mile-long internal jogging/walking path. The project site would have wide paths for walking and biking, as well as plazas and gathering spaces that would enhance the pedestrian environment.	Consistent
LU-15.4 Develop a center focus within the community that combines commercial, civic, cultural, and recreational uses.	The proposed project would aid in developing a center focus within the community by combining commercial, civic, cultural, and recreational uses.	Consistent
LU-15.5 Ensure that the design of public spaces encourages the attention and presence of people at all hours of the day and night.	The proposed project would operate during daytime and nighttime hours. The project would have on-site lighting to promote safety and allow use of the facilities in the evenings, encouraging the attention and presence of people at all hours of the day and night.	Consistent
LU-15.7 Provide for the efficient use of water through the use of natural drainage, drought tolerant landscaping, and use of reclaimed water, efficient appliances, and water conserving plumbing fixtures.	The proposed project would ensure the efficient use of water through the use of natural drainage and drought tolerant landscaping. Throughout the project site, areas would have a park-like character with trees that provide shade and with plantings that thrive in the Southern California climate. A LID Plan that aims to minimize land disturbance, minimize impervious areas, and protect and restore natural areas has been developed for the project.[3] Further, the project would pursue a sustainability strategy that would incorporate LEED certification for select buildings.[2] The project would aim to achieve LEED Gold for Buildings 1 and 7, and LEED Silver for the remainder of the buildings (Plenitude 2018). The LEED framework would ensure water conservation, the use of sustainable materials, construction best practices, and promote health and well-being. Additionally, the use of recycled water would be integral to the project's operational sustainability measures. The protection of the Dominguez Branch Channel and Dominguez Channel would also be prioritized through prevention of runoff or sedimentation, management of invasive plants, and preserving the surrounding vegetation and established trees where feasible. This strategy would promote environmentally sensitive and sustainable design, align the project with the County's sustainability goals, and ensure efficient energy and water use while promoting community health.	Consistent

Table 4.9-2
Proposed Project's Consistency with Applicable City of Carson General Plan Policies

City of Carson General Plan (Included for informational purposes only)		
Open Space Element Goals/Policies		
OSC-1.1 Preserve and enhance the existing open space resources in Carson.	The project would incorporate at least 35 acres of publically accessible open space, 2 miles of jogging/walking paths within the project site. Additionally, the project would preserve and enhance the existing Dominguez Channel and Dominguez Branch Channel with enhanced landscaping and rehabilitated riparian habitat. The area around the Dominguez Branch Channel would be enhanced with outdoor woodland play areas and jogging/walking paths.	Consistent
OSC-1.2 Maintain existing landscaping along the City's major streets and expand the landscaping program along other arterial streets throughout the community.	The project would provide enhanced landscaping throughout the project site, including along City streets. The majority of the periphery of the project site will be tree lined. The eastern project boundary that abuts South Avalon Boulevard would consist of a wide landscaped buffer, creating a park-like setting across from the residential area to the east.	Consistent
OSC-1.4 Require access between open space and recreation areas and adjacent developments, where appropriate.	The project would include two access points along South Avalon Boulevard which would be designed to provide multi-modal access to the project site.	Consistent
OSC-3.1 Promote incentives for the use of site planning techniques, building orientation, building materials, and other measures which reduce energy consumption.	A LID Plan that aims to minimize land disturbance, minimize impervious areas, and protect and restore natural areas has been developed for the project.[3] Further, the project would pursue a sustainability strategy that would incorporate LEED certification for select buildings.[2] The project would aim to achieve LEED Gold for Buildings 1 and 7, and LEED Silver for the remainder of the buildings (Plenitude 2018). The LEED framework would ensure water conservation, the use of sustainable materials, construction best practices, and promote health and well-being. Additionally, the use of recycled water would be integral to the project's operational sustainability measures. The protection of the Dominguez Branch Channel and Dominguez Channel would also be prioritized through prevention of runoff or sedimentation, management of invasive plants, and preserving the surrounding vegetation and established trees where feasible. This strategy would promote environmentally sensitive and sustainable design, align the project with the County's sustainability goals, and ensure efficient energy and water use while promoting community health	Consistent
OSC-3.2 Support the development of alternative sources of energy such as roof-mounted solar panels, fuel cells or new technology.	See response to OSC-3.1	Consistent
Parks, Recreation and Human Services Element Goals/Policies		
P-1: Increase of and improvements to park, recreational and cultural facilities to meet the needs of existing and future	Project implementation would create new recreational t opportunities for the City and the region. The Carson Vision Plan, adopted by the City in 2016, identifies an opportunity to reposition the property as an amenity for both Carson	Consistent

Table 4.9-2
Proposed Project's Consistency with Applicable City of Carson General Plan Policies

City of Carson General Plan (Included for informational purposes only)		
residents and workers in the City.	residents and the South Bay community. The project would aid in meeting the park and recreation needs of existing and future residents and workers in the City	
P-1.3 Promote greater cooperation and coordination with other City departments and public agencies, and encourage the construction of new park and human services facilities in developed areas of Carson as infill development occurs.	The project would consist of redeveloping the existing golf course, a former brownfield site, into a recreational destination with ancillary support facilities. Project implementation would require cooperation and coordination between the City and the County.	Consistent
P-1.5 Provide access to existing and future recreational facilities in accordance with the Americans with Disabilities Act.	The project would be designed in accordance with the Americans with Disabilities Act. The variety of both active and passive recreation and park and open space opportunities within the project would be inclusive to all potential users.	Consistent
P-3.1 Continue to work with the Sheriff's Department in designing park improvements which facilitate effective police surveillance and protection. Continue the Park Safety meetings with Park staff, Sheriff Department personnel, and City Public Safety staff that share park safety issues and solutions.	The project would be designed with safety in mind. Safety measures such as lighting and police access to the site would be prioritized. Project features would be in operation during day and evening hours, ensuring that people are present at a variety of hours and reducing safety concerns and risk of illicit behavior on the project site.	Consistent
P-5: Recreational programs affordable to all income segments of the Carson population.	The project would bring a variety of recreational opportunities, services, and amenities to the surrounding community. Throughout the project site, landscaping and at least 35 acres of publically accessible open space would emphasize a park-like character and would feature recreational and fitness opportunities along with ancillary uses that are open to the public.	Consistent
P-7: Promotion of relationships and understanding between all racial, ethnic, social, and other groups within the community.	The project would aid in creating a sense of community between all racial, ethnic, social and other groups within the community by providing a space for recreation and enjoyment. A variety of gathering spaces would also be implemented as part of the project, creating a sense of space.	Consistent
Transportation and Infrastructure Element Goals/Policies		
TI-2.1 Require that new projects not cause the Level of Service for intersections to drop more than one level if it is at Level A, B or C, and not drop at all if it is at D or below, except when necessary to achieve substantial City development goals.	As discussed in Section 4.14, Transportation, the majority of study intersections would continue to operate at a satisfactory LOS with project implementation. Mitigation measures have been proposed where necessary to reduce impacts to below a level of significance. However, off-site improvements are not under the control of the project applicant and are subject to approval by the City or Cal Trans. Therefore, if the City or Cal Trans do not approve the proposed mitigation, the project would result in a significant and unavoidable impact for a number of study intersections. See Section 4.14, Transportation, for further details.	Consistent
TI-2.7 Provide all residential, commercial and industrial areas with efficient and safe access to major regional	The project would also be regionally accessible via nearby freeways (I-405, I-110, and SR-91) and nearby public transit systems. The project area is served by multiple bus transit	Consistent

Table 4.9-2
Proposed Project's Consistency with Applicable City of Carson General Plan Policies

City of Carson General Plan (Included for informational purposes only)		
transportation facilities.	providers including Long Beach Transit, Torrance Transit, and Los Angeles Metro, as well as the Carson Circuit local bus system. Within the immediate area of the project site, bus stops are currently located at Avalon Boulevard/Elsmere Drive and Avalon Boulevard/Del Amo Boulevard. See Section 4.14, Transportation, for further details.	
TI-2.8 Provide traffic calming, landscape and pedestrian improvements in non-truck route streets and other streets as appropriate.	Internal access roads would be tree-lined and landscaping would occur throughout the project site. Project roadways would include bike lanes and sidewalks. The project site would be accessible via bike routes and sidewalks. The project would include an internal 2-mile-long jogging/walking path, sidewalks, and wide paths that allow walking and biking, contributing to a system of safe and reliable pedestrian walkways.	Consistent
TI-4 Increase the use of alternate forms of transportation generated in, and traveling through, the City of Carson.	The project would promote alternative modes of transportation by encouraging active transportation methods such as walking and cycling. The project would incorporate a 2-mile-long jogging/walking path on site, and facilitate the extension of the existing Dominguez Channel bike path from its southerly terminus at Main Street. The project site would be accessible via bike routes and sidewalks. The project would have bicycle facilities available, such as multiple locations with safe and convenient bicycle parking, wide paths that allow biking, and bike routes on internal roads. There would be a 1-mile bicycle loop within the project site, with 0.5 miles on the non-vehicular Creek Promenade and 0.5 miles on the shared vehicular road through the western portion of the park. The project would also be regionally accessible via public transit systems.	Consistent
TI-4.1 Promote the use of public transit.	The project would be regionally accessible via public transit systems. The project area is served by multiple bus transit providers including Long Beach Transit, Torrance Transit, and Los Angeles Metro, as well as the Carson Circuit local bus system. Within the immediate area of the project site, bus stops are currently located at Avalon Boulevard/Elsmere Drive and Avalon Boulevard/Del Amo Boulevard. See Section 4.14, Transportation, for further details.	Consistent
TI-4.2 Provide appropriate pedestrian access throughout the City. Develop a system of pedestrian walkways, alleviating the conflict between pedestrians, automobiles and bicyclists where feasible.	The project site would be accessible via bike routes and sidewalks. The project would include an internal 2-mile-long jogging/walking path, sidewalks, and wide paths that allow walking and biking, contributing to a system of safe and reliable pedestrian walkways.	Consistent
TI-4.3 Provide appropriate bicycle access throughout the City by implementing the Bicycle Plan.	The project site would have bicycle facilities available, such as multiple locations with safe and convenient bicycle parking, wide paths that allow biking, and bike routes on internal roads. There would be a 1-mile bicycle loop within the project site, with 0.5 miles on the non-vehicular Creek Promenade and 0.5 miles on the shared vehicular road through the west portion of the park.	Consistent

Table 4.9-2
Proposed Project's Consistency with Applicable City of Carson General Plan Policies

City of Carson General Plan (Included for informational purposes only)		
TI-6 Cooperate to the fullest extent possible with Federal, State, County and regional planning agencies responsible for maintaining and implementing circulation standards to ensure orderly and consistent development of the entire South Bay region.	As discussed in Section 4.14, Transportation, there are no County congestion management plan (CMP) monitoring intersections within the study area. Further, mitigation has been proposed that would require State, County, and City cooperation in order to ensure orderly and consistent development that would be consistent with circulation standards.	Consistent
TI-7 Provide improved aesthetic enhancements to and maintenance of the City's transportation corridors.	The project would include extensive landscaping along all project roads, as well as South Avalon Boulevard, which is a major highway in the City. Proposed access roads into the project site would have landscaped medians and be lined with trees creating a park-like environment. This entry landscape would provide walkable access for the surrounding neighborhoods through a 5.5 acre community greenway. A wide landscaped buffer would front South Avalon Boulevard, creating a park-like environment across from the single-family homes.	Consistent
TI-7.1 Provide landscaped medians and greenbelts along major arterials, when economically feasible.	See response to TI-7.	Consistent
TI-7.2 Encourage the aesthetic quality and maintenance of facilities within the City, under the jurisdiction of other agencies.	Project maintenance would be responsibility of a contractor to be designated by Plenitude. The project would enhance the aesthetic quality of the site by implementing well-planned landscaping, colorful and dynamic architectural style, open space and natural areas within a park-like setting. Please see Section 4.1, Aesthetics, for more information.	Consistent
TI-8.2 As development intensifies and/or as land redevelopment occurs in the City, ensure that infrastructure systems are adequate to accommodate any intensification of use, as well as existing uses.	Any intensification of use of City infrastructure as a result of the project has been analyzed in Section 4.14, Transportation. Mitigation measures have been proposed where necessary to ensure that infrastructure systems are adequate to accommodate any intensification of use. However, mitigation is subject to approval by the City or Cal Trans. See Section 4.14, Transportation, for further details.	Consistent
Master Plan of Bikeways Goals/Policies		
Policy 1.1: Create a complete, citywide bikeway network in Carson	The project site would be accessible via bike routes, and would include safe and convenient bicycle parking at multiple locations, wide paths that allow cycling, and bike routes on internal roads. There would be a 1-mile bicycle loop within the project site, with 0.5 miles on the non-vehicular Creek Promenade and 0.5 miles on the shared vehicular road through the west portion of the park. The existing Dominguez Channel bike path could be extended from its southerly terminus at Main Street along the project site through project implementation.	Consistent
Policy 1.2: Ensure that all Carson streets accommodate safe bicycling	The project would incorporate bike routes on internal roads and wide paths that allow bikes to accommodate safe bicycling. The project would also be accessible via surrounding bike routes.	Consistent

Table 4.9-2
Proposed Project's Consistency with Applicable City of Carson General Plan Policies

City of Carson General Plan (Included for informational purposes only)		
Policy 1.3: Make bicycle parking available, secure, and convenient throughout Carson	The project site would have multiple locations with safe and convenient bicycle parking, wide paths that allow biking, and bike lanes on internal roads.	Consistent
Policy 2.2: Ensure that new development accommodates and encourages bicycling	As previously discussed, the project would facilitate the extension of the existing Dominguez Channel bike path from its southerly terminus at Main Street. Additionally, the project would accommodate and encourage bicycling by including wide paths that allow cycling, as well as conveniently located bicycle facilities. There would be a 1-mile bicycle loop within the project site, with 0.5 miles on the non-vehicular Creek Promenade and 0.5 miles on the shared vehicular road through the west portion of the park.	Consistent
Policy 4.1: Attract customers by creating inviting public places centered around bicycling and walking	The project would attract customers to the site by creating an inviting public place centered around recreational activities. The wide paths that allow biking would wind through the landscaped project site, with a variety of plazas, open space, park and recreation opportunities available throughout the site. There would also be a 2-mile-long jogging/walking path and other walkways for pedestrians.	Consistent
Policy 4.2: Encourage new businesses to locate in Carson by promoting walkable and bikeable development	The project would promote walkable and bikeable development. The project site would have bicycle facilities available such as multiple locations with safe and convenient bicycle parking, wide paths that allow biking, and bike routes on internal roads. The project would also incorporate a 2-mile-long jogging/walking path on site, and multiple walkways with inviting plazas and gathering spaces near the various facilities, food vendors and recreational opportunities. .	Consistent

Notes: I- = Interstate; LEED = Leadership in Energy and Environmental Design.

1 In recent years, Victoria Golf Course has decreased rounds of play to 47,349, while the average rounds of play at the County's high-performing courses is 92,400. In addition, Victoria Golf Course generated $19,407 for County Department of Parks and Recreation's operating budget in Fiscal Year 2016/2017 compared with an average of $1,387,930 revenue generated by the County's high performing courses

2 100% Schematic Design Sustainability Narrative prepared by Integral Group Inc.

3 Low Impact Development Plan prepared by Tait and Associates Inc.

As shown in Table 4.9-1 and Table 4.9-2, the project would be consistent with applicable regional, County and City goals and policies. Use of the site for continued public recreational purposes, as proposed, would not conflict with the County's General Plan policies or goals specific to preserving and enhancing parkland and recreational opportunities. Further, the project would not conflict with the applicable land use and zoning designations. The project would not cause a significant environmental impact related to land use due to a conflict with a policy, plan or regulation adopted for the purpose of avoiding or mitigating an environmental effect. As such, impacts to land use would be **less than significant**.

4.9.5 Mitigation Measures

Impacts to land use would be less than significant. No mitigation measures are required.

4.9.6 Level of Significance After Mitigation

Impacts from the proposed project would be **less than significant**, and no mitigation is required.

4.9.7 Cumulative Impacts

Cumulative land use impacts would result from projects that contribute to development that is inconsistent with applicable plans or incompatible with existing or planned uses. As discussed throughout this EIR, the project is located on County-owned land, and thus is subject to County land use regulations adopted for the purposes or avoiding or mitigating potential environmental effects only. City of Carson land use and zoning information has been included for informational purposes, as well as to analyze the project's compatibility with the surrounding environment. The project is consistent with applicable County and City General Plan goals and policies, as well as the SCAG RTP/SCS.

The related projects have the potential to alter the existing land use environment due to infill development at increased densities or conversion of land uses. However, related projects would be subject to applicable zoning and land use designations and environmental review. The related projects primarily include retail/commercial, residential, office and recreational uses within areas that are generally already developed with such uses. As such, these related projects would occur as urban infill within the context of existing land use projects would not be expected to substantially alter these patterns. Therefore, the proposed project and related projects would not combine to create cumulatively considerable impacts related to land use plans, policies, or regulations, and impacts would be **less than significant.**

4.9.8 References

City of Carson. 2004. *General Plan, Land Use Element.* Accessed August 14, 2018. http://ci.carson.ca.us/content/files/pdfs/planning/generalplan/Chapter%202_Land%20Use.pdf.

City of Carson. 2018. *Property Information System – Carson GIS.* Accessed July 27, 2018. http://www.carsonproperty.info.

County of Los Angeles. 2009. Planning and Zoning Information. Accessed August 6, 2018. http://rpgis.isd.lacounty.gov/GIS-NET3_Public/Viewer.html.

County of Los Angeles. 2015a. *General Plan, Parks and Recreation Element*. Accessed August 27, 2018. http://planning.lacounty.gov/generalplan/generalplan.

County of Los Angeles. 2015b. *General Plan, Land Use Element*. Accessed August 27, 2018. http://planning.lacounty.gov/generalplan/generalplan.

LADPR (Los Angeles County Department of Parks and Recreation). 2018. *Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment.* Accessed July 20, 2018. http://lacountyparkneeds.org.

Plenitude (Plenitude Holdings LLC). 2018. *The Creek at Dominguez Hills EIR – Sustainability Strategy*. October 12, 2018.

4.10 NOISE

This section describes the existing noise setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of The Creek at Dominguez Hills project (project or proposed project). This analysis is based, in part, on a review of existing conditions; applicable laws, regulations, and guidelines; and the site plan and projects description data. Data for the technical assessment of certain noise effects of the project may be found in the Noise Technical Appendix (Appendix I of this environmental impact report (EIR).

4.10.1 Existing Conditions

Noise Terminology

Sound may be described in terms of level or amplitude (measured in decibels (dB)), frequency or pitch (measured in hertz (Hz) or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement for sound level is the decibel. Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against low and very high frequencies in a manner approximating the sensitivity of the human ear.

Since sound is measured on a logarithmic scale, a doubling of sound energy results in a 3 dBA increase in the noise level (i.e., for traffic noise, doubling the number of vehicles on a roadway segment would increase the noise level by approximately 3 dBA). Changes in a community noise level of less than 3 dBA are not typically noticed by a healthy human ear; changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise; a 5 dBA increase is readily noticeable (Caltrans 2009). The human ear perceives a 10 dBA increase in sound level as a doubling of the sound level (i.e., 65 dBA sounds twice as loud as 55 dBA to a human ear). Table 4.10-1 presents typical noise levels for common outdoor and indoor activities.

Table 4.10-1
Typical Noise Levels Associated with Common Activities

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, 50 miles per hour		Food Blender at 3 feet

Table 4.10-1
Typical Noise Levels Associated with Common Activities

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	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 (in 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 (Healthy)	0	Lowest Threshold of Human Hearing (Healthy)

Source: Caltrans 2009.
Notes: dBA = A-weighted decibel; mph = miles per hour.

Several descriptors of noise (noise metrics) exist to help predict the average reactions of residents and members of the public to the adverse effects of environmental noise, including traffic-generated noise. These descriptors include the equivalent noise level over a given period (L_{eq}), the statistical sound level (L_n), the day–night average noise level (L_{dn}), and the community noise equivalent level (CNEL). Each of these descriptors uses units of dBA.

L_{eq} is a sound energy level averaged over a specified time period (typically no less than 15 minutes for environmental studies). L_{eq} is a single numerical value that represents the amount of variable sound energy received by a receptor during a time interval. For example, a 1-hour L_{eq} measurement would represent the average amount of energy contained in all the noise that occurred in that hour. L_{eq} is an effective noise descriptor because of its ability to assess the total time-varying effects of noise on sensitive receptors. L_{max} is the greatest sound level measured during a designated time interval or event, while L_{min} is the lowest sound level measured.

Unlike the L_{eq} metrics, L_{dn} and CNEL metrics always represent 24-hour periods. L_{dn} and CNEL also differ from L_{eq} because they apply a time-weighted factor designed to emphasize noise events that occur during the evening and nighttime hours (when speech and sleep disturbance is of more concern). "Time weighted" refers to the fact that L_{dn} and CNEL penalize noise that

occurs during certain sensitive periods. In the case of CNEL, noise occurring during the daytime (7:00 a.m.–7:00 p.m.) receives no penalty. Noise during the evening (7:00 p.m.–10:00 p.m.) is penalized by adding 5 dB to the hourly average noise level for each hour, while nighttime (10:00 p.m.–7:00 a.m.) noise is penalized by adding 10 dB to the hourly average noise level for each hour. L_{dn} differs from CNEL in that the daytime period is defined as 7:00 a.m.–10:00 p.m., thus eliminating the evening period. L_{dn} and CNEL are the predominant criteria used to measure roadway noise affecting residential receptors. These two metrics generally differ from one another by no more than 0.5 to 1 dBA.

Exterior Noise Distance Attenuation

Noise sources are classified in two forms: (1) point sources, such as stationary equipment or a group of construction vehicles and equipment working within a spatially limited area at a given time; and (2) line sources, such as a roadway with a large number of pass-by sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6.0 dBA for each doubling of distance from the source to the receptor at acoustically "hard" sites, and at a rate of 7.5 dBA for each doubling of distance from source to receptor at acoustically "soft" sites (Caltrans 2009).[1] Sound generated by a line source (i.e., a roadway) typically attenuates at a rate of 3 dBA and 4.5 dBA per doubling distance, for hard and soft sites, respectively (Caltrans 2009).

With respect to examples of this distance-attenuation relationship for exterior noise, a 60 dBA noise level measured at 50 feet from mechanical equipment (i.e., heating and air conditioning unit) surrounded by sidewalk and/or parking would diminish to 54 dBA at 100 feet from the source, and to 48 dBA at 200 feet from the source. This scenario is addressed by the point source attenuation for a hard site (6 dBA with each doubling of the distance). For the scenario where soft site conditions exist between the point source and receptor, represented by lawn or landscaping or open ground around the mechanical equipment, an attenuation rate of 7.5 dBA per doubling of distance would apply; the air conditioner noise measured as 60 dBA at 50 feet would diminish to 52.5 dBA at 100 feet from the source, and to 45 dBA at 200 feet from the source, where soft ground with or without vegetation exists between the sound source and the receptor location.

Sound levels can also be attenuated by the presence of buildings, topography, or constructed barriers, located between the noise source and receiver(s). Where a structure, barrier, or topography blocks the line of site between the noise source and receptor, minimum sound attenuation in the range of 10 to 15 dBA would result (Caltrans 2009).

[1] For the purpose of a sound attenuation discussion, a hard or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt or concrete ground surfaces, as well as very hard-packed soils. An acoustically soft or absorptive site is characteristic of unpaved loose soil or vegetated ground.

Vibration

Vibration is the movement of mass over time. It is described in terms of frequency and amplitude and, unlike sound, there is no standard way of measuring and reporting amplitude. Vibration can be described in units of velocity (inches/second) or discussed in decibel (dB) units to compress the range of numbers required to describe vibration. Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) that describes particle movement over time (in terms of physical displacement of mass). For purposes of this analysis, PPV will be used to describe all vibration for ease of reading and comparison. Vibration can impact people, structures, and sensitive equipment (Caltrans 2013). Common sources of vibration within communities include construction activities and railroads. Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving, grading activity has the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used. The Caltrans maximum vibration level standard is 0.2 inches/second PPV for the prevention of structural damage to typical residential buildings (Caltrans 2013).

Sensitive Receptors

Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would be considered noise- and vibration-sensitive and may warrant unique measures for protection from intruding noise. Sensitive receptors near the project site include the following:

- Single-family residential land uses are located immediately east of the project site (across Avalon boulevard), which could be affected by short-term construction noise and long-term on-site operational noise. Additional sensitive receptors are located farther from the project site in the surrounding community and would be less impacted by construction and on-site operational noise and vibration levels than these receptors.
- Residences along Avalon Boulevard, Victoria Street, Martin Luther King Jr. Street, and Main Street, which could be affected by project-related roadway traffic increases.

Existing Noise Conditions

Currently, the project site occupies the southwest portion of a golf course. The Goodyear Blimp Airship Base is located to the northwest, the Dominguez Channel to the west, Del Amo Boulevard to the south, and Avalon Boulevard to the east. Directly south of the project site across from a storm drainage ditch is a small lot with a Mobil gas station and U-Haul dealer. One- to two-story single-family residential uses are located east of the project site across from South Avalon Boulevard.

Commercial uses exist south of the project site across East Del Amo Boulevard and east of South Avalon Boulevard, including the South Bay Pavilion commercial shopping center. The Dominguez Channel, Interstate (I-) 405 freeway, and an undeveloped swatch of land between I-405 and the golf course are located west of the project site. Land adjacent to and north of the project site is currently used by the Links at Victoria Golf Course (Victoria Golf Course); a separate project is proposed by the Carol Kimmelman Center LLC (Kimmelman) for the northerly portion of the existing Victoria Golf Course, which would consist of redeveloping a portion of the golf course with new recreation uses, including a new sports and academic campus.

In October 2018, Dudek conducted noise measurements in the project vicinity to characterize the existing noise environment. The daytime, short-term (1 hour or less) attended sound level measurements were taken with a SoftdB Piccolo 3 sound-level meter. This sound-level meter meets the current American National Standards Institute (ANSI) standard for a Type 2 general purpose sound-level meter. The calibration of the sound level meter was verified before and after the measurements were taken, and the measurements were conducted with the microphone positioned approximately five feet above the ground, facing toward the adjacent roadway.

Dudek selected 11 noise measurement locations (A–K) near the project site to characterize noise levels from important transportation sources in the area, as well as to establish ambient noise levels at sensitive receptors that could be affected by construction or operation of the proposed project, including roadway noise increases resulting from project-added trips. Manual counts of vehicle traffic on the roadway adjacent to each measurement location were also performed, for use in calibrating the traffic noise model. The measurement locations are shown in Figure 4.10-1 (Noise Measurement Locations), and the measured average noise levels and measurement location descriptions are provided in Table 4.10-2. Noise measurement data is also included in Appendix I. The primary noise sources at the measurement locations consisted of traffic along the adjacent roads. As shown in Table 4.10-2, the measured sound levels ranged from approximately 65 dBA L_{eq} at Receptor D to approximately 80 dBA L_{eq} at Receptor E.

Table 4.10-2
Measured Noise Levels

Receptor	Location/Address	Date	Time	L_{eq}[1] (dBA)
A	North of Del Amo Blvd.; west of S Avalon Blvd. Channel	October 11, 2018	02:54 PM to 03:04 PM	79
B	West of S Avalon Blvd., between E Turmont St. and E Elsmere Dr.	October 11, 2018	02:12 PM to 02:22 PM	74
C	West of S Avalon Blvd., between E Elsemere Dr. and E 192nd St.	October 11, 2018	01:44 PM to 01:54 PM	74
D	South of E 192nd St.; West of Victoria Park parking lot.	October 11, 2018	12:21 PM to 12:41 PM	65
E	South of E University Dr., between Wadley Ave. and Pepperdine Dr.	October 11, 2018	01:08 PM to 01:23 PM	80

Table 4.10-2
Measured Noise Levels

Receptor	Location/Address	Date	Time	L_{eq}[1] (dBA)
F	East of 18309 S Avalon Blvd., Carson, California 90746	October 11, 2018	10:16 AM to 10:31 AM	72
G	North of 408 E Victoria St., Carson, California 90746	October 11, 2018	09:51 AM to 10:01 AM	79
H	East of S Main St., South Intersection of W Griffith St.	October 11, 2018	11:06 AM to 11:21 AM	79
I	Southeast corner of S Main St. and E Del Amo Blvd.	October 11, 2018	03:29 PM to 03:39 PM	78
J	North corner of 19202 S Main St., Gardena, California 90248	October 11, 2018	11:38 AM to 11:53 AM	77
K	North of 17701 S Avalon Blvd., Carson, California 90746	October 11, 2018	09:16 AM to 09:31 AM	76

Note: See Appendix I for additional data.

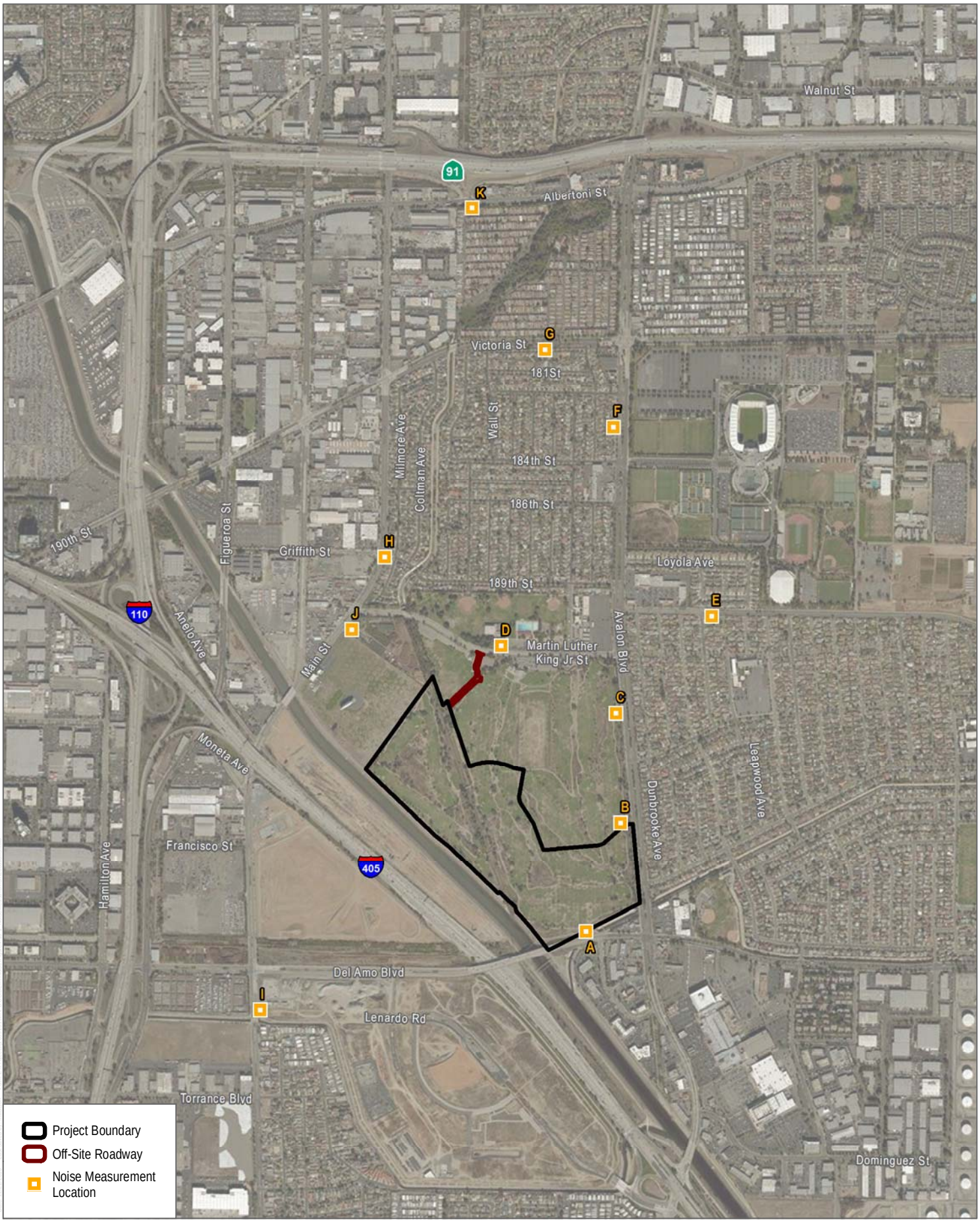
4.10.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal noise regulations that are directly applicable to the project.

State

The California Department of Health Service's Office of Noise Control (ONC), established in 1973, was instrumental in developing regulatory tools to control and abate noise for use by local agencies. One significant model is the Land Use Compatibility for Community Noise Environments Matrix, which allows a local jurisdiction to clearly delineate the compatibility of noise sensitive land uses with ambient exterior noise level exposure. The County of Los Angeles (County) did not adopt this matrix, but used it to fashion maximum noise generation limits for each land use type.



SOURCE: Bing Maps 2018

DUDEK

0 750 1,500 Feet

FIGURE 4.10-1

Noise Measurement Locations

The Creek at Dominguez Hills Project

INTENTIONALLY LEFT BLANK

Local

County of Los Angeles Code of Ordinances and Los Angeles County General Plan

Section 12.08.440 of the County of Los Angeles Code of Ordinances addresses construction noise restrictions. Construction activity is prohibited between the hours of 7:00 p.m. and 7:00 a.m. weekdays and all day on Sundays, where the noise would create a disturbance across a residential property line. For single-family residences, that disturbance noise level overnight is defined as greater than 50 dBA (for construction with a duration greater than 10 days). For construction lasting longer than 10 days, the daytime limit for noise exposure at any residential property affected by the construction noise is 60 dBA (County of Los Angeles 1978a).

The *Los Angeles County General Plan* was adopted by the Board of Supervisors on October 6, 2015. The Noise Element establishes noise generation limits for each land use type, and provides noise management policies to protect residents from excessive noise exposure. As previously discussed, the County did not adopt the ONC Land Use Compatibility for Community Noise Environments Matrix, but instead adapted this matrix to develop the County's exterior noise standards, as seen in Table 4.10-3. By controlling the noise generation from individual properties within a given land use designation (or zone district), all uses should be afforded protection against excessive noise exposure.

Table 4.10-3
Los Angeles County Community Noise Criteria

Noise Zone	Land Use of Receptor Property	Time	Std 1 L_{50} (30 min/hr)	Std 2 L_{25} (15 min/hr)	Std 3 $L_{8.3}$ (5 min/hr)	Std 4 $L_{1.7}$ (1 min/hr)	Std 5 L_{0} (at no time)
I	Noise Sensitive	Anytime	45	50	55	60	65
II	Residential	10 PM to 7 AM	45	50	55	60	65
		7 AM to 10 PM	50	55	60	65	70
III	Commercial	10 PM to 7 AM	55	60	65	70	75
		7 AM to 10 PM	60	65	70	75	80
IV	Industrial	Anytime	70	75	80	85	90

Source: County of Los Angeles 1978b.

The following policies from the County's General Plan Noise Element may be applicable to the project (County of Los Angeles 2015):

Policy N 1.1: Utilize land uses to buffer noise-sensitive uses from sources of adverse noise impacts.

Policy N 1.2: Reduce exposure to noise impacts by promoting land use compatibility.

Policy N 1.4: Enhance and promote noise abatement programs in an effort to maintain acceptable levels of noise as defined by the Los Angeles County Exterior Noise Standards and other applicable noise standards.

Policy N 1.12: Decisions on land adjacent to transportation facilities, such as the airports, freeways and other major highways, must consider both existing and future noise levels of these transportation facilities to assure the compatibility of proposed uses.

City of Carson

The project site, located in the City of Carson, is located on land owned by the County; therefore, all land use decisions pertaining to the proposed project fall under the jurisdiction of the County. However, any off-site improvements required under the proposed project would be subject to City of Carson regulations; therefore, both County of Los Angeles and City of Carson noise regulation information pertaining to off-site improvements is included in Section 4.14, Transportation.

4.10.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts related to noise are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to noise would occur if the project would:

1. 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.
2. Result in generation of excessive groundborne vibration or groundborne noise levels.
3. 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 two 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.

As discussed in the Initial Study prepared for the proposed project (Appendix A), the project site is not located within an airport land use plan or within two miles of a public use airport. In this regard, the Goodyear Blimp Airship Base is not considered an airport, as blimp operations are only infrequent compared to aircraft activity at airports, and produce much lower sound levels that traditional aircraft. Additionally, the project would not expose people to excessive noise levels due to proximity to an airport. As such, the EIR evaluates the following thresholds related to noise and vibration:

NOI-1 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?

NOI-2 Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

4.10.4 Impacts Analysis

NOI-1 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?

Notable on-site noise-generating activities associated with the proposed project would consist of short-term construction, and long-term noise generation from the outdoor active sports area (i.e., the soccer field), building HVAC equipment, and vehicle parking lot use. With respect to noise generation from on-site active sports areas, the soccer field is located more than 2,250 feet from the closest residential uses, and there are a number of on-site structures that are located between the soccer field and these residences; as such, noise generated from the soccer fields would not be anticipated to exceed the applicable standards at the closest residences. The project would generate traffic that would lead to some minor increases in the roadway traffic noise levels along local streets that provide access to the site. These potential impacts are discussed in the following text.

Construction Noise and Vibration

Construction noise and vibration are temporary phenomena. Construction noise and vibration levels vary from hour to hour and day to day, depending on the equipment in use, the operations being performed, and the distance between the source and receptor. The construction activities for the proposed project would include grading and trenching for proposed lots, building construction, paving of the on-site road, and application of architectural coatings. Noise impacts from construction activities associated with the proposed projects would be a function of the noise generated by construction equipment, equipment location, and sensitivity of nearby land uses, and the timing and duration of the construction activities. The nearest sensitive receptors to the project site are single-family homes located as close as 155 feet east of the project site. This distance is representative of the residences along the east side of Avalon Boulevard, across from the project site.

Construction noise is difficult to quantify because of the many variables involved, including the specific equipment types, size of equipment used, percentage of time, condition of each piece of equipment, and number of pieces of equipment that will actually operate on site. The range of maximum noise levels for various types of construction equipment at a distance of 50 feet is depicted in Table 4.10-4. The noise values represent maximum noise generation, or full-power operation of the equipment. As an example, a loader and two dozers, all operating at full power and relatively close together, would generate a maximum sound level of approximately 90 dBA at 50 feet from their operations. As one increases the distance between equipment, and/or the

separation of areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of separate noise sources added together. In addition, typical operating cycles may involve 2 minutes of full-power operation, followed by 3 or 4 minutes at lower levels. The average noise level during construction activity is generally lower, since maximum noise generation may only occur up to 50% of the time. Noise levels from construction operations decrease at a rate of approximately 6 dBA per doubling of distance from the source at a site with hard ground surface conditions (i.e., pavement or hard packed soil) and 7.5 dBA for doubling of distance at a site with soft ground conditions (Caltrans 2009).

Table 4.10-4
Construction Equipment Typical Noise Emission Levels

Equipment	Typical Sound Level (dBA) 50 Feet from Source
Roller	74
Concrete vibrator	76
Pump	76
Saw	76
Backhoe	80
Air compressor	81
Generator	81
Compactor	82
Concrete pump	82
Crane, mobile	83
Concrete mixer	85
Dozer	85
Grader	85
Impact wrench	85
Loader	85
Pneumatic tool	85
Jackhammer	88
Truck	88
Paver	89

Source: FTA 2006.

The nearest point of construction activities to the closest noise-sensitive receivers (single-family residences located to the east across Avalon Boulevard from the project site) would be approximately 155 feet, while the furthest distance would be approximately 3391 feet. For construction noise, a concept called the "acoustic center" is useful in describing average noise levels for adjacent receivers across the entire construction area and for the duration of the construction effort period. The acoustic center is the idealized point from which the energy sum of all construction activity noise near and far would originate, and it is derived by taking the square root of the product of the shortest distance multiplied by the furthest distance. For this project construction, the acoustic center is calculated to be 725 feet from the closest receiver.

Thus, the distance to the nearest construction activities would be approximately 155 feet, but the distribution of construction activity across the site would typically occur with a center approximately 725 feet or more away from the closest noise-sensitive receivers. It should be noted that pile driving will only be present in construction phases that include construction of buildings. The distance from the closest residential receiver to the nearest pile driving activities would be approximately 466 feet, but the distribution of pile driving activity across the site would typically occur with an average distance of 1200 feet or more away from the closest noise-sensitive receivers.

The Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (RCNM) (FHWA 2008) was used to estimate construction noise levels at these noise-sensitive land uses. Although the model was developed by the FHWA, RCNM is often used for non-roadway projects, because the same types of construction equipment used for roadway projects are also used to construct other project types. Input variables for RCNM consist of the receiver/land use types, the equipment type and number of each (e.g., two graders, a loader, a tractor), the duty cycle for each piece of equipment (e.g., percentage of each hour the equipment typically works per day), and the distance from the construction activity to the noise-sensitive receiver. No topographical or structural shielding was assumed in the modeling of construction noise (i.e., the receivers are modelled with no obstacles to the travel of sound between the construction activity and receiver location, a worst-case assumption). The noise levels from the proposed construction activities are summarized in Table 4.10-5. The complete set of RCNM input and output data for construction noise is provided in Appendix I. As shown, at the nearest residences, construction noise levels would range from approximately 72 to 78 dBA L_{eq} when construction is taking place at or near the southeastern project boundary. More typical construction noise levels (represented by the acoustic center distance noise levels) at the adjacent residences would range from approximately 61 to 68 dBA L_{eq}.

Table 4.10-5
Construction Noise Model Results Summary

Construction Phase	L_{eq} (dBA)	
	Nearest Receiver 155 feet	*Acoustical Center 725 feet*
Architectural Coating	72	61
Building Construction	73	64
Grading/Landfill Cap Construction	78	68
Paving	76	67
Site Preparation	75	64
Waste Relocation	76	65
Foundation Pile Driving	*Nearest Receiver 466 feet*	*Acoustical Center 1200 feet*
	75	67

Notes: L_{eq} = equivalent continuous sound level; dBA = A-weighted decibel.

As presented in Table 4.10-5, the highest noise levels are predicted to occur with grading and landfill cap construction, with noise levels as high as 78 dBA L_{eq} at the nearest existing residences 155 feet away. Based on the acoustic center distance of 725 feet for general construction activities, average noise levels at any given off-site residence would range up to 68 dBA (excepting pile driving). During pile driving activities, noise levels of up to 75 dBA L_{eq} at the nearest existing residences (approximately 466 feet away) are predicted to occur. Based upon the acoustic center distance of 1200 feet, construction noise associated with pile driving activities would be approximately 67 dBA L_{eq}.

Section 12.08.440 of the County's Code of Ordinances addresses construction noise restrictions. Construction activity is prohibited between 7:00 p.m. and 7:00 a.m. weekdays and all day on Sundays, where the noise would create a disturbance across a residential property line. For construction lasting longer than 10 days, the daytime limit for noise exposure at any residential property affected by the construction noise is 60 dBA. Based upon the construction noise analysis, the noise from construction would exceed the County's construction noise significance threshold of 60 dBA during the day; if construction were to occur at night, the anticipated noise levels would even further exceed the nighttime limit of 50 dBA (County of Los Angeles 1978a). Applying the County's construction noise limits, the project would have potentially significant short-term construction impacts. A sound barrier along the Avalon Boulevard frontage (prescribed in **MM-NOI-1**) would address construction noise sources for everything except pile driving, which includes noise generating components well above the elevation of any feasible noise barrier. Therefore, even with the implementation of mitigation measures **MM-NOI-1**, **MM-NOI-2**, and **MM-NOI-3**, temporary noise impacts from construction activities would be **significant and unavoidable.**

Parking Lots

The proposed project would provide at-grade parking on the project site. Various noise events, including people talking, shopping carts, and noise related to automobile movement near driveways, car alarms, car horns, door slams, and tire squeals, may occur within the proposed parking areas. These sources typically range from about 30 to 66 dBA at a distance of 50 feet (Gordon Bricken & Associates 1996), and are generally short-term and intermittent. Parking lots would have the potential to generate noise levels that exceed 50 dBA (the County daytime limit for noise generation affecting residential property) on neighboring properties, depending on the location of the source; however, noise sources from the parking lot would be different from each other in kind, duration, and location, so that the overall effects would be separate and in most cases would not affect noise-sensitive receptors at the same time.

The closest proposed parking lots to off-site residences are located not closer than 450 feet from the property boundary of such residences. Using the upper end of the reported range for parking

lot noise (i.e., 66 dBA at 50 feet) as an average noise value for parking lot activity, and the point source attenuation rate of a 7.5 dBA reduction with each doubling of distance (due to the presence of landscaping between the parking lot and eastern property boundary), the average parking lot noise level at closest residential property boundaries across Avalon Boulevard would approximately 42 dBA. This noise level from parking lot activity would fall below the most restrictive level of the County's exterior noise standards (Section 12.08.390 of the Los Angeles County Code), which limits exterior noise levels at residential properties to 45 dBA from 10 p.m. to 7 a.m. (County of Los Angeles 1978b). Thus, noise from parking lot activity would result in a **less-than-significant impact.**

Mechanical Equipment

The primary mechanical equipment for the proposed project that could affect exterior noise levels on adjacent properties is roof-mounted heating-ventilation-air-conditioning (HVAC) equipment. Most of the proposed structures would be located on the western portion of the site, with a very large separation distance to the closest residences (approximately 1,800 feet to residences along Avalon Blvd). The one grouping of buildings including buildings #5 - #11 are closer to residences (450 to 1300 feet), and therefore mechanical equipment on these buildings was evaluated to determine resulting operational noise levels at the Avalon Boulevard residential properties.

Based upon the size (square footage) of each of the buildings, Dudek identified reasonable capacity HVAC units for each building. One 7.5-ton capacity HVAC package unit apiece was assumed for the 12,500-square-foot building on Pad 9 and on Pad 11; one 7.5-ton capacity HVAC package unit was also assumed for the 17,000 square foot building on Pad 6; two 5-ton units were assumed for the 26,000-square-foot buildings on Pad 8; two 7.5-ton capacity HVAC package units were assumed for the 36,000-square-foot building on Pad 10; two 7.5-ton capacity HVAC package units were assumed for the 40,000-square-foot building on Pad 7; and, four 7.5-ton capacity HVAC package units were assumed for the 54,000-square-foot building on Pad 7. For mechanical equipment noise assessment, Dudek used published sound power ratings for representative HVAC package units of these capacities (York XP Series 2015).

In order to assess noise levels from mechanical equipment operations along the common property boundary of the project site and neighboring residential properties to the east, distance measurements were completed from the mechanical equipment locations to these property lines. Standard acoustic calculations were then performed to determine the distance attenuated noise level at the closest residential property line across Avalon Boulevard from the project site.

The noise calculations were performed to consider the contribution of all eleven HVAC units at the closest residential property boundary. The noise levels (L_{eq}) from the combined noise levels of all of the roof-mounted HVAC equipment, are indicated in Table 4.10-6. These average noise

levels assume operation of all of the HVAC units simultaneously. When all of the HVAC equipment operates continuously throughout a given hour, the calculated noise levels at the closest residential property boundary would represent the hourly average. In all cases, the noise level at adjacent residences from continuous operation of all proposed roof-mounted HVAC equipment would be well below the most restrictive level of the County's Code (Section 12.08.390), which limits exterior noise levels at residential properties to 45 dBA from 10 p.m. to 7 a.m. (County of Los Angeles 1978b). This would be a worst-case assumption, in that HVAC units would not be anticipated to operate simultaneously for extended periods.

Table 4.10-6
Mechanical Equipment Operation Noise Summary of Results

Equipment	Noise Level at Property Boundary	
	Property Line	*Average Noise Level (dBA L_{eq})*
15 HVAC Units	East - Adjacent to East Side of Avalon Boulevard	**37**

The results of the mechanical equipment operations noise analysis indicate that the proposed project would comply with the County Code noise restrictions, even in the most restrictive overnight period. Therefore, the impact would be **less than significant.**

Off-site Roadway Noise

The primary noise-related effect the proposed project could have off site is an increase in traffic, which is the main source of noise in most urban areas. Project-related traffic noise levels were examined along roadways evaluated by the project traffic engineer (LSA Associates), where the project would principally contribute vehicle trips. Roadway trip volumes for roadway segments of concern were calculated by Dudek, based upon the data provided by LSA for intersection performance analysis (refer to Appendix J, Traffic Impact Analysis, for the traffic impact assessment).

Traffic noise is generally assessed using software provided by the FHWA, the current version of which is titled Transportation Noise Model 2.5 (TNM 2.5). For projects in California, the TNM model is run based upon information found in *California Vehicle Noise Emission Levels* (Caltrans 1987) and *Technical Noise Supplement: A Technical Supplement to the Traffic Noise Analysis Protocol* (Caltrans 1998). The worksheets in Appendix I are based on the FHWA TNM 2.5 model, but provide an easier to understand format than the full model input and output data sheets. Acoustical calculations using standard noise modeling equations adapted from the FHWA noise prediction model were performed for the following scenarios: Existing & Existing Plus Project.

The modeling calculations take into account the posted vehicle speed, average daily traffic volumes for each scenario, and the estimated vehicle mix (i.e., automobiles, medium and heavy trucks). The model assumed "pavement" propagation conditions, or a hard site surface. Noise levels are generally indicated at the residential property line adjacent to each roadway, which varies from approximately 25 to 45 feet from the roadway centerline. Noise levels at greater distances from the roadway centerline would be lower due to attenuation provided by increased distance from the noise source. Generally, noise from heavily traveled roadways would experience a decrease of approximately 3 dBA for every doubling of distance from the roadway. The noise model does not take into account the sound-attenuating effect of intervening structures, barriers, vegetation, or topography. Therefore, the noise levels predicted by the model are conservative with respect to potential exterior exposure levels at noise-sensitive uses located along these roadways.

Future increases in traffic noise, with and without the proposed project, are provided in Table 4.10-7.

Table 4.10-7
Off-Site Traffic Noise Modeling Results

Modeled Receiver	Existing (2018) Noise Level (dBA CNEL)	Existing (2018) Plus Project Noise Level (dBA CNEL)	Difference (dB)	Significant ?
A – Del Amo west of Avalon	77.9	78.3	0.4	NO
B – Avalon north of Turmont	73.1	73.8	0.7	NO
C – Avalon north of Elsemere	73.3	73.7	0.4	NO
D – MLK west of Avalon	66.0	66.2	0.2	NO
E – University east of Wadley	80.6	80.6	0	NO
F – Avalon north of 184th	72.8	73.3	0.5	NO
G – Victoria west of Avalon	77.9	77.5	-0.4	NO
H – Main north of Lifford	77.6	78.8	1.2	NO
I – Main south of Del Amo	78.1	78.2	0.1	NO
J – Main south of MLK	77.9	78.2	0.3	NO
K – Albertoni west of Avalon	78.2	78.2	0	NO

Source: Appendix I
Notes: dBA CNEL = A-weighted decibel community noise equivalent level; dB = decibel.

Proposed project-related traffic noise increases would be well below the perceptible threshold of an increase of 3 dBA for all the evaluated roadways, compared to existing roadway noise levels. Therefore, the proposed project would have a **less-than-significant** project-specific impact on off-site roadway traffic noise levels.

NOI-2 Would the project result generation of excessive groundborne vibration or groundborne noise levels?

Ground-borne vibration information related to construction activities has been collected by the California Department of Transportation (Caltrans 2013). The Caltrans maximum vibration level standard is 0.2 inches/second PPV for the prevention of structural damage to typical residential buildings (Caltrans 2013). Pile driving typically produces the greatest level of vibration in construction projects, with a generation of approximately 0.65 inch/second PPV at a distance of 25 feet (FTA 2006). The shortest distance between pile driving and an off-site residence is approximately 465 feet. Vibration from pile driving would diminish to approximately 0.026 inch/second PPV at the nearest residence, well below the structural damage threshold of 0.2 inch/second PPV for standard construction buildings. The heavier pieces of construction equipment, such as bulldozers, would generate vibration of approximately 0.089 inch/second PPV or less at a distance of 25 feet (DOT 2006). Ground-borne vibration is typically attenuated over short distances. At the distance from the nearest residence to the construction area (approximately 155 feet for standard equipment, excluding pile drivers), vibration would be approximately 0.012 inches/second PPV at the nearest residence. This vibration level would be below the Caltrans structural damage threshold of 0.2 inch/second PPV for standard construction buildings. Construction-related vibration impacts would therefore be **less than significant**.

4.10.5 Mitigation Measures

The following mitigation measures are required in order to address short-term construction noise impacts.

MM-NOI-1 The following measure shall be incorporated into the project contract specifications. Prior to commencement of construction activities involving heavy equipment, temporary construction noise barriers shall be constructed in the locations shown in Figure 4.10-2, Location of Required Temporary Barrier for Construction Noise Mitigation. The noise barriers shall be 8 feet in height, must have a surface density of at least four pounds per square foot, and be free of openings and cracks (with the exception of expansion joints gaps and other construction techniques, which could create an opening or crack).

MM-NOI-2 Construction activities shall take place during the permitted time and day per Section 12.08.440 of the County of Los Angeles Code of Ordinances. The applicant shall ensure that construction activities for the proposed project are limited to the hours of 7 a.m. to 7 p.m. Monday through Saturday, and not at all during other hours or on Sundays.

MM-NOI-3 The County of Los Angeles shall require the contractor to adhere to the following measures as a condition of granting a grading permit to the contractor:

- All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers.
- Construction noise reduction methods such as shutting off idling equipment, construction of a temporary noise barrier, maximizing the distance between construction equipment staging areas and adjacent residences, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from or shielded from sensitive receptors.
- Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow surrounding property owners to contact the job superintendent regarding any potential noise complaint.

4.10.6 Level of Significance After Mitigation

Even with adherence to **MM-NOI-1** through **MM-NOI-3**, noise impacts from pile driving within 600 feet of the eastern property boundary as a result of the proposed project would remain **significant**. Such impacts would be related to the installation of piles for construction of buildings on pad 6, 10 and 11, which would not be anticipated to have a duration of more than several weeks.

4.10.7 Cumulative Impacts

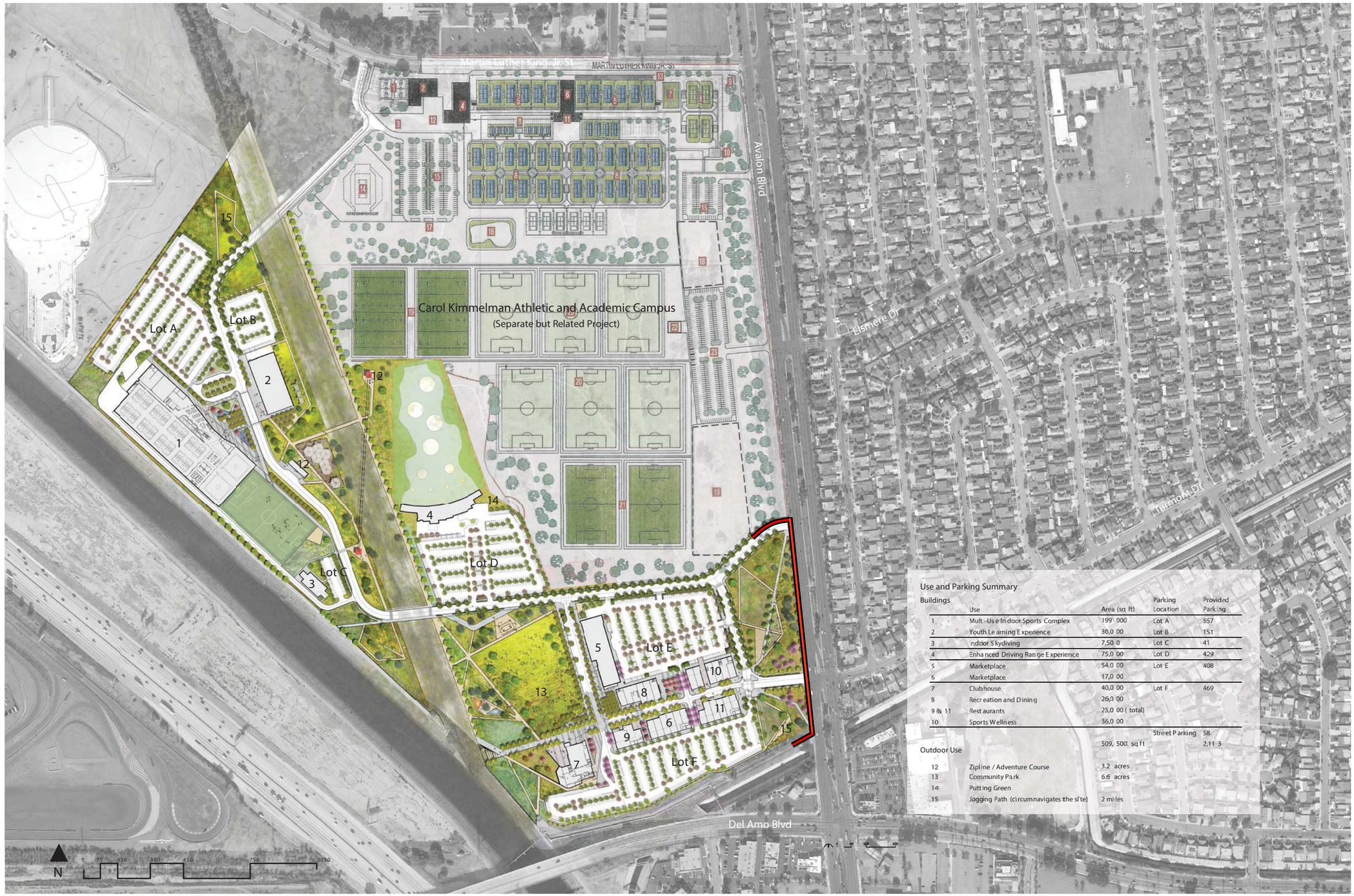
Non-transportation noise sources (e.g., project operation) and construction noise impacts are typically project-specific and highly localized (i.e., these do not generally affect the community noise level at distances beyond 1,500 feet). However, with simultaneous construction activities occurring at two or more project sites in close proximity to one another, the construction noise levels experienced at local receivers could be greater than for construction of each individual project. The Kimmelman Foundation has proposed the development of an athletics and education facility, on the northern and eastern portion of the golf course, immediately adjacent to the proposed project. Construction of both projects could potentially occur at the same time. However, given the large scale of the two sites combined, and construction equipment and activities that are highly similar between both projects, the average construction noise levels at any given residence adjacent to the project site would not be anticipated to be materially different for both construction efforts combined, as compared to the individual projects. This is because the construction activities would continue to be distributed across the combined site, with simultaneous construction activity

in a localized area that includes portions of both sites unlikely. Nonetheless, the project would have short-term construction impacts that are significant and unavoidable, and construction of the Carol Kimmelman Athletic and Academic Campus project at the same time could result in significant and unavoidable cumulative construction noise impacts.

As other development occurs in the area, noise from different types of uses (e.g., traffic, aircraft, fixed noise sources) would continue to combine, albeit on a localized basis, to cause increases in overall background noise conditions within the area. As a result, such sources do not significantly contribute to cumulative noise impacts at distant locations and are not evaluated on a cumulative level.

The project would generate roadway traffic, which would be added to roadway volumes generated by other projects on the assembled cumulative project list. The traffic impact assessment evaluated the resulting roadway volumes from the proposed project, in combination with the traffic generated from the cumulative project list. Dudek evaluated the change in community noise level for existing residences along roadways to which the project would contribute trips, compared to the noise level from cumulative projects.

As with the examination of noise from project-related trip addition to existing roadway volumes, Dudek also evaluated the addition of project-related traffic to traffic from cumulative projects. Roadway traffic volumes were again calculated from the LSA intersection evaluation data. Following the methodology described in Table 4.10-7, Off-Site Traffic Noise Modeling Results, acoustical calculations using standard noise modeling equations adapted from the FHWA noise prediction model were performed for the following scenarios: Cumulative and Cumulative Plus Project.



Use and Parking Summary

Buildings

	Use	Area (sq ft)	Parking Location	Provided Parking
1	Multi-Use Indoor Sports Complex	199,000	Lot A	557
2	Youth Learning Experience	30,000	Lot B	151
3	Indoor Skydiving	7,500	Lot C	41
4	Enhanced Driving Range Experience	75,000	Lot D	429
5	Marketplace	54,000	Lot E	408
6	Marketplace	17,000		
7	Clubhouse	40,000	Lot F	469
8	Recreation and Dining	26,000		
9 & 11	Restaurants	25,000 (total)		
10	Sports Wellness	36,000		
			Street Parking	58
		509,500 sq ft		2,113

Outdoor Use

12	Zipline / Adventure Course	3.2 acres
13	Community Park	6.6 acres
14	Putting Green	
15	Jogging Path (circumnavigates the site)	2 miles

SOURCE: Perkins and Will 2018

Conceptual and Subject to Change

Location of 8 foot temporary construction noise soundwall

FIGURE 4.10-2

Location of Required Temporary Barrier for Construction Noise Mitigation

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

Future increases in traffic noise from cumulative projects, with and without the proposed project, are provided in Table 4.10-8.

Table 4.10-8
Off-Site Traffic Cumulative Noise Modeling Results

Modeled Receiver	Cumulative Traffic Noise Level No Project (dBA CNEL)	Cumulative Traffic Noise Level With Project (dBA CNEL)	Difference (dB)	Significant?
A – Del Amo west of Avalon	78.3	78.6	0.3	NO
B – Avalon north of Turmont	73.1	73.8	0.7	NO
C – Avalon north of Elsemere	73.7	74.0	0.3	NO
D – MLK west of Avalon	66.8	66.9	0.1	NO
E – University east of Wadley	80.8	80.8	0	NO
F – Avalon north of 184th	73.2	73.6	0.4	NO
G – Victoria west of Avalon	79.1	78.8	- 0.3	NO
H – Main north of Lifford	78.2	79.2	1.0	NO
I – Main south of Del Amo	78.5	78.6	0.1	NO
J – Main south of MLK	78.3	78.5	0.2	NO
K – Albertoni west of Avalon	78.2	78.2	0	NO

Source: Appendix I.
Notes: dBA CNEL = A-weighted decibel community noise equivalent level; dB = decibel

The proposed project would increase the roadway noise level by less than 1 dBA in the cumulative scenario, compared to the noise levels from cumulative projects without the proposed project. In fact, traffic noise levels would increase less than 3 dBA CNEL on all examined roadway segments, when comparing *existing* traffic noise levels to those from traffic associated with cumulative projects plus the proposed project. This increase falls below a "noticeable" change of 3 dBA for persons sensitive to noise. Therefore, the proposed project would have a **less-than-significant impact** on cumulative off-site roadway traffic noise levels

4.10.8 References

Caltrans (California Department of Transportation). 1987. *California Vehicle Noise Emission Levels.* Report No. FHWA/CA/TL-87/03. January 1987.

Caltrans. 1998. *Technical Noise Supplement: A Technical Supplement to the Traffic Noise Analysis Protocol*. October 1998.

Caltrans. 2009. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September 2009.

Caltrans. 2013. *Transportation and Construction Vibration Guidance Manual*. September 2013.

County of Los Angeles. 1978a. County of Los Angeles Code of Ordinances, Title 12, Chapter 12.08, Part 4: Specific Noise Restrictions, Section 12.08.440, Construction Noise. Accessed December 2018. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=LOS_ANGELES_CO_CODE.

County of Los Angeles. 1978b. County of Los Angeles Code of Ordinances, Title 12, Chapter 12.08, Part 3: Community Noise Criteria, Section 12.08.390, Exterior Noise Standards—Citations for Violations Authorized When. Accessed December 2018. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=LOS_ANGELES_CO_CODE.

County of Los Angeles. 2015. *Los Angeles County General Plan*. Adopted October 6, 2015. Accessed August 21, 2018. http://planning.lacounty.gov/generalplan/generalplan.

FHWA (Federal Highway Administration). 2008. *Roadway Construction Noise Model (RCNM), Software Version 1.1.* U.S. Department of Transportation, Research and Innovative Technology Administration, John A. Volpe National Transportation Systems Center, Environmental Measurement and Modeling Division. Washington, D.C. December 8, 2008.

FTA (Federal Transit Authority). 2006. *Transit Noise and Vibration Impact Assessment.* FTA-Va-90-1003-06. May 2006.

Gordon Bricken & Associates. 1996. *Parking Lot Noise Estimates*.

4.11 POPULATION AND HOUSING

This section describes the existing setting of the project site, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of The Creek at Dominguez Hills project (project or proposed project). The analysis is based on a review of existing resources and applicable laws, regulations, and guidelines. The information presented in this section was collected from a number of publicly available sources, including the *Los Angeles County General Plan*.

4.11.1 Existing Conditions

The proposed project site consists of a portion of the existing Links at Victoria Golf Course (Victoria Golf Course).

Under existing conditions, the Victoria Golf Course has 13 full-time employees and 18 part-time employees (Greenway Golf, pers. comm. 2018), equating to approximately 22 full-time-equivalent employees. Because the project site comprises approximately half of the Victoria Golf Course, for the purposes of this analysis it is assumed that the project site supports approximately 11 employees.

The following subsections provide an overview of existing conditions related to population, housing, and employment in the County of Los Angeles as a whole and in the City of Carson (City).

Southern California Association of Governments Growth Projections

The Southern California Association of Governments (SCAG) produces a Regional Growth Forecast, which is a key guide for developing regional plans and strategies mandated by federal and state governments such as the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), the Program Environmental Impact Report (PEIR) for the RTP/SCS, the Air Quality Management Plan (AQMP), the Federal Transportation Improvement Program (FTIP), and the Regional Housing Needs Assessment (RHNA). The growth forecasts are appended to the RTP/SCS, the most recent of which was adopted in April 2016. The Growth Forecast Appendix describes the forecasting process; trends in population, housing, and employment; forecasting methodology; and assumptions. The current RTP/SCS planning horizon is from 2012–2040. The SCAG region, which is made up of 6 counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura), is expected to add 3.8 million residents, 1.5 million households and 2.4 million jobs between 2012 and 2040. Slow growth patterns experienced after the Great Recession are expected to continue into the future. Over the course of the RTP/SCS planning horizon, the SCAG region is expected to grow primarily through natural increase, with nearly 90% of population growth the result of births rather than net migration (SCAG 2016a). Table 4.11-1 shows population, household, and employment projections for Los Angeles County as a whole and for the City of Carson, as calculated by SCAG during its 2026 RTP/SCS planning process.

Table 4.11-1
Population, Housing, and Employment (SCAG)

Year	City of Carson			County of Los Angeles		
	Population	*Households*	*Employment*	*Population*	*Households*	*Employment*
2016	93,993	25,459	60,804 *	10,241,335	3,308,022	4,424,056 *
2020	96,100	27,400	64,000	10,326,200	3,493,700	4,662,500
2040	107,900	30,800	69,700	11,514,800	3,946,600	5,225,800

Sources: SCAG 2016a, 2016b, 2017a, 2017b.
Note:
* Reported for 2015.

City of Carson Growth Projections

The Housing Element of the City's General Plan contains population and housing projections for the year 2020. The anticipated 2020 population for the City is 97,500 people, which is similar to the SCAG projections shown above (City of Carson 2013). The City's General Plan Environmental Impact Report (EIR) also shows population projections in the City for the year 2020. At the time the General Plan EIR was produced (in 2002), the City was anticipated to have a population of 103,400 people in 2020; 26,880 housing units in 2020; and 67,900 jobs in 2020. These numbers were sourced from SCAG's growth projections published in 2001 (City of Carson 2002). As shown by comparing these numbers to those shown in Table 4.11-1, while population is still expected to grow, the growth that was anticipated in the early 2000s was not realized, and recent projections are more modest.

County of Los Angeles Growth Projections

The County of Los Angeles General Plan EIR shows population projections for the County for year 2020. At the time the General Plan EIR was produced (in 2014), the County was anticipated to have a population of 10,404,000 people in 2020 and 3,513,000 housing units in 2020 (County of Los Angeles 2015). These numbers are slightly higher than those shown in SCAG's growth projections in Table 4.11-1. Because SCAG's projections were produced more recently than those shown in the County General Plan EIR, the analysis in this section will rely on the SCAG projections.

U.S. Census Data

The U.S. Census Bureau publishes population estimates that are updated annually. The latest population estimates to date for the City are for July 2017. The City's population as of 2017 is estimated by the U.S. Census Bureau to be 92,735 people. Number of households and persons per household are also reported by the U.S. Census Bureau. (Those data are reported for 2012–2016.) Number of households is estimated by the U.S. Census Bureau to be 25,248 households for the period of 2012–2016, and persons per household is estimated to be 3.64 (U.S. Census Bureau 2018a).

The latest population estimates to date for the County are for July 2017. The County's population as of 2017 is estimated by the U.S. Census Bureau to be 10,163,507 people. Number of households and persons per household are also reported by the U.S. Census Bureau. (Those data are reported for 2012–2016.) Number of households is estimated by the U.S. Census Bureau to be 3,281,845 households for the period of 2012–2016, and persons per household is estimated to be 3.01 (U.S. Census Bureau 2018b).

The U.S. Census Bureau's population estimates for the City and County in 2017 are lower than the City and County population as reported by SCAG for 2016. For the purposes of this analysis, the 2016 SCAG data will be used to represent the most recent population estimates, to ensure a more conservative analysis.

4.11.2 Relevant Plans, Policies, and Ordinances

Regional

Southern California Association of Governments

SCAG is the federally designated Metropolitan Planning Organization for six counties in southern California: Ventura, Orange, San Bernardino, Riverside, Imperial, and Los Angeles. SCAG develops plans for transportation, growth management, and hazardous waste management, and develops a regional growth forecast, which forms a foundation for SCAG's regional plans and regional air quality plans developed by the South Coast Air Quality Management District (SCAQMD).

SCAG prepares several plans to analyze and address regional growth, including the Regional Comprehensive Plan (RCP), the Southern California Compass Growth Vision, the Regional Housing Needs Assessment (RHNA), the Regional Transportation Plan (RTP), the Regional Transportation Improvement Program, and annual state-of-the-region reports to measure progress on regional goals and objectives. Plans developed by SCAG that specifically pertain to population and housing are characterized below.

Regional Housing Needs Assessment

The RHNA is mandated by the State Housing Law as part of a periodic process of updating local housing elements in city and county general plans. The RHNA is produced by SCAG and contains a forecast of housing needs within each jurisdiction in the SCAG region for 8-year periods. The 5th Cycle RHNA Allocation Plan is the RHNA that is currently in effect, based on the date that the Notice of Preparation (NOP) was issued for this project (August 2018). The 5th Cycle RHNA Allocation Plan covers a planning period of October 2013 through October 2021. The RHNA shows a need for 412,721 additional housing units within the SCAG region. Of the SCAG region allocation,

the total assigned to the City is 1,698 units. The total assigned to the County of Los Angeles as a whole is 179,881 units (SCAG 2012). Once the RHNA is established, local jurisdictions decide how to address their housing needs through the process of completing general plan housing elements. The City's latest housing element was produced in 2013.

Regional Comprehensive Plan

The 2008 Regional Comprehensive Plan (RCP) was prepared in response to SCAG's Regional Council directive in its 2002 Strategic Plan to define solutions to housing, traffic, water, air quality, and other regional challenges. The 2008 RCP is an advisory document that describes future conditions under current trends, defines a vision for a healthier region, and recommends an Action Plan with a target year of 2035. The RCP addresses land use and housing, transportation, air quality, energy, open space and habitat, water, solid waste, economy, security, and emergency preparedness. The RCP provides a series of recommended near-term policies that developers and stakeholders can consider for implementation, as well as potential policies for consideration by local jurisdictions and agencies when conducting project review.

The Land Use and Housing chapter of the RCP promotes sustainable planning for land use and housing in Southern California through maximizing the efficiency of the existing and planned transportation network, providing the necessary amount and mix of housing for a growing population, and enabling a diverse and growing economy and protecting important natural resources.

Regional Growth Forecast

As part of its Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) document, SCAG develops population and housing forecasts for the SCAG region and for the jurisdictions that make up the SCAG region. Population and housing forecasts for the City of Carson and the County of Los Angeles are shown in Table 4.11-1, Population, Housing, and Employment (SCAG).

Local

Los Angeles County General Plan

County land use policies related to population and housing are primarily addressed in the Housing Element of the County General Plan. The latest version of the County's Housing Element was adopted in 2014. The Housing Element serves as a policy guide to address the comprehensive housing needs of the unincorporated areas of the County. The primary focus of the Housing Element is to ensure decent, safe, sanitary, and affordable housing for current and future residents of the unincorporated areas, including those with special needs (County of Los Angeles 2014). The County is required to ensure the availability of residential sites, at adequate

densities and appropriate development standards, in the unincorporated areas to accommodate its fair share of the RHNA allocation. Because the Housing Element addresses unincorporated areas of the County, the project site is not within an area that is addressed in this element, since it is located within the City of Carson. As such, policies and objectives from the County's Housing Element are not included herein, since they do not apply to the proposed project.

4.11.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to public services are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to population and housing would occur if the project would:

1. 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).
2. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

As discussed in the Initial Study prepared for the proposed project (Appendix A, Initial Study and Notice of Preparation), the project would have no impacts related to displacement of substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere. As such, the EIR evaluates the following threshold related to population and housing:

POP-1 Would the project induce substantial 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)?

4.11.4 Impacts Analysis

POP-1 Would the project 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)?

The proposed project would involve construction and operation of sports, recreation, fitness, and wellness facilities on a portion of an existing golf course. The proposed project would not involve construction of new homes or the extension of roads or other infrastructure that would induce population growth. Any infrastructure improvements associated with the proposed project would generally occur within the project site and in the immediate area and would be

implemented for the purposes of supporting the proposed project. The proposed project would not involve the extension of utilities to areas that are not currently served. As such, the proposed project would not directly induce substantial population growth through developing new housing, nor would it indirectly induce substantial population growth through the extension of roads or other infrastructure to new areas. However, the proposed project would increase the number of jobs available at the project site relative to the number of jobs that are currently available at the site. The potential for the project to induce population growth through provision of new employment is discussed further in the subsections below.

Construction

During proposed construction activities, construction personnel would be required, which would generate a temporary increase in employment at the project site. However, construction employment at the project site is not anticipated to generate population growth in the City or in the County. The need for construction workers would be accommodated within the existing and future labor market in the Los Angeles metropolitan area, which is highly dense and supports a diversity of construction firms and personnel. If construction workers live outside of the City or County, these workers would likely commute during the relatively short and finite construction period, which is anticipated to be approximately 18 months. For these reasons, construction employment would not induce substantial population growth in the area.

Operation

Under existing conditions, the project site supports approximately 11 employees (see Section 4.11.1, Existing Conditions). Upon project implementation, employment opportunities at the project site would increase. Based on project-specific information provided by the applicant, total employment is estimated to be approximately 744 employees (Plenitude 2018), as shown in Table 4.11-2. The net increase in employment at the project site would be approximately 733 employees (744 proposed employees – 11 existing employees = 724 employees). The expected number of new jobs that would be generated by the proposed project is within employment growth projections for the City and County, as calculated by SCAG. The project is anticipated to begin operating in 2020. The City is expected to undergo an increase in 3,000 jobs between 2015 and 2020 (the City had approximately 60,804 jobs in 2015 and is expected to have approximately 64,000 jobs in 2020). An additional 733 jobs in the City is well within these projections. The number of new jobs that is expected to be associated with the proposed project also falls well within employment projections for the County as a whole. The County is expected to undergo an increase in approximately 200,000 jobs between 2015 and 2020 (the County had approximately 4,424,056 jobs in 2015 and is expected to have approximately 4,662,500 jobs in 2020 (SCAG 2016b, 2017a, 2017b).

Table 4.11-2
Employment Generation

	Use	Anticipated Employees (approximate)
Pad 1	Multi-use indoor sports complex	54
Pad 2	Youth learning experience	35
Pad 3	Indoor skydiving building	15
Pad 4	Enhanced driving range experience	300*
Pad 5	Marketplace	30
Pad 6	Marketplace	30
Pad 7	Clubhouse	30
Pad 8	Recreation and dining facility	65
Pad 9 and 11	Restaurants	130
Pad 10	Sports wellness building	30
Pad 12	Zipline and adventure course	15
Pad 13	Community park	10
Pad 14	Putting green	n/a
Pad 15	Jogging/walking path	n/a
	Total	**744**

*The number of employees for Pads 4 and 14 could total up to a maximum of 300 employees.
Source: Plenitude 2018.

While increases in employment opportunities at the project site fall well within employment growth projections for the City and the region, increased permanent employment has the potential to attract additional residents to the City or surrounding areas, in the event that new employees were to relocate to the City or nearby areas upon obtaining a job at the project site. However, population growth due to employee relocation is unlikely. Because the proposed project would be located in the densely populated Los Angeles metropolitan area, it is anticipated that the jobs at the project site would be filled by City residents or by residents of neighboring cities and communities. In the unlikely event that new employees were to relocate to the City or County upon obtaining a job at the project site, the potential population growth would be minor and would not exceed population projections for the City or County.

In summary, the proposed project is not expected to draw substantial numbers of new residents to the City or to the County, if at all. The proposed project is recreational with a commercial component and is located in a densely populated metropolitan area that typically provides a robust and diverse employment pool, such that the increases in employment at the project site during construction and operation are not expected to cause people to move into the City or the County from areas outside the City or County. Furthermore, the employment growth that may be caused by the project falls well within current projections for employment growth in the City and County. For these reasons, the proposed project would not induce substantial unplanned population growth, and impacts would be **less than significant**.

4.11.5 Mitigation Measures

Impacts to population and housing would be less than significant. No mitigation measures are required.

4.11.6 Level of Significance After Mitigation

Impacts from the proposed project would be **less than significant**, and no mitigation is required.

4.11.7 Cumulative Impacts

A significant adverse cumulative impact would occur in the category of population and housing if the proposed project were to induce population growth, and that growth combined with population growth caused by the related projects to trigger substantial population growth in an area. A significant adverse cumulative impact would also occur if the proposed project were to make a considerable contribution to substantial increases in population that are already occurring.

The proposed project would not involve construction of new homes or the extension of roads or other infrastructure that would induce population growth. While the proposed project would increase the number of jobs available at the project site relative to the number of jobs that are currently available at the site, increases in employment at the project site during construction and operation are not expected to cause people to move into the City or the County from areas outside the City or County. Because the proposed project would not induce substantial population growth, it could not combine with population growth caused by other projects to produce a cumulatively considerable effect. Similarly, the proposed project would not contribute to population growth that is already occurring in the City and region. For these reasons, the proposed project would result in **no cumulative impacts** in the category of population and housing.

4.11.8 References

City of Carson. 2002. *Carson General Plan Environmental Impact Report*. Public Review Draft. SCH No 2001091120. Prepared by RBF Consulting. October 30, 2002. Accessed August 22, 2018. http://ci.carson.ca.us/communitydevelopment/generalplan.aspx.

City of Carson. 2013. *City of Carson 2014–2021 Housing Element*. Prepared by ESA. 2013. Accessed October 12, 2018. http://ci.carson.ca.us/communitydevelopment/generalplan.aspx.

County of Los Angeles. 2014. *Los Angeles County Housing Element, 2014–2021*. Adopted February 4, 2014. Accessed October 15, 2018. http://planning.lacounty.gov/housing.

County of Los Angeles. 2015. *Final Environmental Impact Report – Los Angeles County General Plan Update.* Prepared by PlaceWorks. March 2015. Accessed August 21, 2018. http://planning.lacounty.gov/generalplan/eir.

Greenway Golf. 2018. Existing golf course employment. Email correspondence between Greenway Golf and Dudek. October 4, 2018.

Plenitude (Plenitude Holdings LLC). 2018. The Creek at Dominguez Hills EIR – Employment Generation. October 15, 2018.

SCAG (Southern California Association of Governments). 2012. "5th Cycle Regional Housing Needs Assessment Final Allocation Plan, 1/1/2014–10/1/2021." August 2012. Accessed October 12, 2018. https://www.scag.ca.gov/Documents/5thCyclePFinalRHNAplan.pdf.

SCAG. 2016a. "Current Context – Demographics and Growth Forecast Appendix." *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*. Adopted April 2016. Accessed October 12, 2018. http://scagrtpscs.net/pages/final2016rtpscs.aspx.

SCAG. 2016b. *2016 – 2040 Regional Transportation Plan / Sustainable Communities Strategy Final Growth Forecast by Jurisdiction.* 2016. Accessed October 12, 2018. https://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf.

SCAG. 2017a. *Profile of Los Angeles County – Local Profiles Report 2017*. May 2017. Accessed October 10, 2018. https://scag.ca.gov/DataAndTools/Pages/LocalProfiles.aspx.

SCAG. 2017b. *Profile of the City of Carson – Local Profiles Report 2017*. May 2017. Accessed October 10, 2018. https://scag.ca.gov/DataAndTools/Pages/LocalProfiles.aspx.

U.S. Census Bureau. 2018a. "QuickFacts – Carson City, California." Accessed October 12, 2018. https://www.census.gov/quickfacts/fact/table/carsoncitycalifornia,US/HSD310216#viewtop.

U.S. Census Bureau. 2018b. "QuickFacts – Los Angeles County, California." Accessed October 15, 2018. https://www.census.gov/quickfacts/losangelescountycalifornia.

INTENTIONALLY LEFT BLANK

4.12 PUBLIC SERVICES

This section describes the existing setting of the project site, identifies associated regulatory requirements, and evaluates potential impacts to public services related to implementation of The Creek at Dominguez Hills project (project or proposed project).

4.12.1 Existing Conditions

Fire Protection

Fire services in the City of Carson (City) are provided by the Los Angeles County Fire Department (LACFD), also known as the Consolidated Fire Protection District of Los Angeles County. Fire protection services provided to the City include fire, emergency medical, urban search and rescue, hazardous materials prevention and response, air operations, and other emergency response resources. LACFD is also responsible for emergency medical calls, fire response, and inspection and plan check services.

There are six primary fire stations that provide both fire and emergency medical services to the City. Four of the stations are located within City boundaries*:* Fire Station 10, Fire Station 36, Fire Station 116, and Fire Station 127. There is also a Fire Prevention Office located at the Carson City Hall. The nearest station to the project site is Fire Station 116, located at 755 East Victoria Street in Carson. This station is located approximately 1.4 roadway miles northeast of the project site and would be the first responder to the site. Fire Station 116 is equipped with the following during each 24-hour shift: an engine/ladder truck staffed with one captain, one firefighter specialist, and two firefighters; an engine company staffed with one captain, one firefighter specialist, and one firefighter paramedic; and a paramedic squad staffed with two firefighter paramedics. The estimated emergency response time to the project site is 5 minutes (Takeshita, pers. comm. 2019). In urban areas, the LACFD has a response time standard of 5 minutes (County of Los Angeles 2015a). In the event that Fire Station 116 cannot meet the immediate needs of a call for services independently or does not have capability to address the full extent of a larger incident, the other fire stations within the City or the closest available LACFD resources could respond or provide support.

Police Protection

The Los Angeles County Sheriff's Department (LASD) provides police protection services to the City and to County of Los Angeles Department of Parks and Recreation (DPR) facilities. As such, police protection at the project site is currently provided by the LASD. The project site is currently within the jurisdiction of the LASD Parks Bureau; however, the project vicinity (excluding County park facilities) are patrolled by personnel from the Carson Sheriff Station. In the event of an emergency at the project site, the closest LASD unit responds. However, once the initial response is made, the Parks Bureau handles the incident. Additionally, any non-emergency calls from the

project site are handled by the Parks Bureau. Information on the Parks Bureau is provided below; information on the Carson Sheriff Station is also provided, since that facility is responsible for the neighborhood areas surrounding the project site.

Parks Bureau

The Parks Bureau provides police protection services for DPR facilities, including golf courses. The Parks Bureau office is located at 2101 North Highland Avenue in Hollywood. The Parks Bureau provides police protection for approximately 194 DPR venues throughout the County. The Park Bureau divides the County into patrol zones. The project site is located in the "south zone," which currently contains 54 DPR facilities. The south zone has dedicated personnel that patrol the facilities in the south zone: 1 lieutenant, 7 sergeants, 24 deputies, and 12 security officers. The Parks Bureau has established an optimal service response time of 10 minutes or less for emergency response incidents (a crime that is presently occurring and is an emergency situation), 20 minutes or less for priority response incidents (a crime or incident that is currently occurring but is not an emergency situation), and 60 minutes or less for routine response incidents (a crime that has already occurred and is not an emergency situation). The Parks Bureau response times for emergency, priority, and routine calls are shown below in Table 4.12-1. As shown, response times for DPR facilities are generally faster than the response time standards, with the exception for emergency calls. For emergency calls, a unit from the local station is often the first responder due to proximity; however, the Parks Bureau unit typically arrives shortly after to handle the incident (Chavez, pers. comm. 2018).

Table 4.12-1
Parks Bureau Response Times

Type of Call	Average Response Time
Emergency	12.1 minutes
Priority	14.3 minutes
Routine	27 minutes

Source: Chavez, pers. comm. 2018.

Carson Sheriff Station

The Carson Sheriff Station is located at 21356 South Avalon Boulevard in Carson, which is approximately 1.9 roadway miles south of the project site. The Carson Sheriff Station performs various law enforcement, community policing, traffic enforcement, special event management, and investigative functions, as well as various administrative duties within the neighborhoods and communities surrounding the project site. Additionally, Carson Sheriff Station units may respond to emergency calls in adjacent areas also served by LASD (including DPR facilities), in the event that the Carson Sheriff Station unit is the closest responder. The Carson Sheriff Station serves the

City of Carson and several unincorporated areas (Rancho Dominguez, Harbor City, and an unincorporated portion of Torrance) (LASD 2018). The City of Carson comprises a majority of the Carson Sheriff Station's jurisdiction (LASD 2013).

The Carson Sheriff Station had approximately 89 sworn officers as of 2017 (City of Carson 2018a).

The current service ratio is approximately 1 officer per 1,000 residents (City of Carson 2018a). As stated in the County General Plan Environmental Impact Report (EIR), LASD staff has indicated that an officer-to-population ratio of 1 officer to every 1,000 residents provides the desired level of service for its service area. This ideal standard is typically applied in EIRs for proposed projects that are served by the Los Angeles County Sheriff's Department as a means to develop a rough assessment of the project's impacts on law enforcement services (County of Los Angeles 2015a). The current ratio provided by the Carson Sheriff Station is in line with County goals.

LASD has established an optimal service response time of 10 minutes or less for emergency response incidents (a crime that is presently occurring and is an emergency situation), 20 minutes or less for priority response incidents (a crime or incident that is currently occurring but is not an emergency situation), and 60 minutes or less for routine response incidents (a crime that has already occurred and is not an emergency situation). These response times represent the range of time required to handle a service call, which is measured from the time a call is received until the time a patrol car arrives at the incident scene (County of Los Angeles 2015a). The Carson Sheriff Station's response times for emergency, priority, and routine calls are shown below in Table 4.12-2. As shown, response times in Carson are generally faster than the LASD response time standards. As of 2017, LASD does not plan to relocate or expand the Carson Sheriff Station (City of Carson 2018a).

Table 4.12-2
Carson Sheriff Station Response Times

Type of Call	Average Response Time
Emergency	3.9 minutes
Priority	7.1 minutes
Routine	26.2 minutes

Source: City of Carson 2018a.

Parks

The project area has parks that are owned and maintained by the City of Carson and the County of Los Angeles. The project site itself is located within an existing County-owned golf course (Links at Victoria Golf Course (Victoria Golf Course)) that is considered a park and/or recreational resource. Park resources are summarized below, including the role of the Victoria Golf Course in the scope of these resources.

County of Los Angeles

DPR oversees the development, operation, and maintenance of County parks and recreational facilities (DPR 2018). DPR oversees 182 County parks, and the County's park system is comprised of approximately 70,000 acres of land located within cities and unincorporated areas throughout the County (DPR 2018; County of Los Angeles 2015b). Parks operated by DPR fall within two park systems: the local park system (parks that meet local needs such as community parks, neighborhood parks, and pocket parks) and the regional park system (parks that meet the needs of residents and visitors throughout the County, consisting of community regional parks, regional parks, and special use facilities). The Victoria Golf Course is categorized by the County as a special use facility and is therefore part of the County's regional park system. Special use facilities are defined in the County General Plan as "generally single purpose facilities that serve greater regional recreational or cultural needs" (County of Los Angeles 2015b). According to the County General Plan, "Special use facilities can meet both passive (e.g., historic and cultural facilities, natural areas, habitat preservation areas, arboreta and botanical gardens, and nature centers) and active (e.g., golf courses and driving ranges, equestrian centers, off-highway vehicle parks, water parks) needs within the region" (County of Los Angeles 2015b).

The project site is within the South Bay Planning Area, where there are 26 acres of local parkland and 593 acres of regional parkland, for a total of 618 acres of parkland (County of Los Angeles 2015b). The County's 36-acre Victoria Community Regional Park is located across the street from the project site (on the north side of Martin Luther King Jr. Street). The County is also constructing a new park in unincorporated West Carson, called Wishing Tree Park. This park is expected to be open in 2020 and will be 8 acres in size (DPR 2018).

Countywide Comprehensive Parks and Recreation Needs Assessment

In the County's Comprehensive Parks and Recreation Needs Assessment, park resources in the County are broken down into the following categories: local park, regional recreation park, regional open space, and natural area. Golf courses are included in the category of natural areas. The Comprehensive Parks and Recreation Needs Assessment reports that countywide, there are 3.3 acres of local and regional recreation parks per 1,000 residents. The total park acreage that is included in this ratio consists of local parks and regional recreation parks (natural areas, including golf courses, are not included within these categories). Within the City of Carson, DPR has identified 1.53 acres of local and regional recreation parks per 1,000 residents, which falls below the countywide parkland ratio of 3.3 acres per 1,000 residents (DPR 2016a). Countywide, there are 86.2 acres of regional open space and natural areas per 1,000 residents (this acreage is inclusive of golf courses) (DPR 2016b). The County standard for the provision of parkland is 4 acres of local parkland per 1,000 residents of the population in the unincorporated areas, and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County (County of

Los Angeles 2015b). As such, park acreage in the County per resident, as reported in the Comprehensive Parks and Recreation Needs Assessment, is currently below the County standards.

County Golf Courses

DPR operates the largest publicly owned system of golf courses in the nation, consisting of 20 golf courses situated throughout the County (DPR 2018). The project site is part of the DPR system of golf courses. Other DPR golf courses within the vicinity of the project site include Alondra Golf Course, located approximately 3.85 miles northwest of the project site; Chester Washington Golf Course, located approximately 4.5 miles north of the project site; and Lakewood Golf Course, located approximately 6.5 miles east of the project site. In addition to these resources, the City of Los Angeles' Harbor Park Golf Course is approximately 4.15 miles south of the project site and there are 20 private and public golf courses within an approximately 10-mile radius of the project site.

City of Carson

Park and recreational facilities in the City are listed in Table 4.13-1 in Section 4.13 of this EIR. As of 2017, there are approximately 336.4 acres of park space within the City (City of Carson 2018a). This acreage includes parks managed by the City and/or school districts, as well as Victoria Regional Park and Victoria Golf Course, both owned by the County.

4.12.2 Relevant Plans, Policies, and Ordinances

State

California Fire Code

The California Fire Code is Chapter 9 of Title 24 of the California Code of Regulations. The California Fire Code provides regulations for safeguarding life and property from fire and explosion hazards derived from the storage, handling, and use of hazardous substances, materials, and devices. The provisions of this code apply to construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenance connected or attached to such building structures throughout the state.

Uniform Fire Code

The Uniform Fire Code contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The code contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, including regulations for building standards (also set forth in the California Building Code), and fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with California Code of Regulations, Title 8, Sections 1270, Fire Prevention, and 6773, Fire Protection and Fire Equipment, the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials; fire hose size requirements; restrictions on the use of compressed air; requirements for access roads; and guidelines for testing, maintaining, and using all firefighting and emergency medical equipment.

Mutual Aid Agreements

The California Disaster and Civil Defense Master Mutual Aid Agreement, as provided by the California Emergency Services Act, provides statewide mutual aid between and among local jurisdictions and the state. The statewide mutual aid system exists to ensure that adequate resources, facilities, and other supports are provided to jurisdictions whenever resources prove to be inadequate for a given situation. Each jurisdiction controls its own personnel and facilities but can give and receive help whenever needed.

Quimby Act

California Government Code Section 66477, Subdivision Map Act, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The required dedication and/or fee are based upon the residential density, parkland cost, and other factors. Land dedication and fees collected pursuant to the Quimby Act may be used for acquisition, improvement, and expansion of park, playground, and recreational facilities or the development of public school grounds.

The Quimby Act only applies to development of residential subdivisions, and thus the project would not be subject to the Quimby Act. However, it has been included for purposes of clarifying that some of the cumulative projects identified in Chapter 3 would be subject to the Quimby Act, which would contribute to the available land and funding for additional park land.

California Public Park Preservation Act

The primary instrument for protecting and preserving parkland is California's Public Park Preservation Act of 1971, California Public Resources Code sections 5400 through 5409 (the Act). Under the Act, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation, land, or both are provided to replace the parkland acquired.

The Act only applies when a public agency both acquires real property that is in use as a public park and the public agency uses the property for non-park purposes. In this case, the County already owns the project site and it would continue to be used for park purposes. Therefore, the Act does not apply.

Local

Los Angeles County Fire Code

The County Fire Code consists of fire prevention provisions, development specifications and fuel modification requirements. Fire prevention provisions covered in the County Fire Code include fire apparatus access roads, adequate road widths, all-weather access requirements, fire flow requirements, and fire hydrant spacing. The code also requires clearance of brush around structures located in hillside areas that are considered at risk for wildland fire.

Los Angeles County Operational Area Emergency Response Plan

The County approved an Operational Area Emergency Response Plan in 1998, which was updated in 2012 (County of Los Angeles 2012). The plan establishes the County's emergency organization, assigns tasks, specifies policies and general procedures, and provides for coordination of planning efforts among the various emergency departments, agencies, special districts, and jurisdictions that make up the County Operational Area. The plan ensures the most effective allocation of resources for the protection of the public in the event of an emergency.

Los Angeles County General Plan

The *Los Angeles County General Plan* has two chapters that pertain to police and fire services: the General Plan Public Services and Facilities Element and the General Plan Safety Element. The Public Services and Facilities Element establishes goals and policies for effective service and facilities planning and maintenance. The General Plan Safety Element establishes goals and policies for reducing the potential risk of death, injury, and economic damage from natural and human-caused disasters. As it relates to public services, the General Plan Safety Element has goals and policies related effective emergency response and preparing for and/or preventing fire hazards. Most of the General Plan goals and policies for fire hazard preparation and prevention pertain to wildland fire hazards (County of Los Angeles 2015b). As explained in the Initial Study prepared

for the proposed project (Appendix A, Initial Study and Notice of Preparation), the project site is located in a developed area and is not close to any wildlands that could be subject to wildfire. As such, many of the General Plan goals and policies pertaining to fire hazards are not relevant for this project. The following goals and policies pertaining to emergency response services and public facilities may be applicable to the project (County of Los Angeles 2015b):

Goal S 4: Effective County emergency response management capabilities.

Policy S 4.1: Ensure that residents are protected from the public health consequences of natural or man-made disasters through increased readiness and response capabilities, risk communication, and the dissemination of public information.

Policy S 4.2: Support County emergency providers in reaching their response time goals.

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.

Policy S 4.4: Encourage the improvement of hazard prediction and early warning capabilities.

Policy S 4.5: Ensure that there are adequate resources, such as sheriff and fire services, for emergency response.

Policy S 4.6: Ensure that essential public facilities are maintained during natural disasters, such as flooding.

Policy PS/F 1.1: Discourage development in areas without adequate public services and facilities.

Policy PS/F 1.2: Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.

Policy PS/F 1.3: Ensure coordinated service provision through collaboration between County departments and service providers.

Policy PS/F 1.4: Ensure the adequate maintenance of infrastructure.

Policy PS/F 1.5: Focus infrastructure investment, maintenance and expansion efforts where the General Plan encourages development.

Policy PS/F 1.6: Support multi-faceted public facility expansion efforts, such as substations, mobile units, and satellite offices.

Policy PS/F 1.7: Consider resource preservation in the planning of public facilities.

The Parks and Recreation Element provides objectives, policies, and programs pertaining to parks and recreational facilities. Policies that are potentially relevant to the proposed project are listed in Section 4.13 of this EIR.

Los Angeles Countywide Parks and Recreation Needs Assessment

The Los Angeles Countywide Parks and Recreation Needs Assessment was adopted by the Board of Supervisors on July 5, 2016, and involved an undertaking to engage all communities within Los Angeles County in a collaborative process to gather data and input for future decision making on parks and recreation. Per the Parks Needs Assessment, the project site is located within the City of Carson Study Area, which is identified in the Parks Needs Assessment as an area of high park need. More information on the Parks Needs Assessment can be found in Section 4.13 of this EIR.

4.12.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to public services are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to public services would occur if the project would:

1. 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:
    a. Fire protection.
    b. Police protection.
    c. Schools.
    d. Parks.
    e. Other public facilities.

As discussed in the Initial Study prepared for the proposed project (Appendix A), impacts related to schools, parks, and other public facilities would be less than significant. While potential impacts to parks were covered in the Initial Study, additional detail has been added to the discussion in the EIR in response to comments raised during the public scoping period for this EIR (see Appendix A, which includes the Initial Study and comments received during the scoping period). As such, this EIR evaluates the following thresholds related to fire protection, police protection, and parks:

PUB-1 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:

a. Fire protection?

b. Police protection?

c. Parks?

4.12.4 Impacts Analysis

PUB-1 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:

a. Fire protection?

The proposed project would replace a portion of an existing golf course with sports, recreation, fitness, and wellness facilities. Daily operations of these facilities would entail sports practices; youth events; and use of the recreational, fitness, and restaurant/retail businesses that are proposed. Daily operations are expected to result in additional visitors and employees who are present at the project site. While the existing golf course has employees and visitors, the number of employees and visitors is expected to increase under the proposed project. Additionally, larger events such as athletic tournaments, corporate events, fundraisers, weddings, farmers' markets, and theatrical or concert performances would be hosted periodically at the project site. These events would result in intermittent, temporary increases in visitors to the project site relative to existing conditions and relative to the project's anticipated daily operations.

These proposed increases in activity at the project site could increase the potential for emergencies to occur, some of which may require LACFD response. Increased emergency calls could increase the need for fire services within the project area. For the reasons enumerated below, the proposed increase in activity at the project site would not be expected to result in the need for new or expanded fire protection facilities.

The need for new or expanded public services (such as fire protection facilities) is typically associated with a population increase. The proposed project would not involve construction of new homes. While the proposed project would lead to increased employment on the site, it was determined that the proposed project would

not induce substantial population growth (see Section 4.11, Population and Housing, of this EIR for details). Additionally, the proposed project would be designed and constructed in accordance with all applicable provisions of the fire code, which includes requirements for adequate fire flows, width of emergency access routes, turning radii, automatic sprinkler systems, fire alarms, and floor to sky height limits along emergency access routes. More specifically, the proposed project would include the following fire protection features, which would help protect the on-site facilities from fire hazards (Integral Group 2018):

- The project would include firewater service, which would be connected from the municipal water supply to the project site. A double detector check valve assembly would be installed at the supply water main. Downstream of the check valve, a fire department connection would be provided to allow LACFD to pressurize the building firewater lines.
- The fire main would be sized to provide a maximum pipeline velocity up to 15 feet per second.
- Buildings would be protected by hydraulically calculated automatic wet sprinkler systems. Each floor would be provided with its own sprinkler control valve, flow switch, and drain valve.
- A minimum fire water pressure of 65 pounds per square inch would be available from the water distribution system.
- A Class A, fully automatic, addressable fire alarm system would be installed. The system would include smoke detectors, heat detectors, and notification devices throughout the proposed facilities.

Compliance with fire code standards would be ensured through the plan check process prior to the issuance of building permits and would reduce the potential demand for fire services by decreasing the likelihood and/or severity of a fire emergency at the site. Furthermore, the project site is currently served by six existing fire stations, the closest of which is 1.4 roadway miles northeast of the project site. In the event that the nearest station cannot meet the immediate needs of a call for services independently or does not have capability to address the full extent of a larger incident, the other fire stations within the City or the closest available LACFD resources could respond or provide support. For these reasons, the construction or expansion of existing fire facilities would not be expected to be required as a result of developing the proposed project Additionally, the proposed project would be consistent with or would not hinder implementation of most of the general plan goals and policies pertaining to fire protection services listed in Section 4.12.2, Relevant

Plans, Policies, and Ordinances. Many of these goals and policies are actions or coordination efforts to be undertaken by the County and not by the proposed project applicant. For those goals and policies, the proposed project would not hinder the County's ability to implement its goals and policies pertaining to fire protection. The County General Plan sets forth goals and policies for reaching response time goals and providing adequate service levels. As discussed above, the proposed project would not be anticipated to adversely affect service ratios or response times for fire services such that new or expanded facilities would be required. The County General Plan contains policies encouraging coordination between the LACFD and other divisions within the County, as well as LACFD involvement in the development process. The proposed project would not hinder the County's ability to encourage LACFD coordination and involvement and would comply with all requirements for LACFD plan checks and inspections. As such, the proposed project is either consistent with County General Plan goals and policies pertaining to fire protection coordination or would not hinder implementation of these goals and policies.

As stated above, the proposed project would include fire protection features and would comply with fire code standards. LACFD has indicated that the proposed project would increase service demands on existing LACFD resources, already burdened by incremental growth in the surrounding area (Takeshita, pers. comm. 2019). However, the proposed project would pay any applicable fee imposed by the County for the purpose of fire station construction and equipment. As such, impacts resulting from the proposed project would be **less than significant**.

b. Police protection?

As with fire services, increases in activities, visitors, employees, and events at the project site attributable to the proposed project could increase the frequency of emergency and non-emergency calls to the LASD from the project site, as compared with existing conditions. For example, the proposed project would introduce a retail component to the project site, which would create the potential for crimes such as theft and robbery. The proposed project would also introduce alcohol-serving uses to the project site, which could create an increase in police service calls. Additionally, larger events that may be held at the site (e.g., athletic tournaments, corporate events, fundraisers, weddings, farmers' markets, and theatrical or concert performances) may involve additional police support. Increased calls to the LASD and/or increased need for LASD support at the project site would have the potential to increase the need for police services. However, the proposed increase in activities at the project site would not result in the need for new or expanded police protection facilities, for the reasons described below.

A need for new or expanded public services, such as police facilities, is typically associated with a population increase. The proposed project would not involve construction of new homes. While the proposed project would lead to increased employment on the site, it was determined that the proposed project would not induce substantial population growth (see Section 4.11 of this EIR for details). Furthermore, in coordination with the LASD, the proposed project would incorporate operational practices and design elements to increase on-site safety and to reduce the potential for crime to occur. During construction, the contractor would implement temporary security measures including security fencing, lighting, locked entry, and private security officers. During operation, practices to increase safety could include, but would not be limited to, the following: on-site security services, wayfinding signage, security fences, alarms, and security cameras. Project design would also employ defensible design, lighting, and landscaping, as well as open fencing. These techniques would minimize spaces that are hidden from public view, which would help prevent loitering and crime. Building entries, parking areas, and walkways would be sufficiently lit, which would facilitate safe pedestrian movement and would be used to identify routes between parking areas and the various facilities within the project site. These design practices and operational practices would lessen the demand for police protection services at the project site by reducing the potential for crime to occur and by providing on-site security to address minor issues not requiring immediate LASD involvement. Furthermore, police units are continuously mobile, and service calls are responded to by the nearest available mobile unit. Moreover, the proposed project would not result in or require the construction or expansion of police facilities (Chavez, pers. comm. 2018). Therefore, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered facilities. Additionally, the proposed project would be consistent with or would not hinder implementation of the general plan goals and policies pertaining to police protection services listed in Section 4.12.2. Many of these goals and policies are actions to be taken by the County and not by the proposed project itself. For those goals and policies, the proposed project would not hinder the County's ability to implement its goals and policies pertaining to police protection. The County General Plan sets forth goals and policies for reaching response time goals and providing adequate service levels. As substantiated in this analysis, the proposed project is not anticipated to adversely affect service ratios or response times for police services, such that new or expanded facilities would be required. The County General Plan also contains policies encouraging coordination between the LASD and other divisions within the County, as well as LASD involvement in the development process. The proposed project would not hinder the County's ability to encourage LASD coordination and involvement in the development process. As such,

the proposed project is either consistent with County General Plan goals and policies pertaining to police protection or would not hinder implementation of these goals and policies. For the reasons described above, impacts resulting from the proposed project would be **less than significant**.

c. Parks?

The proposed project would replace the southern and western 87 acres of the existing Victoria Golf Course. As explained in Section 4.12.1, Existing Conditions, the Victoria Golf Course is part of a publicly owned system of golf courses that is owned and operated by the County. Per the County's General Plan Parks and Recreation Element, the existing golf course is considered a special use facility. (Special use facilities are generally single purpose facilities that serve greater regional recreational or cultural needs.) The proposed project would replace a portion of this existing special use facility with sports, recreation, fitness, and wellness facilities. Once constructed, the County would also consider the proposed project a special use facility. Therefore, the proposed project involves replacing an existing special use facility with a new special use facility. Both the existing and proposed special use facility would have recreational opportunities; however, those opportunities would be broadened under the proposed project. The proposed change in the type of special use facility at the project site is not expected to result in substantial, adverse physical impacts due to the need for new or physically altered park facilities in order to maintain acceptable service ratios, for the reasons enumerated below.

The existing special use facility at the project site consists of a portion of a golf course that was constructed in 1966 and renovated in 2001 (Victoria Golf Course). The Victoria Golf Course, as well as the County's other 19 golf courses, offer greens fees that are typically reduced relative to those of private golf courses in the Los Angeles area. At Victoria Golf Course, fees range from approximately $60 (for an adult using a cart on the weekends) to $4.50 (for children on weekday mornings) (Links at Victoria Golf Course 2018). Upon implementation of the proposed project, the project site would continue to provide recreational facilities under the special use facility land use category. Development of the proposed project would increase the diversity of recreational facilities at the project site, relative to existing conditions. Once constructed, the proposed project would provide a multi-use indoor sports complex, an outdoor recreation field illuminated for nighttime recreation, experiential learning facilities, recreation classes, community meeting space, a zipline/adventure course, a community park, a putting green, and a jogging/walking path. The multiuse indoor sports complex would provide a practice and competition venue for local sports groups and community use and

programming and could also serve as a venue for athletic tournaments. The zipline/adventure course would have recreation activities for individuals, school groups, community groups, and other organizations. The community park would be 6.6 acres in size and would include a playground and picnic tables. The community park may also serve as a venue for outdoor movies and farmers' markets.

With or without the proposed project, 19 other County golf courses would continue to be available throughout the County. The closest County golf courses to the project site are Alondra Golf Course, located approximately 3.85 miles northwest of the project site; Chester Washington Golf Course, located approximately 4.5 miles north of the project site; and Lakewood Golf Course, located approximately 6.5 miles east of the project site. Similar to the Victoria Golf Course, the three nearby County golf courses are 18-hole regulation courses (Los Angeles County Golf Club 2010). In addition to these three County courses, the City of Los Angeles' Harbor Park Golf Course is located approximately 4.15 miles south of the project site. This course is a regulation 9-hole facility (City of Los Angeles 2018). There are a variety of public golf courses in the vicinity of the project site that offer fees and facilities similar to those at Victoria Golf Course. Due to the availability of similar golf courses within the vicinity of the project site (4–7 miles away), the proposed project is not expected to result in the deterioration of other golf facilities such that new or expanded public golf course facilities would need to be constructed elsewhere.

The need for new or expanded park facilities is usually caused when the residential population in a park's service area increases to the degree that a new or expanded park is required to meet the community's recreational and parkland needs. The proposed project would not involve construction of new homes, nor would the project result in substantial increases in employment at the project site or within the surrounding area, such that substantial population growth would occur (see Section 4.11 of this EIR for details). As such, the proposed project would not result in a substantial increase in population in the area and would not, therefore, require new or expanded parks to accommodate the needs of new residents.

While the project would result in removal of a portion of the golf course, the proposed project would not remove the land from recreational use. Given the proximity of additional golf facilities to the project site, it is anticipated that the loss of golf course acreage would be accommodated by other golf facilities in the area. The lost golf course acreage would be replaced with other recreational uses, including a golf facility and other passive and active recreational facilities, which would serve a greater segment of the community at large. As such, while the type of recreational resource would change at the site, the proposed project would not

substantially reduce the recreational resources that are available in the City and in the region. Furthermore, because the project involves development of recreational resources (as opposed to residences), it would not generate a new demand for park facilities in the City or region. For these reasons, the proposed project is not expected to result in a substantial deterioration of park facilities in the project area such that new or expanded facilities would be required.

Additionally, the proposed project would be consistent with or would not hinder implementation of the general plan goals and policies pertaining to park facilities listed in Section 4.12.2. Many of these goals and policies are actions or coordination efforts to be undertaken by the County and not by the proposed project itself. For those goals and policies, the proposed project would not hinder the County's abilities to implement their goals and policies pertaining to parks. The County has set forth policies to promote collaboration with other agencies and organizations (including private groups and organizations) to "leverage capital and operational resources" and to "support the development of multi-benefit parks and open spaces through collaborative efforts" (County of Los Angeles 2015b). The proposed project would contribute to implementation of this policy, as it involves collaboration with a private organization to redevelop an underutilized County recreational resource.[1] The proposed project would also support a County policy of providing more lighted playing fields to extend playing time, since it would incorporate an outdoor recreation field with nighttime lighting. The proposed project would also be consistent with County policies that promote consideration of emerging trends in recreation and would also provide additional active and passive recreational resources to the area, as it would replace an underutilized, single-use County recreational facility with a modernized facility that would offer more flexible and diverse recreational opportunities. Consistent with County policy, the project would also improve and update an existing County recreational facility that is currently underutilized. The proposed facilities would also be used for a variety of educational purposes, consistent with County policy to promote the use of County parks and recreational facilities for education, such as classes and after school programs. The proposed project would include a variety of facilities that would offer educational programs, including the youth learning experience facility, the indoor skydiving facility, the marketplace (which would offer fitness and recreation classes), and the clubhouse (which would offer space for community meetings and classes). As described above under PUB-1(b), the proposed project

[1] In recent years, Victoria Golf Course has decreased rounds of play to 47,349, while the average rounds of play at the County's high-performing courses is 92,400. In addition, Victoria Golf Course generated $19,407 for County Department of Parks and Recreation's operating budget in fiscal year 2016/2017, compared with an average of $1,387,930 in revenue generated by the County's high-performing courses.

would incorporate a variety of security measures to minimize on-site security risks. As such, the proposed project is either consistent with general plan goals and policies pertaining to parks or would not hinder implementation of these goals and policies. For the reasons described above, impacts resulting from the proposed project related to parks would be **less than significant**.

4.12.5 Mitigation Measures

Impacts to, police protection services, fire services, and park facilities would be less than significant. No mitigation measures are required.

4.12.6 Level of Significance After Mitigation

Impacts to police protection services, fire services, and park facilities would be **less than significant**, and no mitigation is required.

4.12.7 Cumulative Impacts

A significant adverse cumulative impact would occur in the category of public services if the service demands of the proposed project were to combine with those of related projects, triggering a need for new or physically altered public service facilities, the development of which could cause significant environmental impacts. A significant adverse cumulative impact would also occur if the proposed project were to make a considerable contribution to a cumulatively significant effect that is already occurring (or that is anticipated to occur).

As explained in Section 4.12.1, the project site is served by the LACFD and the LASD. As explained and substantiated in Section 4.12.4, Impacts Analysis, the proposed project alone would not have a significant effect on police protection services or on park facilities (meaning that the proposed project would not cause the need for new or physically altered government facilities in order to maintain acceptable levels of service). However, the related projects listed in Table 3-3 of this EIR would also be served by the LACFD, the LASD, and County and City park facilities in the project area. The Carson Sheriff Station would serve the proposed project area and most of the related projects, which are located within the City and within the unincorporated community of West Carson. The two related projects located in the City of Gardena would be served by the Gardena Police Department. Because multiple fire stations and parks are located within and surrounding the City, a variety of LACFD fire stations and parks would serve the related projects. As identified above, impacts to fire services would be considered less than significant. As described in Table 3-3 Related Projects, several development projects are planned for the surrounding area. Similar to the proposed project, these projects would also require fire services. Therefore, similar to project impacts discussed above, cumulative impacts to fire services would be less than significant.

Upon buildout of the related projects, total increase in residential units within the City would be 1,953 units. As explained in Section 4.12.4, the need for new or expanded public services is typically associated with a population increase. The proposed project would not contribute to the increase in residential units in the City, nor would it induce substantial population growth, as explained and substantiated in Section 4.11 of this EIR. The proposed project would not contribute to the cumulative increase in housing units in the City and would not, therefore, contribute to the associated effects on fire protection services, police protection services, or park facilities. The largest contributor to the cumulative increase in housing units in the City is the District at South Bay project. The District at South Bay EIR includes a robust set of mitigation measures to address the District at South Bay's effects on police protection services, and park facilities, including mitigation requiring space for a police substation within the project. With mitigation in place, no significant impacts would occur, and no cumulatively considerable effects were identified (City of Carson 2018b). In contrast, the proposed project is recreational in nature with a commercial component. While calls for police services may increase relative to existing conditions at the project site, the proposed project would not contribute to the cumulative increases in residential housing within police, fire, and park service areas.

The proposed project would be adjacent to one of the related projects (the Carol Kimmelman Athletic and Academic Campus Project), which is also recreational in nature. In combination, the proposed project and the related Carol Kimmelman Athletic and Academic Campus Project would result in a greater increase in land use intensity and activities in the project area than the proposed project would by itself. However, neither project would involve an increase in residential units. As such, the two projects would not combine to increase the service population of local parks or police services. Additionally, in combination, the two projects would provide an expanded recreational resource for the community that would meet the needs of a greater number and variety of persons in the region than the existing golf course, which is generally limited to use by golfers. While activities and visitors to the area would increase, the proposed project would incorporate numerous design features related to police and fire protection at the site. The proposed project and related projects (including the Carol Kimmelman Athletic and Academic Campus Project) would be required to be developed in accordance with applicable fire codes and emergency access requirements (Section 4.12.4 includes a list with a number of these requirements that apply to the proposed project). Compliance with these requirements would help prevent and/or ameliorate fire emergencies (automatic sprinkler systems and fire alarms) and would help facilitate more expedient emergency response (adequate fire flows, turning radii, width of emergency accesses). Similarly, the proposed project has been designed to improve public safety and alleviate any potential increases in demands for police services that may occur as a result of increasing the land use intensity of the site. As described in Section 4.12.4, temporary security measures would be put in place during construction at the project site. During operation, practices to increase safety could include, but would not be limited to, the following: on-site security services, wayfinding signage,

security fences, alarms, and security cameras. Project design would also employ defensible design, lighting, and landscaping, as well as open fencing. These aspects of the project would lessen the demand for police protection services at the project site.

It is expected that related projects in the City of Carson, the City of Gardena, and in West Carson (including the Carol Kimmelman Athletic and Academic Campus Project) would incorporate similar design elements that would reduce each project's incremental effect on police and fire services by preventing emergencies and facilitating expedient access and response. Regarding park facilities, the proposed project would provide park and recreational facilities and open space that would meet the needs of a greater number and variety of persons in the region than the existing golf course, which is generally limited to use by golfers. Therefore, the project (in combination with the Carol Kimmelman Athletic and Academic Campus Project) would add to the overall variety of available park and recreation space. For the reasons enumerated in Section 4.12.4, the proposed project would not overburden existing park and recreation resources or planned park and recreation resources needed to serve future growth. Furthermore, the LACFD, the LASD, the Gardena Police Department, and the County and City parks and recreation departments evaluate their service needs on an annual basis to keep pace with projected growth. Due to the facilities planning efforts of police, fire, and parks and recreation services and compliance with modern performance standards, cumulative impacts would be **less than significant**.

4.12.8 References

Chavez, E.E. 2018. Los Angeles County Sheriff's Department response times, personnel, patrol zones, and capacity to accommodate the proposed project. Telephone conversation between Captain E. Chavez (Los Angeles County Sheriff's Department Parks Bureau) and Dudek. December 5, 2018, and December 12, 2018.

City of Carson. 2018a. *Existing Conditions Report.* Prepared by Dyett and Bhatia, with Fehr and Peers and Environmental Science Associates. January 2018 (Volume I) and May 2018 (Volume II). Accessed October 29, 2018. https://www.carson2040.com/reports-and-products/.

City of Carson. 2018b. *Final Supplemental Environmental Impact Report – The District at South Bay Specific Plan Project*. SCH No. 2005051059. Prepared by Environmental Science Associates. January 2018.

City of Los Angeles. 2018. "Harbor Park Golf Course." Los Angeles City Golf Webpage. Accessed November 28, 2018. http://golf.lacity.org/course_harbor_park/.

County of Los Angeles. 2012. *Los Angeles County Operational Area Emergency Response Plan*. March 2012. Accessed August 21, 2018. http://file.lacounty.gov/SDSInter/bos/supdocs/69205.pdf.

County of Los Angeles. 2015a. *Final Environmental Impact Report – Los Angeles County General Plan Update.* Prepared by PlaceWorks. March 2015. Accessed August 21, 2018. http://planning.lacounty.gov/generalplan/eir.

County of Los Angeles. 2015b. *Los Angeles County General Plan*. Adopted October 6, 2015. Accessed August 21, 2018. http://planning.lacounty.gov/generalplan/generalplan.

DPR (Los Angeles County Department of Parks and Recreation). 2016a. *Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment.* Accessed July 20, 2018. http://file.lacounty.gov/SDSInter/dpr/243548_FinalReport.pdf.

DPR. 2016b. *Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment – Interactive Maps*. Accessed December 5, 2018. http://lacountyparkneeds.org/interactive-maps-and-data/.

DPR. 2018. "Tee Time" and "New 8-Acre Park to be Built in West Carson." Los Angeles County Parks and Recreation Webpage. Accessed November 29, 2018. http://parks.lacounty.gov.

Integral Group. 2018. "Fire Protection Narrative" and "Electrical Narrative." Prepared August 14, 2018 for Plenitude Holdings.

LASD (Los Angeles County Sheriff's Department). 2013. "LASD Patrol Divisions." Last revised May 7, 2013. Accessed August 21, 2018. http://www.lasd.org/public_data_sharing.html.

LASD. 2018. "Carson Station." Accessed August 21, 2018. http://shq.lasdnews.net/pages/patrolstation.aspx?id=CAS.

Links at Victoria Golf Course. 2018. "Course Rates." The Links at Victoria Golf Course. Accessed November 28, 2018. https://www.linksatvictoria.com/course/course-rates.

Los Angeles County Golf Club. 2010. "Course by Course Description." Los Angeles County Golf Club. Last updated June 15, 2010. Accessed November 28, 2018. http://lacountygolfclub.lagolfclubs.com/clubs/NewHome.cfm/ClubID/30/Section/News/messid/391.

Takeshita, M.Y. 2019. Request for Fire Department Service Information. Letter correspondence between M.Y. Takeshita, Acting Chief, Forestry Division- (Los Angeles County Fire Department – Prevention Services Bureau) and Dudek. April 5, 2019.

4.13 RECREATION

This section describes the existing recreation setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of The Creek at Dominguez Hills project (project or proposed project). The analysis is based on a review of existing resources, and applicable laws, regulations, and guidelines. The information presented in this section was collected from a number of publicly available sources, including the *Los Angeles County General Plan*. Information regarding the County and the City's existing parks, recreational facilities, and open spaces was reviewed, as was information provided by the project applicant regarding recreational components of the proposed project.

4.13.1 Existing Conditions

The approximately 87-acre project site is located in the southwesterly area of the approximately 170-acre Links at Victoria Golf Course (Victoria Golf Course). The project site contains natural turf golf greens, paved internal pathways, areas of natural vegetation, and scattered mature trees. A drainage channel runs through the western portion of the project site.

Los Angeles County is a highly urbanized area with limited opportunities for new park development. The City of Carson and the surrounding communities are among the most lacking in park areas in the County. For instance, the City of Carson has 1.53 park acres per 1,000 residents, which is below the County average of 3.3 acres per 1,000 residents (DPR 2016). The County General Plan identifies a goal of 4 acres of local parkland per 1,000 residents in the unincorporated areas and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County.

Off-site Recreational Opportunities

County Recreational Facilities

Los Angeles County Department of Parks and Recreation (DPR) oversees the development, operation, and maintenance of County parks and recreational facilities (DPR 2018). There are 182 County parks, ranging from the world's largest municipal golf course system to Nature Centers and Wildlife Sanctuaries, to local parks and large regional recreational centers (DPR 2018). The County's park system is comprised of approximately 70,000 acres of land located within cities and unincorporated areas in Los Angeles County (County of Los Angeles 2015). Parks operated by DPR fall within two park systems: the local park system, parks that meet local needs such as community parks, neighborhood parks, and pocket parks, and the regional park system, which meets the needs of residents and visitors throughout Los Angeles County and consists of community regional parks, regional parks, and special use facilities. Other

recreational facilities within the County include multi-benefit parks, school sites, city parks and facilities, private recreational facilities and greenways. The project site is within the South Bay Planning Area, where there are 26 acres of local parkland and 593 acres of regional parkland for a total of 618 acres of parkland (County of Los Angeles 2015). The County's 36-acre Victoria Community Regional Park is located approximately 0.1 miles north of the project site.

DPR operates the largest publicly owned system of golf courses in the nation, including 20 golf courses at 18 different facilities throughout the County at a variety of unique locations (DPR 2018). The project site is currently part of the DPR system of golf courses. Golf courses fall within the regional park system and are categorized as special use facilities, which are generally single purpose facilities with no size criteria or service radius area (County of Los Angeles 2015). The DPR golf courses closest to the project site include Alondra Golf Course, located approximately 3.85 miles northwest of the project site, Chester Washington Golf Course, located approximately 4.5 miles north of the project site, and Lakewood Golf Course, located approximately 6.5 miles east of the project site.

Nearby Recreational Facilities

There are numerous parks and recreational facilities located in proximity to the project site, as listed in Table 4.13-1. These parks and recreational facilities are all within 2.85 miles of the project site. Parks and recreational facilities within a 1-mile radius of the project site are shown in bold in Table 4.13-1.

Table 4.13-1
Nearby Parks and Recreational Facilities

Facility	Address	Approximate Acreage and Facility Description
Anderson Park	19101 Wilmington Ave. Carson, California 90746	8.5-acre facility with two lighted multi-purpose game courts, four lighted tennis courts, Frisbee golf course, picnic areas, play area, a multi-purpose building, wading pool, amphitheater, equipment building, and parking lot.
Calas Park	1000 E 220th St. Ave. Carson, California 90745	8.7-acre facility with two lighted tennis courts, outdoor fitness zone, one lighted multi-purpose game court, one lighted ball diamond, two multi-purpose rooms, play area, par course, picnic area, wading pool, snack bar / restroom building, and parking lot.
Carriage Crest Park	23800 S Figueroa St. Carson, California 90745	5-acre facility with a lighted multi-purpose game court, one lighted ball diamond, a multi-purpose room, play area, picnic area, and parking lot.
Carson Community Center	801 East Carson Street Carson, California 90745	12-acre facility with meeting/craft rooms.
Carson Park and Pool	21411 S. Orrick Ave. Carson, California 90745	10.9-acre facility with two lighted ball diamonds, a swimming pool, play area, two multi-purpose game courts, restroom / snack-bar building, multi-purpose building, picnic area, and two parking lots.

Table 4.13-1
Nearby Parks and Recreational Facilities

Facility	Address	Approximate Acreage and Facility Description
Del Amo Park	703 E Del Amo Blvd. Carson, California 90746	9.5-acre facility with two-lighted basketball courts, two multi-purpose rooms, two lighted ball diamonds, a play area, picnic area, snack-bar building, remote restroom building, and parking lot.
Dolphin Park	21205 S. Water St. Carson, California 90745	11.8-acre facility with two lighted ball diamonds, two multi-purpose rooms, a play area, a wading pool, two lighted tennis courts, one multi-purpose game court, a picnic area, a snack-bar building, and parking lot.
Dominguez Park and Pool	21330 Santa Fe Ave. Carson, California California 90810	9-acre facility with two lighted tennis courts, two lighted multi-purpose game courts, an aquatic center, a multi-purpose room, play area, picnic area, a lighted ball diamond, aquatics center, Frisbee golf, one practice diamond, a snack-bar building, a jogging path, and parking lot.
Friendship Mini-Park	21930 S Water St. Carson, California 90745	0.3-acre facility with a sand play area, play apparatus, park furniture, picnic area and security lighting.
Hemingway Park	700 E Gardena Blvd. Carson, California 90746	13-acre facility with a multi-purpose building, two lighted tennis courts, lighted multi-purpose court, a snack bar/restroom/maintenance building, play area, picnic area, athletic field, one lighted baseball diamond, one practice diamond, security lighting, par course, Frisbee golf, and two parking lots.
Mills Park	1340 E. Dimondale Dr. Carson, California 90746	5-acre facility with two multi-purpose rooms, two play areas, a wading pool, picnic area, Frisbee golf, and parking lot.
Perry Street Mini-Park	215th & Perry St. Carson, California 90745	1.16-acre facility with sand play area, play apparatuses, and park furniture Perry Street Mini-Park was donated to the City from Shell Oil Products Company on October 22, 2005.
Reflections Mini-Park	21208 Shearer St. Carson, California 90745	Less than 0.5-acre facility with park furniture, trees, and drought-tolerant landscaping.
Scott Park and Pool	23410 Catskill Ave. Carson, California 90745	11.2-acre facility with a boxing center, two lighted basketball courts, two lighted ball diamonds, two handball courts, two lighted tennis courts, two multi-purpose rooms, a swimming pool, a children's play area, a snack bar, and a multi-purpose game court.
Stevenson Park/Gym	17400 Lysander Dr. Carson, California 90746	11.7-acre facility with two lighted ball diamonds, two lighted tennis courts, a wading pool, two play areas, a multi-purpose building, two multi-purpose game courts, a snack bar / restroom / maintenance building, picnic areas, and parking lot. Stevenson Park has a separate facility with one gymnasium, community room with kitchen, fitness room, and meeting room.
Veterans Sports Complex and Park	22400 Moneta Dr. Carson, California 90746	12.6-acre facility with two lighted ball diamonds, two multi-purpose rooms, a play area, picnic area, 10,000-sq. ft. skate park, two lighted tennis courts, a snack-bar building, two parking lots, and one amphitheater. The Veterans Sports Complex has group exercise classes, cardio equipment, weights, personal trainers, and nutritional counseling. The facility includes an NBA regulation-size basketball court, racquetball courts, an indoor cycling studio, group exercise room, locker room, and meeting rooms.

Table 4.13-1
Nearby Parks and Recreational Facilities

Facility	Address	Approximate Acreage and Facility Description
Victoria Community Regional Park (County)	419 Martin Luther King Jr. Street. Carson, California 90746	36-acre facility with ball fields, basketball courts, swimming pool, gymnasium, a cricket field, tennis courts, play area, recreation building, and picnic area.
Walnut Mini-Park	440 E. Walnut St. Carson, California 90746	1.5-acre facility with play apparatus, picnic area, and two athletic game courts.

Sources: City of Carson Parks and Recreation n.d.; City of Carson 2004.
Note: Bold typeface indicates recreational facilities within 1 mile of the project site.

In addition to the parks and recreational facilities identified above, there are numerous other municipal parks and recreational facilities in the communities surrounding the project site. For example, the City of Los Angeles' Harbor Park Golf Course is approximately 4.15 miles south of the project site, and there are 20 other private and public golf courses and numerous public parks within a 10-mile radius of the project site.

Existing On-site Recreational Opportunities

As previously discussed, the project site consists of approximately 86-acres of the approximately 170-acre Victoria Golf Course, located at 340 East Martin Luther King Jr. Street in the City of Carson. The Victoria Golf Course is part of the County system of golf courses managed by the DPR. It is a regulation 18-hole golf course with wide fairways that provides "links" style golf for a variety of skill levels. The course was designed by golf course architect William Bell, opened for play in 1966 and was later renovated in 2001. The Victoria Golf Course also features a driving range and a clubhouse, which are not within the boundaries of the project site.

Project Recreational Opportunities

The project proposes to redevelop a portion of the Victoria Golf Course into a sports, recreation, fitness, and wellness destination. The project would provide recreational and wellness opportunities for community members of all ages. For example, the project would include both active and passive recreational opportunities, including open space, park and outdoor play areas, a 2-mile jogging/walking path, outdoor plazas and gathering spaces, a multi-use indoor sports complex, a sports wellness center, a marketplace, a clubhouse, and a recreation and dining center. Table 4.13-2 summarizes the proposed recreational facilities and amenities associated with the project. Figure 3-2, Site Plan, and Figure 3-3, Concept Plan, in Chapter 3, Project Description, of this environmental impact report (EIR) provide a detailed layout of the project components.

Table 4.13-2
Project Recreational Facilities

	Use	Description
Pad 1	Multi-Use Indoor Sports Complex	The centerpiece of the project, this facility would provide a practice and competition venue for local sports groups and community use and programming. It would also serve as host venue for regional and local amateur athletic tournaments. The facility is primarily intended for mid-week team practices (youth and elite), adult leagues, corporate leagues for local and regional businesses, and private training. In addition, certain areas within the complex would be suitable for children's birthdays and general play areas. The complex would include numerous areas for different sports and activities, including basketball, turf fields, batting cages/pitching tunnels, sports performance areas, play areas, café area, and common areas.
Pad 2	Youth Learning Experience	This facility would offer experiential learning activities. In addition, the facility would include a gathering place for parents and guardians, where children can be observed while undertaking various activities. This area would include limited food and beverage offerings.
Pad 3	Indoor Skydiving	This facility would be a state-of-the-art facility that allows participants to experience free-fall conditions in a vertical wind tunnel. The facility would be available for individual users, as well as for educational, social and corporate events. The facility would also be capable of hosting other events, including youth group visits, Boy Scout and Girl Scout outings, fundraising events, birthday parties, and corporate and team building events.
Pad 4	Enhanced Driving Range Experience	This facility would be public golf practice, instruction, recreation and entertainment facility. The facility would provide a social and interactive experience for both golfers and non-golfers, and would be used by individuals and groups, both youth and adults. The facility would also offer the ability to host special events, such as birthday parties and corporate gatherings, and could also host tournaments and fundraisers for educational, community and other charitable organizations. The facility would include a climate-controlled seating and waiting area with 102 hitting bays. From the hitting bays, players would hit balls into an open outdoor area that would be surrounded by netting and support poles designed to contain all golf balls hit on the driving range. The approximately 4.5-acre outdoor driving range area would be surfaced with a high-quality, natural-looking synthetic turf.
Pad 5 & 6	Marketplace	The marketplace would offer multi-tenant usage for a variety of fitness and recreational and related uses, such as yoga, Pilates and spinning. In addition, the Marketplace would include numerous food and beverage options showcasing a variety of cuisines and prepared foods, meats and seafood, produce, and baked goods. The food and beverage outlets would generally consist of an eclectic mix of eateries and food artisans offering fare for consumption within communal dining areas and to take home. The Marketplace would also feature outdoor landscaped areas adjoining the buildings, including outdoor furniture where patrons would be able to eat and gather in a relaxed outdoor environment.
Pad 8	Recreation and Dining	This facility would offer a variety of activities that would include bowling, ping pong, and pool as well as a restaurant area with full food and beverage service. The building would also feature a rooftop deck for functions and events.
Pad 10	Sports Wellness	This facility would include numerous tenants involving a variety of sports-related medical and therapeutic uses intended to achieve health and performance goals for individuals, businesses, sports teams, and other organizations. Uses within this building could include physical therapy, nutrition planning, fitness and wellness training, and health and performance consultations.

Table 4.13-2
Project Recreational Facilities

	Use	Description
Pad 12	Zipline/Adventure Course	This outdoor area would offer recreation activities and high-impact team building and leadership development experiences for individuals, schools, community groups, organizations and businesses. This area would include a zipline traversing a portion of the project site, as well as a ropes course with high and low elements.
Pad 13	Community Park	The 6.6-acre Community Park would feature open space and would be centrally located within the project site. The park would be situated at the egress point of the pedestrian thoroughfare for Marketplace, Restaurants and Sports Wellness facilities and would be designed to accommodate numerous uses and facilities, including playground areas for children, picnic areas with tables, and team building events. Programming for outdoor community-based events, such as "Movie in the Park" and farmers' markets, could be accommodated within the Community Park, which would also include an amphitheater suitable for theatrical or concert performances.
Pad 14	Putting Green	The Putting Green would be an outdoor natural grass surface located adjacent to and operated by the Enhanced Driving Range Experience. The Putting Green would offer several adjustable hole locations for serious practice, casual recreation and entertainment.
Pad 15	Jogging/Walking Path	An approximately 2-mile-long jogging/walking path would extend from the entrance to the project site near Avalon Boulevard and Turmont Street and wind through landscaped areas to the northwesterly portion of the project site.

4.13.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal regulations related to the provision of recreational facilities that are applicable to the project.

State

Quimby Act

California Government Code Section 66477, Subdivision Map Act, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The required dedication and/or fee are based upon the residential density, parkland cost, and other factors. Land dedication and fees collected pursuant to the Quimby Act may be used for acquisition, improvement, and expansion of park, playground, and recreational facilities or the development of public school grounds.

The Quimby Act only applies to development of residential subdivisions, and thus the project would not be subject to the act. However, it has been included for purposes of clarifying that

some of the cumulative projects identified in Chapter 3 would be subject to the act, which would contribute to the available land and funding for additional park land.

California Public Park Preservation Act

The primary instrument for protecting and preserving parkland is California's Public Park Preservation Act of 1971, California Public Resources Code Sections 5400 through 5409. Under the act, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation, land, or both, are provided to replace the parkland acquired.

The act only applies when a public agency both acquires real property that is in use as a public park, and the public agency uses the property for non-park purposes. In this case, no public agency is acquiring the park. Therefore, the act does not apply. In addition, the land would continue to be used for park purposes.

Local

The following local/regional regulations pertaining to recreation would apply to the proposed project.

Los Angeles County General Plan

The *Los Angeles County General Plan* was adopted by the Board of Supervisors on October 6, 2015. The Parks and Recreation Element of the General Plan provides objectives, policies, and programs regarding recreational facilities. The following policies may be applicable to the project (County of Los Angeles 2015):

> **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 1.3:** Consider emerging trends in parks and recreation when planning for new parks and recreation programs.
>
> **Policy P/R 1.5:** Ensure that County parks and recreational facilities are clean, safe, inviting, usable and accessible.
>
> **Policy P/R 1.6:** Improve existing parks with needed amenities and address deficiencies identified through the park facility inventories.
>
> **Policy P/R 1.7:** Ensure adequate staffing, funding, and other resources to maintain satisfactory service levels at all County parks and recreational facilities.

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 1.9: Offer more lighted playing fields using energy efficient light fixtures to extend playing time, where appropriate (e.g., not in areas adjacent to open space or natural areas that can be impacted by spillover lighting).

Policy P/R 1.10: Ensure a balance of passive and recreational activities in the development of new park facilities.

Policy P/R 1.11: Provide access to parks by creating pedestrian and bicycle-friendly paths and signage regarding park locations and distances.

Policy P/R 2.2: Establish new revenue generating mechanisms to leverage County resources to enhance existing recreational facilities and programs.

Policy P/R 2.3: Build multi-agency collaborations with schools, libraries, non-profit, private, and other public organizations to leverage capital and operational 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.

Policy P/R 2.7: Increase communication and partnerships with local law enforcement, neighborhood watch groups, and public agencies to improve safety in parks.

Policy P/R 3.1: Acquire and develop local and regional parkland to meet the following County goals: 4 acres of local parkland per 1,000 residents in the unincorporated areas and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County.

Policy P/R 3.3: Provide additional parks in communities with insufficient local parkland as identified through the gap analysis.

Policy P/R 3.4: Expand the supply of regional parks by acquiring land that would: 1) provide a buffer from potential threats that would diminish the quality of the recreational experience; 2) protect watersheds; and 3) offer linkages that enhance wildlife movements and biodiversity.

Policy P/R 3.5: Collaborate with other public, non-profit, and private organizations to acquire land for parks.

Policy P/R 3.8: Site new parks near schools, libraries, senior centers and other community facilities where possible.

Policy P/R 4.1: Create multi-use trails to accommodate all users.

Policy P/R 4.2: Develop staging areas and trail heads at strategic locations to accommodate multi-use trail users.

Policy P/R 4.4: Maintain and design multi-purpose trails in ways that minimize circulation conflicts among trail users.

Policy P/R 4.6: Create new multi-use trails that link community destinations including parks, schools and libraries.

Policy P/R 5.1: Preserve historic resources on County park properties, including buildings, collections, landscapes, bridges, and other physical features.

Policy P/R 5.3: Protect and conserve natural resources on County park properties, including natural areas, sanctuaries, and open space preserves.

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.

Policy P/R 5.7: Integrate a range of cultural arts programs into existing activities, and partner with multicultural vendors and organizations.

Policy P/R 6.1: Support the use of recycled water for landscape irrigation in County parks.

Policy P/R 6.2: Support the use of alternative sources of energy, such as wind and solar sources to reduce the use of energy at existing parks.

Policy P/R 6.4: Ensure that new buildings on County park properties are environmentally sustainable by reducing carbon footprints, and conserving water and energy.

Policy P/R 6.5: Ensure the routine maintenance and operations of County parks and recreational facilities to optimize water and energy conservation.

County of Los Angeles Park Design Guidelines and Standards

The Park Design Guidelines and Standards was created by the DPR. The guidelines aim to create a common approach to the design of the countywide park system. A variety of areas concerning park development and design are addressed to provide guidance to design professionals and field agency staff as well as guide the implementation of sustainable practices. These guidelines are an effort to ensure the highest quality design standards while also promoting environmental stewardship.

Los Angeles Countywide Parks and Recreation Needs Assessment

Adopted by the Board of Supervisors on July 5, 2016, the Parks Needs Assessment was a historic and significant undertaking to engage all communities within Los Angeles County in a collaborative process to gather data and input for future decision-making on parks and recreation. The primary goal of the Parks Needs Assessment was to quantify the magnitude of need for parks and recreational facilities, and determine the potential costs of meeting that need. This goal has been accomplished, as evidenced by the final report, which uses a transparent, best-practices approach to evaluate park and recreation needs, and is the product of an engagement process that involved the public, cities, unincorporated communities, community-based organizations, and other stakeholders. Specifically, the Parks Needs Assessment (DPR 2016):

- Uses a set of metrics to measure and document park needs for each study area;
- Establishes a framework to determine the overall level of park need for each study area;
- Offers a list of priority park projects for each study area;
- Details estimated costs for the priority park projects by study area;
- Builds a constituency of support and understanding of the park and recreational needs and opportunities; and
- Informs future decision-making regarding planning and funding for parks and recreation.

Per the Parks Needs Assessment, the project site is located within the City of Carson Study Area, which is an area of high park need.

4.13.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to recreation are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to recreation would occur if the project would:

1. 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.

2. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

As discussed in the Initial Study prepared for the proposed project (Appendix A), the project would result in less than significant impacts related to 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 such, this section of the EIR only evaluates the following threshold related to recreation facilities:

REC-1 Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

4.13.4 Impacts Analysis

REC-1 Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The proposed project involves the redevelopment of a portion of the Victoria Golf Course into a sports, recreation, fitness, and wellness destination. While the project would not require the construction or expansion of additional off-site recreational facilities, the proposed project would involve the addition of recreational facilities and amenities to the project site, which could result in an adverse physical effect to the environment. The proposed project would not include new residences that would generate an increase in the local population resulting in the need to develop new parks; therefore, the analysis includes a qualitative discussion of the adequacy of parks and recreation as it pertains to the project. The potential for project-related impacts to the environment during both construction and operation have been evaluated in this EIR.

Construction

Construction activities related to the proposed project would involve introducing heavy machinery to the project site for grading, excavation and development of recreational facilities and amenities. Impacts associated with project construction would be temporary and short in duration, as the project is proposed to be constructed over an approximate period of 18 months. Staging of construction equipment and construction activities would be implemented according to County regulations. Any off-site improvements or staging of equipment off site would be required to comply with applicable City regulations. As discussed in each respective section of this EIR, construction of the project would have no impact or less than significant impacts on Aesthetics, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use, Population and Housing, Public

Services, Transportation, Tribal Cultural Resources, and Utilities and Service Systems. Mitigation measures have been identified as necessary to reduce impacts to below a level of significance.

Project construction would result in a significant and unavoidable impacts to Air Quality and Noise. As discussed in Section 4.2, Air Quality, the project would exceed the South Coast Air Quality Management District's (SCAQMD's) daily construction emissions threshold for volatile organic compounds and oxides of nitrogen (NO_x). Implementation of **MM-AQ-1, MM-AQ-2,** and **MM-AQ-3** would reduce emissions of volatile organic compounds below the SCAQMD threshold, but NO_x and CO emissions would continue to exceed the SCAQMD daily threshold after mitigation. Construction-generated emissions would be temporary and would not represent a long-term source of criteria air pollutant emissions. However, because the SCAQMD thresholds would be exceeded, impacts to air quality as a result of project construction would be **significant and unavoidable.** As discussed in Section 4.10, Noise, project construction would exceed the County's construction noise significance threshold of 60 dBA during the day at residential properties; if construction were to occur at night, the anticipated noise levels would even further exceed the nighttime limit of 50 dBA (County of Los Angeles 1978). A sound barrier along the Avalon Boulevard frontage (prescribed in **MM-NOI-1**) would address construction noise sources for everything except pile driving, which includes noise generating components well above the elevation of any feasible noise barrier. Therefore, even with the implementation of mitigation measures **MM-NOI-1**, **MM-NOI-2**, and **MM-NOI-3**, temporary noise impacts from construction activities would be **significant and unavoidable.**

Operation

The proposed project would include both active and passive recreational components on an approximately 87-acre site in the southwestern portion of the existing golf course. The project would include approximately 509,500 square feet of buildings. As described in Table 4.13-2, Project Recreational Facilities, recreational facilities and amenities would include a multi-use indoor sports complex, a youth learning experience building, indoor skydiving, an enhanced driving range, a multi-tenant fitness, recreation and dining marketplace, and a sports wellness center. In addition, the project would include open space and outdoor recreational facilities and amenities including a zipline, ropes course, play areas, picnic areas, a putting green, a 2-mile-long jogging/walking path, a 6.6-acre community park, and landscaping that would enhance and rehabilitate natural areas. The overall effect would be to create a recreation destination in a park-like setting. Project design features have been incorporated to avoid, reduce or offset potential impacts. A Low Impact Development (LID) Plan, which aims to minimize land disturbance, minimize impervious areas, and protect and restore natural areas, has been developed for the

project.[1] Further, the project would pursue a sustainability strategy that would incorporate LEED certification for select buildings.[2] The project would pursue LEED Gold for Buildings 1 and 7, and LEED Silver for the remainder of the buildings. The LEED framework would ensure water conservation, the use of sustainable materials, construction best practices, and promote health and well-being. The use of recycled water would also be integral to the project's operational sustainability measures. Additionally, the protection of the Dominguez Branch Channel and Dominguez Channel would also be prioritized. On-site riparian habitat surrounding the Dominguez Branch Channel would be preserved and enhanced with additional plantings that thrive in the Southern California climate. These project design features would align the project with the County's sustainability goals, as well as ensure sustainable energy and water use while promoting community health.

As discussed in Table 4.13-3, the project would be consistent with applicable policies from the County General Plan Parks and Recreation Element.

Table 4.13-3
Project Consistency with Applicable Parks and Recreation Policies

Policy/Goal	Discussion	Consistency
County General Plan Parks and Recreation Element		
P/R 1.2 Provide additional active and passive recreation opportunities based on a community's setting, and recreational needs and preferences.	The project would provide additional active and passive recreation opportunities that are otherwise unavailable in the surrounding area. The existing golf course has been underutilized for many years,[1] and the proposed project would provide a wider variety of recreation opportunities that would better meet the community's needs.	Consistent
P/R 1.3: Consider emerging trends in parks and recreation when planning for new parks and recreation programs.	The project would be in line with emerging trends in parks and recreation by providing a variety of state-of-the-art facilities and many options for recreation. For instance, the multi-tenant marketplace would provide the opportunity for an evolving variety of tenants, and the multi-use indoor sports complex would have a flexible arrangement to accommodate different sports and activities. In addition to the many forward-thinking facilities proposed, the project also would include the more traditional aspects of parks and recreation, such as open space, a jogging/walking path, and athletic fields.	Consistent
P/R 1.5: Ensure that County parks and recreational facilities are clean, safe, inviting, usable and accessible.	Maintenance of the project site would be the responsibility of a third-party contractor hired by Plenitude. The contractor would hold responsibility for maintaining clean, safe, inviting, usable, and accessible facilities. Additionally, certain project elements would operate during daytime and nighttime hours. Project design would also employ defensible design, lighting, and landscaping, as well as open fencing. These techniques would minimize spaces that are hidden from public view, which would	Consistent

1 Low Impact Development Plan prepared by Tait and Associates Inc.
2 100% Schematic Design Sustainability Narrative prepared by Integral Group Inc.

Table 4.13-3
Project Consistency with Applicable Parks and Recreation Policies

Policy/Goal	Discussion	Consistency
	help prevent loitering and crime. The project would include many outdoor plazas that would operate as inviting gathering spaces for recreationists. Additionally, the project would include parking that is compliant with the Americans with Disabilities Act in project parking lots, increasing accessibility.	
P/R 1.6: Improve existing parks with needed amenities and address deficiencies identified through the park facility inventories.	The project would be an improvement from the existing underutilized golf course.[1] The project would provide additional recreational opportunities along with amenities and ancillary support facilities. According to the Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment, park pressure is high at 13 regional parks in the County, as they offer fewer than 3.3 acres per 1,000 people (DPR 2016).	Consistent
P/R 1.7: Ensure adequate staffing, funding, and other resources to maintain satisfactory service levels at all County parks and recreational facilities.	The project would include a variety of recreational facilities, each of which would be separately staffed. Based on project-specific information provided by the Plenitude, total employment is estimated to be approximately 509 employees (Plenitude 2018).	Consistent
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.	The project would offer a balance of passive and active recreation opportunities through the efficient use of space and the addition of new amenities. Passive recreation opportunities would include open space, play areas, a jogging/walking path, and many plazas and gathering spaces throughout the project site. Active recreation opportunities would include an enhanced driving range experience and putting green, a zipline and ropes course, athletic field, the multi-use indoor sports complex, and more. The multi-tenant marketplace would also fulfill additional active recreation opportunities through fitness studios such as yoga, Pilates, and spinning.	Consistent
P/R 1.9: Offer more lighted playing fields using energy efficient light fixtures to extend playing time, where appropriate (e.g., not in areas adjacent to open space or natural areas that can be impacted by spillover lighting).	The project would include a lighted athletic field. The field would be located on the west side of the project site, away from residential areas or other land uses that can be impacted by spillover lighting. The field would be illuminated for nighttime play by approximately 10 poles with lighting fixtures. The poles would be up to approximately 60 to 80 feet in height, and each lighting fixture would be individually aimed to optimize light on the field of play while at the same time minimizing light spill and glare. The project would utilize energy efficient light fixtures throughout the project site.	Consistent
P/R 1.10: Ensure a balance of passive and recreational activities in the development of new park facilities.	As previously discussed in P/R 1.8, the project would offer a balance of passive and active recreation opportunities.	Consistent
P/R 1.11: Provide access to parks by creating pedestrian and bicycle-friendly paths and signage regarding park locations and distances.	The project site would be accessible via bike routes, sidewalks and a 2-mile-long internal jogging/walking path. The project site would have bicycle facilities available, such as multiple locations with safe and convenient bicycle parking, wide paths that allow biking, and bike routes on internal roads. There would be a 1-mile bicycle loop within the project site, with 0.5 miles on the non-vehicular Creek Promenade and 0.5 miles on	Consistent

Table 4.13-3
Project Consistency with Applicable Parks and Recreation Policies

Policy/Goal	Discussion	Consistency
	the shared vehicular road through the western portion of the park. Plenitude proposes to prepare and submit a Master Sign Program to the County for approval, which would include on-site outdoor media intended to create a sense of place and to enhance peoples' experiences when navigating their way to and through the project site. In addition, typical of any large, multi-use development, project identification signs, tenant signs, and entry monument signs would be provided along adjacent streets, and various tenant identification and other signs would be located within the project site.	
P/R 2.2: Establish new revenue generating mechanisms to leverage County resources to enhance existing recreational facilities and programs.	The project would include a commercial component that would generate revenue through private vendors and occupants of the facilities. Revenue would support and enhance the recreational facilities and programs on site.	Consistent
P/R 2.3: Build multi-agency collaborations with schools, libraries, non-profit, private, and other public organizations to leverage capital and operational resources.	The project is a collaboration between the County and the private land lessee, Plenitude. Plenitude currently leases the land from the County, and together with the County have agreed to reposition the project site as a recreational amenity for the region. This collaboration allows for the leveraging of capital and operational resources.	Consistent
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.	The project would convert the existing golf course into a multi-benefit public park with new recreational facilities, youth educational opportunities, natural habitat, and water quality improvement features. The project would prioritize sustainability and the preservation and enhancement of on-site riparian habitat areas near the Dominguez Branch Channel that passes through the site.	Consistent
P/R 2.7: Increase communication and partnerships with local law enforcement, neighborhood watch groups, and public agencies to improve safety in parks.	Project design would employ defensible design, lighting, and landscaping, as well as open fencing. These techniques would minimize spaces that are hidden from public view, which would help prevent loitering and crime. Building entries, parking areas, and walkways would be sufficiently lit, which would facilitate safe pedestrian movement and would be used to identify routes between parking areas and the various facilities within the project site. These design practices and operational practices would lessen the demand for police protection services at the project site by reducing the potential for crime to occur. Additionally, on-site security would be provided to address minor issues that would not require immediate involvement of the police.	Consistent
P/R 3.1: Acquire and develop local and regional parkland to meet the following County goals: 4 acres of local parkland per 1,000 residents in the unincorporated areas and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County.	According to the Los Angeles County Park Needs Assessment, regional recreation parks occupy a total of 18,248 acres of land and provide 1.81 acres of park land per 1,000 people Countywide (DPR 2016). This is far below the goal of 6 acres of regional parkland per 1,000 residents. Further, the City of Carson has 1.53 total park acres per 1,000 residents, which is also below the County average of 3.3 total park acres per 1,000 residents (DPR 2016). By repositioning the project site as a	Consistent

Table 4.13-3
Project Consistency with Applicable Parks and Recreation Policies

Policy/Goal	Discussion	Consistency
	public park with additional recreational facilities, the park would appeal to a wider population than its current use as a golf course, thereby resulting in an increase in publicly accessible regional park land.	
P/R 3.3: Provide additional parks in communities with insufficient local parkland as identified through the gap analysis.	Los Angeles County is a highly urbanized area with a lack of opportunities for new park development. As identified in the Los Angeles County Park Needs Assessment, the City of Carson has 1.53 park acres per 1,000 residents, which is below the County average of 3.3 acres per 1,000 residents (DPR 2016). The proposed project would create recreational opportunities that are available to a wider variety of residents than its current use as a golf course. By including a jogging/walking path, bicycle facilities, and other components that encourage a healthy lifestyle, as well as ancillary uses such as food services, the proposed project would serve as an amenity to the surrounding communities and the region.	Consistent
P/R 3.4: Expand the supply of regional parks by acquiring land that would: 1) provide a buffer from potential threats that would diminish the quality of the recreational experience; 2) protect watersheds; and 3) offer linkages that enhance wildlife movements and biodiversity.	The project would include on-site water management and watershed protection for the Dominguez Branch Channel and Dominguez Channel. The project would preserve and enhance the on-site riparian habitat near the Dominguez Branch Channel, which bisects the project site. By restoring this riparian habitat, the project would also help to create enhanced habitat and linkages for wildlife movements and biodiversity within the urban setting.	Consistent
P/R 3.5: Collaborate with other public, non-profit, and private organizations to acquire land for parks.	The project is a collaborative effort between the private lessee, Plenitude, and the County. Plenitude currently leases the project site from the County for the underutilized golf course,[1] and has worked with the County to propose new recreational opportunities for the site.	Consistent
P/R 3.8: Site new parks near schools, libraries, senior centers and other community facilities where possible.	The project site is located within 0.32 miles of Towne Avenue Elementary School and within 0.36 miles of Leapwood Avenue Elementary School. However, the northern entrance to the project site will be at Martin Luther King, Jr. Street, directly across from Victoria Park (public park), and a jogging/walking path will extend north of the project site and connect to Martin Luther King, Jr. Street. Both of these locations are less than 0.25 miles from Towne Avenue Elementary School. It is also located within 1 mile of the StubHub Center and California State University, Dominguez Hills. Further, the Carson Community Center is located approximately 1 mile south of the project site.	Consistent
P/R 4.1: Create multi-use trails to accommodate all users.	The project would include a 2-mile-long jogging/walking path, as well as numerous walkways, plazas, and gathering spaces. The project would also include bike routes and wide paths that allow cycling.	Consistent
P/R 4.2: Develop staging areas and trail heads at strategic locations to accommodate multi-use trail users.	The project would include an internal 2-mile-long jogging/walking path that would wind through the landscaped property. There would be multiple plazas and gathering spaces	Consistent

Table 4.13-3
Project Consistency with Applicable Parks and Recreation Policies

Policy/Goal	Discussion	Consistency
	through the site that could serve as staging areas. Additionally, the project would include wide paths that allow cycling.	
P/R 4.4: Maintain and design multi-purpose trails in ways that minimize circulation conflicts among trail users.	As discussed P/R 4.2, the project would include both separated and shared pathways to minimize circulation conflicts among users.	Consistent
P/R 4.6: Create new multi-use trails that link community destinations including parks, schools and libraries.	As discussed in P/R 4.2, provide a system of paths and trails through the project site that link community destinations.	Consistent
P/R 5.3: Protect and conserve natural resources on County park properties, including natural areas, sanctuaries, and open space preserves.	The project would preserve and enhance the Dominguez Branch Channel that passes through the project site, as well as the associated riparian habitat. Additional measures to beautify the area around the Dominguez Branch Channel would be implemented, such as enhancing the riparian habitat with additional plantings that are native to Southern California, creating a woodland play area, and adding paths and walkways.	Consistent
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.	The project would include a youth learning experience building that would offer experiential learning activities in which children and teens acquire knowledge through a hands-on "discovery" experience. The preserved and enhanced natural habitat areas could serve as opportunities to improve community understanding of and appreciation for natural areas, including watersheds.	Consistent
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.	As discussed in P/R 5.5, the project would include a youth learning experience building.	Consistent
P/R 5.7: Integrate a range of cultural arts programs into existing activities, and partner with multicultural vendors and organizations.	The project would include a variety of vendors and programs available to the public, many of which could include multicultural vendors and organizations.	Consistent
P/R 6.1: Support the use of recycled water for landscape irrigation in County parks.	The use of recycled water on site would be integral to the project's operational sustainability measures.	Consistent
P/R 6.2: Support the use of alternative sources of energy, such as wind and solar sources to reduce the use of energy at existing parks.	A Low Impact Development (LID) Plan that aims to minimize land disturbance, minimize impervious areas, and protect and restore natural areas has been developed for the project.[3] Further, the project would pursue a sustainability strategy that would incorporate LEED certification for select buildings.[2] The project would aim to achieve LEED Gold for Buildings 1 and 7, and LEED Silver for the remainder of the buildings (Plenitude 2018). The LEED framework would ensure water conservation, the use of sustainable materials, construction best practices, and promote health and well-being. Additionally, the use of recycled water would be integral to the project's operational sustainability measures. The protection of the Dominguez Branch Channel and Dominguez Channel would also be	Consistent

Table 4.13-3
Project Consistency with Applicable Parks and Recreation Policies

Policy/Goal	Discussion	Consistency
	prioritized through prevention of runoff or sedimentation, management of invasive plants, and preserving the surrounding vegetation and established trees where feasible. This strategy would promote environmentally sensitive and sustainable design, align the project with the County's sustainability goals, and ensure efficient energy and water use while promoting community health.	
P/R 6.4: Ensure that new buildings on County park properties are environmentally sustainable by reducing carbon footprints, and conserving water and energy.	As discussed in P/R 6.2, a LID Plan was developed for the project, and the project would aim to achieve LEED certification for select buildings. The LID Plan aims to minimize land disturbance, minimize impervious areas, and protect and restore natural areas. The LEED framework would ensure water conservation, the use of sustainable materials, construction best practices, and promote health and well-being.	Consistent
P/R 6.5: Ensure the routine maintenance and operations of County parks and recreational facilities to optimize water and energy conservation.	The project would undergo routine maintenance to ensure the project site is operating efficiently and optimize water and energy conservation. Further, as previously discussed, the project would aim to achieve LEED certification for select buildings, which would also optimize water and energy conservation.[2, 3]	Consistent

Notes: I- =Interstate; LEED = Leadership in Energy and Environmental Design.

1 In recent years, Victoria Golf Course has decreased rounds of play to 47,349, while the average rounds of play at the County's high-performing courses is 92,400. In addition, Victoria Golf Course generated $19,407 for County Department of Parks and Recreation's operating budget in Fiscal Year 2016/2017 compared with an average of $1,387,930 revenue generated by the County's high performing courses

2 100% Schematic Design Sustainability Narrative prepared by Integral Group Inc.

3 Low Impact Development Plan prepared by Tait and Associates Inc.

The respective analyses in this EIR determined that the proposed project would have no operational impacts or less than significant operational impacts to Aesthetics, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use, Noise, Population and Housing, Public Services, Tribal Cultural Resources, Utilities and Services Systems and Energy. Mitigation measures have been proposed in order to reduce impacts below a level of significance for Aesthetics, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Noise, and Tribal Cultural Resources. However, the project would result in significant and unavoidable operational impacts related to Air Quality, and Transportation. An analysis of each of these resource areas can be found in Sections 4.2 and 4.14 of this EIR, respectively.

As discussed in Section 4.2, Air Quality, operation of the project would generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicle trips from employees and patrons; area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment; and energy sources, including electricity and natural gas. Operation of the project would exceed the SCAQMD threshold for

NO_x emissions. The majority of NO_x emissions would result from mobile sources, specifically vehicle travel to and from the project site from employees, patrons, and delivery trucks. Due to the size and type of the project, it is not feasible to implement mitigation measures to reduce the mobile source emissions. Based on the analysis in Section 4.2, because the project would continue to exceed the SCAQMD threshold for NO_x after mitigation is incorporated, the project would potentially result in health effects related to O_3, NO_2, and CO. Therefore, impacts during operation of the proposed project would be **significant and unavoidable**.

The proposed project would also result in operational impacts related to Transportation. As discussed in Section 4.14, the project would have an adverse impact on various study intersections, roadway segments, turn lanes, and freeway ramps, based on the County's methodology for assessing transportation- and traffic-related impacts. Mitigation has been proposed to reduce the level of significance; however, many of the mitigation measures would require off-site improvements that are not under the jurisdiction of the County. The County cannot impose mitigation outside of its jurisdiction; therefore, impacts would remain **significant and unavoidable** until the mitigation measures are approved and implemented by the other affected jurisdictions. Physical improvements requiring implementation by another public agency will be monitored by County Public Works and implemented to the extent feasible. If the physical improvements are deemed infeasible by the other public agency, cannot be implemented, or implementation is delayed, a significant impact would remain until the improvement is implemented.

Despite the significant and unavoidable impacts related to Air Quality, Noise, and Transportation, the project would represent an increase in the available recreation resources, as it represents an improvement to, and expansion of, the existing capacity of recreational facilities. Additionally, the project would appeal to more residents than the existing golf course by providing a greater variety of recreational opportunities.

With implementation of the mitigation measures described in this EIR, and adherence to applicable regulations, impacts would be reduced below a level of significance for the majority of resource areas. However, as previously discussed, the project would have remaining significant and unavoidable impacts. Therefore, as the project involves the construction of recreational facilities which would have adverse physical impacts on the environment related to Air Quality, Noise, and Transportation, the project would result in **significant and unavoidable** impacts.

4.13.5 Mitigation Measures

The following mitigation measures have been identified in this EIR. Please see each respective EIR section for further details.

- Aesthetics: **MM-AES-1**
- Air Quality: **MM-AQ-1, MM-AQ-2, MM-AQ-3, MM-AQ-4, MM-AQ-5**
- Biological Resources: **MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4**
- Cultural Resources: **MM-CUL-1, MM-CUL-2**
- Geography and Soils: **MM-GEO-1, MM-GEO-2**
- Hazards and Hazardous Materials: **MM-HAZ-1, MM-HAZ-2, MM-HAZ-3, MM-HAZ-4**
- Noise: **MM-NOI-1, MM-NOI-2, MM-NOI-3**
- Transportation: **MM-TRAF-1** through **MM-TRAF-20**
- Tribal Cultural Resources: **MM-TCR-1**

4.13.6 Level of Significance After Mitigation

With implementation of the mitigation measures described in this EIR, and adherence to applicable regulations, impacts associated with Aesthetics, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, and Tribal Cultural Resources would be reduced to below a level of significance. However, impacts related to Air Quality, Noise, and Transportation would remain **significant and unavoidable**.

4.13.7 Cumulative Impacts

The geographic context for cumulative impacts to recreational facilities is the City of Carson. Cumulative projects within the City of Carson could result in significant cumulative impacts if they would, in combination, result in the deterioration of parks and recreational facilities due to increased use or necessitate the construction of new parks or recreational facilities that could have an adverse physical impact on the environment. A list of cumulative projects is included in Table 3-3, Related Projects, of this EIR. Only residential projects would have the potential to increase the demand for recreational facilities, due to their inevitability to induce growth. As discussed in Section 4.11, Population and Housing, the proposed project would not lead to substantial population growth in the area. Thus, recreational facilities within the City of Carson would not experience a significant increase in visitors as a result of the proposed project. Further, the potential deterioration that would occur to parks and recreational facilities from local population growth would be partially offset by in-lieu fees for parks or donation of parkland pursuant to the Quimby Act (as established in the City's Municipal Code Section 9207.19).

Donation of parkland or payment of the park fee would ensure that the City of Carson's established park land and recreational facility standards are met with respect to the additional needs created by individual developments. The majority of cumulative projects would also be required to demonstrate compliance with CEQA prior to project approval, which would help ensure that potential environmental impacts are adequately addressed at the project level.

However, as discussed in Section 4.13.4, Impacts Analysis, the proposed project would result in significant and unavoidable construction impacts to Air Quality and Noise, and significant and unavoidable operational impacts to Air Quality, and Transportation. Since the proposed project entails the construction of recreational facilities that would have significant and unavoidable impacts, the proposed project would contribute to cumulatively considerable impacts.

4.13.8 References

City of Carson Parks and Recreation. n.d. Parks in the City. Accessed August, 28, 2018. http://ci.carson.ca.us/CommunityServices/Parks_Rec_Parks.aspx.

City of Carson. 2004. *General Plan.* Accessed August 28, 2018. http://ci.carson.ca.us/content/files/pdfs/planning/generalplan/Chapter%209_Parks%20and%20Recreation.pdf.

County of Los Angeles. 1978. County of Los Angeles Code of Ordinances, Title 12, Chapter 12.08, Part 4: Specific Noise Restrictions, Section 12.08.440, Construction Noise. Accessed December 2018. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=LOS_ANGELES_CO_CODE.

County of Los Angeles. 2015. *Los Angeles County General Plan*. Adopted October 6, 2015. Accessed August 21, 2018. http://planning.lacounty.gov/generalplan/generalplan.

DPR (Los Angeles County Department of Parks and Recreation). 2016. *Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment.* Accessed July 20, 2018. http://file.lacounty.gov/SDSInter/dpr/243548_FinalReport.pdf

DPR. 2018. Los Angeles County Parks and Recreation. Accessed August 29, 2018. http://parks.lacounty.gov.

Plenitude (Plenitude Holdings LLC.). 2018. The Creek at Dominguez Hills EIR – Sustainability Strategy. October 12, 2018.

INTENTIONALLY LEFT BLANK

4.14 TRANSPORTATION

This section describes the existing traffic/circulation setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of The Creek at Dominguez Hills project (project or proposed project).

The project site encompasses approximately 87 acres of the southwestern portion of the existing The Links at Victoria Golf Course (Victoria Golf Course). The project site is generally northwest of the intersection of Del Amo Boulevard/Avalon Boulevard, northeast of the Dominguez Channel, and east of the junction of Interstate 405 (I-405) and Interstate 110 (I-110). This section is based on the *Traffic Impact Analysis for The Creek at Dominguez Hills* (TIA) and the *Parking Study* prepared by LSA (Appendix J of this environmental impact report (EIR)).

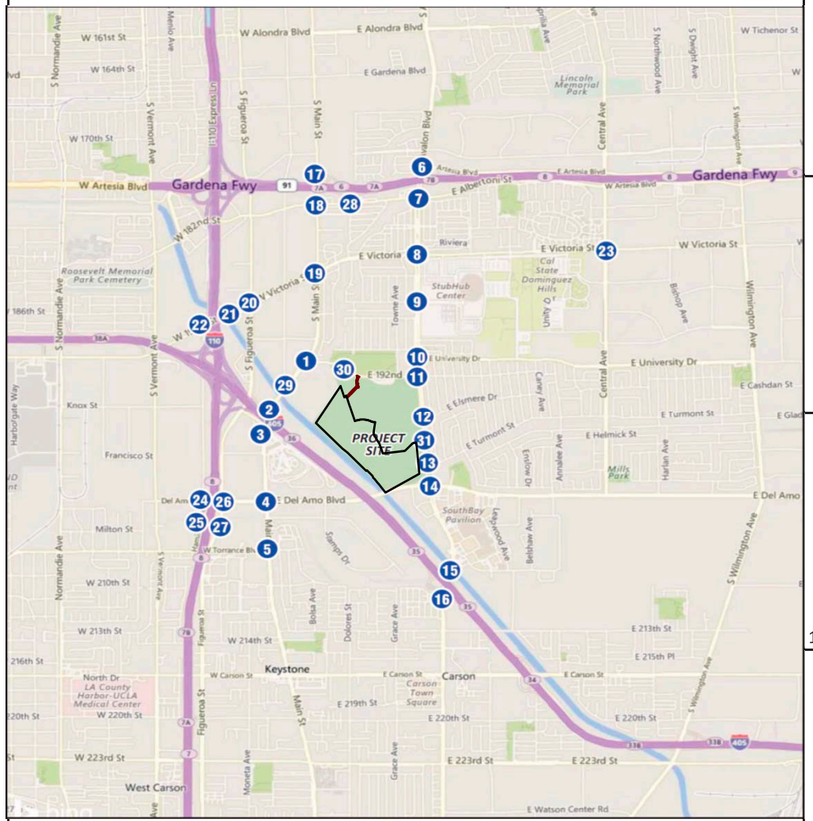
4.14.1 Existing Conditions

Study Area

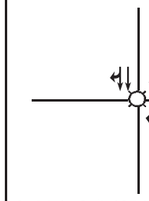
The project site location, study intersections, and existing geometrics are displayed in Figure 4.14-1, Existing Geometrics. The project's study area contains the following 31 intersections, listed with their jurisdictions, which are largely within the City of Carson (Carson):

1. Main Street/Martin Luther King Jr. (MLK Jr.) Street (Carson)
2. Main Street/I-405 northbound (NB) ramps (Carson/Caltrans)
3. Main Street/I-405 southbound (SB) ramps (Carson/Caltrans)
4. Main Street/Del Amo Boulevard (Carson)
5. Main Street/Torrance Boulevard (Carson)
6. Avalon Boulevard/Artesia Boulevard (Carson/Caltrans)
7. Avalon Boulevard/Albertoni Street (Carson)
8. Avalon Boulevard/Victoria Street (Carson)
9. Avalon Boulevard/184th Street (Carson)
10. Avalon Boulevard/University Drive (Carson)
11. Avalon Boulevard/192nd Street (Carson)
12. Avalon Boulevard/Elsmere Drive (Carson)
13. Avalon Boulevard/Turmont Street (Carson)
14. Avalon Boulevard/Del Amo Boulevard (Carson)

15. Avalon Boulevard/I-405 NB ramps (Carson/Caltrans)
16. Avalon Boulevard/I-405 SB ramps (Carson/Caltrans)
17. Main Street/SR-91 westbound (WB) ramps (Carson/Caltrans)
18. Main Street/Albertoni Street (Carson)
19. Main Street/Victoria Street (Carson)
20. Figueroa Street/Victoria Street (Carson/Los Angeles)
21. I-110 NB on-ramp/190th Street (Carson/Los Angeles/Caltrans)
22. I-110 SB off-ramp/190th Street (Los Angeles/Caltrans)
23. Central Avenue/Victoria Street (Carson)
24. Hamilton Avenue/Del Amo Boulevard (unsignalized) (County of Los Angeles)
25. Hamilton Avenue/I-110 SB ramps (unsignalized) (County/Caltrans)
26. Figueroa Street/Del Amo Boulevard (Carson)
27. Figueroa Street/I-110 NB ramps (Carson/Caltrans)
28. State Route (SR-91) eastbound (EB) ramps/Albertoni Street (Carson/Caltrans)
29. Main Street/Broadway (unsignalized) (Carson)
30. new project intersection/MLK Jr. Street (Carson)
31. Avalon Boulevard/new project intersection (Carson)

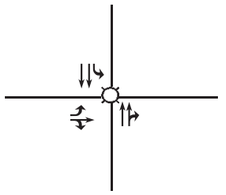


1 Main St/Martin Luther King Jr. S

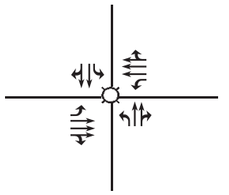


2 Main St/I-405 NB off-ramp

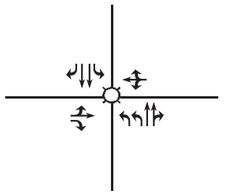
3 Main St/I-405 SB on-ramp



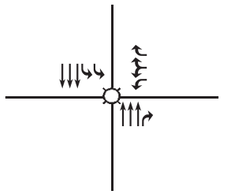
4 Main St/Del Amo Blvd



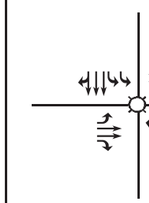
5 Main St/Torrance Blvd



6 Avalon Blvd/SR-91 WB on-ramp

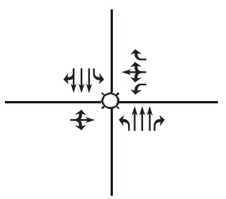


7 Avalon Blvd/Albertoni Blvd

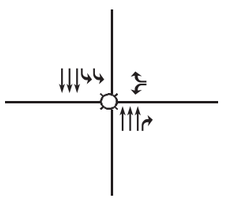


8 Avalon Blvd/Victoria St

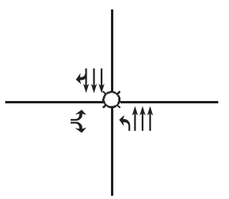
9 Avalon Blvd/184th St



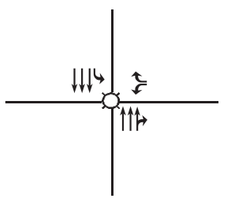
10 Avalon Blvd/University Dr



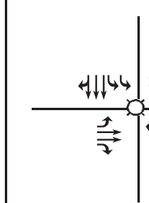
11 Avalon Blvd/Martin Luther King Jr.



12 Avalon Blvd/Elsmere Dr

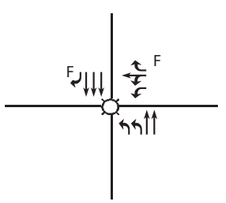


13 Avalon Blvd/Turnmont St

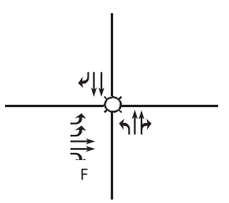


14 Avalon Blvd/Del Amo Blvd

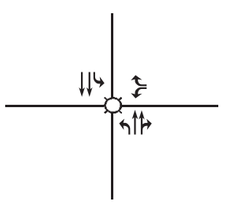
15 Avalon Blvd/I-405 NB Ramps



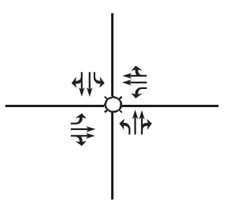
16 Avalon Blvd/I-405 SB Ramps



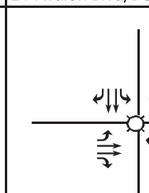
17 Main St/SR-91 WB Ramps



18 Main St/Albertoni St

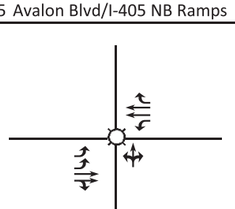


19 Main St/Victoria St

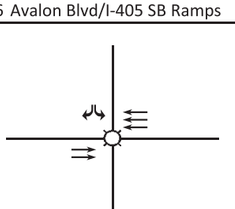


20 Figueroa St/Victoria St

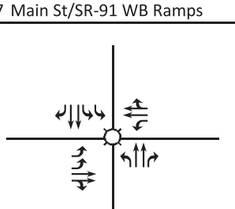
21 I-110 NB on-ramp/190th St



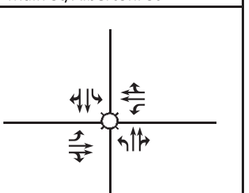
22 I-110 SB off-ramp/190th St



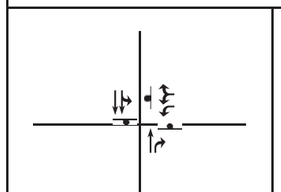
23 Central Ave/Victoria St



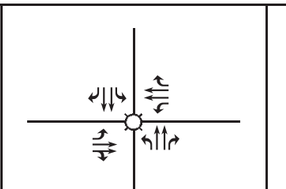
24 Hamilton Ave/Del Amo Blvd



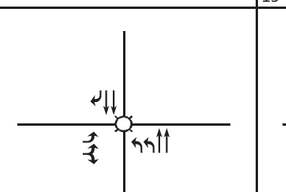
25 Hamilton Ave/I-110 SB Ramps



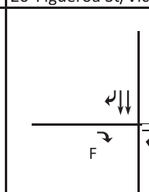
26 Figueroa St/Del Amo Blvd



27 Figueroa St/I-110 NB Ramps

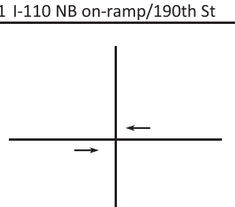


28 SR-91 EB Ramps/Albertoni Blvd

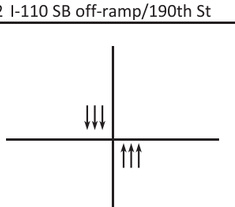


29 Main Street/Broadway

30 New Intersection/MLK



31 Avalon Blvd/New Intersection



LEGEND

- Signal
- Stop Sign
- F Free Right Turn

SOURCE: LSA 2018

FIGURE 4.14-1

Existing Geometrics

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

Roadway Network/Circulation System

Key roadways in the vicinity of the proposed project are as follows:

- **Interstate 405.** I-405 is south of the project site. This freeway is a north-south interstate highway that extends from Lake Forest in the south to the San Fernando Valley in the north. Access to the project site from the I-405 freeway is provided via northbound and southbound on/off-ramps at Avalon Boulevard and Main Street. I-405 is also classified as a State Freeway in the County of Los Angeles' (County's) *2010 Congestion Management Program* (2010 CMP) (County of Los Angeles 2010). The segment of I-405 south of I-110 is a monitoring location in the CMP.
- **Interstate 110.** I-110 is west of the project site. This freeway is a north-south interstate highway that runs from San Pedro in the south to Pasadena in the north. I-110 is also classified as a State Freeway in the County's 2010 CMP. Access to the project site is provided via the northbound and southbound on/off-ramps at 190th Street which transitions to Victoria Street and Del Amo Boulevard, which is accessed from roadways parallel to I-110.
- **State Route 91.** SR-91 is north of the project site. This freeway is an east-west state facility that extends from Riverside to Gardena. SR-91 is also classified as a State Freeway in the County's 2010 CMP. Direct access to the project site from SR-91 is provided via the Avalon Boulevard and Main Street interchanges.
- **Avalon Boulevard.** Avalon Street is adjacent to and east of the project site. This roadway is classified as a four-lane major highway in the City of Carson Transportation and Infrastructure Element. Along the project site, the roadway is three lanes in each direction. The roadway also provides direct access to SR-91 and I-405. The posted speed limit is 40 miles per hour (mph). A raised median is provided along this roadway with electrical (kV) poles spaced approximately 650 to 750 feet apart. The project plans to take access from Avalon Boulevard at two signalized locations, including a newly constructed intersection.
- **Main Street.** Main Street is west of the project site. This roadway is classified as a four-lane major highway in the Transportation and Infrastructure Element of the City's General Plan (City of Carson 2004), and is two lanes in each direction along the project site. The posted speed limit is 45 mph.
- **Figueroa Street.** Figueroa Street is located west of the project site. This roadway is classified as a four-lane major highway in the City of Carson's Transportation and Infrastructure Element and is two lanes in each direction. The posted speed limit is 40 mph.
- **Del Amo Boulevard.** Del Amo Boulevard is south of the project site. This roadway is classified as a four-lane major highway in the Transportation and Infrastructure Element of the City's General Plan (City of Carson 2004). The posted speed limit is 45 mph. The

roadway between I-110 and Avalon Boulevard is three lanes in each direction and transitions to two lanes in each direction east of Avalon Boulevard.

- **Victoria Street.** Victoria Street is east of the project site. This roadway is classified as a four-lane major highway in the Transportation and Infrastructure Element of the City's General Plan (City of Carson 2004), and has two lanes in each direction. The posted speed limit is 40 mph.
- **Martin Luther King Jr. Street.** Martin Luther King Jr. Street (formerly 192nd Street) is north of the project site and is an east–west roadway that runs between Main Street and Avalon Boulevard. This roadway is classified as a two-lane collector in the Transportation and Infrastructure Element of the City's General Plan (City of Carson 2004), and has one lane in each direction. The posted speed limit is 35 mph. Martin Luther King Jr. Street will provide shared access to the proposed project and the adjacent Kimmelman project. Currently, Martin Luther King Jr. Street provides access to the existing Victoria Golf Course.

Transit Service

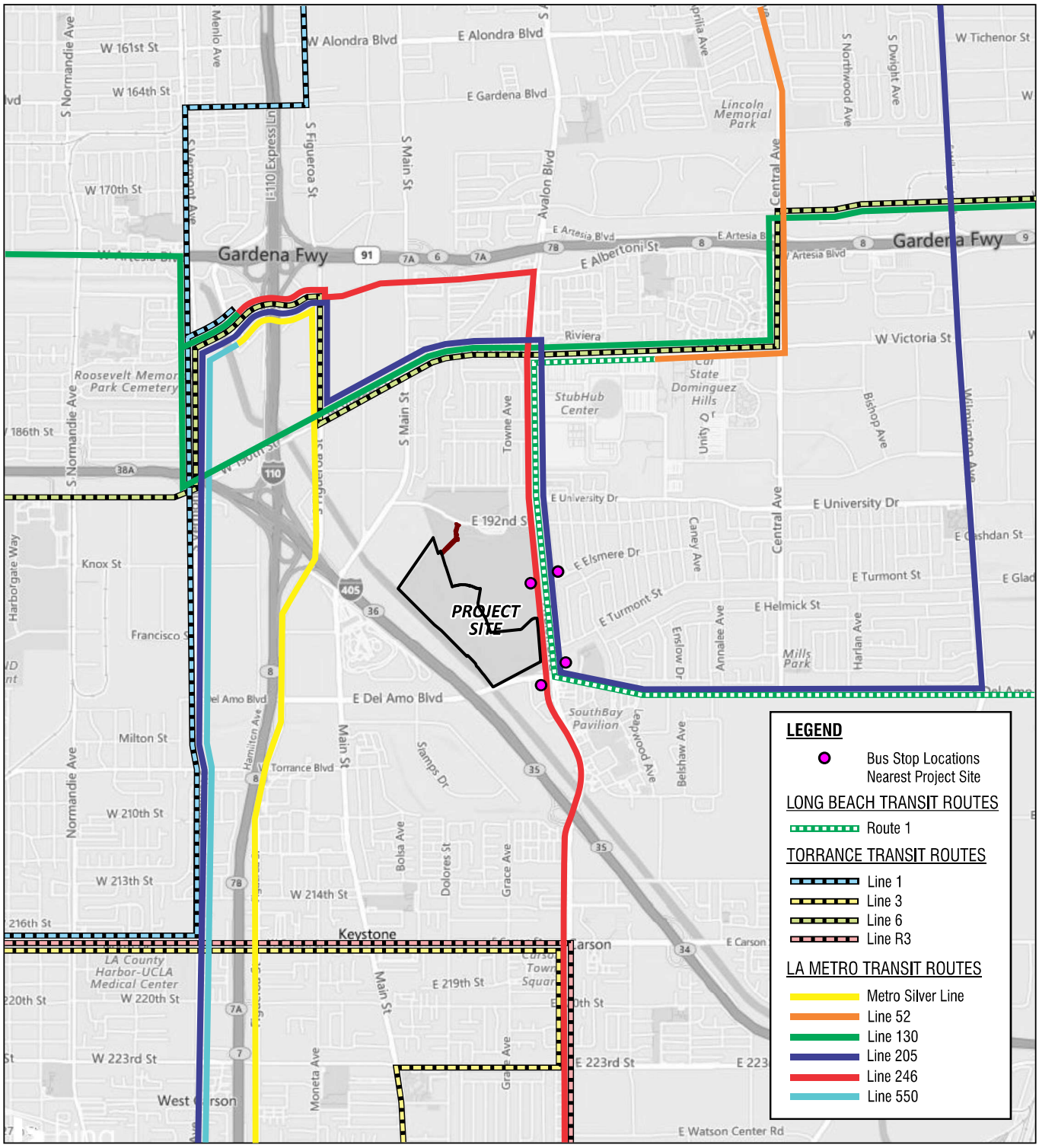
The existing transit service in the project study area are identified below and shown in Figure 4.14-2, Transit Routes. The project area is served by multiple bus transit providers including Long Beach Transit, Torrance Transit, and Los Angeles Metro, as well as the Carson Circuit local bus system. Within the immediate area of the project site, bus stop locations are currently located at Avalon Boulevard/Elsmere Drive and Avalon Boulevard/Del Amo Boulevard.

Long Beach Transit provides fixed-route bus service in the vicinity of the project. There are bus stop locations for Route 1, which runs along Victoria Street, Avalon Boulevard, and Del Amo Boulevard neighboring the project site.

Torrance Transit provides fixed-route bus service in the vicinity of the project. There are bus stop locations for Routes 1, 3, and 6, which run along Carson Street south of the project site. There are also bus stop locations for route R3, which runs along 190th Street and transitions to West Victoria Street north of the project site.

LA Metro provides fixed-route bus service in the vicinity of the project. Bus stops for route 246 are adjacent to the project site on Avalon Boulevard to the east. Bus stops for routes 52 and 130 run along Victoria Street to north of the project, and for routes 205 and 550 the bus stop locations run along Vermont Avenue to west of the project site. The Silver Line route runs along the I-110 and Figueroa Street to the west of the project site.

The Carson Circuit is the City's local bus system, with service throughout Carson and connections to the Metro Blue Line and regional bus services from Torrance Transit, Metro, Long Beach Transit and Gardena Municipal Bus Lines.



SOURCE: LSA 2018

FIGURE 4.14-2

Transit Routes

The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

Pedestrian and Bicycle Facilities

Within the vicinity of the project, pedestrian facilities along the boundary of the site include:

- **Avalon Boulevard.** Avalon Boulevard is adjacent to and east of the project site and provides sidewalks along both sides of the street.
- **Main Street.** Main Street is west of the project site and sidewalks are only available on the east side of the roadway between the Dominguez Channel and Martin Luther King Jr. Street.

Bicycle facilities in the vicinity of the site include:

- **Avalon Boulevard.** Avalon Boulevard has striped, on-street (Class II) bicycle lanes on both sides of the street in the vicinity of the project site. Continuation of the bicycle lanes are planned north of University Drive and south of I-405.
- **Main Street.** Main Street has no bicycle lanes, but facilities are planned in the City's Master Plan of Bikeways.
- **Figueroa Street.** Figueroa Street has striped, on-street (Class II) bicycle lanes on both sides of the street between Victoria Street and Redondo Street and are planned to continue south in the City's Master Plan of Bikeways.
- **Del Amo Boulevard.** Del Amo Boulevard has bicycle lanes east of Avalon Boulevard and are planned east of Avalon Boulevard to Figueroa Street in the City's Master Plan of Bikeways.
- **Victoria Street.** Victoria Street has no bicycle lanes, but facilities are planned in the City's Master Plan of Bikeways.
- **Martin Luther King Jr. Street.** Martin Luther King Jr. Street (formerly 192nd Street) has no bicycle lanes, but facilities are planned in the City's Master Plan of Bikeways.

Traffic Volumes

Vehicle turning volumes were collected for the study area intersections during the peak morning (7:00 a.m. to 9:00 a.m.) and evening (4:00 p.m. to 6:00 p.m.) commute periods. Peak hour intersection turn volumes were collected on typical weekdays in 2018 while adjacent schools were in session. Figure 4.14-3, Existing Traffic Volumes, presents the existing AM and PM peak hour turn movement volumes for the study area intersections. Detailed traffic count data sheets are provided in Appendix J.

Level of Service Methodology

Level of service (LOS) refers to letter designations "A" through "F" which represent progressively declining traffic flow conditions. LOS designations indicate whether the roadways and

intersections are operating in excess of their intended capacity. In accordance with the County's Traffic Impact Analysis Report Guidelines (County of Los Angeles Department of Public Works 2013), the study intersections were analyzed using the Intersection Capacity Utilization (ICU) methodology for signalized intersections and *Highway Capacity Manual* (HCM) methodology for unsignalized intersections. The ICU methodology compares the amount of traffic an intersection is able to process (capacity) to the level of traffic during peak hours (volume). The resulting volume-to-capacity (v/c) ratio of conflicting turn movements at an intersection sums these critical conflicting v/c ratios for each intersection approach and determines the overall ICU. The resulting ICU is expressed in terms of LOS. The relationship between ICU and LOS, and descriptions of each LOS value, are shown in Table 4.14-1.

Table 4.14-1
Level of Service Definitions for ICU Methodology

LOS	Intersection Capacity Utilization	LOS Description
A	< 0.601	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601–0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701–0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801–0.900	FAIR. Delays may be substantial during portions of the rush hour, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901–1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

The *Highway Capacity Manual* (Transportation Research Board 2016) methodology calculates the delay (in seconds per vehicle) experienced by all movements through an intersection—as opposed to capacity—as the measure of effectiveness. The resulting delay is expressed in terms of LOS, much like the ICU methodology. LOS definitions for signalized intersections and unsignalized intersections under the HCM methodology are provided in Table 4.14-2.

Table 4.14-2
Level of Service Definitions for Intersections for HCM Methodology

LOS	Signalized Intersection Control Delay Per Vehicle (s/v)	Unsignalized Intersection Control Delay Per Vehicle (s/v)
A	≤10.0	≤10.0

Table 4.14-2
Level of Service Definitions for Intersections for HCM Methodology

LOS	Signalized Intersection Control Delay Per Vehicle (s/v)	Unsignalized Intersection Control Delay Per Vehicle (s/v)
B	> 10.0 and ≤ 20.0	> 10.0 and ≤ 15.0
C	> 20.0 and ≤ 35.0	> 10.0 and ≤ 25.0
D	> 35.0 and ≤ 55.0	> 25.0 and ≤ 35.0
E	> 55.0 and ≤ 80.0	> 35.0 and ≤ 50.0
F	≥ 80.0	≥ 50.0

Source: Transportation Research Board 2010.

Existing Level of Service

The existing traffic volumes collected in the study area were analyzed for their levels of service per the methodologies described above. Table 4.14-3 summarizes the results of the existing AM and PM peak hour LOS analysis for the study area intersections. Existing condition analysis worksheets are provided in the TIA, included as Appendix J of this EIR.

Table 4.14-3
Existing Intersection Level of Service

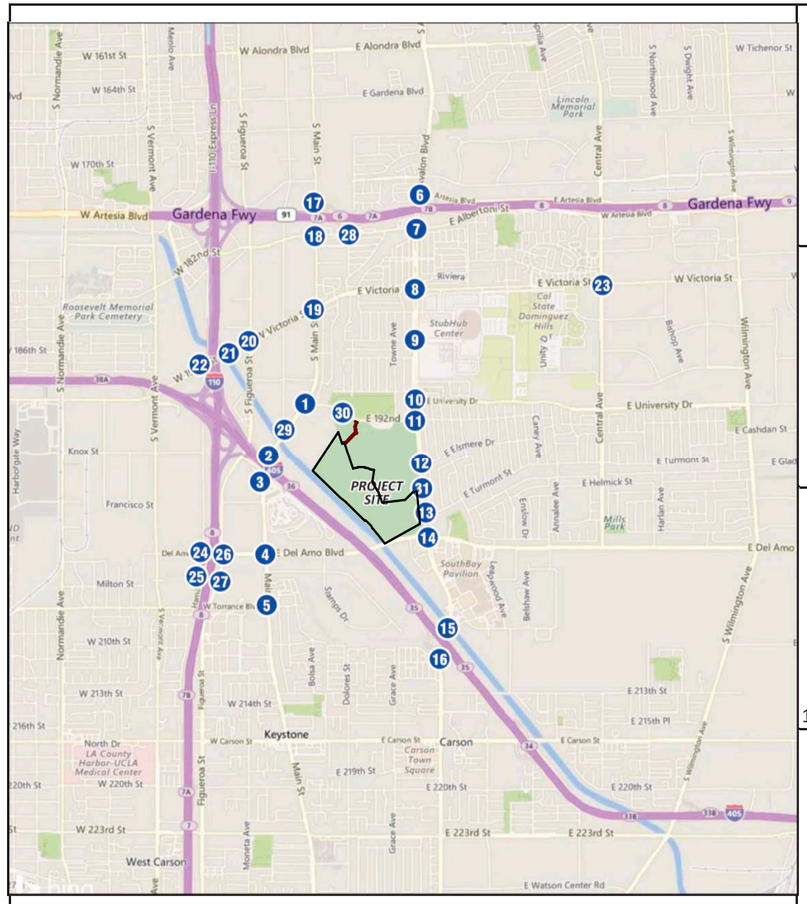
Study Area No.	Intersection	Jurisdiction	AM Peak Hour		PM Peak Hour	
			V/C Ratio or Delay	*LOS*	*V/C Ratio or Delay*	*LOS*
1	Main Street/MLK Jr. Street	Carson	0.42	A	0.52	A
2	Main Street/I-405 NB Ramps	Carson/Caltrans	0.57	A	0.68	B
3	Main Street/I-405 SB Ramps	Carson/Caltrans	0.45	A	0.70	C
4	Main Street/Del Amo Boulevard	Carson	0.67	B	0.86	D
5	Main Street/Torrance Boulevard	Carson	0.62	B	0.75	C
6	Avalon Boulevard/Artesia Boulevard	Carson/Caltrans	0.55	A	0.57	A
7	Avalon Boulevard/Albertoni Street	Carson	0.65	B	0.84	D
8	Avalon Boulevard/Victoria Street	Carson	0.59	A	0.74	C
9	Avalon Boulevard/184th Street	Carson	0.39	A	0.47	A
10	Avalon Boulevard/University Drive	Carson	0.67	B	0.72	C
11	Avalon Boulevard/192nd Street	Carson	0.42	A	0.59	A
12	Avalon Boulevard/Elsmere Drive	Carson	0.46	A	0.44	A
13	Avalon Boulevard/Turmont Street	Carson	0.52	A	0.49	A
14	Avalon Blvd/Del Amo Boulevard	Carson	0.80	C	0.90	D
15	Avalon Boulevard/I-405 NB Ramps	Carson/Caltrans	0.47	A	0.51	A
16	Avalon Boulevard/I-405 SB Ramps	Carson/Caltrans	0.60	B	0.59	A
17	Main Street/SR-91 WB Ramps	Carson/Caltrans	0.62	B	0.58	A
18	Main Street/Albertoni Street	Carson	0.69	B	0.81	D
19	Main Street/Victoria Street	Carson	0.53	A	0.74	C

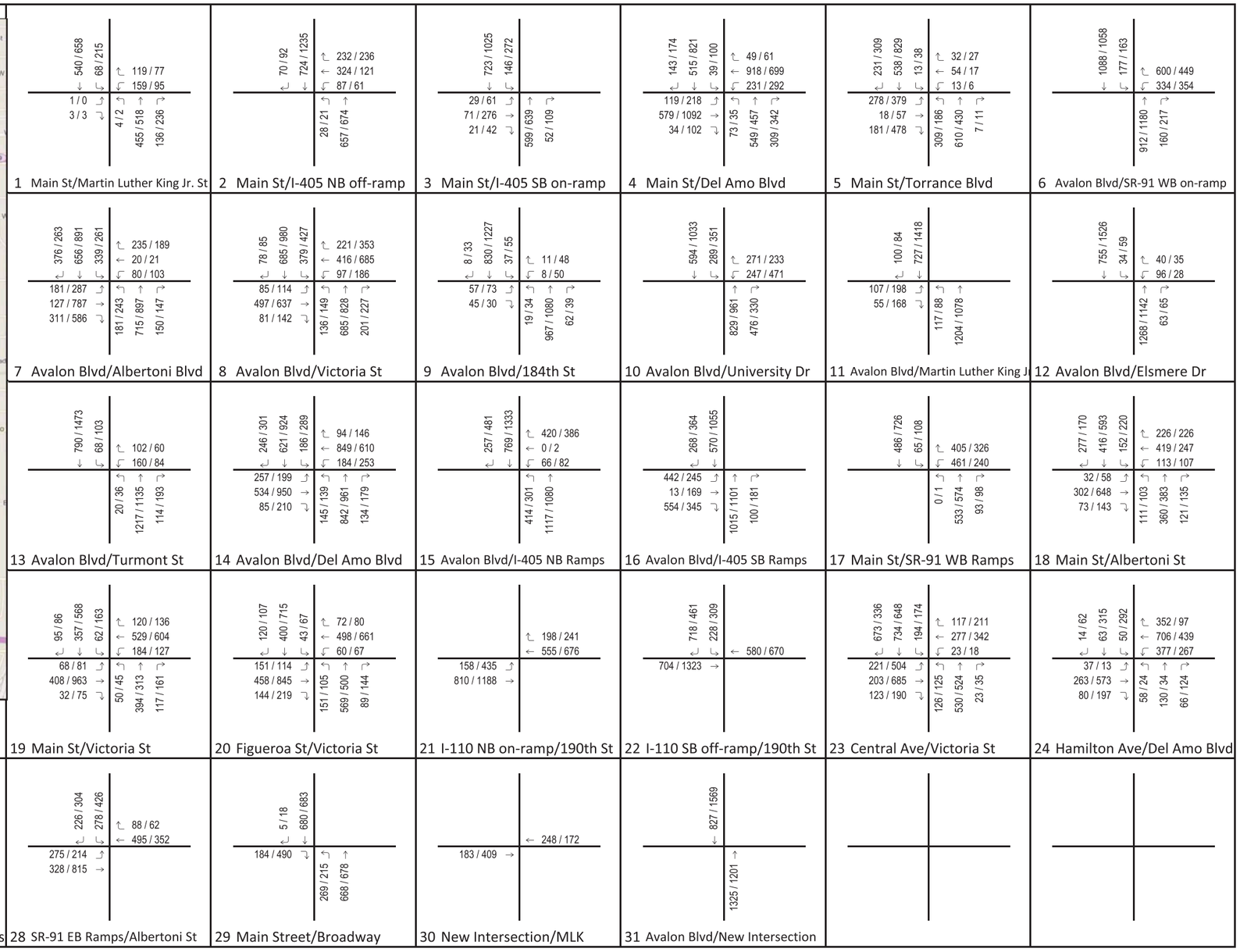
Table 4.14-3
Existing Intersection Level of Service

Study Area No.	Intersection	Jurisdiction	AM Peak Hour		PM Peak Hour	
			V/C Ratio or Delay	*LOS*	*V/C Ratio or Delay*	*LOS*
20	Figueroa Street/Victoria Street	Carson/Los Angeles	0.61	B	0.69	B
21	I-110 NB Ramp/190th Street	Carson/Los Angeles/Caltrans	0.35	A	0.47	A
22	I-110 SB Ramp/190th Street	Los Angeles/Caltrans	0.77	C	0.80	C
23	Central Avenue/Victoria Street	Carson	0.80	C	0.74	C
24	Hamilton Ave/Del Amo Boulevard	County	0.55	A	0.77	C
25	Hamilton Avenue/I-110 SB Ramps (u)	County/Caltrans	> 50 sec	F	> 50 sec	F
26	Figueroa Street/Del Amo Boulevard	Carson	0.73	C	0.82	D
27	Figueroa Street/I-110 NB Ramps	Carson/Caltrans	0.70	B	0.71	C
28	SR-91 EB Ramps/Albertoni Street	Carson/Caltrans	0.55	A	0.62	B
29	Main Street/Broadway (u)	Carson	8.1	A	13.4	B
30	New Intersection/MLK Jr. Street	Carson	new intersection			
31	Avalon Boulevard/New Intersection	Carson	new intersection			

Source: Appendix J.
☐ = Unsatisfactory LOS
(u) = unsignalized intersection
County = County of Los Angeles
EB = eastbound
LOS = level of service
I-110 = Interstate 110
I-405 = Interstate 405
SR-91 = State Route 91
V/C = volume-to-capacity
MLK = Martin Luther King
NB = northbound
SB = southbound
Sec = seconds
WB = westbound

Both the County (Lead Agency) and the City of Carson consider LOS D as the minimum satisfactory LOS. Based on the existing analysis, all study area intersections operate at an acceptable LOS (i.e., LOS D or better) in the AM and PM peak hours except for the unsignalized intersection of Hamilton Avenue/I-110 southbound ramps, which currently operates at LOS F during both peak hours.





LEGEND
XXX / YYY AM / PM Volume

SOURCE: LSA 2018

FIGURE 4.14-3
Existing Traffic Volumes
The Creek at Dominguez Hills Project

DUDEK

INTENTIONALLY LEFT BLANK

Cumulative (No Project) Condition

The proposed project is anticipated to be completed by 2020. Per County requirements, a future cumulative traffic analysis consistent with the project's planned "opening year" was conducted to determine potential project traffic impacts in the cumulative condition. The cumulative traffic analysis includes traffic generated from other pending and/or approved development projects. The list of related projects anticipated to be completed by 2020 was developed in collaboration with the County and the traffic consultant for the adjacent Kimmelman project (which is one of the cumulative projects analyzed). This list was further refined by considering distance from Victoria Golf Course. Table 4.14-4 provides the cumulative projects and trip generation for each project. The locations of each project are shown on Figure 4.14-4, Cumulative Project Locations.

Table 4.14-4
Cumulative Project Trip Generation

Land Use	Description	ADT	AM Peak Hour			PM Peak Hour		
			In	*Out*	*Total*	*In*	*Out*	*Total*
1. 21521 S. Avalon Blvd, Carson[1]	357 apartments, 30,700 sf retail	3,685	54	156	210	199	137	336
2. 1281 E. University Dr, Carson[1]	47,000 sf retail	2,007	27	16	43	84	91	175
3. 21205 S. Main St, Carson[1]	46 apartments	306	5	19	24	19	10	29
4. 17706 S. Main St, Gardena[1]	94,731 sf warehouse, 15,000 sf office	503	43	9	52	11	41	52
5. 19210 S. Vermont Ave, Gardena[1]	61,500 sf office	677	84	11	95	16	76	92
6. 1054 W. 204th St, Torrance[1]	8.5 acre park	425	3	3	6	2	2	4
7. Development District #3, Carson[1]	300 dwelling units	1,580	27	109	136	84	45	129
8. The District at South Bay, Carson[1, 2]	581,000 sf shopping center	12,388	228	85	313	446	502	948
9. Carol Kimmelman Sports and Academic Campus, Carson[3]	62 tennis courts, 10 soccer fields, 25,000 sf learning center, 23,000 sf welcome center, 13,000 sf player development building, 5,000 sf administration, 43,560 sf skate park	3,808	105	83	188	244	192	436
Total Trip Generation		**25,379**	**576**	**491**	**1,067**	**1,105**	**1,096**	**2,201**

Notes: ADT = average daily trips; sf = square feet.
1 Trip generation referenced from Fehr and Peers (2017).
2 Review of The District development phasing indicates that only the 581,000-square-foot shopping center portion is anticipated to be completed and operational by the project opening year.
3 Trip generation provided by Gibson Transportation Consulting (November, 21, 2018).

Most of the identified related projects (with the exception of the Kimmelman project) were previously disclosed and analyzed in the *District at South Bay Draft Transportation Impact*

Analysis (Fehr and Peers 2017). The trip generation for the District at South Bay represents only portions of the full project that will be completed by 2020. Trip generation for the Kimmelman project is based on the project description included in their Notice of Preparation.

4.14.2 Relevant Plans, Policies, and Ordinances

Federal

No federal laws, plans, or policies related to land use are applicable to the proposed project as the project would not impact any federal transportation facilities and/or services.

State

California Department of Transportation

Caltrans is the public agency responsible for designing, building, operating, and maintaining California's state highway system, which consists of freeways, highways, expressways, toll roads, and the area between the roadways and property lines. Caltrans is also responsible for permitting and regulating the use of state roadways. Caltrans' construction practices require temporary traffic control planning during any activities that interfere with the normal function of a roadway. Where applicable, the parameters set forth in Caltrans' *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002) were used in the traffic analysis.

Senate Bill 743

On September 27, 2013, Governor Brown signed SB 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under the California Environmental Quality Act (CEQA) process for several categories of development projects including the development of infill projects in transit priority areas and to balance the needs of congestion management with Statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions. SB 743 adds Chapter 2.7: Modernization of Transportation Analysis for Transit Oriented Infill Projects to the CEQA Statute (Section 21099). Section 21099(d)(1) provides that aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment. In addition, SB 743 mandates that alternative metric(s) for determining impacts relative to transportation shall be developed to replace the use of LOS in CEQA documents.

Related Project List

No.	Address / Project Name	Description
1	21521 S Avalon Blvd Carson, CA	357 apartment units, 30,700 sf retail
2	1281 E University Dr Carson, CA	47,000 sf retail
3	21205 S Main St Carson, CA	46 apartment units
4	17706 S Main St Gardena, CA	94,731 sf warehouse, 15,000 sf office
5	19210 S Vermont Ave, Gardena, CA	61,500 sf office
6	1054 W 204th St Torrance, CA	8.5 acre park
7	Development District #3 (11 acres) Carson, CA	300 dwelling units
8	The District at South Bay Carson, CA	1,250 dwelling units, 350 hotel rooms, 25,000 sf bowling alley, 25,000 rec center, 2,500 seat movie theater, 140,000 sf restaurant, 581,020 sf luxury outlet shops, 635,000 sf shopping center
9	Carol Kimmelman Sports and Academic Campus Carson, CA	50 tennis courts, 10 soccer fields and 66,000-square-foot Recreational Community Facility use (includes a 25,000-square-foot learning center, 28,000-square-foot welcome center and admin building, and 13,000-square-foot player development building).

SOURCE: LSA 2018

DUDEK

FIGURE 4.14-4

Cumulative Project Locations

The Creek at Dominguez Hills Project

INTENTIONALLY LEFT BLANK

Currently, environmental review of transportation impacts focuses on the delay that vehicles experience at intersections and on roadway segments, which is often measured using LOS. Mitigation for impacts on vehicular delay often involves increasing capacity such as widening a roadway or the size of an intersection, which in turns encourages more vehicular travel and greater pollutant emissions. Additionally, improvements to increase vehicular capacity can often discourage alternative forms of transportation such as biking and walking. SB743 directs the Office of Planning and Research (OPR) to develop an alternative metric(s) for analyzing transportation impacts in CEQA document. The alternative shall promote the State's goals of reducing greenhouse gas emissions and traffic-related air pollution, promoting the development of multimodal transportation system, and providing clean, efficient access to destinations. Under SB 743, it is anticipated that the focus of transportation analysis will shift from vehicle delay to vehicle miles traveled (VMT) within transit priority areas (i.e., areas well served by transit).

Pursuant to SB743, OPR released the draft revised CEQA Guidelines in November 2017, recommending the use of vehicles miles traveled (VMT) for analyzing transportation impacts. Additionally, OPR released *Updates to Technical Advisory on Evaluating Transportation Impacts in CEQA*, to provide guidance on VMT analysis. In this Technical Advisory, OPR provides its recommendations to assist lead agencies in screening out projects from VMT analysis and selecting a significance threshold that may be appropriate for their particular projects. While OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance... recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence" (CEQA Guidelines, Section 15064.7, subd. (c)).

The updated CEQA Guidelines will apply prospectively, meaning that projects such as proposed project are not currently required to incorporate VMT as the primary transportation impact metric.

Local

Los Angeles County Public Works Traffic Impact Analysis Report Guidelines

The Los Angeles County Public Works (PW) (formerly the County of Los Angeles Department of Public Works) uses level of service (LOS) to assess the congestion of roadways in the transportation system. Based on a roadway's volume-to-capacity ratio (the number of vehicles currently using the roadway compared to the ideal maximum number of vehicles that can efficiently use the roadway), a letter designation is assigned that represents the traffic flow conditions, or LOS. LOS D is the desired minimum LOS in the County. In some instances, an LOS below LOS D is deemed acceptable to further the County's general plan goals and policies, such as those that protect environmentally sensitive areas, promote active transportation, and encourage infill development, particularly within the County's designated transit-oriented districts. The

traffic analysis has been prepared consistent with the County's Traffic Impact Analysis Report Guidelines (County of Los Angeles Department of Public Works 2013).

Los Angeles County Metropolitan Transportation Authority Congestion Management Program

Proposition 111 created a statewide Congestion Management Program (CMP), which was implemented locally by the County's Metropolitan Transportation Authority (Metro). The County's CMP requires that traffic impact be analyzed for individual development projects that may have regional significance. A specific system of arterial roadways plus all freeways comprises the CMP system. A total of 164 intersections are identified for monitoring on the system in the County. There are no CMP-monitored intersections within 2 miles of the project, and the project is anticipated to add 150 or more peak-hour trips to one CMP mainline freeway segment, the I-405, south of I-110.

CMP TIA Guidelines are provided in the County's 2010 CMP. According to these guidelines, an analysis of the effects that a project may have on the CMP system is conducted in the following instances (County of Los Angeles 2010):

- The project is projected to add 50 or more vehicle trips during either AM or PM weekday peak hours to CMP arterial monitoring intersections, including freeway on-ramps or off-ramps.
- The project is projected to add 150 or more trips in either direction during either the AM or PM weekday peak hours at CMP mainline freeway monitoring locations.

The proposed project was analyzed for its potential to trigger the above thresholds, which would then require the project to be further analyzed under the CMP.

Los Angeles County General Plan

The Los Angeles County General Plan was adopted by the Board of Supervisors on October 6, 2015, and provides the policy framework for how and where the unincorporated County will grow through the year 2035. The Mobility Element provides an overview of the transportation infrastructure and strategies for developing an efficient and multimodal transportation network, 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 the County. The General Plan also establishes a program to prepare community pedestrian plans, with guidelines and standards to promote walkability and connectivity throughout the unincorporated areas (County of Los Angeles 2015).

Southern California Association of Governments 2016 Regional Transportation Plan/Sustainable Communities Strategy

On April 7, 2016, the Regional Council of SCAG adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). The County is one of six counties within SCAG, and accounts for more than half of the vehicle miles traveled within SCAG. The RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. It charts a course for integrating land use and transportation – so that the region can grow smartly and sustainably. It serves as a blueprint to address the mobility challenges created by Southern California's growing population and employment. It contains an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system in the region.

City of Carson General Plan

As discussed in Section 4.9, Land Use, the County is responsible for all of the proprietary decisions regarding any proposed development of the project site, and will act as the permitting authority for any such development pursuant to its sovereign immunity from local zoning and permitting. Certain off-site traffic improvements located within the City will require the City's approval, as discussed later in this section. The following is provided for information only.

The Transportation and Infrastructure Element of the City's General Plan provides goals, policies, and implementation measures for providing a safe and efficient circulation system. One of the goals in the element is to provide a sustainable, safe, convenient, and cost-effective circulation system to serve the present and future transportation needs of the Carson community and thereby requires that new projects not cause the LOS for intersections to drop more than one level if it is at LOS A, B or C, and not drop at all if it is at D or below, except when necessary to achieve substantial City development goals (City of Carson 2004). Furthermore, if an intersection currently operates, or is forecast to operate, at LOS E or F, a new project would create a significant impact if it increases the v/c ratio by 0.02 v/c or higher. It should be noted that the County's LOS criteria is more stringent (conservative) than the City's LOS criteria.

Vision Zero

As described in *Vision Zero: Eliminating Traffic Deaths in Los Angeles by 2025* (City of Los Angeles, August 2015), Vision Zero is a traffic safety policy that promotes strategies to eliminate collisions that result in severe injury or death. Vision Zero has identified the High Injury Network, a network of streets based on the collision data from the last five years, where strategic investments will have the biggest impact in reducing death and severe injury. Vision Zero has not identified any streets within the study area as part of the High Injury Network.

4.14.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to traffic and circulation are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to traffic and circulation would occur if the project would:

1. Conflict with an applicable plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
2. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves, or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.

TRAF-1 Would the project conflict with an applicable plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

TRAF-2 Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

TRAF-3 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)?

TRAF-4 Would the project result in inadequate emergency access?

In addition to the above thresholds from Appendix G of the CEQA Guidelines, the following significance criteria was also used in order to determine the project's impacts related to transportation:

Significance Criteria

With regard to items 1, 2, 3, and 4 above, the County utilizes the following significance criteria to determine impacts to transportation facilities:

Intersections

As identified in the County's guidelines, an impact is considered significant if the project-related increase in the volume to capacity (v/c) ratio equals or exceeds the thresholds shown in Table 4.14-5.

Table 4.14-5
County of Los Angeles Traffic Impact Guidelines Significant Impact Criteria for Intersections

Intersections		
Pre-project		
LOS	*V/C*	*Project V/C Increase*
A/B	0.70 or less	Resultant V/C of 0.75 or more
C	0.71 to 0.80	0.04 or more
D	0.81 to 0.90	0.02 or more
E/F	0.91 or more	0.01 or more

Source: County of Los Angeles Department of Public Works 2013.
Notes: LOS = level of service; V/C = volume to capacity.

According to the County's guidelines, a project could significantly impact an intersection that continues to operate at a satisfactory LOS (at LOS C and D), while the City only considers LOS E or F as an unacceptable LOS. It should be noted that the County's LOS criteria is more stringent (conservative) than the City's LOS criteria.

Los Angeles County Congestion Management Plan Facilities

The CMP requires analysis of arterial monitoring intersections where the proposed project will add 50 or more trips during either the AM or PM peak hours and CMP mainline freeway monitoring locations where the proposed project will add 150 or more trips (by direction) during either the AM or PM peak hour. No CMP monitored intersections are located within 2 miles of the project site, and the project is not anticipated to add 50 or more trips to any CMP monitored intersection. The project is anticipated to add 150 or more peak-hour trips to one CMP mainline freeway location (I-405 south of I-110).

The CMP indicates that a project would have a significant impact if project traffic increases the v/c ratio by 0.02 or more at a facility operating at LOS F. Additionally, Appendix D.8.4 of the CMP provides a methodology for estimating transit ridership generated by a project to determine whether or not the project is anticipated to result in a significant impact to transit service.

Caltrans Facilities

Within the study area, Caltrans has jurisdiction over two types of facilities: freeway ramps (on-ramps and off-ramps) and freeway mainline facilities.

Freeway Ramps

Although the County and the City of Carson use the ICU methodology to analyze the capacity of signalized intersections, the operation of all intersections under Caltrans jurisdiction are analyzed using HCM methodology. Synchro (version 10) was used to determine the LOS based on the HCM methodology at intersections under Caltrans jurisdiction.

Freeway Mainline Segments

Consistent with Caltrans guidelines, the freeway mainline segments within the study area have been assessed using HCM 6th Edition analysis methodology. The HCM methodology for freeway facilities calculates vehicle density (passenger car lengths per mile per lane) and assigns an LOS letter grade from LOS A to LOS F. Table 4.14-6 shows the LOS and density relationship for mainline freeway segments below.

Table 4.14-6
Level of Service for Freeway Mainline Segments

LOS	Density (pc/mi/ln)
	Mainline Freeway Segments
A	≤ 11.0
B	> 11.0 - 18.0
C	> 18.0 - 26.0
D	>26.0 - 35.0
E	> 35.0 - 45.0
F	demand exceeds capacity

Source: Transportation Research Board 2016.
Notes: LOS = level of service; pc/mi/ln = passenger car lengths per mile per lane.

Caltrans impact criteria state that a target LOS at the transition between LOS C and LOS D is recommended. However, Caltrans also acknowledges that this target may not always be feasible, and if an existing State Highway facility is operating worse than the appropriate target LOS, the existing LOS should be maintained.

A project would have a significant impact if a satisfactory baseline LOS is degraded to unsatisfactory or further degrades the LOS. To determine if a project has a significant impact at a segment operating at LOS F, the Los Angeles County CMP threshold (2% increase in volume) was applied.

City of Carson Significance Thresholds

Since the County is the Lead Agency, the County's significance criteria has been applied to the proposed project. However, it should be noted that the County's LOS criteria is more stringent (conservative) than the City of Carson's LOS criteria.

Section 4.14.7, City of Carson Intersection Impact Thresholds, provides a summary of project impacts under the City's significance thresholds, while Appendix B of the TIA (Appendix J) provides a detailed assessment of the study area intersections. The City requires an analysis of project opening year (2020) for no project and plus project conditions. Impacts based on the City's methodology are identified based on the increase of an intersection ICU (v/c ratio) by 0.02 v/c or more to an LOS E or LOS F condition (LOS A – D is considered satisfactory by the City of Carson).

Vehicle Miles Traveled Significance Thresholds

A key provision of SB 743, passed in September 2013, is the elimination of vehicle delay and LOS as a CEQA significance criterion in urban areas. The basic reason for this change at the State level is the recognition that there can be conflicts between improvements that benefit automobiles versus those that benefit other modes of transportation in urban areas (e.g., widening streets to improve automobile LOS can often be to the detriment of pedestrians), that continued reliance on automobiles is at odds with State objectives to reduce greenhouse gas emissions (through reductions in vehicle miles of travel), and that mitigation for increased vehicle delay often involves measures which may increase auto use and discourage alternative forms of transportation. When employed in isolation, LOS can lead to ad hoc roadway expansions that deteriorate conditions on the network as a whole, or discourage transportation improvements that improve street function overall, by providing better service for transit pedestrians or bicycles, but decreasing level of service for vehicles. Among the issues with vehicle LOS identified by the Governor's Office of Planning and Research (OPR) are the following:

- LOS is biased against "last in" development;
- LOS scale of analysis is too small;
- LOS mitigation is problematic (e.g., physical constraints limit roadway capacity upgrades);
- LOS mischaracterizes transit, bicycle and pedestrian improvements as detrimental to transportation (i.e., improvements for pedestrians may result in degraded vehicle LOS);
- Use of LOS thresholds implies false precision; and,
- As a measurement of delay, LOS measures motorist convenience, but not a physical impact to the environment.

According to the legislative intent contained in SB 743, changes to the current practice of using LOS are necessary to, "More appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions." Pursuant to SB743, the focus of transportation analysis changes from vehicle delay to vehicle miles traveled (VMT). OPR released two rounds of draft proposals for updating the CEQA Guidelines related to evaluating transportation impacts and, after further study and consideration of public comment, submitted a final set of revisions to the Natural Resources Agency in November 2017. This was followed by a rulemaking process that would implement the requirements of the legislation. The updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. OPR's regulatory text indicates that a public agency may immediately commence implementation of the new transportation impact guidelines, and that the guidelines must be implemented statewide by January 1, 2020.

Based on OPR's review of the applicable research, and an assessment by the California Air Resources Board, OPR recommends that a per capita or per employee VMT that is 15% below that of the existing development may be a reasonable threshold.

The County of Los Angeles, City of Los Angeles, and City of Carson have not yet adopted local VMT criteria therefore this section is based on traffic impact study that provides a delay based level of service analysis for the proposed project.

4.14.4 Impacts Analysis

TRAF-1 Would the project conflict with an applicable plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

As discussed in the Initial Study prepared for the proposed project (Appendix A), the project was determined to result in less than significant impacts related to conflicts with adopted plans for public transit, bicycle and pedestrian facilities. The following discussion relates to potential project impacts to vehicular roadway facilities.

Project Traffic

Trip Generation

The daily and peak-hour trips for many project elements were generated using trip rates contained in the ITE *Trip Generation Manual*, 10th Edition (2017). Other elements of the project are specialized land uses for which no surveyed rates are published in *Trip Generation*. For these uses, trip generation was estimated based on surveyed trip generation of similar facilities as reported in traffic studies prepared for other jurisdictions. The trip generation for the project was reviewed and approved by County staff through a Memorandum of Understanding (MOU) during the TIA scoping process. In some cases, trip generation estimates have been increased since review of the MOU to present a more conservative analysis. Table 4.14-7 provides the trip generation for the project.

It should be noted that a portion of the multi-use sports complex (up to 40,194 SF based on preliminary design of the facility) may be open to the public during weekday mornings. To account for this activity in the morning, health club trip rates have been applied to this portion of the building in the AM peak hour to reflect this use. In addition to the volleyball courts, the multi-use sports complex contains a few athletic fields that could be configured for several different sports. The ITE trip rate per soccer field has been applied to this component as an approximation for the trips that may be generated by the variety of sports possible, even though the multi-use sports complex is not itself a soccer complex.

Table 4.14-7
Project Trip Generation

Land Use (Land Use Code)	Size	Unit	ADT	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				In	*Out*	*Total*	*In*	*Out*	*Total*	*In*	*Out*	*Total*
Trip Rates												
Placer County Sports[1]		Courts	80.00	-	-	-	6.15	9.85	16.00	12.62	16.46	29.08
Discovery Science Center[2,3]		TSF	14.52	0.41	0.32	0.73	0.31	0.60	0.91	0.31	0.60	0.91
TopGolf[4]		Bays	18.00	0.27	0.04	0.31	0.89	0.90	1.79	1.58	1.48	3.06
iFly[5]		TSF	61.20	0.00	0.00	0.00	2.82	4.43	7.25	2.82	4.43	7.25
High-Turnover (Sit-Down) Restaurant (932)[6]		TSF	112.18	5.47	4.47	9.94	6.06	3.71	9.77	5.71	5.48	11.19
Shopping Center (820)[6]		TSF	37.75	0.58	0.36	0.94	1.83	1.98	3.81	2.34	2.16	4.50
Supermarket (850)[6] `		TSF	106.78	2.29	1.53	3.82	4.71	4.53	9.24	5.27	5.07	10.34
Health/Fitness Club (492)[6]		TSF	34.50	0.75	0.56	1.31	1.59	1.86	3.45	1.56	1.63	3.19
Recreational Community Center (495)[6]		TSF	28.82	1.16	0.60	1.76	1.09	1.22	2.31	0.58	0.49	1.07
Recreational Community Center (495)[6]		Emp	27.25	1.34	0.66	2.00	1.17	1.49	2.66	1.37	1.22	2.59
Medical-Dental Office Building (720)[6]		TSF	34.80	2.17	0.61	2.78	0.97	2.49	3.46	1.77	1.33	3.10
Public Park (411)[6,7]		Acre	5.00	0.01	0.01	0.02	0.18	0.12	0.30	0.15	0.13	0.28
Athletic Fields (488)[6]		Fields	71.33	0.60	0.39	0.99	10.84	5.59	16.43	19.25	20.85	40.10
Golf Course (430)[6]		Acre	3.74	0.14	0.05	0.19	0.10	0.18	0.28	0.33	0.31	0.64
Project Trip Generation												
Pad	*Use*											
1. Multi-use Sports Complex	Placer County Sports[8]	16	Courts	1,280	30	23	53	98	157	255	202	263	465
	Athletic Fields[6]	3	Fields	214	2	1	3	33	17	50	58	63	121
2. Youth Learning Experience	Discovery Science Center	30	TSF	436	12	10	22	9	18	27	9	18	27
3. Indoor Skydiving	iFly[9]	7.5	TSF	459	0	0	0	21	33	54	21	33	54
4 and 14. Enhanced Driving Range Experience & Putting Green	TopGolf	102	Hitting Bays	1,836	28	4	32	91	92	183	161	151	312
5. Marketplace	High Turnover Restaurant	27	TSF	3,029	148	121	269	164	100	264	155	148	303
	Shopping Center	27	TSF	1,019	16	10	26	49	53	102	63	58	121
6. Marketplace	High Turnover Restaurant	8.5	TSF	954	46	38	84	52	32	84	49	47	96
	Shopping Center	8.5	TSF	321	5	3	8	16	17	33	20	18	38

Table 4.14-7
Project Trip Generation

Land Use (Land Use Code)		Size	Unit	ADT	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
					In	*Out*	*Total*	*In*	*Out*	*Total*	*In*	*Out*	*Total*
7. Clubhouse	Recreational Community Center	40	TSF	1,153	46	24	70	44	49	93	23	20	43
8. Recreation and Dining	High Turnover Restaurant	26	TSF	2,917	142	116	258	158	96	254	148	142	290
9. Restaurant	High Turnover Restaurant	10.0	TSF	1,122	55	45	100	61	37	98	57	55	112
10. Sports Wellness	Medical Office	36	TSF	1,253	78	22	100	35	90	125	64	48	112
11. Restaurant	High Turnover Restaurant	15.0	TSF	1,683	82	67	149	91	56	147	86	82	168
12. Zipline / Adventure Course	Recreational Community Center	8	Emp	218	11	5	16	9	12	21	11	10	21
13 and 15. Community Park & Jogging Path	Public Park	6.6	Acre	33	0	0	0	1	1	2	1	1	2
Total				**17,927**	**701**	**489**	**1,190**	**932**	**860**	**1,792**	**1,128**	**1,157**	**2,285**
Trip Reductions													
Existing Use	*Golf Course*	(78)	Acre	(292)	(11)	(4)	(15)	(8)	(14)	(22)	(26)	(24)	(50)
Internal Trip Capture with Kimmelman Site[10]				*(398)*	*(61)*	*(61)*	*(122)*	*(138)*	*(138)*	*(276)*	*(166)*	*(166)*	*(332)*
10% Retail Pass-by Trip Reduction[11]				*(1,105)*	*(49)*	*(40)*	*(89)*	*(59)*	*(39)*	*(98)*	*(58)*	*(55)*	*(113)*
Net Project Trip Generation				**16,132**	**580**	**384**	**964**	**727**	**669**	**1,396**	**878**	**912**	**1,790**
Grocery Store Option													
Reduction	Restaurant	(28.6)	TSF	(3,208)	(156)	(128)	(284)	(173)	(106)	(279)	(163)	(157)	(320)
Addition	Supermarket	30	TSF	3,203	69	46	115	141	136	277	158	152	310
Net Option Effect on Trip Generation				**(5)**	**(87)**	**(82)**	**(169)**	**(32)**	**30**	**(2)**	**(5)**	**(5)**	**(10)**

Notes: ADT = average daily traffic; TSF = thousand square feet; Emp = employees.

1 Gibson Transportation Consulting (2018).

2 In absence of a Saturday rate, the PM peak-hour rate has been applied.

3 Average of surveyed trip generation at Discovery Science Center, Santa Ana, California.

4 Fehr and Peers 2014.

5 Rate developed from operational data in Kimley-Horn and Associates Inc. (2015).

6 ITE 2017.

7 SANDAG (2002) provides daily and PM peak-hour trip rates. AM peak-hour and Saturday peak-hour rates from ITE (2017).

8 Weekday AM peak-hour rate is based on public use of 40,194 square feet as a health/fitness club.

9 Operational data increased proportionate to increase in size.

10 Estimated using ITE Trip Generation Methodology, NCHRP 684 Internal Trip Capture Estimation Tool.

11 Pass-by trip reduction applied to retail and restaurant uses based on the County of Los Angeles' TIA Information form

Additionally, a 30,000-square-foot supermarket may be provided in lieu of 28,600 square feet of restaurant uses located elsewhere in the project. The number of trips generated by a 30,000-square-foot supermarket is equivalent to the number of trips generated by 28,600 square feet of restaurant uses.

While the County guidelines (and City of Carson guidelines) specify that analysis of project impacts occur for weekday AM and PM peak hours, Table 4.14-7 also calculates project trip generation during a Saturday peak hour (i.e., the peak hour of traffic generation for each use). The TIA (Appendix J) provides analysis of the project access intersections during the Saturday peak hour.

The trip generation calculation takes credit for trips currently generated by the existing golf course. While the project site is approximately 87 acres of the existing Victoria Golf Course, only 78 acres of the project site are part of the playing field. Therefore, credit is only taken for 78 acres of the existing golf course.

Some of the trips generated by retail and restaurant uses within the proposed project would be pass-by trips, or trips whose primary destination are not those uses. These would include trips such as a work-to-home trip that stops at a restaurant or retail business on the way home from work. These trips would not be new trips generated by the project; rather, they are trips that are already on the roadway network that would make a stop at the project site. ITE's *Trip Generation Handbook* (2017) provides estimates of pass-by trip percentages for restaurants and retail uses that exceed 10%. However, Table 4.14-7 limits the credit taken for pass-by trips to 10% for these uses consistent with County guidance. No pass-by credit is taken for the more–specialized land uses provided on site.

Table 4.14-7 also considers the potential for walking or vehicle trips to take place between the Kimmelman project and the proposed project. These would be trips generated by the project land uses that do not result in additional traffic through study intersections. The internal trip capture methodology outlined in the *Trip Generation Handbook* was applied, and those trips were removed from the traffic being added to the study intersections.

Based on the table, the proposed project is anticipated to generate 16,132 net new daily weekday trips, 964 net new weekday AM peak-hour trips (580 inbound and 384 outbound), 1,396 net new weekday PM peak-hour trips (727 inbound and 669 outbound), and 1,790 net new Saturday peak-hour trips (878 inbound and 912 outbound).

Trip Distribution and Assignment

Trip distribution defines the project's regional origin and destination percentage. To determine trip distribution for the proposed project, trip distribution patterns identified in the City of Carson

General Plan Transportation and Infrastructure Element and cumulative project trip distribution patterns for other regionally significant commercial projects were considered. The estimated trip distribution for the project was reviewed and approved by County staff through the MOU. Trips were assigned based on the distances required for the potential routes to and from regional transportation facilities. Figure 4.14-5, Project Trip Distribution and Assignment, illustrates the trip distribution percentages and resulting project trip assignment (actual net project traffic volumes).

Existing plus Project

The net project trips were added to the existing traffic volumes at the study intersections. Figure 4.14-6, Existing Plus Project Traffic Volumes, shows the resulting existing plus project AM and PM peak hour traffic volumes. Table 4.14-8 summarizes the results of the Existing plus Project AM and PM peak hour LOS analysis for all study intersections. As Table 4.14-8 indicates, most of the study area intersections are anticipated to operate at an acceptable LOS (i.e., LOS D or better) in the AM and PM peak hours with implementation of the proposed project except:

14. Avalon Boulevard/Del Amo Boulevard
25. Hamilton Avenue/I-110 southbound ramps

Based on the County's criteria for determining significant traffic impacts, the project is expected to result in a **significant impact** at the following study intersections:

1. Main Street/Martin Luther King Jr. Street: resultant V/C of ≥0.75 from LOS A/B in PM peak hour
4. Main Street/Del Amo Boulevard: ≥0.02 V/C increase at LOS D in PM peak hour
7. Avalon Boulevard/Albertoni Street: ≥0.02 V/C increase at LOS D in PM peak hour
14. Avalon Boulevard/Del Amo Boulevard: ≥0.04 V/C increase at LOS C in AM peak hour, and ≥0.02 V/C increase at LOS D, and LOS D to LOS E in PM peak hour
18. Main Street/Albertoni Street: ≥0.02 V/C increase at LOS D in PM peak hour
19. Main Street/Victoria Street: ≥0.04 V/C increase at LOS C in PM peak hour
24. Hamilton Avenue/Del Amo Boulevard: ≥0.04 V/C increase at LOS C in PM peak hour
25. Hamilton Avenue/I-110 SB Ramps (unsignalized): project increases delay at (baseline) LOS F in both peak hours
26. Figueroa Street/Del Amo Boulevard: ≥0.02 V/C increase at LOS D in PM peak hour

The proposed project will be required to provide feasible mitigation measures to reduce the project's impacts to levels of less than significant. A discussion of proposed the mitigation measures is included in Section 4.14.5, Mitigation Measures.

Table 4.14-8
Existing plus Project Intersection Level of Service Summary

No.	Intersection	Existing				Existing plus Project				Increase		Significant Impact?[1]
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		ICU or Delay		
		ICU or Delay	LOS	ICU or Delay	LOS	ICU or Delay	LOS	ICU or Delay	LOS	AM	PM	
1	Main St/MLK Jr. St	0.42	A	0.52	A	0.57	A	0.78	C	0.15	0.26	**Yes**
2	Main St/I-405 NB Ramps	0.57	A	0.68	B	0.58	A	0.71	C	0.01	0.03	No
3	Main St/I-405 SB Ramps	0.45	A	0.70	C	0.46	A	0.73	C	0.01	0.03	No
4	Main Street/Del Amo Blvd	0.67	B	0.86	D	0.70	C	0.90	D	0.04	0.04	**Yes**
5	Main St/Torrance Blvd	0.62	B	0.75	C	0.64	B	0.76	C	0.02	0.00	No
6	Avalon Blvd/Artesia Blvd	0.55	A	0.57	A	0.56	A	0.59	A	0.02	0.02	No
7	Avalon Blvd/Albertoni St	0.65	B	0.84	D	0.65	B	0.88	D	0.01	0.04	**Yes**
8	Avalon Blvd/Victoria St	0.59	A	0.74	C	0.62	B	0.77	C	0.03	0.03	No
9	Avalon Blvd/184th St	0.39	A	0.47	A	0.41	A	0.50	A	0.02	0.03	No
10	Avalon Blvd/University Dr	0.67	B	0.72	C	0.67	B	0.74	C	0.00	0.02	No
11	Avalon Blvd/MLK Jr. St	0.42	A	0.59	A	0.44	A	0.63	B	0.02	0.04	No
12	Avalon Blvd/Elsmere Dr	0.46	A	0.44	A	0.48	A	0.47	A	0.02	0.03	No
13	Avalon Blvd/Turmont St	0.52	A	0.49	A	0.62	B	0.65	B	0.10	0.16	No
14	Avalon Blvd/Del Amo Blvd	0.80	C	0.90	D	0.89	D	0.95	E	0.09	0.05	**Yes**
15	Avalon Blvd/I-405 NB Ramps	0.47	A	0.51	A	0.49	A	0.53	A	0.02	0.02	No
16	Avalon Blvd/I-405 SB Ramps	0.60	B	0.59	A	0.62	B	0.61	B	0.02	0.03	No
17	Main St/SR-91 WB Ramps	0.62	B	0.58	A	0.64	B	0.60	A	0.01	0.02	No
18	Main St/Albertoni St	0.69	B	0.81	D	0.71	C	0.87	D	0.02	0.06	**Yes**
19	Main St/Victoria St	0.53	A	0.74	C	0.62	B	0.88	D	0.09	0.14	**Yes**
20	Figueroa St/Victoria St	0.61	B	0.69	B	0.63	B	0.73	C	0.03	0.04	No
21	I-110 NB Ramp/190th St	0.35	A	0.47	A	0.38	A	0.51	A	0.03	0.04	No
22	I-110 SB Ramp/190th St	0.77	C	0.80	C	0.78	C	0.82	D	0.01	0.02	No
23	Central Avenue/Victoria St	0.80	C	0.74	C	0.81	D	0.74	C	0.01	0.01	No
24	Hamilton Ave/Del Amo Blvd (u)	0.55	A	0.77	C	0.56	A	0.81	D	0.01	0.04	**Yes**
25	Hamilton Ave/I-110 SB Ramps (u)	>50 sec	F	>50 sec	F	>50 sec	F	>50 sec	F	7.9	20.1	**Yes**

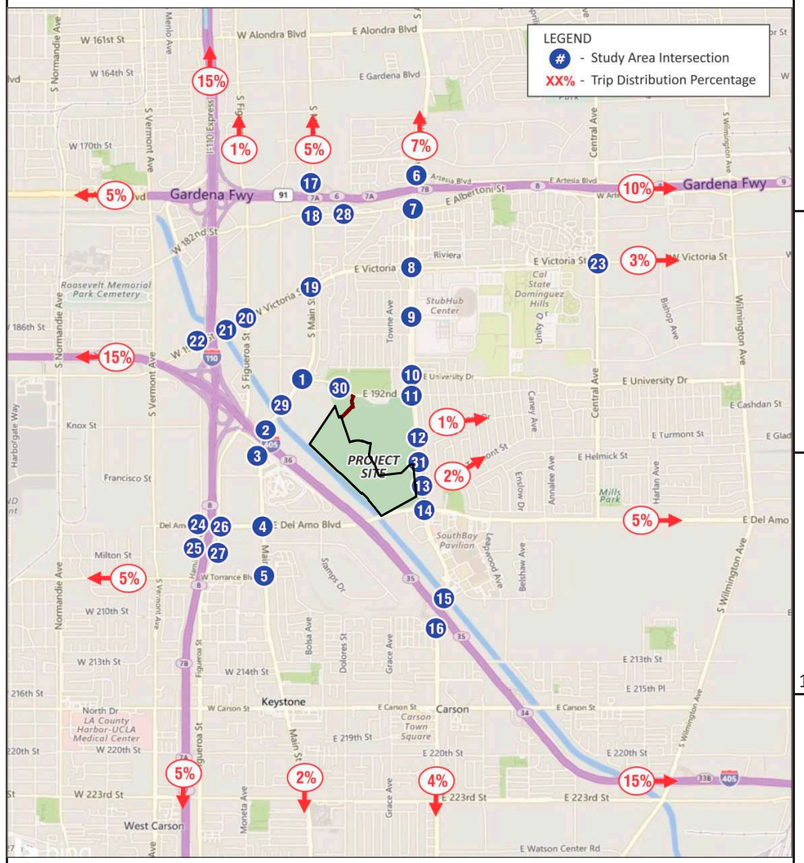
Table 4.14-8
Existing plus Project Intersection Level of Service Summary

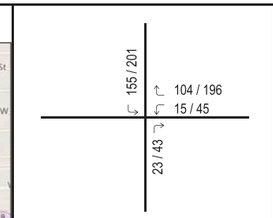
No.	Intersection	Existing				Existing plus Project				Increase		Significant Impact?[1]
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		ICU or Delay		
		ICU or Delay	LOS	ICU or Delay	LOS	ICU or Delay	LOS	ICU or Delay	LOS	AM	PM	
26	Figueroa St/Del Amo Blvd	0.73	C	0.82	D	0.74	C	0.87	D	0.01	0.05	**Yes**
27	Figueroa St/I-110 NB Ramps	0.70	B	0.71	C	0.71	C	0.72	C	0.01	0.01	No
28	SR-91 EB Ramps/Albertoni St	0.55	A	0.62	B	0.55	A	0.62	B	0.00	0.00	No
29	Main St/Broadway (u)	8.1	A	13.4	B	8.2 sec	A	14.4 sec	B	0.10	1.00	No
30	New Intersection/MLK Jr. St	New Intersection				0.34	A	0.52	A	0.34	0.52	No
31	Avalon Blvd/New Intersection	New Intersection				0.42	A	0.62	B	0.42	0.62	No

☐ = Unsatisfactory LOS

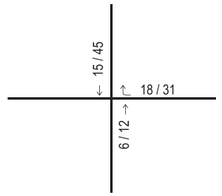
[1] Based on County criteria: ≥ 0.04 increase to pre-project LOS C, ≥ 0.02 increase to pre-project LOS D, or ≥ 0.01 increase to pre-project LOS E or F

(u) = unsignalized intersection
EB = eastbound
HCM = Highway Capacity Manual
I-110 = Interstate 110
I-405 = Interstate 405
ICU = intersection capacity utilization
LOS = level of service
MLK = Martin Luther King
NB = northbound
SB = southbound
sec = seconds
SR-91 = State Route 91
V/C = volume-to-capacity
WB = westbound

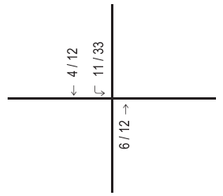




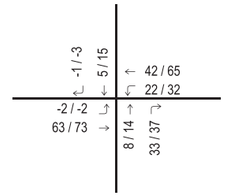
1 Main St/Martin Luther King Jr. St



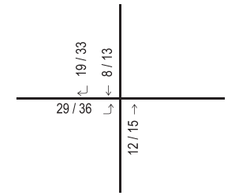
2 Main St/I-405 NB off-ramp



3 Main St/I-405 SB on-ramp

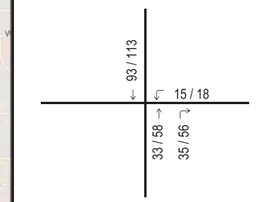


4 Main St/Del Amo Blvd

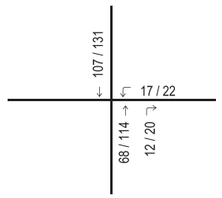


5 Main St/Torrance Blvd

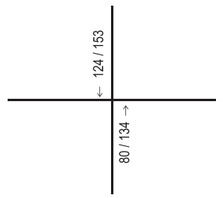
6 Avalon Blvd/SR-91 WB on-ramp



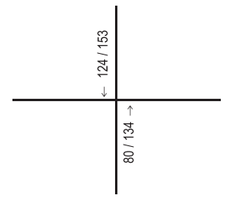
7 Avalon Blvd/Albertoni Blvd



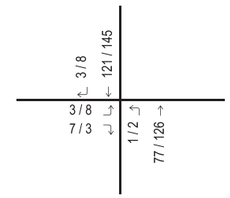
8 Avalon Blvd/Victoria St



9 Avalon Blvd/184th St

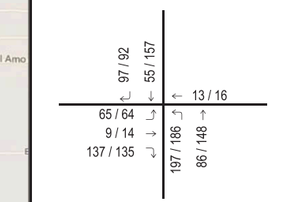


10 Avalon Blvd/University Dr

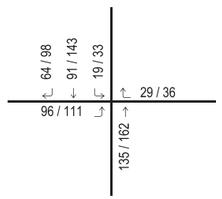


11 Avalon Blvd/Martin Luther King J

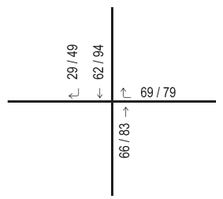
12 Avalon Blvd/Elsmere Dr



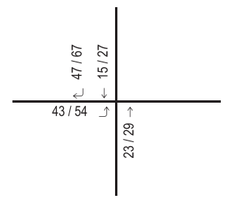
13 Avalon Blvd/Turmont St



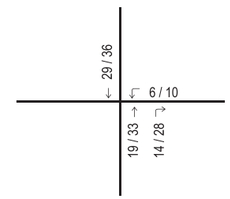
14 Avalon Blvd/Del Amo Blvd



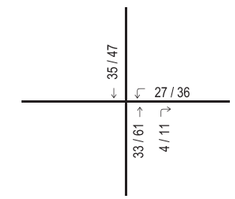
15 Avalon Blvd/I-405 NB Ramps



16 Avalon Blvd/I-405 SB Ramps

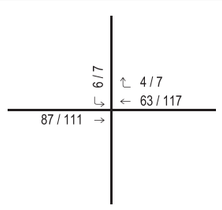


17 Main St/SR-91 WB Ramps

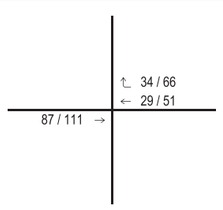


18 Main St/Albertoni St

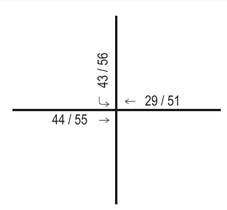
19 Main St/Victoria St



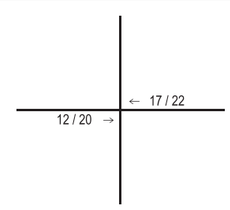
20 Figueroa St/Victoria St



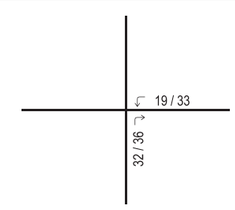
21 I-110 NB on-ramp/190th St



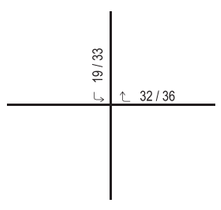
22 I-110 SB off-ramp/190th St



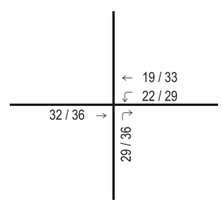
23 Central Ave/Victoria St



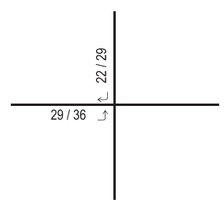
24 Hamilton Ave/Del Amo Blvd



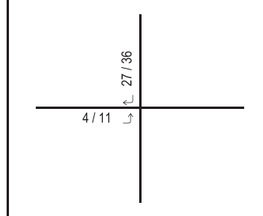
25 Hamilton Ave/I-110 SB Ramps



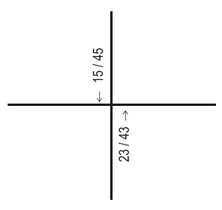
26 Figueroa St/Del Amo Blvd



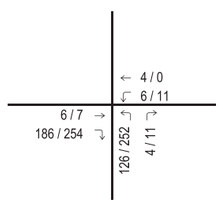
27 Figueroa St/I-110 NB Ramps



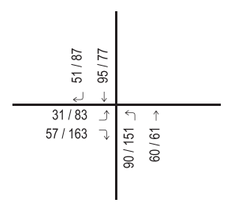
28 SR-91 EB Ramps/Albertoni St



29 Main Street/Broadway



30 New Intersection/MLK



31 Avalon Blvd/New Intersection

LEGEND
XXX / YYY AM / PM Volume

SOURCE: LSA 2018

FIGURE 4.14-5

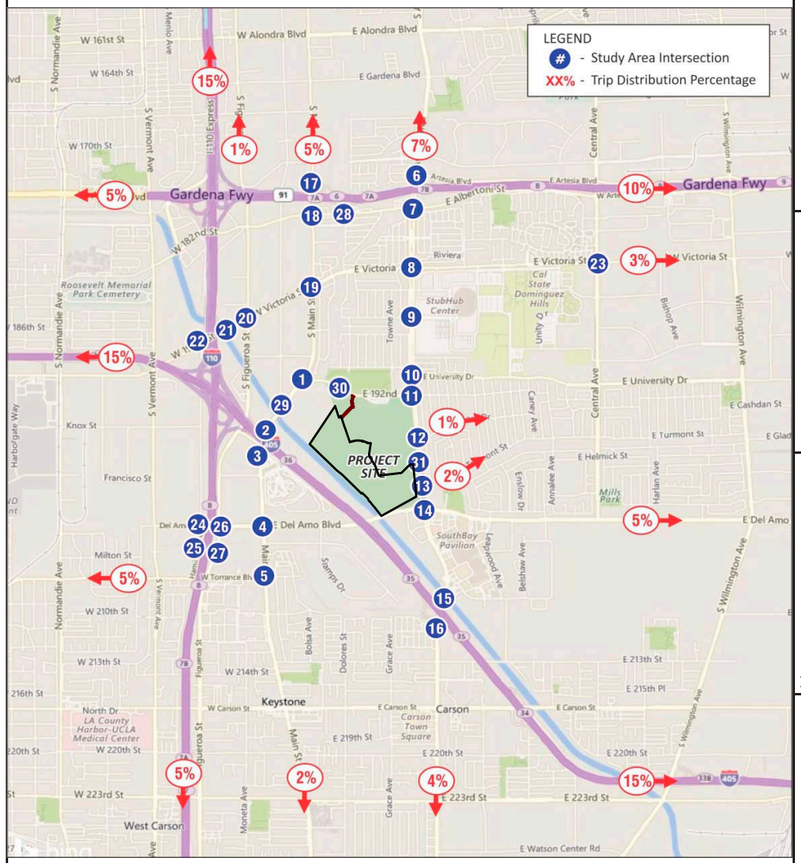
Project Trip Distribution and Assignment

The Creek at Dominguez Hills Project

DUDEK

Path: Z:\Projects\10990\01\MAP\DOC\DEIR\Traffic

INTENTIONALLY LEFT BLANK



1 Main St/Martin Luther King Jr. St

	540 / 658	223 / 416
1 / 0	↓	↳
3 / 3	↳	↰ 223 / 273
	4 / 2	← 174 / 140
	↑	↱
	455 / 518	159 / 279

2 Main St/I-405 NB off-ramp

	70 / 92	739 / 1280
↲	↓	↳ 250 / 267
	↰	← 324 / 121
	28 / 21	↰ 87 / 61
	↑	
		663 / 686

3 Main St/I-405 SB on-ramp

	727 / 1037	157 / 305
29 / 61	↓	↳
71 / 276	→	
21 / 42	↳	
	605 / 651	↑
		52 / 109

4 Main St/Del Amo Blvd

	142 / 171	520 / 836
↲	↓	↳ 49 / 61
117 / 216	↳	← 960 / 764
642 / 1165	→	↰ 253 / 324
34 / 102	↳	
	73 / 35	↑
	557 / 471	↱
		342 / 379

5 Main St/Torrance Blvd

	250 / 342	546 / 842
↲	↓	↳ 32 / 27
307 / 415	↳	← 54 / 17
18 / 57	→	↰ 13 / 6
181 / 478	↳	
	309 / 186	↑
	622 / 445	↱
		7 / 11

6 Avalon Blvd/SR-91 WB on-ramp

	1129 / 1109	177 / 163
	↓	↳ 600 / 449
		← 386 / 417
	↑	↱
	939 / 1227	166 / 228

7 Avalon Blvd/Albertoni Blvd

	376 / 263	749 / 1004
↲	↓	↳ 235 / 189
181 / 287	↳	← 20 / 21
127 / 787	→	↰ 95 / 121
311 / 586	↳	
	181 / 243	↑
	748 / 955	↱
		185 / 203

8 Avalon Blvd/Victoria St

	78 / 85	792 / 1111
↲	↓	↳ 221 / 353
85 / 114	↳	← 416 / 685
497 / 637	→	↰ 114 / 208
81 / 142	↳	
	136 / 149	↑
	753 / 942	↱
		213 / 247

9 Avalon Blvd/184th St

	8 / 33	954 / 1380
↲	↓	↳ 37 / 55
57 / 73	↳	↰ 11 / 48
45 / 30	↳	← 8 / 50
	19 / 34	↑
	1047 / 1214	↱
		62 / 39

10 Avalon Blvd/University Dr

	718 / 1186	289 / 351
	↓	↳ 271 / 233
		↰ 247 / 471
	909 / 1095	↑
	476 / 330	↱

11 Avalon Blvd/Martin Luther King J

	103 / 92	848 / 1563
↲	↓	
110 / 206	↳	↰
62 / 171	↳	118 / 90 ↑
		1281 / 1204 ↑

12 Avalon Blvd/Elsmere Dr

	883 / 1674	34 / 59
	↓	↳ 40 / 35
		↰ 102 / 35
	1346 / 1270	↑
		↱
		67 / 72

13 Avalon Blvd/Turmont St

	97 / 92	845 / 1630
↲	↓	↳ 68 / 103
65 / 64	↳	↰ 102 / 60
9 / 14	→	← 13 / 16
137 / 135	↳	↰ 160 / 84
	217 / 222	↑
	1302 / 1283	↱
		114 / 193

14 Avalon Blvd/Del Amo Blvd

	310 / 399	712 / 1067
↲	↓	↳ 205 / 322
353 / 310	↳	↰ 123 / 182
534 / 950	→	← 849 / 610
85 / 210	↳	↰ 184 / 253
	145 / 139	↑
	977 / 1123	↱
		134 / 179

15 Avalon Blvd/I-405 NB Ramps

	286 / 530	831 / 1427
↲	↓	↰ 489 / 465
		← 0 / 2
		↰ 66 / 82
	414 / 301	↑
	1183 / 1163	↱

16 Avalon Blvd/I-405 SB Ramps

	315 / 431	585 / 1082
↲	↓	
485 / 299	↳	
13 / 169	→	
554 / 345	↳	
	1038 / 1130	↑
	100 / 181	↱

17 Main St/SR-91 WB Ramps

	515 / 762	65 / 108
	↓	↳ 405 / 326
		↰ 467 / 250
	0 / 1	↑
	552 / 607	↱
		107 / 126

18 Main St/Albertoni St

	277 / 170	451 / 640
↲	↓	↳ 152 / 220
32 / 58	↳	↰ 226 / 226
302 / 648	→	← 419 / 247
73 / 143	↳	↰ 140 / 143
	111 / 103	↑
	393 / 444	↱
		125 / 146

19 Main St/Victoria St

	95 / 86	419 / 650
↲	↓	↳ 62 / 163
68 / 81	↳	↰ 120 / 136
408 / 963	→	← 529 / 604
125 / 194	↳	↰ 184 / 127
	117 / 169	↑
	431 / 385	↱
		117 / 161

20 Figueroa St/Victoria St

	120 / 107	400 / 715
↲	↓	↳ 49 / 74
151 / 114	↳	↰ 76 / 87
545 / 956	→	← 561 / 778
144 / 219	↳	↰ 60 / 67
	151 / 105	↑
	569 / 500	↱
		89 / 144

21 I-110 NB on-ramp/190th St

		↰ 232 / 307
		← 584 / 727
158 / 435	↳	
897 / 1299	→	

22 I-110 SB off-ramp/190th St

	718 / 461	271 / 365
↲	↓	↳
		← 609 / 721
748 / 1378	→	

23 Central Ave/Victoria St

	673 / 336	734 / 648
↲	↓	↳ 194 / 174
221 / 504	↳	↰ 117 / 211
215 / 705	→	← 294 / 364
123 / 190	↳	↰ 23 / 18
	126 / 125	↑
	530 / 524	↱
		23 / 35

24 Hamilton Ave/Del Amo Blvd

	14 / 62	63 / 315
↲	↓	↳ 50 / 292
37 / 13	↳	↰ 352 / 97
263 / 573	→	← 706 / 439
80 / 197	↳	↰ 396 / 300
	58 / 24	↑
	130 / 34	↱
		98 / 160

25 Hamilton Ave/I-110 SB Ramps

	95 / 169	350 / 667
↲	↓	↳ 266 / 138
		↰ 764 / 296
	79 / 61	↑
		↱
		110 / 534

26 Figueroa St/Del Amo Blvd

	349 / 206	347 / 693
↲	↓	↳ 50 / 185
56 / 68	↳	↰ 97 / 87
292 / 843	→	← 839 / 566
77 / 132	↳	↰ 127 / 222
	193 / 63	↑
	641 / 407	↱
		349 / 343

27 Figueroa St/I-110 NB Ramps

	148 / 176	411 / 888
↲	↓	
578 / 393	↳	↰
223 / 138	↳	657 / 499 ↑
		599 / 420 ↑

28 SR-91 EB Ramps/Albertoni St

	253 / 340	278 / 426
↲	↓	↳
279 / 225	↳	↰ 88 / 62
328 / 815	→	← 495 / 352

29 Main Street/Broadway

	5 / 18	695 / 728
↲	↓	
184 / 490	↳	↰
	269 / 215	↑
	691 / 721	↱

30 New Intersection/MLK

		← 252 / 172
		↰ 6 / 11
189 / 416	→	↱
186 / 252	↳	
	126 / 250	↑
	4 / 11	↱

31 Avalon Blvd/New Intersection

	51 / 83	923 / 1655
↲	↓	
31 / 84	↳	
57 / 163	↳	
	90 / 161	↑
	1385 / 1262	↱

LEGEND
XXX / YYY AM / PM Volume

SOURCE: LSA 2018

FIGURE 4.14-6
Existing Plus Project Traffic Volumes
The Creek at Dominguez Hills Project

DUDEK

Path: Z:\Projects\10990101\MAPDOC\DEIR\Traffic

INTENTIONALLY LEFT BLANK

Existing plus Project plus Cumulative Projects

Traffic from cumulative projects was added to the Existing plus Project traffic volumes at the study intersections. Figure 4.14-7, Existing Plus Project Plus Cumulative Traffic Volumes, shows the resulting existing plus project plus cumulative projects AM and PM peak-hour traffic volumes. Table 4.14-9 summarizes the results of the existing plus project plus cumulative projects AM and PM peak hour LOS analysis for all study intersections. Analysis worksheets are provided in the TIA (Appendix J).

As Table 4.14-9 indicates, most of the study area intersections are anticipated to operate at an acceptable LOS (i.e., LOS D or better) in the AM and PM peak hours with implementation of the proposed project in a cumulative setting except for the following intersections:

4. Main Street/Del Amo Boulevard
7. Avalon Boulevard/Albertoni Street
14. Avalon Boulevard/Del Amo Boulevard
18. Main Street/Albertoni Street
19. Main Street/Victoria Street
24. Hamilton Avenue/Del Amo Boulevard
25. Hamilton Avenue/I-110 southbound ramps
26. Figueroa Street/Del Amo Boulevard

Based on the County's criteria for determining significant traffic impacts, the project is expected to create a **significant impact** at the following study intersections.

1. Main Street/Martin Luther King Jr. Street: resultant V/C of ≥0.75 from LOS A/B in PM peak hour
3. Main Street/I-405 southbound ramps: ≥0.04 V/C increase at LOS C in PM peak hour
4. Main Street/Del Amo Boulevard: ≥0.02 V/C increase at LOS D, and LOS D to LOS F in PM peak hour
7. Avalon Boulevard/Albertoni Street: ≥0.02 V/C increase at LOS D, and LOS D to LOS E in PM peak hour
8. Avalon Boulevard/Victoria Street: ≥0.02 V/C increase at LOS D in PM peak hour
10. Avalon Boulevard/University Drive: ≥0.04 V/C increase at LOS C in PM peak hour
14. Avalon Boulevard/Del Amo Boulevard: ≥0.04 V/C increase at LOS C, and LOS C to LOS E in AM peak hour; and, ≥0.02 V/C increase at LOS D, and LOS D to LOS E in PM peak hour

18. Main Street/Albertoni Street: ≥0.02 V/C increase at LOS D, and LOS D to LOS E in PM peak hour
19. Main Street/Victoria Street: ≥0.04 V/C increase at LOS C, and LOS C to LOS E in PM peak hour
22. I-110 southbound ramps/190th Street: ≥0.02 V/C increase at LOS D in both peak hours
24. Hamilton Avenue/Del Amo Boulevard (unsignalized): LOS B to LOS E in PM peak hour
25. Hamilton Avenue/I-110 SB Ramps (unsignalized): project increases delay at (baseline) LOS F in both peak hours
26. Figueroa Street/Del Amo Boulevard: ≥0.02 V/C increase at LOS D, and LOS D to LOS F in PM peak hour,

Significant project impacts were identified at Avalon Boulevard/Victoria Street (#8), Avalon Boulevard/University Drive (#10), and I-110 southbound ramps/190th Street (#22), as discussed in detail in the TIA (Appendix J). County staff directed further consideration of operational improvements to the operation of an intersection (e.g., adding protected left-turn signal phasing or extending inadequate turn pockets) when an impact occurs at an intersection operating at a satisfactory LOS (LOS D or better), rather than add more approach lanes. Based on that direction, queue lengths provided in the TIA were compared to existing turn storage lengths at those three intersections, and no deficiencies were found. Therefore, no operational improvements are needed or required per the County's direction. The effect of the addition of cumulative and project traffic would not result in operational deficiencies at Avalon Boulevard/Victoria Street (#8), Avalon Boulevard/University Drive (#10), and I-110 southbound ramps/190th Street (#22).

For the significantly impacted intersections, the proposed project will be required to provide feasible mitigation measures to reduce the project's cumulative impacts to less-than-significant levels. A discussion of proposed the mitigation measures is included in Section 4.14.5.

Caltrans Facility Analysis

Intersections

Some of the study intersections are freeway ramp intersections or street intersections under the jurisdiction of Caltrans, and were therefore analyzed using Caltrans preferred HCM methodology.

Table 4.14-9
Existing plus Project plus Cumulative (2020) Intersection Level of Service Summary

No.	Intersection	Existing				Existing plus Project plus Cumulative Projects				Increase		Significant Impact?[1]
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		ICU or Delay		
		ICU or Delay	LOS	ICU or Delay	LOS	ICU or Delay	LOS	ICU or Delay	LOS	AM	PM	
1	Main St/MLK Jr. St	0.42	A	0.52	A	0.64	B	0.89	D	0.22	0.36	**Yes**
2	Main St/I-405 NB Ramps	0.57	A	0.68	B	0.60	A	0.74	C	0.03	0.06	No
3	Main St/I-405 SB Ramps	0.45	A	0.70	C	0.48	A	0.76	C	0.03	0.06	**Yes**
4	Main Street/Del Amo Blvd	0.67	B	0.86	D	0.76	C	1.02	F	0.10	0.15	**Yes**
5	Main St/Torrance Blvd	0.62	B	0.75	C	0.66	B	0.78	C	0.04	0.03	No
6	Avalon Blvd/Artesia Blvd	0.55	A	0.57	A	0.57	A	0.60	B	0.02	0.03	No
7	Avalon Blvd/Albertoni St	0.65	B	0.84	D	0.66	B	0.91	E	0.01	0.07	**Yes**
8	Avalon Blvd/Victoria St	0.59	A	0.74	C	0.63	B	0.81	D	0.04	0.07	No[2]
9	Avalon Blvd/184th St	0.39	A	0.47	A	0.42	A	0.52	A	0.03	0.05	No
10	Avalon Blvd/University Dr	0.67	B	0.72	C	0.67	B	0.78	C	0.01	0.06	No[2]
11	Avalon Blvd/MLK Jr. St	0.42	A	0.59	A	0.47	A	0.69	B	0.05	0.10	No
12	Avalon Blvd/Elsmere Dr	0.46	A	0.44	A	0.49	A	0.54	B	0.03	0.11	No
13	Avalon Blvd/Turmont St	0.52	A	0.49	A	0.63	B	0.67	B	0.11	0.18	No
14	Avalon Blvd/Del Amo Blvd	0.80	C	0.90	D	0.92	E	1.00	E	0.12	0.10	**Yes**
15	Avalon Blvd/I-405 NB Ramps	0.47	A	0.51	A	0.51	A	0.59	A	0.04	0.09	No
16	Avalon Blvd/I-405 SB Ramps	0.60	B	0.59	A	0.66	B	0.64	B	0.06	0.06	No
17	Main St/SR-91 WB Ramps	0.62	B	0.58	A	0.66	B	0.62	B	0.03	0.04	No
18	Main St/Albertoni St	0.69	B	0.81	D	0.72	C	0.93	E	0.03	0.12	**Yes**
19	Main St/Victoria St	0.53	A	0.74	C	0.64	B	0.93	E	0.12	0.19	**Yes**
20	Figueroa St/Victoria St	0.61	B	0.69	B	0.64	B	0.75	C	0.03	0.06	No[3]
21	I-110 NB Ramp/190th St	0.35	A	0.47	A	0.39	A	0.53	A	0.04	0.06	No
22	I-110 SB Ramp/190th St	0.77	C	0.80	C	0.80	D	0.84	D	0.03	0.04	No[2]
23	Central Avenue/Victoria St	0.80	C	0.74	C	0.81	D	0.76	C	0.01	0.03	No
24	Hamilton Ave/Del Amo Blvd	0.55	A	0.77	C	0.61	B	0.95	E	0.06	0.18	**Yes**

Table 4.14-9
Existing plus Project plus Cumulative (2020) Intersection Level of Service Summary

No.	Intersection	Existing				Existing plus Project plus Cumulative Projects				Increase		Significant Impact?[1]
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		ICU or Delay		
		ICU or Delay	LOS	ICU or Delay	LOS	ICU or Delay	LOS	ICU or Delay	LOS	AM	PM	
25	Hamilton Ave/I-110 SB Ramps (u)	>50 sec	F	>50 sec	F	>50 sec	F	>50 sec	F	26.5	69.5	**Yes**
26	Figueroa St/Del Amo Blvd	0.73	C	0.82	D	0.75	C	1.05	F	0.02	0.23	**Yes**
27	Figueroa St/I-110 NB Ramps	0.70	B	0.71	C	0.73	C	0.74	C	0.03	0.03	No
28	SR-91 EB Ramps/Albertoni St	0.55	A	0.62	B	0.55	A	0.62	B	0.00	0.00	No
29	Main St/Broadway (u)	8.1	A	13.4	B	8.3	A	16.2	B	0.20	2.8	No
30	New Intersection/MLK Jr. St	New Intersection				0.40	A	0.61	B	0.40	0.61	No
31	Avalon Blvd/New Intersection	New Intersection				0.43	A	0.64	B	0.43	0.64	No

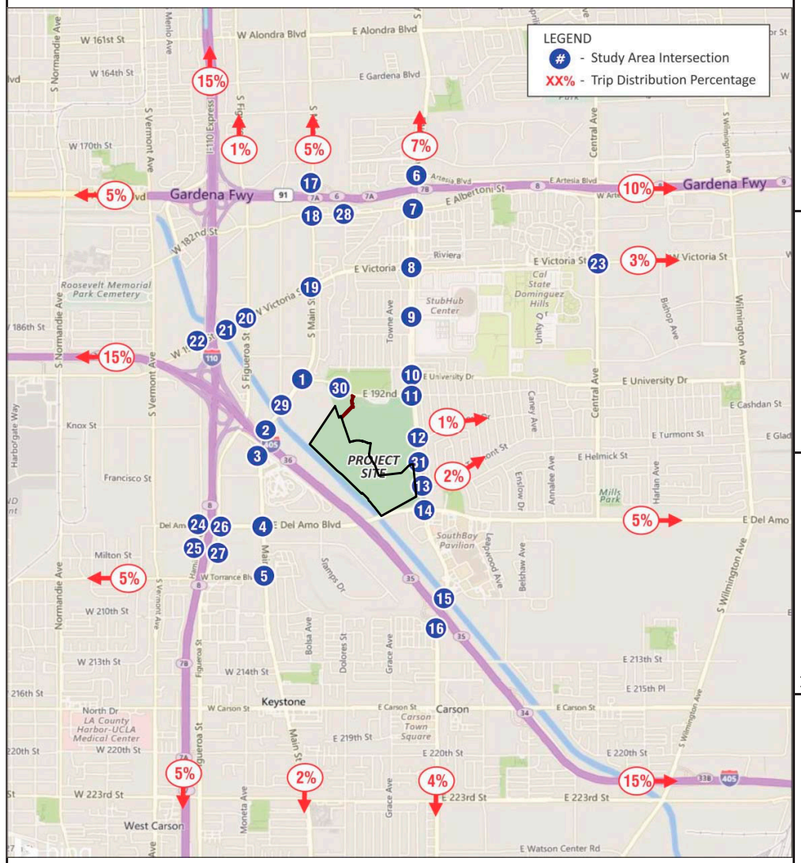
☐ = Unsatisfactory LOS

1 Based on County of Los Angeles criteria: ≥ 0.04 increase to pre-project LOS C, ≥ 0.02 increase to pre-project LOS D, or ≥ 0.01 increase to pre-project LOS E or F, except where noted.

2 Per County's direction, significantly impacted intersections operating with satisfactory LOS (LOS D or better) were analyzed for the need of other operational improvements (signal phasing, extension of storage lengths, etc.). If none are required, then project would not have a significant impact.

3 The Existing plus Project plus Cumulative ICU during the PM peak hour is 0.748 when shown as three decimals. Therefore, a significant impact does not occur at this intersection.

(u) = unsignalized intersection
EB = eastbound
I-110 = Interstate 110
I-405 = Interstate 405
LOS = level of service
MLK = Martin Luther King
NB = northbound
SB = southbound
sec = seconds
SR-91 = State Route 91
V/C = volume-to-capacity
WB = westbound



1 Main St/Martin Luther King Jr. St	2 Main St/I-405 NB off-ramp	3 Main St/I-405 SB on-ramp	4 Main St/Del Amo Blvd
550 / 686 ↓ 268 / 487 ↳ 1 / 0 ⤵ 3 / 3 ⤵ 4 / 2 ↰ 473 / 538 ↑ 189 / 318 ↱ ↱ 258 / 340 ↰ 197 / 181	70 / 92 ⤶ 772 / 1349 ↓ 28 / 21 ↰ 703 / 735 ↑ ↱ 257 / 277 ← 324 / 121 ↰ 106 / 101	773 / 1135 ↓ 163 / 315 ↳ 29 / 61 ⤵ 71 / 276 → 21 / 42 ⤵ 645 / 700 → 68 / 149 ↱	150 / 186 ⤶ 533 / 867 ↓ 65 / 153 ↳ 128 / 230 ⤵ 749 / 1407 → 34 / 102 ⤵ 73 / 35 ↰ 585 / 491 ↑ 357 / 414 ↱ ↱ 68 / 116 ← 1049 / 1003 ↰ 265 / 358
5 Main St/Torrance Blvd	6 Avalon Blvd/SR-91 WB on-ramp	7 Avalon Blvd/Albertoni Blvd	8 Avalon Blvd/Victoria St
259 / 364 ⤶ 562 / 885 ↓ 13 / 38 ↳ 318 / 438 ⤵ 18 / 57 → 182 / 483 ⤵ 314 / 189 ↰ 653 / 477 ↑ 7 / 11 ↱ ↱ 32 / 27 ← 54 / 17 ↰ 13 / 6	1149 / 1164 ↓ 177 / 163 ↳ 965 / 1260 ↑ 171 / 243 ↱ ↱ 600 / 449 ↰ 389 / 421	376 / 263 ⤶ 772 / 1063 ↓ 339 / 261 ↳ 181 / 287 ⤵ 129 / 797 → 311 / 586 ⤵ 181 / 243 ↰ 780 / 1003 ↑ 188 / 210 ↱ ↱ 235 / 189 ← 20 / 21 ↰ 101 / 150	78 / 85 ⤶ 822 / 1199 ↓ 379 / 427 ↳ 85 / 114 ⤵ 505 / 662 → 81 / 158 ⤵ 136 / 156 ↰ 787 / 997 ↑ 216 / 255 ↱ ↱ 221 / 353 ← 421 / 712 ↰ 118 / 218
9 Avalon Blvd/184th St	10 Avalon Blvd/University Dr	11 Avalon Blvd/Martin Luther King J	12 Avalon Blvd/Elsmere Dr
8 / 33 ⤶ 988 / 1494 ↓ 37 / 55 ↳ 57 / 73 ⤵ 45 / 30 ⤵ 19 / 34 ↰ 1085 / 1284 ↑ 62 / 39 ↱ ↱ 11 / 48 ↰ 8 / 50	752 / 1300 ↓ 289 / 351 ↳ 947 / 1165 ↑ 484 / 353 ↱ ↱ 271 / 233 ↰ 253 / 496	124 / 120 ⤶ 867 / 1674 ↓ 126 / 235 ⤵ 70 / 198 ⤵ 129 / 110 ↰ 1311 / 1268 ↑	0 / 64 ⤶ 909 / 1746 ↓ 35 / 60 ↳ 1 / 30 ⤵ 1 / 18 ⤵ 0 / 38 ↰ 1385 / 1323 ↑ 67 / 72 ↱ ↱ 41 / 36 ← 0 / 1 ↰ 102 / 35
13 Avalon Blvd/Turmont St	14 Avalon Blvd/Del Amo Blvd	15 Avalon Blvd/I-405 NB Ramps	16 Avalon Blvd/I-405 SB Ramps
97 / 92 ⤶ 872 / 1720 ↓ 68 / 103 ↳ 65 / 64 ⤵ 9 / 14 → 137 / 135 ⤵ 217 / 222 ↰ 1341 / 1374 ↑ 114 / 193 ↱ ↱ 102 / 60 ← 13 / 16 ↰ 160 / 84	320 / 426 ⤶ 725 / 1122 ↓ 208 / 330 ↳ 361 / 346 ⤵ 549 / 998 → 97 / 243 ⤵ 160 / 171 ↰ 1003 / 1169 → 134 / 179 ↱ ↱ 127 / 192 ← 873 / 652 ↰ 184 / 253	288 / 534 ⤶ 857 / 1516 ↓ ↳ 471 / 345 ↰ 1210 / 1199 → ↱ ↱ 505 / 513 ← 0 / 2 ↰ 105 / 185	355 / 533 ⤶ 610 / 1172 ↓ ↳ 503 / 348 ⤵ 32 / 224 → 588 / 454 ⤵ 26 / 53 ↰ 1105 / 1161 ↑ 139 / 184 ↱ ↱ ← ↰
17 Main St/SR-91 WB Ramps	18 Main St/Albertoni St	19 Main St/Victoria St	20 Figueroa St/Victoria St
531 / 795 ↓ 65 / 108 ↳ 0 / 1 ↰ 567 / 638 → 120 / 157 ↱ ↱ 405 / 326 ↰ 481 / 257	277 / 170 ⤶ 471 / 678 ↓ 163 / 223 ↳ 32 / 58 ⤵ 302 / 648 → 76 / 150 ⤵ 114 / 109 ↰ 418 / 496 → 138 / 153 ↱ ↱ 228 / 236 ← 419 / 247 ↰ 156 / 176	95 / 86 ⤶ 458 / 728 ↓ 62 / 163 ↳ 68 / 81 ⤵ 416 / 1004 → 141 / 215 ⤵ 129 / 191 ↰ 471 / 450 ↑ 117 / 161 ↱ ↱ 120 / 136 ← 534 / 638 ↰ 184 / 127	120 / 107 ⤶ 400 / 715 ↓ 49 / 74 ↳ 151 / 114 ⤵ 569 / 1018 → 144 / 219 ⤵ 151 / 105 ↰ 569 / 500 ↑ 89 / 144 ↱ ↱ 76 / 87 ← 579 / 834 ↰ 60 / 67
21 I-110 NB on-ramp/190th St	22 I-110 SB off-ramp/190th St	23 Central Ave/Victoria St	24 Hamilton Ave/Del Amo Blvd
162 / 455 ⤵ 921 / 1361 → ↱ 239 / 335 ← 594 / 755	740 / 466 ⤶ 281 / 394 ↳ 765 / 1430 → ↱ ← 619 / 749	673 / 336 ⤶ 737 / 656 ↓ 194 / 174 ↳ 221 / 504 ⤵ 218 / 713 → 131 / 215 ⤵ 131 / 152 ↰ 532 / 533 ↑ 23 / 35 ↱ ↱ 117 / 211 ← 298 / 374 ↰ 23 / 18	14 / 62 ⤶ 63 / 315 ↓ 50 / 292 ↳ 37 / 13 ⤵ 293 / 641 → 80 / 197 ⤵ 58 / 24 ↰ 130 / 34 → 157 / 282 ↱ ↱ 352 / 97 ← 737 / 502 ↰ 418 / 366
25 Hamilton Ave/I-110 SB Ramps	26 Figueroa St/Del Amo Blvd	27 Figueroa St/I-110 NB Ramps	28 SR-91 EB Ramps/Albertoni St
95 / 169 ↓ 372 / 733 ↳ 79 / 61 ↑ 110 / 534 ↱ ↱ 325 / 260 ↰ 773 / 331	349 / 206 ⤶ 347 / 693 ↓ 50 / 185 ↳ 56 / 68 ⤵ 381 / 1033 → 77 / 132 ⤵ 193 / 63 ↰ 641 / 407 ↑ 378 / 410 ↱ ↱ 97 / 87 ← 891 / 693 ↰ 172 / 348	193 / 302 ⤶ 411 / 888 ↓ ↳ 607 / 460 ⤵ 223 / 138 ⤵ 685 / 503 ↑ 599 / 420 ↱	267 / 363 ⤶ 278 / 426 ↓ ↳ 281 / 229 ⤵ 328 / 815 → ↱ 88 / 62 ← 495 / 352
29 Main Street/Broadway	30 New Intersection/MLK	31 Avalon Blvd/New Intersection	
5 / 18 ⤶ 728 / 797 ↓ ↳ 184 / 490 ⤵ ↰ 269 / 215 ↑ 739 / 780 ↱	← 252 / 172 ↰ 38 / 59 189 / 416 → 261 / 362 ⤵ 184 / 358 ↰ 28 / 67 ↱	51 / 83 ⤶ 950 / 1745 ↓ ↳ 31 / 84 ⤵ 57 / 163 ⤵ 90 / 161 ↰ 1424 / 1353 ↑ ↱	

LEGEND
XXX / YYY AM / PM Volume

SOURCE: LSA 2018

FIGURE 4.14-7

Existing Plus Project Plus Cumulative Traffic Volumes

The Creek at Dominguez Hills Project

DUDEK

Path: Z:\Projects\10990101\MAP\DOC\DEIR\Traffic

INTENTIONALLY LEFT BLANK

Existing Plus Project

Table 4.14-10 presents the analysis of these intersections in the Existing and Existing plus Project conditions. As Table 4.14-10 shows, most of the Caltrans intersections operate at a satisfactory LOS in the existing condition and would continue to operate with satisfactory LOS with the project with the exception of the unsignalized intersection of Hamilton Avenue/I-110 southbound ramps. This intersection operates at LOS F in the existing condition and the project is anticipated to increase the delay already experienced at this intersection. The project was determined to also have a **significant impact** on this intersection under County significance criteria.

Cumulative (2020) Plus Project

Table 4.14-11 displays the operations of Caltrans intersections under Cumulative (2020) No Project and Cumulative (2020) plus Project conditions. For this cumulative condition, the anticipated increase in ambient traffic was accounted for by applying a growth factor to existing traffic volumes. According to the County's 2010 CMP, traffic in the South Bay region is expected to grow 1.3% from 2015 to 2020. Therefore, to derive the growth factor between existing 2018 and 2020 traffic volumes, a 1% growth factor was applied in addition to adding traffic from cumulative projects. This baseline is compared to the traffic conditions with the project traffic added to the no project condition.

As Table 4.14-11 shows, most of the Caltrans intersections are anticipated to operate with satisfactory LOS in the Cumulative plus Project (project opening) condition and would continue to operate at a satisfactory LOS with the project with the exception of the unsignalized intersection of Hamilton Avenue/I-110 southbound ramps (similar to the analysis of the Existing plus Project condition). This intersection is forecast to operate at LOS F in the Cumulative No Project condition and the project is anticipated to increase the delay at this intersection. The project was determined to also have a **significant impact** on this intersection under County significance criteria.

The proposed project will be required to provide feasible mitigation measures to reduce the project's direct and cumulative impacts to levels of less than significant. A discussion of proposed the mitigation measures is included in sub-section 4.14.5.

Freeway Mainline Segments

Existing Plus Project

Existing (2017) freeway mainline volumes were obtained from the Caltrans Traffic Operations website, as were directional and peak hour factors (i.e., K and D factors). The calculated peak hour directional volumes were analyzed in HCS software to determine density and LOS. Peak hour project traffic volumes on freeway mainline segments were calculated from freeway ramp intersection turn volumes. Table 4.14-12 summarizes the Existing and Existing plus Project

freeway mainline LOS analysis. As Table 4.14-12 shows, several freeway mainline segments currently operate at LOS F, and continue to operate at LOS F with addition of project traffic. However, per the CMP significance criteria, the addition of project traffic to these segments would increase the traffic volumes by less than 2%. Therefore, the proposed project would have a **less than significant impact** on all freeway mainline segments in the Existing plus Project condition.

Cumulative (2020) Plus Project

Cumulative (2020) traffic volumes were calculated by applying an ambient growth factor of 0.5% per year to existing peak hour directional volumes and adding traffic from cumulative projects. Project traffic volumes were added to this baseline condition to arrive at the Cumulative (2020) plus Project volumes. The calculated peak hour directional volumes were analyzed in HCS software to determine density and LOS. Table 4.14-13 summarizes the Cumulative (2020) and Cumulative (2020) plus Project freeway mainline LOS analysis. As Table 4.14-13 shows, several freeway mainline segments are forecast to operate at LOS F, and will continue to operate at LOS F with addition of project traffic. However, per the CMP significance criteria, the project increase to the traffic volumes would be less than 2%. Therefore, the proposed project would have a **less-than-significant impact** on all freeway mainline segments in the Cumulative (2020) plus Project condition.

Avalon Boulevard Corridor Analysis – Signal Progression Analysis

A Signal Progression Analysis was conducted for the Avalon Boulevard corridor between Martin Luther King Jr. Street and Del Amo Boulevard using the Synchro software and HCM 6 methodologies. Current signal timing sheets were used for this analysis. The purpose of this analysis is to determine whether the modifications in signal operations, due to the addition of fourth legs at the intersections of Avalon Boulevard/Elsmere Drive and Avalon Boulevard/Turmont Street, and the addition of the new signal at the new project intersection on Avalon Boulevard, would result in any adverse effects on traffic flow along the Avalon Boulevard corridor.

An analysis was conducted using existing signal timings at the study intersections along the study corridor for the existing and cumulative with project scenarios. The analysis was performed for both the AM and the PM peak hour on a typical weekday, and the afternoon peak hour on a Saturday. For purposes of this analysis, the left-turns for the eastbound movement at the intersection of Avalon Boulevard/New Intersection, and both the eastbound and westbound movements at the intersection of Avalon Boulevard/Turmont Street were considered to have protected phasing. Table 4.14-14 summarizes the results of the signal progression analysis for the Avalon Boulevard corridor.

Table 4.14-10
Caltrans Intersection LOS Summary – Existing plus Project

No.	Intersection	Existing				Existing plus Project				Increase		Significant Impact?[1]
		AM Peak Hour		*PM Peak Hour*		*AM Peak Hour*		*PM Peak Hour*		*Delay (sec)*		
		Delay (sec)	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*	*LOS*	*AM*	*PM*	
2	Main St/I-405 NB Ramps	20.5	C	15.5	B	21.8	C	17.7	B	1.3	2.2	No
3	Main St/I-405 SB Ramps	8.3	A	16.2	B	8.5	A	18.6	B	0.2	2.4	No
6	Avalon Blvd/Artesia Blvd	43.0	D	18.3	B	42.6	D	19.0	B	(0.4)	0.7	No
15	Avalon Blvd/I-405 NB Ramps	3.3	A	3.7	A	3.4	A	3.8	A	0.1	0.1	No
16	Avalon Blvd/I-405 SB Ramps	7.0	A	6.3	A	7.5	A	6.9	A	0.5	0.6	No
17	Main St/SR-91 WB Ramps	20.1	C	14.7	B	20.4	C	15.2	B	0.3	0.5	No
21	I-110 NB Ramp/190th St	3.0	A	4.0	A	3.0	A	4.1	A	0.0	0.1	No
22	I-110 SB Ramp/190th St	17.7	B	17.2	B	18.2	B	17.6	B	0.5	0.4	No
25	Hamilton Ave/I-110 SB Ramps (u)	>50 sec	F	>50 sec	F	>50 sec	F	>50 sec	F	7.9	20.1	**Yes**
27	Figueroa St/I-110 NB Ramps	34.9	C	21.2	C	38.4	D	22.2	C	3.5	1.0	No
28	SR-91 EB Ramps/Albertoni St	17.5	B	14.9	B	17.7	B	15.2	B	0.2	0.3	No

☐ = Unsatisfactory LOS

[1] Based on increase in delay at an LOS E or F intersection

(u) = unsignalized intersection
EB = eastbound
I-110 = Interstate 110
I-405 = Interstate 405
LOS = level of service
NB = northbound
SB = southbound
sec = seconds
SR-91 = State Route 91
WB = westbound

Table 4.14-11
Caltrans Intersection LOS Summary – Cumulative plus Project

No.	Intersection	Cumulative No Project				Cumulative plus Project				Increase		Significant Impact?[1]
		AM Peak Hour		*PM Peak Hour*		*AM Peak Hour*		*PM Peak Hour*		*Delay (sec)*		
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	AM	PM	
2	Main St/I-405 NB Ramps	21.0	C	17.9	B	22.6	C	22.7	C	1.6	4.8	No
3	Main St/I-405 SB Ramps	8.4	A	17.0	B	8.6	A	20.6	C	0.2	3.6	No
6	Avalon Blvd/Artesia Blvd	42.7	D	18.5	B	43.3	D	19.5	B	0.6	1.0	No
15	Avalon Blvd/I-405 NB Ramps	4.1	A	5.2	A	4.2	A	5.5	A	0.1	0.3	No
16	Avalon Blvd/I-405 SB Ramps	7.6	A	7.5	A	8.1	A	8.4	A	0.5	0.9	No
17	Main St/SR-91 WB Ramps	20.7	C	15.2	B	21.5	C	16.2	B	0.8	1.0	No
21	I-110 NB Ramp/190th St	3.0	A	4.2	A	3.0	A	4.2	A	0.0	0.1	No
22	I-110 SB Ramp/190th St	18.4	B	17.7	B	19.2	B	19.0	B	0.8	1.3	No
25	Hamilton Ave/I-110 SB Ramps (u)	>50 sec	F	>50 sec	F	>50 sec	F	>50 sec	F	11.8	18.7	**Yes**
27	Figueroa St/I-110 NB Ramps	38.9	D	23.5	C	44.1	D	25.2	C	5.2	1.7	No
28	SR-91 EB Ramps/Albertoni St	17.8	B	15.2	B	18.1	B	15.6	B	0.3	0.4	No

☐ = Unsatisfactory LOS

[1] Based on increase in delay at an LOS E or F intersection

(u) = unsignalized intersection
EB = eastbound
I-110 = Interstate 110
I-405 = Interstate 405
LOS = level of service
SR-91 = State Route 91
V/C = volume-to-capacity
NB = northbound
SB = southbound
sec = seconds
WB = westbound

Table 4.14-12
Existing Freeway Facilities Level of Service Summary

Freeway Segment	Dir	Existing						Existing plus Project						Volume Increase	
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour				
		Volume	Density[1]	LOS	Volume	Density[1]	LOS	Volume	Density[1]	LOS	Volume	Density[1]	LOS	AM	PM
SR-91															
I-110 to Avalon Blvd	EB	5,282	17.9	B	7,649	26.2	D	5,286	17.9	B	7,660	26.2	D	0.1%	0.1%
	WB	8,467	29.7	D	6,299	21.3	C	8,487	29.9	D	6,338	21.4	C	0.2%	0.6%
Avalon Blvd to Central Ave	EB	5,390	18.2	C	7,804	26.8	D	5,394	18.2	C	7,840	27.0	D	0.1%	0.5%
	WB	8,638	30.6	D	6,427	21.7	C	8,644	30.6	D	6,448	21.8	C	0.1%	0.3%
Central Ave to Wilmington Ave	EB	5,497	18.6	C	7,960	27.5	D	5,501	18.6	C	7,996	27.6	D	0.1%	0.5%
	WB	8,810	31.5	D	6,555	22.2	C	8,862	31.7	D	6,618	22.4	C	0.6%	1.0%
I-110															
Carson St to Torrance Blvd	NB	9,027	>45.0	F	6,293	27.1	D	9,056	>45.0	F	6,329	27.3	D	0.3%	0.6%
	SB	6,645	29.0	D	8,686	>45.0	F	6,677	29.2	D	8,719	>40.0	F	0.5%	0.4%
Torrance Blvd to I-405	NB	9,548	>45.0	F	6,656	29.1	D	9,570	>45.0	F	6,685	29.2	D	0.2%	0.4%
	SB	7,028	31.3	D	9,187	>45.0	F	7,047	31.4	D	9,220	>45.0	F	0.3%	0.4%
I-405 to SR-91	NB	11,761	>45.0	F	8,198	40.5	E	11,783	>45.0	F	8,227	40.7	E	0.2%	0.4%
	SB	8,658	>45.0	F	11,317	>45.0	F	8,706	>45.0	F	11,353	>45.0	F	0.6%	0.3%
SR-91 to Redondo Beach Blvd	NB	10,503	42.5	E	7,321	24.9	C	10,559	43.0	E	7,416	25.3	C	0.5%	1.3%
	SB	7,731	27.3	D	10,106	40.3	E	7,772	27.4	D	10,142	40.5	E	0.5%	0.4%
I-405															
Wilmington Ave to Carson St	NB	8,989	>45.0	F	8,181	40.3	E	9,058	>45.0	F	8,260	41.1	E	0.8%	1.0%
	SB	7,375	34.4	D	9,330	>45.0	F	7,422	34.7	D	9,397	>45.0	F	0.6%	0.7%
Carson St to Avalon Blvd	NB	8,850	>45.0	F	8,054	39.1	E	8,897	>45.0	F	8,134	39.9	E	0.5%	1.0%
	SB	7,261	32.8	D	9,185	>45.0	F	7,308	33.2	D	9,252	>45.0	F	0.6%	0.7%
Avalon Blvd to I-110	NB	9,477	>45.0	F	8,625	44.9	E	9,506	>45.0	F	8,674	>45.0	F	0.3%	0.6%
	SB	7,776	36.7	E	9,836	>45.0	F	7,830	37.2	E	9,923	>45.0	F	0.7%	0.9%

Table 4.14-12
Existing Freeway Facilities Level of Service Summary

Freeway Segment	Dir	Existing						Existing plus Project						Volume Increase	
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour				
		Volume	Density[1]	LOS	Volume	Density[1]	LOS	Volume	Density[1]	LOS	Volume	Density[1]	LOS	AM	PM
I-110 to Vermont Ave	NB	9,581	>45.0	F	8,720	>45.0	F	9,610	>45.0	F	8,769	>45.0	F	0.3%	0.6%
	SB	7,861	38.2	E	9,945	>45.0	F	7,904	38.6	E	9,999	>45.0	F	0.5%	0.5%
Vermont Ave to Normandie Ave	NB	9,930	38.2	E	9,037	>45.0	F	9,959	>45.0	F	9,086	>45.0	F	0.3%	0.5%
	SB	8,147	41.6	E	10,306	>45.0	F	8,190	42.1	E	10,360	>45.0	F	0.5%	0.5%
Normandie Ave to Western Ave	NB	9,303	>45.0	F	8,467	43.2	E	9,332	>45.0	F	8,516	43.7	E	0.3%	0.6%
	SB	7,633	35.6	E	9,655	>45.0	F	7,676	35.9	E	9,709	>45.0	F	0.6%	0.6%

Notes: EB = eastbound; I-110 = Interstate 110; I-405 = Interstate 405; LOS = level of service; NB = northbound; SB = southbound; SR-91 = State Route 91; WB = westbound.
[1] Density is measured in passenger car lengths per mile per lane.

Table 4.14-13
Cumulative (2020) Freeway Facilities Level of Service Summary

Freeway Segment	Dir	Baseline						Cumulative plus Project						Volume Increase	
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour				
		Volume	Density[1]	LOS	Volume	Density[1]	LOS	Volume	Density[1]	LOS	Volume	Density[1]	LOS	AM	PM
SR-91															
I-110 to Avalon Blvd	EB	5,313	18.0	B	7,698	26.4	D	5,317	18.0	B	7,709	26.4	D	0.1%	0.1%
	WB	8,485	29.9	D	6,346	21.5	C	8,505	29.9	D	6,385	21.5	C	0.2%	0.6%
Avalon Blvd to Central Ave	EB	5,397	18.3	C	7,826	26.9	D	5,401	18.3	C	7,862	27.1	D	0.1%	0.5%
	WB	8,655	30.7	D	6,445	21.8	C	8,661	30.7	D	6,466	21.9	C	0.1%	0.3%
Central Ave to Wilmington Ave	EB	5,504	18.6	C	7,982	27.6	D	5,508	18.6	C	8,018	27.7	D	0.1%	0.5%
	WB	8,827	31.5	D	6,573	22.2	C	8,879	31.8	D	6,636	22.4	C	0.6%	1.0%
I-110															
Carson St to Torrance Blvd	NB	9,056	>45.0	F	6,360	27.4	D	9,085	>45.0	F	6,396	27.6	D	0.3%	0.6%
	SB	6,667	29.1	D	8,752	>45.0	F	6,699	29.3	D	8,785	>45.0	F	0.5%	0.4%
Torrance Blvd to I-405	NB	9,621	>45.0	F	6,786	29.9	D	9,643	>45.0	F	6,815	30.0	D	0.2%	0.4%

Table 4.14-13
Cumulative (2020) Freeway Facilities Level of Service Summary

Freeway Segment	Dir	Baseline						Cumulative plus Project						Volume Increase	
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour				
		Volume	Density[1]	LOS	Volume	Density[1]	LOS	Volume	Density[1]	LOS	Volume	Density[1]	LOS	AM	PM
	SB	7,096	31.8	D	9,344	>45.0	F	7,115	31.9	D	9,377	>45.0	F	0.3%	0.4%
I-405 to SR-91	NB	11,844	>45.0	F	8,376	42.2	E	11,866	>45.0	F	8,405	42.6	E	0.2%	0.3%
	SB	8,758	>45.0	F	11,507	>45.0	F	8,806	>45.0	F	11,543	>45.0	F	0.5%	0.3%
SR-91 to Redondo Beach Blvd	NB	10,597	43.3	E	7,524	25.7	C	10,653	43.8	E	7,619	26.0	C	0.5%	1.3%
	SB	7,831	27.7	D	10,296	41.7	E	7,872	27.9	D	10,332	42.0	E	0.5%	0.3%
I-405															
Wilmington Ave to Carson St	NB	9,070	>45.0	F	8,381	42.3	E	9,139	>45.0	F	8,460	43.2	E	0.8%	0.9%
	SB	7,408	34.7	D	9,423	>45.0	F	7,455	35.0	D	9,490	>45.0	F	0.6%	0.7%
Carson St to Avalon Blvd	NB	8,931	>45.0	F	8,254	41.0	E	8,978	>45.0	F	8,334	41.8	E	0.5%	1.0%
	SB	7,294	33.1	D	9,278	>45.0	F	7,341	33.4	D	9,345	>45.0	F	0.6%	0.7%
Avalon Blvd to I-110	NB	9,536	>45.0	F	8,673	>45.0	F	9,565	>45.0	F	8,722	>45.0	F	0.3%	0.6%
	SB	7,811	37.0	E	9,933	>45.0	F	7,865	37.4	E	10,020	>45.0	F	0.7%	0.9%
I-110 to Vermont Ave	NB	9,640	>45.0	F	8,768	>45.0	F	9,669	>45.0	F	8,817	>45.0	F	0.3%	0.6%
	SB	7,896	38.5	E	10,042	>45.0	F	7,939	38.9	E	10,096	>45.0	F	0.5%	0.5%
Vermont Ave to Normandie Ave	NB	9,989	38.6	E	9,085	>45.0	F	10,018	38.8	E	9,134	>45.0	F	0.3%	0.5%
	SB	8,182	42.0	E	10,403	>45.0	F	8,225	42.4	E	10,457	>45.0	F	0.5%	0.5%
Normandie Ave to Western Ave	NB	9,362	>45.0	F	8,515	43.7	E	9,391	>45.0	F	8,564	44.3	E	0.3%	0.6%
	SB	7,668	35.9	E	9,752	>45.0	F	7,711	36.2	E	9,806	>45.0	F	0.6%	0.6%

Notes: EB = eastbound; I-110 = Interstate 110; I-405 = Interstate 405; LOS = level of service; NB = northbound; SB = southbound; SR-91 = State Route 91; WB = westbound.

[1] Density is measured in passenger car lengths per mile per lane.

Table 4.14-14
Avalon Boulevard Corridor HCM Operational Analysis

No.	Intersection	Existing						Cumulative plus Project Current Signal Timing						Cumulative plus Project Optimized Signal Timing[1]					
		AM Peak Hour		PM Peak Hour		Saturday Peak Hour		AM Peak Hour		PM Peak Hour		Saturday Peak Hour		AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
11	Avalon Blvd/ MLK Jr. St	9.1	A	13.0	B	8.2	A	9.8	A	15.4	B	7.6	A	11.1	B	16.0	B	12.2	B
12	Avalon Blvd/ Elsmere Dr	21.4	C	14.2	B	15.2	B	29.7	C	38.1	D	28.0	C	4.6	A	4.1	A	7.9	A
13	Avalon Blvd/ Turmont St	25.3	C	18.0	B	20.2	C	67.6	E	>80	F	68.6	E	29.9	C	47.0	D	29.7	C
31	Avalon Blvd/ New Intersection	New Intersection						9.5	A	16.7	B	18.0	B	4.1	A	10.2	B	5.3	A
14	Avalon Blvd/ Del Amo Blvd	74.5	E	>80	F	53.6	D	>80	F	>80	F	55.9	E	47.4	D	54.6	D	43.8	D
15	Avalon Blvd/ I-405 NB Ramps	11.7	B	14.2	B	11.1	B	12.7	B	16.3	B	11.9	B	12.8	B	16.2	B	11.9	B
16	Avalon Blvd/ I-405 SB Ramps	10.1	B	7.1	A	10.9	B	10.9	B	8.4	A	11.9	B	10.9	B	8.4	A	11.9	B

Notes: HCM = Highway Capacity Manual; I-405 = Interstate 405; LOS = level of service; MLK = Martin Luther King; sec = seconds.

[1] Cycle lengths and splits optimized at Carson intersections but not Interstate 405 ramp intersections.

As shown in Table 4.14-14, the signal modifications and the addition of the new signal would have a nominal impact on traffic operations at most of the intersections along the corridor, except for the intersections of Avalon Boulevard/Elsmere Drive and Avalon Boulevard/Turmont Street. These intersections would experience increases in delay along with a degrading of LOS under Cumulative plus Project conditions if existing signal timings were kept. All other study intersections along the corridor experience comparable delays and operate with similar LOS in the Existing- and Cumulative plus Project scenarios. Therefore, with construction of the project and the new traffic signal on Avalon Boulevard, it is recommended that the signal timing along the corridor be optimized for improved traffic operations.

TRAF-2 Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3, subdivision (b), focuses on newly adopted criteria (vehicle miles traveled) for determining the significance of transportation impacts. It is further divided into four subdivisions: (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology.

Section 15064.3, subdivision (b)(1) for land use projects would apply to the proposed project, and states that "generally, projects within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor should be presumed to have a less-than-significant impact on VMT." Per the Technical Advisory, this presumption would not apply, however, if project-specific or location-specific information indicates that the project will still generate significant levels of VMT. For example, the presumption might not be appropriate if the project:

- Has a floor area ratio less than 0.75
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization)

The County of Los Angeles, City of Los Angeles, and City of Carson have not yet adopted local VMT criteria therefore a VMT analysis for the proposed project has not been prepared at this time.

TRAF-3 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)?

Project Access

Access to the project site and parking lots would be provided via two east-west roadways extending westerly from Avalon Boulevard into the project site and one north-south roadway extending southwesterly from Martin Luther King Jr. Street into the project site.

Development of the southernmost access driveway along Avalon Boulevard, opposite the westerly terminus of Turmont Street, would include the addition of a dual left-turn pocket lane on Avalon Boulevard and modification of the existing median to accommodate the additional 150-foot length pocket. In addition, the existing traffic signal would require signal modification for the additional intersection leg. This driveway would serve as the primary access to the retail/restaurant/ and wellness/clubhouse uses, and would channel vehicles to parking areas on the north and south sides of the commercial buildings. This access also extends into Main Street between the rows of buildings.

The second, northernmost access driveway along Avalon Boulevard, located midway between Turmont Street and Elsmere Drive, would include the development of a signalized intersection, allowing ingress and egress to and from the project site from both northbound and southbound traffic on Avalon Boulevard. A dual left-turn pocket lane would be developed at the proposed new entrance and would require the modification of the existing median. Proposed improvements to provide dual northbound left-turn lanes at both access driveways along Avalon Boulevard would not affect the location of the existing transmission (kV) lines within the center median. This driveway would serve the proposed restaurant/retail uses north of Main Street as well as provide access to other portions of the project site, including the enhanced golf driving range and uses in the northwestern portion of the project site.

The access road extending from Martin Luther King Jr. Street would be located opposite Victoria Park. A new traffic signal would be installed at this intersection to allow ingress and egress to and from the project from both eastbound and westbound traffic on Martin Luther King Jr. Street. This driveway would serve as the primary access for the multi-sports complex, youth learning experience and skydiving facility. This road would also provide access to the commercial buildings on the southern portion of the site and would be shared with the Kimmelman project, allowing vehicles from the adjacent project to access the Creek facilities.

All three access roads described above would be designed and constructed in accordance with all applicable County roadway standards and practices. Construction of these improvements would be coordinated and approved by the lead agency (County) with review and approval of design plans from their qualified engineers. This approach would ensure compliance with any and all applicable roadway design requirements. As such, no hazardous design features would be a part

of the project's roadway improvement. Impacts associated with hazardous design features or incompatible uses would be **less than significant**.

Saturday Analysis

Analysis of Saturday traffic conditions is not required by either the County's and City of Carson's guidelines, due to typically lower traffic volumes on the roadway network on Saturday compared to the weekday peak hours. However, due to the recreational and retail uses of the project, project trip generation estimates are higher during the Saturday peak hour than the weekday peak hours. To confirm that the intersections providing direct access to the project site would have adequate capacity for project traffic during a Saturday peak hour, a Saturday LOS analysis of the project's access intersections was prepared, and included in the TIA (Appendix J).

Existing Saturday traffic volumes were collected on May 5, 2018. Afternoon (i.e., 4:00 p.m. to 6:00 p.m.) traffic volumes were higher on Saturday; therefore, these were used for the Saturday peak hour. To develop the Saturday condition, an ambient growth rate and the traffic anticipated to be generated by the neighboring Kimmelman project were added to the existing Saturday traffic volumes.

Table 4.14-7, Project Trip Generation, shows trip generation for the project during the Saturday peak hour. The trip generation for each project component represents the peak hour of generation for that component. It is anticipated that the peak generation for the multi-use sports complex will occur during the morning or midday on Saturday, whereas many of the commercial components will experience their peak hour in the early evening. However, Table 4.14-15 presents a conservative analysis by combining the peak generation of each component as if all occurred simultaneously. As shown on Table 4.14-15, the three main access intersections of the proposed project are forecast to operate with satisfactory LOS (LOS D or better) during the Saturday peak hour.

Table 4.14-15
Saturday plus Project Intersection Level of Service Summary

Study Area No.	Intersection	Saturday Peak Hour	
		V/C Ratio or Delay	*LOS*
13	Avalon Boulevard/Turmont Street	0.58	A
30	New Intersection/MLK Jr. Street	0.74	C
31	Avalon Boulevard/New Intersection	0.62	B

Source: Appendix J.
Notes: LOS = level of service; MLK = Martin Luther King; V/C = volume to capacity

Event Traffic

Potentially Significant Impact. The project site is accessed from regional transportation facilities using the same arterials (i.e., Main Street, Avalon Boulevard, and 190th Street-Victoria Street) that

are used to access the StubHub Center, an existing professional sports arena north of the project site. During events at the StubHub Center, these arterials can experience travel demand that exceeds the capacity of the roadways and the intersections. As traffic volumes increase and queues form at critical intersections, operation of a downstream intersection can impact the performance of an upstream intersection, resulting in forced flow conditions where the number of vehicles able to travel through an intersection drops below the saturation flow rate further compounding the strain on the transportation network.

Overcapacity conditions occur because many vehicles are attempting to reach the same destination during a narrow window of time. The StubHub Center has a traffic management plan that is active during events. Successful event traffic management plans monitor the entire network and have protocols in place for clearing critical bottlenecks before system wide performance is degraded. Protocols should also be in place to prevent vehicles from stopping in the middle of intersections and blocking cross-traffic vehicles from proceeding during their green light. These traffic management plans do not prevent congestion on the roadways leading to the destination, but they are helpful in preventing the breakdown of the entire roadway network. At the conclusion of the narrow window of time, travel demand is reduced, and traffic conditions return to normal.

Traffic analysis tools are not able to accurately analyze the conditions of forced flow traffic during special events. The project's anticipated traffic volume (as shown on Figure 4.14-6) is approximately 200 vehicles on Main Street, 330 vehicles on Avalon Boulevard, and 120 vehicles on Victoria Street in the weekday PM peak hour. This represents between 3.5% and 10% of the capacity of the roadways, which would add to congestion during forced flow conditions during events at StubHub Center. However, the project site is closer to I-405 and I-110 than the StubHub Center, and traffic destined for the project would not be present on the critical roadways for the entire path to the StubHub Center. Furthermore, congested conditions during large events are unattractive to drivers who are not destined for the event. Trips to the project are discretionary, and many of the trips anticipated on a typical day would be timed by those project customers to avoid event traffic. Those customers may defer their visit to a non-event day or plan an earlier or later arrival to avoid the worst levels of delay leading up to the start of an event. As a result, the contribution of project traffic to roadway traffic is expected to be lower than the trip generation for a typical day.

The project would include a multi-use sports facility, which may host tournaments. The trip generation provided in Table 4.14-7 includes tournament trip generation for the multi-use sports facility in the PM peak hour (which was calculated from surveys of Friday evening tournaments at a similar facility). Therefore, the traffic analysis presented above includes tournament conditions at the multi-use sports facility. Other special events may occur on the project site in areas such as the clubhouse or in the public open space. Special events in these spaces would occur less frequently than the regularly recurring events in the multi-use sports complex. Special events such

as these may require special event permits and could prepare traffic management plans as part of event planning. Examples of traffic management techniques that could be included in these plans include but are not limited to paid parking, traffic control at internal intersections, lane management, and wayfinding. These traffic management plan elements could improve the internal flow of traffic during special events.

The neighboring Carol Kimmelman Sports and Academic Campus may also host tournaments. The operation of roadways internal to the existing Victoria Golf Course during tournaments would be coordinated between the operators of both projects.

Construction Traffic

Potentially Significant Impact. The project's construction manager has prepared a construction schedule. To complete the project by the end of 2020, some of the construction phases would overlap. According to the schedule, between November 1, 2019 and December 15, 2019, building construction on part of the site could occur at the same time as waste relocation, grading, and pile foundations that are taking place on other parts of the site. Similarly, between July 1, 2020, and November 24, 2020, building construction on part of the site could occur at the same time as paving and architectural coating that are taking place on other parts of the site. These periods of overlap have the highest construction trip generation potential.

During construction, heavy equipment used on the site would be staged on-site and would not generate trips along the arterial roadway network. Construction workers would park on-site in designated construction worker parking areas. Material delivery (including soil import) is also anticipated during grading, pile foundations, and building construction phases. Large trucks have a greater effect on intersection and roadway operations than passenger vehicles due to their slower movement and reduced mobility. Therefore, the volume of large trucks was converted to passenger car equivalent (PCE) to account for their increased effect. A PCE factor of 2.0 was applied to material delivery trips and a PCE factor of 3.0 was applied to soil import (or export) trips to convert the vehicle trip generation into a PCE trip generation.

Table 4.14-16 displays the estimated trip generation for each construction phase. Because the construction worker schedules would fall outside of the typical peak periods (i.e., 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m.), construction worker trips would not contribute to traffic during these periods. Daily material delivery trips are shown to be spread evenly throughout the day with some trips occurring in the peak hours.

As Table 4.14-16 shows, during construction the project is anticipated to generate a maximum of 11,828 daily PCE trips and a maximum of 696 peak hour PCE trips during the periods of highest trip generation due to overlapping construction phases. This is a lower trip generation than the operation of the site displayed in Table 4.14-7. Therefore, the traffic impacts during construction

are anticipated to be equal to or less than the traffic impacts discussed above during typical operation of the project.

Table 4.14-16
Construction Trip Generation

Construction Phase	Daily Trips	PCE Factor	Total Daily PCE	AM Peak Hour			PM Peak Hour		
				In	*Out*	*Total*	*In*	*Out*	*Total*
Site Preparation (7/5/2019 to 9/1/2019)									
Worker Trips	72	1.0	72	0	0	0	0	0	0
Soil Haul Trips	100	2.0	200	13	13	26	13	13	26
Waste Relocation (7/15/2019 to 12/15/2019)									
Worker Trips	72	1.0	72	0	0	0	0	0	0
Grading/Landfill Cap Construction (8/1/2019 to 12/15/2019)									
Worker Trips	96	1.0	96	0	0	0	0	0	0
Material Trips	4	2.0	8	1	1	2	1	1	2
Soil Haul Trips	276	3.0	828	52	52	104	52	52	104
Total	**376**	**-**	**932**	**53**	**53**	**106**	**53**	**53**	**106**
Pile Foundations									
Worker Trips	144	1.0	144	0	0	0	0	0	0
Material Trips	12	2.0	24	2	2	4	2	2	4
Total	**156**	**-**	**168**	**2**	**2**	**4**	**2**	**2**	**4**
Building Construction (11/1/2019 to 11/24/2020)									
Worker Trips	5,952	1.0	5,952	0	0	0	0	0	0
Material Trips	2,340	2.0	4,680	293	293	586	293	293	586
Total	**8,292**	**-**	**10,632**	**293**	**293**	**586**	**293**	**293**	**586**
Paving (7/1/2020 to 10/30/2020)									
Worker Trips	60	1.0	60	0	0	0	0	0	0
Architectural Coating (6/1/2020 to 9/30/2020)									
Worker Trips	1,136	1.0	1,136	0	0	0	0	0	0
11/1/2019 to 12/15/2020 Overlap									
Waste Relocation	72	-	72	0	0	0	0	0	0
Grading	376	-	932	53	53	106	53	53	106
Pile Foundations	156	-	168	2	2	4	2	2	4
Building Construction	8,292	-	10,632	293	293	586	293	293	586
Total	**8,896**	**-**	**11,804**	**348**	**348**	**696**	**348**	**348**	**696**
7/1/2020 to 11/24/2020 Overlap									
Building Construction	8,292	-	10,632	293	293	586	293	293	586
Paving	60	-	60	0	0	0	0	0	0
Architectural Coating	1,136	-	1,136	0	0	0	0	0	0
Total	**9,488**	**-**	**11,828**	**293**	**293**	**586**	**293**	**293**	**586**

Note: PCE = passenger car equivalent.

During construction, implementation of a Construction Traffic Management Plan, would minimize the project's construction-related impacts. Therefore, impacts would be **less than significant with mitigation incorporated**.

TRAF-4 Would the project result in inadequate emergency access?

During the permanent operations of the project, all areas of the project site would be accessible to emergency responders. As described in ***TRAF-3***, local access to the proposed project would be provided by one access road along Martin Luther King Jr. Street and two access roads along Avalon Boulevard. The proposed project would be designed and constructed in accordance with all applicable provisions of the fire code, which includes requirements for width of emergency access routes and turning radii along emergency access routes. Impacts associated with emergency access during the permanent operations of the project would be **less than significant.**

During the project's construction phases, traffic circulation may be temporarily adversely affected as a result of increased traffic flow from construction vehicles and heavy equipment. In addition, the project would require the construction of access driveways, modification of medians and left-turn lanes, and installation of traffic signals along Martin Luther King Jr. Street and Avalon Boulevard, which may result in temporary lane closures. As such, the County shall ensure that temporary signage is posted and detour routes are identified to facilitate movement of traffic flow, including emergency vehicles, during project construction. A Construction Traffic Management Plan would be implemented prior to construction of these improvements to minimize impacts throughout the duration of construction activities. Impacts associated with emergency access during the construction phases of the project would be **less than significant with mitigation incorporated.**

4.14.5 Mitigation Measures

The following project design features and mitigation measures are proposed to address the proposed project's transportation impacts. All traffic mitigation measure improvements within the responsibility and jurisdiction of public agencies other than the County shall be monitored through the County and implemented to the extent feasible. If improvements within the responsibility and jurisdiction of public agencies other than the County (e.g., Caltrans or the City of Carson) cannot be implemented, significant traffic impacts may remain at such locations.

TRAF-1 Study Intersections – Existing plus Project

Based on the County's criteria for determining significant traffic impacts, the project is expected to result in a **significant impact** at the following study intersections:

1. Main Street/Martin Luther King Jr. Street: resultant V/C of ≥0.75 from LOS A/B in PM peak hour
4. Main Street/Del Amo Boulevard: ≥0.02 V/C increase at LOS D in PM peak hour
7. Avalon Boulevard/Albertoni Street: ≥0.02 V/C increase at LOS D in PM peak hour
14. Avalon Boulevard/Del Amo Boulevard: ≥0.04 V/C increase at LOS C in AM peak hour, and ≥0.02 V/C increase at LOS D, and LOS D to LOS E in PM peak hour
18. Main Street/Albertoni Street: ≥0.02 V/C increase at LOS D in PM peak hour
19. Main Street/Victoria Street: ≥0.04 V/C increase at LOS C in PM peak hour
24. Hamilton Avenue/Del Amo Boulevard: ≥0.04 V/C increase at LOS C in PM peak hour
25. Hamilton Avenue/I-110 SB Ramps (unsignalized): project increases delay at (baseline) LOS F in both peak hours
26. Figueroa Street/Del Amo Boulevard: ≥0.02 V/C increase at LOS D in PM peak hour

The proposed project will be required to implement the following mitigation measures to reduce the project's impact to the study area intersections.

#1 Main Street/Martin Luther King Jr. Street

MM-TRAF-1 The proposed project shall implement the following improvements at Main Street/Martin Luther King Jr. Street:

- Reconfigure the westbound approach to provide a left-turn, shared left/right-turn, and right-turn lanes;
- Add new northbound right-turn lane.

#4 Main Street/Del Amo Boulevard

MM-TRAF-2 The proposed project shall implement the following improvements at Main Street/Del Amo Boulevard:

- Add new second (dual) westbound left-turn lane; OR,
- Add new northbound right-turn lane; AND
- Add new eastbound right-turn lane
- Widening of respective approaches will be required

#7 Avalon Boulevard/Albertoni Street

MM-TRAF-3 The proposed project shall implement the following improvements at Avalon Boulevard/Albertoni Street:

- Restripe existing (cross-hatched) pavement on the northbound approach to a second (dual) northbound left-turn lane. This improvement could be accomplished within the existing right-of-way.
- Modify signal left-turn lead-lag phasing for the northbound and southbound approaches (for opposing left-turn clearance purposes).

#14 Avalon Boulevard/Del Amo Boulevard

MM-TRAF-4 The proposed project shall implement the following improvements at Avalon Boulevard/Del Amo Boulevard:

- Add new southbound right-turn lane. This improvement could be accomplished within the existing right-of-way.

#18 Main Street/Albertoni Street

MM-TRAF-5 The proposed project shall implement the following improvements at Main Street/Albertoni Street:

- Add new eastbound right-turn lane. This improvement could be accomplished within the existing right-of-way, but would require the removal of approximately 5 on-street parking spaces approximately 100 feet west of the intersection.

#19 Main Street/Victoria Street

MM-TRAF-6 The proposed project shall implement the following improvements at Main Street/Victoria Street:

- Add new eastbound right-turn lane. This improvement could be accomplished within the existing right-of-way, but would require the removal of approximately 5 on-street parking spaces approximately 100 feet west of the intersection.

#24 Hamilton Avenue/Del Amo Boulevard

MM-TRAF-7 The proposed project shall implement the following improvements at Hamilton Avenue/Del Amo Boulevard:

- Modify signal head for protected-permitted phasing for the westbound approach (in order to prevent left-turn queue from blocking a westbound through lane).

#25 Hamilton Avenue/I-110 Southbound Ramps

MM-TRAF-8 The proposed project shall implement the following improvements at Hamilton Avenue/I-110 southbound ramps:

- Restripe the southbound approach to provide an exclusive left-turn lane and a shared through-left lane. This improvement could be accomplished within the existing right-of-way.

#26 Figueroa Street/Del Amo Boulevard

MM-TRAF-9 The proposed project shall implement the following improvements at Figueroa Street/Del Amo Boulevard:

- Restripe the westbound approach to provide two left-turn lanes, a through lane, and a shared through-right lane. This improvement could be accomplished within the existing right-of-way.
- Modify the traffic signal to provide an overlap phase for the northbound right-turn and overlap phase for the southbound right-turn.

TRAF-1 Study Intersections – Existing plus Project plus Cumulative Projects

Based on the County's criteria for determining significant traffic impacts, the project is expected to create a **significant impact** at the following study intersections.

1. Main Street/Martin Luther King Jr. Street: resultant V/C of ≥0.75 from LOS A/B in PM peak hour
3. Main Street/I-405 southbound ramps: ≥0.04 V/C increase at LOS C in PM peak hour
4. Main Street/Del Amo Boulevard: ≥0.02 V/C increase at LOS D, and LOS D to LOS F in PM peak hour
7. Avalon Boulevard/Albertoni Street: ≥0.02 V/C increase at LOS D, and LOS D to LOS E in PM peak hour
8. Avalon Boulevard/Victoria Street: ≥0.02 V/C increase at LOS D in PM peak hour
10. Avalon Boulevard/University Drive: ≥0.04 V/C increase at LOS C in PM peak hour

14. Avalon Boulevard/Del Amo Boulevard: ≥0.04 V/C increase at LOS C, and LOS C to LOS E in AM peak hour; and, ≥0.02 V/C increase at LOS D, and LOS D to LOS E in PM peak hour
18. Main Street/Albertoni Street: ≥0.02 V/C increase at LOS D, and LOS D to LOS E in PM peak hour
19. Main Street/Victoria Street: ≥0.04 V/C increase at LOS C, and LOS C to LOS E in PM peak hour
22. I-110 southbound ramps/190th Street: ≥0.02 V/C increase at LOS D in both peak hours
24. Hamilton Avenue/Del Amo Boulevard: ≥0.04 V/C increase at LOS C, and LOS C to LOS E in PM peak hour
25. Hamilton Avenue/I-110 SB Ramps (unsignalized): project increases delay at (baseline) LOS F in both peak hours
26. Figueroa Street/Del Amo Boulevard: ≥0.02 V/C increase at LOS D, and LOS D to LOS F in PM peak hour,

The proposed project will be required to pay its fair-share costs to construct the following mitigation measures to reduce the project's cumulative impacts to levels of less than significant.

#1 Main Street/Martin Luther King Jr. Street

The proposed project shall implement **MM-TRAF-1** at Main Street/Martin Luther King Jr. Street to mitigate direct project impacts. With implementation of MM-TRAF-1, no further mitigation is required for cumulative impacts.

#3 Main Street/I-405 southbound ramps

MM-TRAF-10 The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following improvements at Main Street/I-405 southbound ramps:

- Convert the eastbound left-turn lane to a shared through-left-turn lane (onto the I-405 on-ramp).

#4 Main Street/Del Amo Boulevard

MM-TRAF-11 The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following improvements at Main Street/Del Amo Boulevard:

- Add new second (dual) westbound left-turn lane;
- Add new northbound right-turn lane;

- Widening of the westbound approach will be required.

#7 Avalon Boulevard/Albertoni Street

The proposed project shall implement **MM-TRAF-3** at Avalon Boulevard/Albertoni Street to mitigate direct project impacts. With implementation of MM-TRAF-3, no further mitigation is required for cumulative impacts.

#8 Avalon Boulevard/Victoria Street

MM-TRAF-12 The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following physical improvements at Avalon Boulevard/Victoria Street:

- On the eastbound approach, restripe the right-turn lane into a shared through/right-turn lane
- On the eastbound departure, restripe to provide three through lanes

Although the physical improvement described above could be accomplished through restriping, the geometric limitations of the eastbound departure lanes beyond the immediate vicinity of the intersection could result in the improvement being determined infeasible. Pursuant to County Department of Public Works policy, however, when an intersection is projected to exceed the significance criteria but still operate at a satisfactory LOS (LOS D or better), the County may direct that operational, rather than physical, improvements be implemented for the intersection. As previously detailed, Intersection No. 8 is projected to operate at LOS C under the Cumulative Future with Project conditions. As such, per County of Public Works direction, Intersection No. 8 was evaluated for operational deficiencies by comparing the projected turning lane queue lengths under Cumulative Future with Project conditions to the existing turning lane storage capacity at the intersection. Based on the results of the evaluation, no operational deficiencies were identified and, thus, no operational improvements were required.

#10 Avalon Boulevard/University Drive

MM-TRAF-13 The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following physical improvements at Avalon Boulevard/University Avenue:

- On the westbound approach, reconfigure to provide two left-turn lanes and one right-turn lane; this is anticipated to require some modification to the existing medians located on Avalon Boulevard and University Avenue
- Reclassify a section of the existing dedicated westbound bicycle lane as a shared lane

Although the physical improvement described above could be accomplished through modifications to the existing medians, the physical requirements for the existing KV transmission tower within the Avalon Boulevard median could result in the improvement being determined infeasible. Pursuant to County Department of Public Works policy, however, when an intersection is projected to exceed the significance criteria but still operate at a satisfactory LOS (LOS D or better), the County may direct that operational, rather than physical, improvements be implemented for the intersection. As previously detailed, Intersection No. 10 is projected to operate at LOS C under the Cumulative Future with Project conditions. As such, per County of Public Works direction, Intersection No. 10 was evaluated for operational deficiencies by comparing the projected turning lane queue lengths under Cumulative Future with Project conditions to the existing turning lane storage capacity at the intersection. Based on the results of the evaluation, no operational deficiencies were identified and, thus, no operational improvements were required.

#14 Avalon Boulevard/Del Amo Boulevard

MM-TRAF-14 The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following improvements at Avalon Boulevard/Del Amo Boulevard:

- Add second (dual) northbound left-turn lane.
- Reconfigure southbound approach to provide a right-turn lane.
- Reconfigure eastbound right-turn lane into a shared through/right-turn lane.

#18 Main Street/Albertoni Street

Implementation of **MM-TRAF-5** mitigates the proposed project's impacts to this intersection. With implementation of MM-TRAF-5, no further mitigation is required for cumulative impacts.

#19 Main Street/Victoria Street

Implementation of **MM-TRAF-6** mitigates the proposed project's impacts to this intersection. With implementation of MM-TRAF-6, no further mitigation is required for cumulative impacts.

#22 I-110 southbound ramps/190th Street

MM-TRAF-15 The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following physical improvements at I-110 southbound ramps/190th Street:

- Provide an additional eastbound lane for a total of three through lanes by reducing the width of the existing painted median on 190th Street to accommodate the additional eastbound lane.

Although the physical improvement described above could be accomplished through restriping, the physical requirements for the corresponding advance warning signage and the existing physical constraints could result in the improvement being determined infeasible. Pursuant to County Department of Public Works policy, however, when an intersection is projected to exceed the significance criteria but still operate at a satisfactory LOS (LOS D or better), the County may direct that operational, rather than physical, improvements be implemented for the intersection. As previously detailed, Intersection No. 22 is projected to operate at LOS D under the Cumulative Future with Project conditions. As such, per County of Public Works direction, Intersection No. 22 was evaluated for operational deficiencies by comparing the projected turning lane queue lengths under Cumulative Future with Project conditions to the existing turning lane storage capacity at the intersection. Based on the results of the evaluation, no operational deficiencies were identified and, thus, no operational improvements were required.

#24 Hamilton Avenue/Del Amo Boulevard

MM-TRAF-16 The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following improvements at Hamilton Avenue/Del Amo Boulevard:

- Convert the second northbound through lane to a dedicated right-turn lane.
- Modify the traffic signal to provide an overlap phase for the northbound right-turn and add protected-permitted phasing for the westbound left-turn movements.

This measure is able to mitigate the cumulative impact to a less than significant level. Implementation of this mitigation will require review and approval by the County of Los Angeles Public Works.

#25 Hamilton Avenue/I-110 Southbound Ramps

Implementation of **MM-TRAF-8** satisfies the proposed project's contribution towards the mitigation of cumulative impacts at this intersection. With implementation of MM-TRAF-8, no further mitigation is required for cumulative impacts.

#26 Figueroa Street/Del Amo Boulevard

MM-TRAF-17 The proposed project shall pay its fair-share, as calculated based on the County's methodology, toward the implementation of the following improvements at Figueroa Street/Del Amo Boulevard:

- Restripe the westbound approach to provide two left-turn lanes, a through lane, and a shared through-right lane.

- Restripe the eastbound approach to provide a left-turn lane, two through lanes, and a shared through-right turn lane.
- Modify the traffic signal to provide an overlap phase for the northbound and southbound right-turns.

Table 4.14-17 provides a summary of the study area intersection impacts, mitigation measures, and impact summary.

TRAF-1 Caltrans Facilities – Intersections

Most of the Caltrans intersections are anticipated to operate with satisfactory LOS in the Existing plus Project and Cumulative plus Project (project opening) condition and would continue to operate at a satisfactory LOS with the project with the exception of the unsignalized intersection of Hamilton Avenue/I-110 southbound ramps. This intersection is forecast to operate at LOS F in the No Project conditions and the project is anticipated to increase the delay at this intersection. The project was determined to also have a significant impact on this intersection under County significance criteria.

Implementation of mitigation measures **MM-TRAF-8** above would mitigate the project's significant impact at Hamilton Avenue/I-110 southbound ramps. However, this intersection is shared between the County and Caltrans, and the County cannot impose mitigation outside of its jurisdiction. Therefore, the impact would remain **significant and unavoidable**.

TRAF-1 Avalon Boulevard Corridor Analysis – Signal Progression Analysis

Based on a Signal Progression Analysis conducted for the Avalon Boulevard corridor, optimizing signal timings along the corridor results in significant overall improvement in traffic progression and reduces delay when project traffic is added.

MM-TRAF-18 Prior to receiving a Certificate of Occupancy, the proposed project shall optimize signal timings along the Avalon Boulevard corridor within the project study area.

With implementation of optimized corridor signal timing, all corridor intersections would result in satisfactory LOS (LOS D or better) during the AM peak hour, PM peak hour, and Saturday peak hour, and project impacts to signal progression would be **less than significant**.

Table 4.14-17
Intersection Significant Impact, Fair Share, and Mitigation Summary

Intersection	Impact	Existing		Existing plus Project plus Cumulative Projects		Cumulative Fair Share	Mitigation	With Mitigation		Feasible?	Significant Impact if Mitigation Implemented by Other Jurisdiction	Significant Impact if Mitigation not Implemented by Other Jurisdiction[1]
		AM	*PM*	*AM*	*PM*			*AM*	*PM*			
#1 Main St/MLK Jr. St	Direct, Cumulative	0.42 A	0.52 A	0.64 B	0.89 D	65%	Stripe northbound right-turn and re-stripe westbound approach with left-, left-right, and right turn lanes	0.47 A	0.62 B	Yes	No	Yes[3]
#3 Main St/I-405 SB Ramps	Cumulative	0.45 A	0.70 C	0.48 A	0.76 C	22%	Restripe eastbound left-turn to a through/left	0.46 A	0.68 B	Yes	No	Yes[2]
#4 Main St/Del Amo Blvd	Direct, Cumulative	0.67 B	0.86 D	0.76 C	1.02 F	24%	Second westbound left-turn and northbound right-turn	0.67 B	0.89 D	No	Yes	Yes
#7 Avalon Blvd/ Albertoni St	Direct, Cumulative	0.65 B	0.84 D	0.66 B	0.91 E	62%	Second northbound left-turn	0.66 B	0.85 D	Yes	No	Yes[3]
#8 Avalon Blvd/Victoria St	Cumulative	0.59 A	0.74 C	0.63 B	0.81 D	55%	None required[4]	0.63 B	0.81 D	N/A	No	No
#10 Avalon Blvd/University Dr	Cumulative	0.67 B	0.72 C	0.67 B	0.78 C	55%	None required[4]	0.67 B	0.78 C	N/A	No	No

Table 4.14-17
Intersection Significant Impact, Fair Share, and Mitigation Summary

Intersection	Impact	Existing		Existing plus Project plus Cumulative Projects		Cumulative Fair Share	Mitigation	With Mitigation		Feasible?	Significant Impact if Mitigation Implemented by Other Jurisdiction	Significant Impact if Mitigation not Implemented by Other Jurisdiction[1]
		AM	*PM*	*AM*	*PM*			*AM*	*PM*			
#14 Avalon Blvd/ Del Amo Blvd	Direct, Cumulative	0.80 C	0.90 D	0.92 E	1.00 E	77%	Add southbound right-turn, second northbound left-turn, and convert eastbound right-turn to through/right-turn	0.88 D	0.88 D	Yes	No	Yes[3]
#18 Main St/ Albertoni St	Direct, Cumulative	0.69 B	0.81 D	0.72 C	0.93 E	50%	Add eastbound right-turn	0.73 C	0.88 D	Yes	No	Yes[3]
#19 Main St/ Victoria St	Direct, Cumulative	0.53 A	0.74 C	0.64 B	0.93 E	60%	Add eastbound right-turn	0.60 A	0.87 D	Yes	No	Yes[3]
#22 I-110 SB ramps/190th St	Cumulative	0.77 C	0.80 C	0.80 C	0.84 D	59%	None required[4]	0.80 C	0.84 D	N/A	No	No
#24 Hamilton Ave/ Del Amo Blvd	Direct, Cumulative	0.55 A	0.77 C	0.61 B	0.95 E	26%	Add protected westbound left-turn phasing and convert northbound through/ right-turn to right-turn only and add northbound right-turn overlap signal phase	0.59 A	0.79 C	Yes	No	No

Table 4.14-17
Intersection Significant Impact, Fair Share, and Mitigation Summary

Intersection	Impact	Existing		Existing plus Project plus Cumulative Projects		Cumulative Fair Share	Mitigation	With Mitigation		Feasible?	Significant Impact if Mitigation Implemented by Other Jurisdiction	Significant Impact if Mitigation not Implemented by Other Jurisdiction[1]
		AM	*PM*	*AM*	*PM*			*AM*	*PM*			
#25 Hamilton Ave/Interstate 110 SB Ramps	Direct, Cumulative	>50 sec F	>50 sec F	>50 sec F	>50 sec F	36%	Restripe southbound approach to left-turn and through/left	>50 sec F	>50 sec F	Yes[2]	No	Yes[2]
#26 Figueroa St/ Del Amo Blvd	Direct, Cumulative	0.73 C	0.82 D	0.75 C	1.05 F	21%	Add northbound and southbound right-turn overlap phasing and restripe westbound approach to 2 left-turns, a through, and a through/right-turn and restripe eastbound approach to a left, 2 throughs, and a through/right-turn	0.75 C	0.72 C	Yes	No	Yes[3]

Notes:

1 Impacts are potentially significant and unavoidable if the mitigation to be implemented is located outside the jurisdiction of the lead agency because the other jurisdiction may not accept the improvement.

2 Requires approval by Caltrans.

3 Requires approval by the City of Carson.

4 Per County of Public Works direction, since this intersection is forecast to continue to operate with satisfactory LOS (LOS D or better), it was evaluated for operational deficiencies by comparing the projected turning lane queue lengths under cumulative with project conditions to the existing turning lane storage capacity at the intersection. Based on the results of the evaluation, no operational deficiencies were identified and, thus, no operational improvements were required.

TRAF-3 Special Events

The project includes a multi-use sports facility, which may host tournaments. The traffic analysis presented above includes tournament conditions at the multi-use sports facility. Other special events may occur on the project site in areas such as the clubhouse or in the public open space. Special events in these spaces would occur less frequently than the regularly recurring events in the multi-use sports complex, but if events at these facilities would occur simultaneously, traffic congestion may occur.

MM-TRAF-19 Prior to receiving a Certificate of Occupancy for the multi-use indoor sports complex on Pad 1 or the clubhouse on Pad 7, or the commencement of special events within the community park that are anticipated to be attended by a large number of people, the proposed project shall develop a Traffic Management Plan for Special Events and submit to the County of Los Angeles for review and approval. Special events may require special event permits and traffic management plans as part of event planning. Examples of traffic management techniques that could be included in these plans include but are not limited to paid parking, traffic control at internal intersections, lane management, and wayfinding. These traffic management plan elements could improve the internal flow of traffic during special events.

With the implementation of a Traffic Management Plan for Special Events, project impacts to the adjacent street network would be **less than significant**.

TRAF-3 Construction Traffic

Traffic circulation may be temporarily adversely affected during construction as a result of increased traffic flow from construction vehicles and heavy equipment. In addition, the project would require the construction of access driveways, modification of medians and left-turn lanes, and installation of traffic signals along Martin Luther King Jr. Street and Avalon Boulevard, which may result in temporary lane closures.

MM-TRAF-20 Prior to issuance of a grading permit, the proposed project shall develop a Construction Traffic Management Plan for construction activities that would impact public streets and submit to the County of Los Angeles for review and approval. As such, the County of Los Angeles shall ensure that temporary signage is posted and detour routes are identified to facilitate movement of traffic flow, including emergency vehicles, during project construction. A Construction Traffic Management Plan shall be implemented prior to construction of these improvements to minimize impacts throughout the duration of construction activities.

Temporary impacts associated with construction traffic impacts would be **less than significant.**

TRAF-4 Emergency Access

Traffic circulation may be temporarily adversely affected during construction as a result of increased traffic flow from construction vehicles and heavy equipment. In addition, the project would require the construction of access driveways, modification of medians and left-turn lanes, and installation of traffic signals along Martin Luther King Jr. Street and Avalon Boulevard, which may result in temporary lane closures. This may potentially impact emergency access to/from, and through, the project study area. Implementation of mitigation measure **MM-TRAF-20** would mitigate impacts to emergency responders through the use of a Construction Traffic Management Plan that would notify emergency responders to temporary street closures and detours. Therefore, impacts to emergency access would be **less than significant**.

4.14.6 Level of Significance After Mitigation

The following section discuss the levels of significance of project impacts after the prescribed mitigation measures have been implemented.

TRAF-1 Study Intersections – Existing plus Project

Implementation of MM-TRAF-1 through MM-TRAF-9 would reduce the project's impact to less than significant based on the County's methodology. However, these intersection are within the jurisdiction of another public agency. Physical improvements requiring implementation by another public agency will be monitored by County Public Works and implemented to the extent feasible. If the physical improvements are deemed infeasible by the other public agency, cannot be implemented, or implementation is delayed, a significant impact would remain until the improvement is implemented. As the County is not assured of timely implementation of the physical improvement, it is conservatively concluded that impacts at Intersections #1, #4, #7, #14, #18, #19, #24, #25, and #26 would remain **significant and unavoidable**.

TRAF-1 Study Intersections – Existing plus Project plus Cumulative Projects

Implementation of MM-TRAF-1 (for Intersection #1), MM-TRAF-3 (for Intersection #7), MM-TRAF-10 (for Intersection #3), MM-TRAF-16 (for Intersection #24), and MM-TRAF-17 (for Intersection #26) would reduce the project's impact to less than significant based on the County's significance thresholds.

Implementation of MM-TRAF-5 (for Intersection #18), MM-TRAF-6 (for Intersection #19), MM-TRAF-8 (for Intersection #25), MM-TRAF-11 (for Intersection #4), and MM-TRAF-14 (for Intersection #14) would reduce the effects of the cumulative impacts based on the County's LOS

standard of LOS D (or better), with exception of Intersection #25 (Hamilton Avenue/I-110 southbound ramps) which is forecast to continue to operate at LOS F. However, while the project's level of impact would be reduced to LOS D or better (except for Intersection #25), the project's impact would still exceed the County's significance thresholds (V/C increases), and impacts would be considered **significant and unavoidable**.

Significant project impacts were identified at Avalon Boulevard/Victoria Street (#8), Avalon Boulevard/University Drive (#10), and I-110 southbound ramps/190th Street (#22), as discussed in detail in the TIA (Appendix J). County staff directed further consideration of operational improvements to the operation of an intersection (e.g., adding protected left-turn signal phasing or extending inadequate turn pockets) when an impact occurs at an intersection operating at a satisfactory LOS (LOS D or better), rather than add more approach lanes. Based on that direction, queue lengths provided in the TIA were compared to existing turn storage lengths at those three intersections, and no deficiencies were found. Therefore, no operational improvements are needed or required per the County's direction. The effect of the addition of cumulative and project traffic would not result in operational deficiencies at Avalon Boulevard/Victoria Street (#8), Avalon Boulevard/University Drive (#10), and I-110 southbound ramps/190th Street (#22).

All of the significantly impacted intersections, except Intersection #24 (Hamilton Avenue/Del Amo Boulevard), are within the jurisdiction of another public agency. Physical improvements requiring implementation by another public agency will be monitored by County Public Works and implemented to the extent feasible. If the physical improvements are deemed infeasible by the other public agency, cannot be implemented, or implementation is delayed, a significant impact would remain until the improvement is implemented. As the County is not assured of timely implementation of the physical improvement, it is conservatively concluded that impacts at Intersections #1, #3, #4, #7, #14, #18, #19, #25, and #26 would remain **significant and unavoidable**.

TRAF-1 Avalon Boulevard Corridor Analysis – Signal Progression Analysis

MM-TRAF-18. With implementation of optimized corridor signal timing, all corridor intersections would result in satisfactory LOS (LOS D or better) during the AM peak hour, PM peak hour, and Saturday peak hour, and project impacts to signal progression would be **less than significant**.

TRAF-4 Special Events

MM-TRAF-19. With the implementation of a Traffic Management Plan for Special Events, project impacts to the adjacent street network would be **less than significant**.

TRAF-4 Construction Traffic and Emergency Access

MM-TRAF-20. A Construction Traffic Management Plan shall be implemented prior to construction of these improvements to minimize impacts throughout the duration of construction

activities. Temporary impacts associated with construction traffic impacts and emergency access would be **less than significant.**

4.14.7 City of Carson Intersection Impact Thresholds

While the Lead Agency of the project is the County, and the traffic impacts and mitigation measures of the proposed project analyzed above were appropriately based on the County's traffic impact thresholds, for comparative purposes, the following section provides a discussion of potential project impacts under the City of Carson's traffic impact thresholds.

City of Carson General Plan Transportation and Infrastructure Element

The City of Carson's General Plan Transportation and Infrastructure Element requires that new projects not cause the LOS for intersections to drop more than one level if it is at LOS A, B or C, and not drop at all if it is at D or below, except when necessary to achieve substantial City development goals (i.e., minimum acceptable LOS D). Furthermore, if an intersection currently operates, or is forecast to operate, at LOS E or F, a new project would create a significant impact if it increases the v/c ratio by 0.02 v/c or higher. It should be noted that the County's LOS criteria is more stringent (conservative) than the City of Carson's LOS criteria.

Therefore, under the City's threshold criteria, the proposed project would create a significant impact if the following would occur:

1. Addition of traffic from the proposed project would cause an intersection to operate from LOS A, B, C, or D (without the project), to LOS E or F; or,
2. Cause an increase of 0.02 v/c or higher from the addition of traffic from the proposed project to intersections that are currently operating, or forecast to operate, at LOS E or F.

The City would require mitigation measures in order for the project to not exceed these thresholds.

Existing Plus Project LOS

Based on the City's criteria for determining significant traffic impacts, the project is expected to result in a **significant impact** at the following study intersections:

14. Avalon Boulevard/Del Amo Boulevard: LOS D to LOS E in PM peak hour
25. Hamilton Avenue/I-110 SB Ramps (unsignalized): project increases delay at (baseline) LOS F in both peak hours

The proposed project would be required to implement the following mitigation measures to reduce the project's impacts to levels of less than significant.

14. Avalon Boulevard/Del Amo Boulevard: see **MM-TRAF-4**. This intersection is within the jurisdiction of the City, and would require the City to amend their General Plan policies, or approve the implementation of the measure, in order to mitigate the project's impact.

25. Hamilton Avenue/I-110 SB Ramps (unsignalized): see **MM-TRAF-8**. This intersection is within the jurisdiction of Caltrans, and would require their approval for implementation of the measure in order to mitigate the project's impact.

Existing Plus Project Plus Cumulative Projects

Based on the City's criteria for determining significant traffic impacts, the project is expected to create a **significant impact** at the following study intersections.

4. Main Street/Del Amo Boulevard: LOS E to LOS F in PM peak hour

7. Avalon Boulevard/Albertoni Street: LOS D to LOS E in PM peak hour

14. Avalon Boulevard/Del Amo Boulevard: LOS D to LOS E in AM peak hour; and, LOS E to LOS F in PM peak hour

18. Main Street/Albertoni Street: LOS D to LOS E in PM peak hour

19. Main Street/Victoria Street: LOS D to LOS E in PM peak hour

24. Hamilton Avenue/Del Amo Boulevard: Project increases v/c by 0.02 or more at (baseline) LOS E in PM peak hour

25. Hamilton Avenue/I-110 SB Ramps (unsignalized): Project increases delay at (baseline) LOS F in both peak hours

26. Figueroa Street/Del Amo Boulevard: Project increases v/c by 0.02 or more at (baseline) LOS F in PM peak hour

The proposed project would be required to pay its fair-share costs to construct the following mitigation measures to reduce the project's cumulative impacts to levels of less than significant.

4. Main Street/Del Amo Boulevard: see **MM-TRAF-11**. This intersection is within the jurisdiction of the City, and would require the City to amend their General Plan policies, or approve the implementation of the measure, in order to mitigate the project's impact.

7. Avalon Boulevard/Albertoni Street: see **MM-TRAF-3**. This intersection is within the jurisdiction of the City, and would require the City to approve the implementation of the measure in order to mitigate the project's impact.

14. Avalon Boulevard/Del Amo Boulevard: see **MM-TRAF-14**. This intersection is within the jurisdiction of the City, and would require the City to amend their General Plan policies, or approve the implementation of the measure, in order to mitigate the project's impact.

18. Main Street/Albertoni Street: see **MM-TRAF-5**. This intersection is within the jurisdiction of the City, and would require the City to approve the implementation of the measure in order to mitigate the project's impact.
19. Main Street/Victoria Street: see **MM-TRAF-6**. This intersection is within the jurisdiction of the City, and would require the City to approve the implementation of the measure in order to mitigate the project's impact.
24. Hamilton Avenue/Del Amo Boulevard: see **MM-TRAF-16**. This intersection is within the jurisdiction of the City and County of Los Angeles, and would require the City and County of Los Angeles to approve the implementation of the measure in order to mitigate the project's impact.
25. Hamilton Avenue/I-110 SB Ramps (unsignalized): see **MM-TRAF-8**. This intersection is within the jurisdiction of Caltrans, and would require their approval for implementation of the measure in order to mitigate the project's impact.
26. Figueroa Street/Del Amo Boulevard: see **MM-TRAF-17**. This intersection is within the jurisdiction of the City, and would require the City to amend their General Plan policies, or approve the implementation of the measure, in order to mitigate the project's impact.

For the intersections that are located in the City of Carson, the implementation of the mitigation measures would either require approval of the City or have been determined infeasible by the City under the District at South Bay project. The mitigation of Hamilton Avenue/I-110 southbound ramps would require approval of Caltrans. All traffic improvements within the responsibility and jurisdiction of public agencies other than the County would be monitored through PW and implemented to the extent feasible. If improvements within the responsibility and jurisdiction of public agencies other than the County (i.e., City of Carson, Caltrans, etc.) cannot be implemented, significant traffic impacts may remain at such locations. Furthermore, if implementation of any mitigation measure is delayed, a significant impact would occur until the implementation of the mitigation measure.

4.14.8 Cumulative Impacts

Because of the cumulative nature of transportation impacts, cumulative impacts to study area transportation network (study area intersections, roadway segments, freeway ramp intersections, and freeway mainline segments) are addressed in Section 4.14.4, Impacts Analysis, under impact threshold TRAF-1. A majority of cumulative transportation impacts would be significant and unavoidable.

4.14.9 On-Site Project Parking

The Los Angeles County Code establishes parking requirements to assure that an adequate number of spaces are available to accommodate anticipated demand in order to lessen traffic congestion and

adverse impacts on surrounding properties. A parking study has been prepared (*Parking Study for The Creek at Dominguez Hills*, LSA, February 2019 – located in Appendix J) which considers the parking needs for each of the proposed uses of the project by time of day. Many of the uses proposed as part of the project are not easily defined by the land use categories in the Los Angeles County Code. This report references empirical data collected at similar facilities to the specialized uses being proposed.

The parking spaces planned for the project are shown in Table 4.14-18. A total of 2,113 parking spaces for project uses would be provided in surface parking and on-street parking areas dispersed throughout the project site. The parking lots would be located adjacent to the uses they would serve. While access is possible from any of the internal roadways, some parking lots are closest to, and most likely to be accessed from, a particular internal roadway. Parking Lots A and B would be accessible from the north-south roadway nearest the entrance from Martin Luther King Jr. Street. Parking Lots C and D would be accessible from the northern of the two east-west roadways. Lot E would be equally accessible from either east-west roadway. Lot F would be most easily accessible from the southern of the two east-west roadways.

Table 4.14-18
Summary of Project Elements

Building Location	Use	Building Area (sf)	Parking Location	Parking Spaces
Pad 1	Multi-Use Indoor Sports Complex	199,000	Lot A	557
Pad 2	Youth Learning Experience	30,000	Lot B	151
Pad 3	Indoor Skydiving Building	7,500	Lot C	41
Pad 4	Enhanced Driving Range Experience	75,000	Lot D	429
Pad 5	Marketplace/Food Hall	54,000	Lot E	408
Pad 6	Marketplace	17,000		
Pad 7	Clubhouse	40,000	Lot F	469
Pad 8	Recreation and Dining Facility	26,000		
Pad 9	Restaurants	10,000		
Pad 10	Sports Wellness Building	36,000		
Pad 11	Restaurants	15,000		
Pad 12	Zipline and Adventure Course	—	—	—
Pad 13	Community Park	—	—	—
Pad 14	Putting Green	—	—	—
Pad 15	Jogging/Walking Path	—	—	—
			On-Street	58
	Total	**509,500**		**2,113**

Source: Plenitude Holdings
sf = square feet

Municipal Code Parking Requirements

The off-street parking requirements found in the Los Angeles County Code (Chapter 22.52, Part 11) apply to the land uses of the proposed project. Table 4.14-19 identifies the parking requirement for each pad and for the total project.

Table 4.14-19
Los Angeles County Code Parking Requirements

Land Use	Building Area (sf)	Occupancy[1]	Code Parking Requirement	Parking Requirements
Pad 1: Multi-Use Indoor Sports Complex	199,000	4,476	1 per 3 persons based on occupancy	1,492
Pad 2: Youth Learning Experience	30,000	296	1 per 3 persons based on occupancy	99
Pad 3: Indoor Skydiving Building	7,500	74	1 per 3 persons based on occupancy	25
Pad 4: Enhanced Driving Range Experience	75,000	450	1 per 3 persons based on occupancy	150
Pad 5: Marketplace/Food Hall	54,000	963	1 per 3 persons based on occupancy	321
Pad 6: Marketplace	17,000	152	1 per 3 persons based on occupancy	51
Pad 7: Clubhouse	40,000	1,529	1 per 3 persons based on occupancy	486
Pad 8: Recreation and Dining Facility	26,000	359	1 per 3 persons based on occupancy	120
Pad 9: Restaurants	10,000	260	1 per 3 persons based on occupancy	87
Pad 10: Sports Wellness Building	36,000	370	1 per 250 sf	144
Pad 11: Restaurants	15,000	426	1 per 3 persons based on occupancy	142
Pad 12: Zipline and Adventure Course	–	36	1 per 3 persons based on occupancy	12
Pad 13: Community Park	26.4 acre	–	1 per 0.5 acre	13
Pad 14: Putting Green	–	–	Ancillary to enhanced driving range	0
Pad 15: Jogging/Walking Path	4 acre	–	1 per 0.5 acre	2
			Total	**3,144**

Source: Compiled by LSA Associates, Inc. (2019).
[1] Provided by Perkins + Will.
sf = square feet

Table 4.14-19 shows that the project would require 3,144 parking spaces if Los Angeles County Code requirements were applied to each individual land use based on the occupancy or building size of each project component on site. However, many of the project's land uses are unique and do not properly fit into the Los Angeles County Code categories. For example, the multi-use sports complex is shown to require 1,492 parking spaces based on a maximum occupancy of 4,476 people within 199,000 sf of space; however, the building is not anticipated to reach that occupancy because much of the space will be used for basketball and volleyball courts and turf fields and amenities in support of these facilities. In addition, some of the project's uses (such as the multi-use sports complex) are anticipated to experience their peak parking demand at a different time than the restaurants and other uses within the site. The parking study identified the peak parking

demand anticipated to occur based on surveys of similar uses and consideration of parking demand by time of day.

Weekday Parking Demand

Table 4.14-20 summarizes the anticipated peak parking demand for each pad during a typical weekday based on surveys of similar uses and consideration of parking demand by time of day. Time-of-day factors found in the Urban Land Institute (ULI) *Shared Parking* (Second Edition) (2005) were applied to most of the land uses (e.g., restaurants and retail uses) for which data were available. For specialized land uses (i.e., the indoor sports complex, youth learning experience, and enhanced driving range), time-of-day factors were developed using empirical data referenced in the parking study (see Appendix J).

As Table 4.14-20 shows, the peak parking demand anticipated on a weekday is 1,770 vehicles (at 6:00 p.m.), which is less than the 2,113 parking space supply. On a typical weekday, the internal parking supply is sufficient to meet the site's parking demand. It should be noted that the parking demand depicted in the table includes two events occurring at the Clubhouse. On a typical weekday without events at the Clubhouse, parking demand would peak at 1,284 cars.

Lot E, adjacent to the Clubhouse, does not have a sufficient number of striped parking spaces to allow event guests to self-park. However, sufficient parking spaces are provided within The Creek at Dominguez Hills that would permit valet attendants to park vehicles on site. Valet parking of Clubhouse visitor vehicles is an operational strategy to prevent localized parking shortfalls. A full discussion of operational strategies is provided later, following the calculation of worst-case parking demand during a weekend with a tournament at the multi-use sports complex.

Weekend Parking Demand

Table 4.14-21 summarizes the anticipated peak parking demand for each pad during a worst-case scenario weekend with a tournament at the multi-use sports complex and two events at the Clubhouse. Similar to the weekday analysis, weekend time-of-day factors published in *Shared Parking,* Second Edition (ULI 2005) were applied, and derived from empirical data of specific, specialized land uses to calculate parking demand throughout the day.

As Table 4.14-21 shows, during the worst-case parking conditions with a tournament at the multi-use sports complex and two simultaneous events at the Clubhouse, peak parking demand on a typical weekend would be 2,173 spaces. The number of striped parking spaces would be approximately 60 spaces short of meeting parking demand for 2 hours of the day (5:00 p.m. and 6:00 p.m.). However, a valet operation in a valet-only area of the parking lot can increase parking supply by parking some vehicles behind others. This and other operational strategies to prevent localized parking shortfalls are discussed in the next section.

Table 4.14-20
Weekday Time-of-Day Parking Demand

Time-of-Day Factors		6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
Shopping Center[1]	Customer	1%	5%	15%	35%	65%	85%	100%	100%	95%	90%	90%	95%	95%	95%	80%	50%	30%	10%
Fine/Casual Dining[1]	Customer	-	-	-	-	15%	40%	75%	75%	65%	40%	50%	75%	95%	100%	100%	100%	95%	75%
Health Club[1]	Customer	70%	40%	40%	70%	70%	80%	60%	70%	70%	70%	80%	90%	100%	90%	80%	70%	35%	10%
Hotel-Leisure[1]	Conference	-	-	30%	60%	60%	60%	65%	65%	65%	65%	65%	100%	100%	100%	100%	100%	50%	-
Medical Office[1]	Visitor	-	-	90%	90%	100%	100%	30%	90%	100%	100%	90%	80%	67%	30%	15%	-	-	-
Multi-Sports Complex[2]	Visitor	70%	40%	40%	70%	70%	80%	60%	70%	70%	70%	80%	90%	100%	90%	80%	70%	35%	10%
Youth Learning[3]	Visitor	-	-	-	74%	100%	98%	95%	90%	81%	86%	84%	46%	9%	-	-	-	-	-
Enhanced Driving Range[4]	Visitor	-	-	-	20%	39%	53%	59%	65%	70%	75%	80%	91%	93%	100%	100%	100%	90%	53%
Land Use	*Peak Demand*	*Time-of-Day Parking Demand*																	
Multi-Use Sports Complex	112	78	45	45	78	78	90	67	78	78	78	90	101	112	101	90	78	39	11
Total Lot A (557 spaces)		**78**	**45**	**45**	**78**	**78**	**90**	**67**	**78**	**78**	**78**	**90**	**101**	**112**	**101**	**90**	**78**	**39**	**11**
Youth Learning	68	0	0	0	50	68	67	65	61	55	58	57	31	6	0	0	0	0	0
Jogging/Walking Path	2	1	1	1	1	1	2	1	1	1	1	2	2	2	2	2	1	1	1
Total Lot B (151 spaces)		**1**	**1**	**1**	**51**	**69**	**69**	**66**	**62**	**56**	**59**	**59**	**33**	**8**	**2**	**2**	**1**	**1**	**1**
Indoor Skydiving	53	1	3	8	19	34	45	50	53	50	48	48	50	50	50	42	27	16	5
Total Lot C (41 spaces)		**1**	**3**	**8**	**19**	**34**	**45**	**50**	**53**	**50**	**48**	**48**	**50**	**50**	**50**	**42**	**27**	**16**	**5**
Enhanced Driving Range	317	0	0	0	63	123	168	187	206	222	238	254	290	296	317	317	317	285	168
Zipline Course	24	0	1	4	8	16	20	23	24	23	22	22	23	23	23	19	12	7	2
Total Lot D (429 spaces)		**0**	**1**	**4**	**71**	**139**	**188**	**210**	**230**	**245**	**259**	**276**	**313**	**319**	**340**	**336**	**329**	**292**	**170**
Restaurants	280	0	0	0	0	42	112	210	210	184	112	140	210	266	280	280	280	266	210
Retail	161	2	8	24	56	105	137	153	161	153	145	145	153	153	153	129	81	48	16
Sports Wellness	144	0	0	130	130	144	144	43	130	144	144	130	115	96	43	22	0	0	0
Community Park	13	9	5	5	9	9	10	8	9	9	9	10	12	13	12	10	9	5	1

Table 4.14-20
Weekday Time-of-Day Parking Demand

Time-of-Day Factors		6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
Total Lot E (408 spaces)		**11**	**13**	**159**	**195**	**300**	**403**	**414**	**510**	**488**	**410**	**425**	**490**	**528**	**488**	**441**	**370**	**319**	**227**
Clubhouse	486	0	0	146	292	292	292	316	316	316	316	316	486	486	486	486	486	243	0
Restaurants	229	0	0	0	0	34	92	172	172	149	92	115	172	218	229	229	229	218	172
Retail	51	1	3	8	18	33	43	48	51	48	46	46	48	48	48	41	26	15	1
Total Lot F (469 spaces)		**1**	**3**	**154**	**310**	**359**	**427**	**536**	**539**	**513**	**454**	**477**	**706**	**752**	**763**	**756**	**741**	**476**	**177**
Total Lots E and F minus Clubhouse (877 spaces)		12	16	167	213	367	538	634	732	685	548	585	710	794	765	711	624	552	404
Total Site (2,113 spaces)		**92**	**65**	**370**	**725**	**980**	**1,221**	**1,343**	**1,472**	**1,432**	**1,309**	**1,373**	**1,693**	**1,770**	**1,744**	**1,666**	**1,545**	**1,143**	**591**
Remaining (deficit)		**2,021**	**2,048**	**1,743**	**1,388**	**1,133**	**892**	**770**	**641**	**681**	**804**	**740**	**420**	**343**	**369**	**447**	**568**	**970**	**1,522**

Source: Compiled by LSA Associates, Inc. (2019).

1 Time-of-day factors referenced from Shared Parking, Second Edition (Urban Land Institute 2005).

2 Health club rates were applied for weekday parking demand.

3 Developed from empirical data collected for Pretend City Trip Generation and Parking Requirements (LSA Associates, Inc. 2007).

4 Developed from empirical data in the Topgolf Final Transportation Impact Analysis Report (Fehr and Peers 2016).

Table 4.14-21
Weekend Time-of-Day Parking Demand

Time-of-Day Factors		6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
Shopping Center [1]	Customer	1%	5%	10%	30%	50%	65%	80%	90%	100%	100%	95%	90%	80%	75%	65%	50%	35%	10%
Fine/Casual Dining[1]	Customer	-	-	-	-	-	15%	50%	55%	45%	45%	45%	60%	90%	95%	100%	90%	90%	90%
Health Club[1]	Customer	80%	45%	35%	50%	35%	50%	50%	30%	25%	30%	55%	100%	95%	60%	30%	10%	1%	1%
Hotel-Leisure[1]	Conference	-	-	30%	60%	60%	60%	65%	65%	65%	65%	65%	100%	100%	100%	100%	100%	50%	-
Medical Office[1]	Visitor	-	-	90%	90%	100%	100%	30%	90%	100%	100%	90%	80%	67%	30%	15%	-	-	-
Multi-Sports Complex[2]	Visitor	-	-	-	77%	82%	86%	93%	100%	96%	92%	88%	83%	70%	60%	35%	0%	-	-
Youth Learning[3]	Visitor	-	-	-	74%	100%	98%	95%	90%	81%	86%	84%	46%	9%	-	-	-	-	-

Table 4.14-21
Weekend Time-of-Day Parking Demand

Time-of-Day Factors		6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
Enhanced Driving Range[4]	Visitor	-	-	-	20%	39%	53%	59%	65%	70%	75%	80%	91%	93%	100%	100%	100%	90%	53%
Land Use	*Peak Demand*	*Time-of-Day Parking Demand*																	
Multi-Use Sports Complex	708	0	0	0	545	577	609	658	708	680	651	620	588	496	425	248	0	0	0
Total Lot A (557 spaces)		**0**	**0**	**0**	**545**	**577**	**609**	**658**	**708**	**680**	**651**	**620**	**588**	**496**	**425**	**248**	**0**	**0**	**0**
Youth Learning	89	0	0	0	66	89	87	85	80	73	76	74	41	8	0	0	0	0	0
Jogging/Walking Path	2	2	1	1	1	1	1	1	1	1	1	1	2	2	1	1	0	0	0
Total Lot B (151 spaces)		**2**	**1**	**1**	**67**	**90**	**88**	**86**	**81**	**74**	**77**	**75**	**43**	**10**	**1**	**1**	**0**	**0**	**0**
Indoor Skydiving	53	1	3	5	16	27	34	42	48	53	53	50	48	42	40	34	27	19	5
Total Lot C (41 spaces)		**1**	**3**	**5**	**16**	**27**	**34**	**42**	**48**	**53**	**53**	**50**	**48**	**42**	**40**	**34**	**27**	**19**	**5**
Enhanced Driving Range	397	0	0	0	79	154	210	234	258	278	298	318	363	371	397	397	397	357	210
Zipline Course	24	0	1	2	7	12	16	19	22	24	24	23	22	19	18	16	12	8	2
Total Lot D (429 spaces)		**0**	**1**	**2**	**86**	**166**	**226**	**253**	**280**	**302**	**322**	**341**	**385**	**390**	**415**	**413**	**409**	**365**	**212**
Restaurants	280	0	0	0	0	0	42	140	154	126	126	126	168	252	266	280	252	252	252
Retail	161	2	8	16	48	81	105	129	145	161	161	153	145	129	121	105	81	56	16
Sports Wellness	144	0	0	130	130	144	144	43	130	144	144	130	115	96	43	22	0	0	0
Community Park	13	10	6	5	7	5	7	7	4	3	4	7	13	12	8	4	1	0	0
Total Lot E (408 spaces)		**12**	**14**	**151**	**185**	**230**	**298**	**319**	**433**	**434**	**435**	**415**	**441**	**489**	**438**	**411**	**334**	**308**	**268**
Clubhouse	486	0	0	146	292	292	292	316	316	316	316	316	486	486	486	486	486	243	0
Restaurants	229	0	0	0	0	0	34	115	126	103	103	103	137	206	218	229	206	206	206
Retail	51	1	3	5	15	26	33	41	46	51	51	48	46	41	38	33	26	18	5
Total Lot F (469 spaces)		**1**	**3**	**151**	**307**	**317**	**359**	**471**	**488**	**470**	**470**	**467**	**669**	**733**	**742**	**748**	**718**	**467**	**211**
Total Lots E and F minus Clubhouse (877 spaces)		*13*	*16*	*155*	*200*	*255*	*365*	*474*	*604*	*588*	*589*	*567*	*624*	*737*	*694*	*672*	*565*	*532*	*479*

Table 4.14-21
Weekend Time-of-Day Parking Demand

Time-of-Day Factors	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
Total Site (2,113 spaces)	15	21	310	1,206	1,405	1,613	1,830	2,036	2,012	2,008	1,969	2,173	2,161	2,060	1,854	1,487	1,160	698
Remaining (deficit)	2,098	2,092	1,803	907	708	500	283	77	101	105	144	(60)	(48)	53	259	626	953	1,415

Source: Compiled by LSA Associates, Inc. (2018).

1 Time-of-day factors referenced from Shared Parking, Second Edition (Urban Land Institute 2005).

2 Developed from empirical data in Trip Generation and Parking Studies for the Placer County Sports and Entertainment Center (Gibson Transportation Consulting 2018).

3 Developed from empirical data collected for Pretend City Trip Generation and Parking Requirements (LSA Associates, Inc. 2007).

4 Developed from empirical data in the Topgolf Final Transportation Impact Analysis Report (Fehr and Peers 2016).

Operational Strategies

The analysis of parking demand by time of day showed that localized parking shortfalls in certain lots are possible on weekdays and weekends. On weekdays, the peak parking demand generated by uses surrounded by Lot E has the potential to exceed the 469 striped parking spaces in that parking lot. However, the combined parking supply of Lot E and adjacent Lot F (877 parking spaces) is sufficient to accommodate the combined parking demand of uses surrounded by Lots E and F. The exception is when events are held at the Clubhouse. Peak parking demand for the Clubhouse alone has the potential to exceed the parking supply in adjacent Lot F. Operational strategies would be needed to address this potential localized parking shortfall.

The worst-case weekend analysis showed that peak parking demand during a tournament has the potential to exceed the 557 parking spaces in Lot A adjacent to the multi-use sports complex. Operational strategies would be needed to address this potential localized parking shortfall. Similar to weekdays, an operational strategy on weekends would be needed to manage Clubhouse parking demand. Additionally, on a worst-case weekend with a tournament and two events at the Clubhouse, the number of striped parking spaces would be approximately 60 spaces short of meeting parking demand on site for 2 hours of the day (5:00 p.m. and 6:00 p.m.).

Multiple operational strategies are available to address the localized issues identified above. The project operator may choose to employ one or more of these strategies at a time and may change the strategies used based on the observed effectiveness or tailored to a specific set of circumstances. For example, the project operator may select to employ one set of operational strategies during a tournament weekend with one Clubhouse event scheduled and another set of operational strategies during a tournament weekend with two Clubhouse events scheduled.

Clubhouse Valet Parking

Events occurring before noon or events with a small number of guests may be able to self-park in Lot F. However, valet parking should serve most events at the Clubhouse (Pad 7). Clubhouse visitors would drop off and pick up their vehicles in this area. The valet operator has options for where to park vehicles based on the total number of Clubhouse visitors and whether a tournament is being held in the multi-use sports complex.

- Park vehicles within striped parking spaces in Lot A.
- Section off a portion of one or more parking lots for valet-only, which will permit stacking of vehicles.

Stacking some valet-parked vehicles behind other valet-parked vehicles in a valet-only section of the parking lot has the potential to increase the total parking supply. Using this parking strategy would overcome the projected potential shortfall during the worst-case scenario.

Operating Hours

The worst-case weekend analysis was conducted with all uses operating during the time of peak parking demand (i.e., 5:00 p.m. to 6:00 p.m.) as well as two simultaneous events at the Clubhouse. These assumptions may be overly conservative. If, for example, the Sports Wellness building closes before 5:00 p.m. on weekends, then the total parking demand would be lower and the total parking supply would be sufficient.

Staggering events at the Clubhouse could also reduce total parking demand. An overall parking shortfall is only anticipated between 5:00 p.m. and 6:00 p.m. on a weekend when a tournament is held at the multi-use sports complex and two events are held simultaneously at the Clubhouse. If one event is held at the Clubhouse during the period of peak demand and the second event is scheduled to conclude before 5:00 p.m. or start at or after 7:00 p.m., then the overall parking demand for the site would be less than the total parking supply of the site. This consideration of event scheduling would only be necessary during a sports tournament.

Internal Shuttle

A localized parking shortfall is possible in Lot A during tournaments at the multi-use sports complex depending on the size of the tournament. However, during the times of peak parking demand, parking would be available in other lots throughout the site. Furthermore, visitors to the multi-use sports complex are likely to desire to park once even if they intend to visit multiple locations within the site. For example, during lunchtime, spectators may desire to visit some of the on-site restaurants but would not want to risk losing their parking space near the multi-use sports complex. Both of these issues are solved with an internal shuttle to move people between the north and south sides of the project. With an internal shuttle, all parking spaces throughout the site could serve any of the land uses within the project. Operation of the shuttle should be considered during tournaments and during the peak evening times of the land uses within Lots E and F.

Summary of Operational Strategies

- Operational strategies to reduce parking demand include modifying operating hours and staggering events at the Clubhouse.
- Operational strategies to balance parking demand within the site include providing an internal shuttle and offering valet parking for Clubhouse events.

- Operational strategies to increase parking supply include stacking vehicles within valet-only areas of the parking lot.
- Use of these strategies would prevent localized parking shortfalls and would ensure that the site's parking supply is sufficient to accommodate the peak parking demand. The project operator can select from these strategies or employ a combination of strategies based on specific condition.

4.14.10 References

Caltrans (California Department of Transportation). 2002. *Guide for the Preparation of Traffic Impact Studies*. December 2002.

City of Carson. 2004. *General Plan*. Accessed November 2018. http://ci.carson.ca.us/communitydevelopment/generalplan.aspx.

County of Los Angeles. 2010. *2010 Congestion Management Program*. Los Angeles County Metropolitan Transportation Authority. Accessed December 2018. http://media.metro.net/docs/cmp_final_2010.pdf.

County of Los Angeles. 2015. *Los Angeles County General Plan*. Adopted October 6, 2015. Accessed November 2018. http://planning.lacounty.gov/generalplan/generalplan.

County of Los Angeles Department of Public Works. 2013. *Traffic Impact Analysis Report Guidelines.* December 2013.

Fehr and Peers. 2014. *Draft TIS for the North Central Roseville Specific Plan Parcel 49*. November 2014.

Fehr and Peers. 2016. *Topgolf Final Transportation Impact Analysis Report.*

Fehr and Peers. 2017. *District at South Bay Project Transportation Impact Analysis*. September 2017.

Gibson Transportation Consulting. 2018. *Trip Generation and Parking Studies for the Placer County Sports and Entertainment Center*. March 2018.

ITE (Institute of Transportation Engineers). 2017. *Trip Generation Manual*. 10th ed. Washington, DC: Institute of Transportation Engineers.

Kimley-Horn and Associates Inc. 2015. iFly Oceanside Traffic Analysis.

SANDAG (San Diego Association of Governments). 2002. *(Not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*. April 2002.

Transportation Research Board. 2010. *Highway Capacity Manual*. 5th ed. Washington, DC: Transportation Research Board.

Transportation Research Board. 2016. *Highway Capacity Manual*. 6th ed. Washington, DC: Transportation Research Board.

INTENTIONALLY LEFT BLANK

4.15 TRIBAL CULTURAL RESOURCES

This section discusses potential impacts to tribal cultural resources resulting from implementation of The Creek at Dominguez Hills project (project or proposed project). The analysis is based on a review of existing cultural resources; technical data; and applicable laws, regulations, and guidelines and is derived from the Cultural Resources Study prepared by Dudek in September 2018 (Appendix E, Cultural Technical Report, of this environmental impact report (EIR)).

4.15.1 Existing Conditions

Plenitude Holdings LLC proposes to develop a new sports, recreation, fitness, and wellness destination on a portion of the approximately 170-acre Links at Victoria Golf Course (Victoria Golf Course), located at 340 Martin Luther King Jr. Street (formerly East 192nd Street) in the City of Carson. The approximately 87-acre project site is located northwest of the intersection of East Del Amo Boulevard and South Avalon Boulevard, northeast of the Dominguez Channel, and east of the junction of Interstate (I-) 405 and I-110. The project site is located in the southwesterly area of the golf course. Between 1948 and 1959, the project site was used as a landfill for surrounding communities. After this, the site was graded and landscaped in order to function as a golf course. Due to these factors, the likelihood of encountering tribal cultural resources on the project site is low.

The present study documents the results of a South Central Coastal Information Center (SCCIC) records search, a search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF), and tribal consultation completed by the lead agency, the County of Los Angeles (County), pursuant to California Assembly Bill (AB) 52.

South Central Coast Information Center Records Search

On February 28, 2018, Dudek completed a search of the California Historical Resources Inventory System (CHRIS) at the SCCIC for the project site and surrounding 0.5 miles. This search included mapped prehistoric, historical, and built-environment resources; Department of Parks and Recreation site records; technical reports; archival resources; and ethnographic references. Additional consulted sources included historical maps of the project site, the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Historic Property Data File, and the lists of California State Historical Landmarks, California Points of Historical Interest, and the Archaeological Determinations of Eligibility. The confidential records search results are available as Appendix A of the Cultural Resources Study, which is included in Appendix E of this EIR.

Previously Conducted Cultural Resource Studies

The SCCIC records indicate that nine previous cultural resources technical investigations have been conducted within 0.5 miles of the project site between 1974 and 2002. One of these previously conducted studies intersects the project site (Table 4.15-1).

Table 4.15-1
Previously Conducted Technical Studies Within 0.5 Miles of the Project Site

Report Number	Author	Year	Report Title	Proximity to Project Site
LA-00679	Weil, Edward B.	1980	Cultural Resource Evaluation of Proposed Improvements of 190th Street Carson, California	Outside
LA-01016	Schroth, Adella	1981	Archaeological Resources Assessment of Replacement Bus Operations and Maintenance Facility for Division 18 in the City of Carson, California	Outside
LA-03583	Bucknam, Bonnie M.	1974	The Los Angeles Basin and Vicinity: a Gazetteer and Compilation of Archaeological Site Information	Outside
LA-03809	Anonymous	1979	Historic Property Survey, Del Amo Blvd.-Figueroa St. to Avalon Blvd.	Intersects
LA-04512	Eggers, A.V.	1977	Cultural Resources Inventory of the City of Carson, California	Outside
LA-03204	Wlodarski, Robert J.	1995	The Results of a Phase 1 Archaeological Study for the Proposed Del Amo Boulevard Extension Project, City of Carson, Los Angeles County, California	Outside
LA-06194	White, Laura S.	2002	Records Search Results for the Carson Town Center Project Eda Grant, City of Carson, Los Angeles County, California	Outside
LA-06200	McKenna, Jeanette A.	2002	Cultural Resource Assessment/evaluation for Nextel Communications Site CA-7805-a, Carson, Los Angeles County, California	Outside
LA-11482	Racer, F.H.	n.d.	Camp Sites in Harbor District	Outside

Previously Recorded Cultural Resources

SCCIC records indicate that no cultural resources have been previously recorded within the project site. However, the SCCIC records indicate that one resource has been previously recorded within 0.5 miles of the project site. This resource is a prehistoric site that was recorded in 1939 and updated in 1951 (Table 4.15-2).

Table 4.15-2
Previously Recorded Cultural Resources Within 0.5 Miles of the Project Site

Primary Number	Trinomial	Period	NRHP/CRHR Status	Description	Recorded By/Year
P-19-000088	CA-LAN-88	Prehistoric	Recommended Eligible for the CRHR	Miscellaneous small prehistoric sites around border of Lagunas de Los Dominguez area has been heavily developed since recordation.	Racer, F.H. (1939); Rozaire (1951)

Notes: NRHP = National Register of Historic Places; CRHR = California Register of Historical Resources.

Native American Coordination

Sacred Lands File Search and Tribal Outreach

Although the project site encompasses only a portion of the existing Victoria Golf Course, the cultural study associated with this EIR evaluated the golf course as a whole. Therefore, an initial SLF search request was submitted to the NAHC on March 8, 2018, for the larger Victoria Golf Course to ensure a thorough record of Native American resources was acquired for reporting purposes. Subsequently, a second SLF request focusing only on the project site was submitted on September 4, 2018. The NAHC responded via email on September 11, 2018, reiterating the results of the initial request, which states that the results of the SLF search failed to indicate the presence of Native American cultural resources for the project area. The NAHC also provided a list of six Native American groups and individuals who may have knowledge of cultural resources in the project area. On September 25, 2018, Dudek mailed letters to all six individuals listed on the NAHC consultation list detailing the proposed project, the project location, and requesting any information about potential tribal cultural resources within the project site (Table 4.15-3). This outreach was conducted for informational purposes only and did not constitute formal government-to-government consultation as specified by AB 52, which is discussed in detail in the following section. A copy of the letters mailed to each individual is included in Appendix E.

Table 4.15-3
Native American Heritage Commission-Listed Native American Contacts

Native American Tribal Representatives	Method of Notification/Date	Response Received
Anthony Morales, Chairperson San Gabriel Band of Mission Indians	Certified Mail; September 25, 2018	None to date
Sandonne Goad, Chairperson Gabrielino-Tongva Nation	Certified Mail; September 25, 2018	None to date
Robert F. Dorame, Chairman Gabrielino Tongva Indians of California Tribal Council	Certified Mail; September 25, 2018	None to date

Table 4.15-3
Native American Heritage Commission-Listed Native American Contacts

Native American Tribal Representatives	Method of Notification/Date	Response Received
Linda Candelaria, Chairperson Gabrielino-Tongva Tribe	Certified Mail; September 25, 2018	None to date
Charles Alvarez, Council Member Gabrielino Tongva Tribe	Certified Mail; September 25, 2018	None to date
Andrew Salas, Chairperson Gabrieleno Band of Mission Indians – Kizh Nation	Certified Mail; September 25, 2018	Received September 24, 2018, via email from Admin Specialist. Response requests to be informed of any project-related ground disturbance.

Assembly Bill 52

A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource (TCR) is a project that may have a significant effect on the environment (PRC Section 21084.2). Under AB 52, a TCR must have tangible, geographically defined properties that can be impacted by project implementation. The proposed project is subject to compliance with AB 52.

The County sent notification of the proposed project to all California Native American tribal representatives that have requested project notifications from the County pursuant to AB 52 and that are on file with the NAHC as being traditionally or culturally affiliated with the geographic area on July 16, 2018. These notification letters included a project map and description inquiring if the tribe would like to consult to discuss the project and the potential to impact any TCRs. AB 52 allows tribes 30 days after receiving notification to request consultation. If a response is not received within the allotted 30 days, it is assumed that consultation is declined. To date, government-to-government consultation initiated by the County has not resulted in the identification of a TCR within or near the project site. Table 4.15-4 summarizes the results of the AB 52 process for the proposed project.

Table 4.15-4
Assembly Bill 52 Native American Tribal Outreach Results

Native American Tribal Representatives	Method of Notification	Response to County Notification Letters
Jairo Avila, Tribal Historic and Cultural Preservation Officer Fernandeno Tataviam Band of Mission Indians	Certified Mail; July 16, 2018	None to date
Lee Clauss San Manuel Band of Mission Indians (SMBMI)	Certified Mail; July 16, 2018	Received July 19, 2018, via email from Jessica Mauck, Cultural Resources Analyst for the SMBMI. Response declines consulting party status.

Table 4.15-4
Assembly Bill 52 Native American Tribal Outreach Results

Native American Tribal Representatives	Method of Notification	Response to County Notification Letters
Octavio Escobedo, Tribal Chair Tejon Indian Tribe	Certified Mail; July 16, 2018	None to date
Anthony Morales San Gabriel Band of Mission Indians	Certified Mail; July 16, 2018	None to date
Andrew Salas, Chairman Gabrieleno Band of Mission Indians – Kizh Nation	Certified Mail; July 16, 2018	None to date

Cultural Resources Survey

Dudek conducted a pedestrian survey of the project site on May 9, 2018, for historic-age built-environment resources and archaeological resources. Exposed ground surface was inspected for archaeological resources; however, the majority of the project site has been impacted by landscaping associated with the golf course, and there are few places where native soil is present. Ground visibility within the project site ranges from good to poor. No archaeological resources were identified during the survey. All field notes, photographs, and records related to the current study are on file at Dudek's office in Pasadena, California.

In summary, no cultural resources were identified (other than the historic Victoria Golf Course itself) were identified within the project site as a result of the CHRIS records search, Native American outreach, or pedestrian survey.

4.15.2 Relevant Plans, Policies, and Ordinances

Federal

Although there is no federal nexus for this project, the subject property was evaluated in consideration of National Register of Historic Places (NRHP) designation criteria and integrity requirements.

The National Register of Historic Places

The NRHP is on the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service, under the U.S. Department of the Interior, the NRHP was authorized under the National Historic Preservation Act (NHPA) of 1966, as amended (16 USC 470 et seq.). Its listings encompass all National Historic Landmarks, as well as historic areas administered by the National Park Service.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
>
> A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B. That are associated with the lives of persons significant in our past; or
>
> C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D. That have yielded, or may be likely to yield, information important in prehistory or history.

Integrity is defined in NRHP guidance, *How to Apply the National Register Criteria*, as "the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity" (NPS 1990). NRHP guidance further asserts that properties be completed at least 50 years ago to be considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be "exceptionally important" (criteria consideration G) to be considered for listing.

A historic property is defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the NRHP criteria (36 CFR Sections 800.16(i)(1)).

Effects on historic properties under Section 106 of the National Historic Preservation Act are defined in the assessment of adverse effects in 36 CFR Sections 800.5(a)(1):

> An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

Adverse effects on historic properties are clearly defined and include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;

(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines;

(iii) Removal of the property from its historic location;

(iv) Change of the character of the property's use or of physical features within the property's setting that contributes to its historic significance;

(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;

(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance (36 CFR 800.5 (2)).

To comply with Section 106, the criteria of adverse effect are applied to historic properties, if any exist in the project area of potential effect, pursuant to 36 CFR Sections 800.5(a)(1). If no historic properties are identified in the area of potential effect, a finding of "no historic properties affected" will be made for the proposed project. If there are historic properties in the area of potential effect, application of the criteria of adverse effect will result in project-related findings of either "no adverse effect" or of "adverse effect," as previously described. A finding of no adverse effect may be appropriate when the undertaking's effects do not meet the thresholds in criteria of adverse effect 36 CFR Sections 800.5(a)(1), in certain cases when the undertaking is modified to avoid or lessen effects, or if conditions were imposed to ensure review of rehabilitation plans for

conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (codified in 36 CFR Part 68).

If adverse effects findings were expected to result from the proposed project, mitigation would be required, as feasible, and resolution of those adverse effects by consultation may occur to avoid, minimize, or mitigate adverse effects on historic properties pursuant to 36 CFR Part 800.6(a).

State

The California Register of Historical Resources

In California, the term "historical resource" includes, but is not limited to, "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC Section 5020.1(j)). In 1992, the California legislature established the CRHR "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 Section 5024.1(a)). The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, enumerated as follows. According to Public Resources Code (PRC) Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) 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.

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

To understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 CCR 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Environmental Quality Act

As described further, the following California Environmental Quality Act (CEQA) statutes (PRC Section 21000 et seq.) and CEQA Guidelines (14 CCR 15000 et seq.) are of relevance to the analysis of archaeological, historic, and TCRs:

- PRC Section 21083.2(g) defines "unique archaeological resource."
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) defines "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource"; it also defines the circumstances when a project would materially impair the significance of a historical resource.
- PRC Section 21074(a) defines "tribal cultural resources."
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- PRC Sections 21083.2(b) and 21083.2(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures. Preservation in place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; 14 CCR 15064.5(b)). If a site is listed or eligible for listing in the CRHR, included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1(q)), it is an "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (PRC Section 21084.1; 14 CCR 15064.5(a)). The lead agency is not precluded from

determining that a resource is a historical resource even if it does not fall within this presumption (PRC Section 21084.1; 14 CCR 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA 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" (14 CCR 15064.5(b)(1); PRC Section 5020.1(q)). In turn, the significance of a historical resource is materially impaired when a project does any of the following:

(1) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or

(2) 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 Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, 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

(3) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA (14 CCR 15064.5(b)(2)).

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.2(a)–(c)).

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 (PRC Section 21083.2(g)).

Impacts on non-unique archaeological resources are generally not considered a significant environmental impact (PRC Section 21083.2(a); 14 CCR 15064.5(c)(4)). However, if a non-unique archaeological resource qualifies as a TCR (PRC Sections 21074(c) and 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. Described as follows, these procedures are detailed in PRC Section 5097.98.

California State Assembly Bill 52

AB 52 of 2014 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. AB 52 established that TCRs must be considered under CEQA and also provided for additional Native American consultation requirements for the lead agency. Section 21074 describes a TCR as a site, feature, place, cultural landscape, sacred place, or object that is considered of cultural value to a California Native American tribe. A TCR is either:

- On the CRHR or a local historic register; Eligible for the CRHR or a local historic register; or
- 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.

AB 52 formalizes the lead agency–tribal consultation process, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with the project, including tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or EIR.

Section 1 (a)(9) of AB 52 establishes that "a substantial adverse change to a TCR has a significant effect on the environment." Effects on TCRs 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." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to TCRs, 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)).

California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the county coroner has examined the remains (Section 7050.5(b)). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact NAHC within 24 hours (Section 7050.5(c)). NAHC will notify the "most likely descendant." With the permission of the landowner, the most likely descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the most likely descendant by NAHC. The most likely descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Local

Los Angeles County General Plan

The *Los Angeles County General Plan* was adopted by the Board of Supervisors on October 6, 2015, and provides the policy framework for how and where the unincorporated County will grow through the year 2035. The Conservation and Natural Resources Element provides strategies and policies regarding historic, cultural and paleontological resources. The following policies may be applicable to the proposed project (County of Los Angeles 2015):

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 proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

4.15.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to TCRs would occur if the project would:

TCR-1 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, 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:

a. Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

b. 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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.15.4 Impacts Analysis

TCR-1 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, 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:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

As described under Section 4. 15.1, a CHRIS records search was conducted at the SCCIC on February 28, 2018, for the proposed project site and within a 0.5-mile buffer around the site. The CHRIS search included a review mapped prehistoric, historical, and built-environment resources; Department of Parks and Recreation site records; technical reports; archival resources; and ethnographic references. Additional consulted sources included historical maps of the project site, the NRHP, the CRHR, the California Historic Property Data File, and the lists of California State Historical Landmarks, California

Points of Historical Interest, and the Archaeological Determinations of Eligibility. No previously recorded TCRs listed in the CRHR or a local register were identified within the project site. Further, no TCRs have been identified by California Native American tribes as part of the County's AB 52 notification and consultation process. Impacts are considered **less than significant**. No mitigation is required.

b. 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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

There are no resources on the project site that have been determined by the County to be significant pursuant to the criteria set forth in PRC Section 5024.1. Further, no TCRs were identified in the project site by California Native American tribes as part of the County's AB 52 notification and consultation process.

Prior to the current project, the County had not received any requests from California Native American Tribes to be notified of CEQA projects for the purposes of AB 52. In an effort to proactively reach out to tribes with a cultural affiliation to the project site, the County requested a tribal consultation list from the NAHC. The NAHC provided the County with a list of five tribes with traditional lands or cultural places located within the boundaries of the project site. On July 16, 2018, the County mailed notification letters to all five contacts provided by the NAHC.

One response to AB 52 outreach letters to tribal contacts was received by the County. On July 19, 2018, Jessica Mauck, Cultural Resources Analyst for the San Manuel Band of Mission Indians (SMBMI), responded via email. Ms. Mauck states in the email that the project site is located outside of Serrano ancestral territory, and therefore, the SMBMI would not request consulting party status for the proposed project.

As no information regarding TCRs has been received by the County, the County has determined that no TCRs are present in the project site. However, there is still a low potential for unknown subsurface TCRs to be impacted by the project, which could result in a significant impact. Therefore, protocols for the inadvertent discovery of TCRs is included as **MM-TCR-1,** which would reduce the potential impact to a **less-than-significant level**.

4.15.5 Mitigation Measures

The following mitigation measure would ensure that the project has a less-than-significant impact on TCRs.

MM-TCR-1 While no tribal cultural resources (TCRs) have been identified that may be affected by the project, the following approach for the unanticipated discovery of TCRs has been prepared to reduce potential impacts to unanticipated resources. Should a potential TCR be encountered, construction activities near the potential TCR shall be temporarily halted within 50 feet of the potential TCR and the County of Los Angeles (County) notified. The County will notify Native American tribes that have been identified by the Native American Heritage Commission (NAHC) to be traditionally and culturally affiliated with the geographic area of the project. If the unanticipated resource is archaeological in nature, appropriate management requirements shall be implemented as outlined in Mitigation Measure (MM-) CUL-1 (see Section 4.4.5, Mitigation Measures). If the County determines that the potential resource is a TCR (as defined by Public Resources Code, Section 21074), tribes consulting under AB 52 would be provided a reasonable period of time, typically five days from the date a new discovery is made, to conduct a site visit and make recommendations regarding future ground disturbance activities as well as the treatment and disposition of any discovered TCRs. A qualified archaeologist shall implement a plan for the treatment and disposition of any discovered TCRs based on the nature of the resource and considering the recommendations of the tribe(s). All activities shall be conducted in accordance with regulatory requirements. If human remains are found within the project site, management recommendations as outlined in MM-CUL-3 (see Section 4.4.5) should be implemented.

4.15.6 Level of Significance After Mitigation

With adherence to **MM-TCR-1**, the potential for impacts to TCRs as a result of the proposed project would be **less than significant**.

4.15.7 Cumulative Impacts

The cumulative impacts analysis on TCRs considers whether impacts of the proposed project together with the nine projects identified within the vicinity of the project site, when taken as a whole, substantially diminish the number of TCRs within the same or similar context. There are no known TCRs on the project site, and as such, the project site is not part of an existing or known grouping of TCRs that would be impacted as part of the cumulative impacts of other projects. It is anticipated that TCRs that are potentially affected by related projects would also be subject to the

same requirements of CEQA as the proposed project and any impacts would be mitigated, as applicable. These determinations would be made on a case-by-case basis, and the effects of cumulative development on TCRs would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. Therefore, the proposed project would not cumulatively contribute to a significant impact associated with TCRs and impacts would be **less than significant.**

4.15.8 References

County of Los Angeles. 2015. *Los Angeles County General Plan*. Adopted October 6, 2015. Accessed August 21, 2018. http://planning.lacounty.gov/generalplan/generalplan.

NPS (National Park Service, U.S. Department of the Interior). 1990. *National Register Bulletin: Technical Information on the National Register of Historic Places: Survey, Evaluation, Registration, and Preservation of Cultural Resources*. How to Apply the National Register Criteria for Evaluation. https://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf.

4.16 UTILITIES AND SERVICE SYSTEMS

This section describes the existing utilities setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of The Creek at Dominguez Hills project (project or proposed project). The analysis is based on a review of existing infrastructure and applicable laws, regulations, and guidelines. The information presented in this section was collected from a number of publicly available sources and technical reports, including a Hydrology Study and a Low Impact Development Plan that fulfill the requirements of the Los Angeles County Hydrology Manual and the Los Angeles County Low Impact Development Manual. Reports and documents used are listed below:

- *Preliminary Hydrology Study, The Creek at Dominguez Hills,* prepared by Tait and Associates Inc. (Tait) (Appendix H-1, Hydrology Report)
- *Preliminary Low Impact Development Plan (LID), The Creek at Dominguez Hills*, prepared by Tait (Appendix H-2, LID Plan)
- *Sewer Analysis Study,* prepared by Tait (Appendix K, Sewer Analysis Study)
- *The Creek at Dominguez Hills 100% Schematic Design Sustainability Narrative* (Integral Group Inc. 2018)
- *Draft Conceptual Water Exhibit – Creek at Dominguez Hills* (Tait 2018a)
- *Draft Conceptual Sanitary Sewer Exhibit – Creek at Dominguez Hills* (Tait 2018b)

4.16.1 Existing Conditions

Wastewater

Sewer System

The City of Carson owns the local sanitary sewers within the City. The sewers are constructed of vitrified clay pipe, which have a normal service life in excess of 75 years. Los Angeles County Public Works Consolidated Sewer Maintenance District (CSMD) maintains these sewers lines. The CSMD collects user fees for operation and maintenance of the existing local sewer lines (City of Carson 2002). Wastewater from the Links at Victoria Golf Course (Victoria Golf Course) currently discharges into an existing 8-inch-diameter sewer line in Martin Luther King Jr. Street. Sewage from this line flows into a 10-inch-diameter line in 15th Street, which then connects to a 15-inch-diameter line in Avalon Boulevard. There is also an existing 8-inch-diameter sewer line adjacent to the project site that crosses Avalon Boulevard about 175 feet north of Turmont Street. This line was installed to service the Victoria Golf Course but does not currently appear to be in use. This line connects to the 15-inch-diameter sewer line in Avalon Boulevard. These lines are owned by the City and maintained

by the CSMD. Sewage from these lines flows into the Del Amo Trunk Sewer, located in Avalon Boulevard, south of Del Amo Boulevard (Tait 2018b).

Sewer trunk lines (including the Del Amo Trunk Sewer) and the wastewater treatment plant within the City are owned and operated by the County Sanitation Districts of Los Angeles County (LACSD) (City of Carson 2002). After discharging into the local sewer lines described above, wastewater from the project site is conveyed to LACSD's Del Amo Trunk Sewer, located in Avalon Boulevard at Del Amo Boulevard, approximately 0.4 miles southeast of the project site. This trunk sewer line is 24 inches in diameter upstream of the confluence point with the local line in Avalon Boulevard, and 27 inches in diameter downstream of the confluence point. The Del Amo Trunk Sewer has a capacity of approximately 3.7 million gallons per day (mgd) and was conveying a peak flow of 2.4 mgd when last measured in 2015.

Wastewater generated within the City (including wastewater generated at the project site) is treated at the Joint Water Pollution Control Plant (JWPCP), which is located at 24501 South Figueroa Street in Carson (City of Carson 2002; LACSD 2018). The JWPCP is the largest of LACSD's wastewater treatment plants. The facility provides both primary and secondary treatment for approximately 260 mgd of wastewater, and has a total permitted capacity of 400 mgd. The plant serves a population of approximately 3.5 million people throughout Los Angeles County. Prior to discharge, the treated wastewater is disinfected with sodium hypochlorite and sent to the Pacific Ocean through a network of outfalls. These outfalls extend 1.5 miles off the Palos Verdes Peninsula to a depth of 200 feet (LACSD 2018).

In order for the LACSD to conform to the requirements of the Federal Clean Air Act, the design capacities of LACSD wastewater treatment facilities are based on regional growth forecasts adopted by the Southern California Association of Governments (SCAG). Expansion of LACSD facilities must be sized and service phased in a manner that is consistent with SCAG's regional growth forecasts. The available capacity of LACSD treatment facilities is, therefore, limited to levels associated with the approved growth identified by SCAG.

Existing Wastewater Generation

As stated in the Sewer Analysis Study (Appendix K) prepared by Tait, no credit for existing wastewater generation was taken for existing site uses, because wastewater from the existing golf course flows into an existing sewer lateral in Martin Luther King Jr. Street, and this lateral will not be used by the proposed project. As such, to ensure a more conservative analysis, it is assumed that the project site does not currently generate wastewater. The analysis is, therefore, based on gross wastewater generation at the proposed project site.

Water

Water Service

Water service is provided to the City of Carson by the California Water Service Company Dominguez District (Cal Water Dominguez, or Cal Water) and by Southern California Water Company (SCWC) Southwest District. SCWC serves approximately 13% of the City, and the other 87% is served by Cal Water (City of Carson 2002). The project site is within the portion of the City served by Cal Water Dominguez. Water supplies for Cal Water Dominguez come from three principal sources: local groundwater, purchased imported water, and recycled water. Local groundwater is pumped from two adjudicated groundwater basins, the West Coast Basin and the Central Basin. Imported water is purchased from the Metropolitan Water District of Southern California (MWD), a wholesale State Water Project supplier, through the West Basin Municipal Water District (WBMWD). Recycled wastewater in Cal Water's Dominguez District is supplied and distributed by WBMWD. Between 2011 and 2015, water supply in Cal Water's Dominguez District was 68% purchased water, 17% groundwater, and 15% recycled water (Cal Water 2016).

Recycled wastewater from WBMWD originates from secondary effluent received from the City of Los Angeles' Hyperion Wastewater Treatment Plant, which provides secondary treatment using the activated sludge process. Most of the treated effluent is disposed of through an ocean outfall, but approximately 6% of the treated effluent is sent to WBMWD's main treatment facility, the Edward C. Little Water Recycling Facility (ELWRF). The ELWRF produces numerous types of recycled water, for a variety of purposes. WBMWD serves approximately 32,300 acre-feet per year (AFY) of recycled water to over 200 customers in its service area, which encompasses 185 square miles and includes 17 cities. Cal Water Dominguez began purchasing recycled water from WBMWD in 2000. The use of recycled water is expected to increase over time. Currently, the ELWRF produces approximately 72 mgd of water. Approximately 17.5 mgd is used for seawater barrier injection and 50 mgd is tertiary treated recycled water. Tertiary treated water is used for industrial and irrigation purposes (Cal Water 2016; WBMWD 2018; HDR Inc. 2018).

The Victoria Golf Course uses a combination of potable and recycled water. Cal Water's Water Supply and Facilities Master Plan (2009) for the Dominguez District identified a list of top 20 customers that can use recycled water, with a total potential demand of 6,650 AFY, which equates to 5.94 mgd. The Victoria Golf Course was identified as one of these customers (Cal Water 2016).

There are existing water mains in Avalon Boulevard, Martin Luther King Jr. Street, and Del Amo Boulevard, which provide potable water to the site. (The line in Martin Luther King Jr. Street is 14 inches in diameter, the line in Avalon Boulevard is 12 inches in diameter, and the line in De Amo Boulevard is 16 inches in diameter.) Recycled water is provided to the site via existing WBMWD

pipelines, which extend along the western, eastern, and southern perimeters of the Victoria Golf Course, specifically along the Dominguez Channel, Avalon Boulevard, and East Del Amo Boulevard (WBMWD 2017). WBMWD has approximately 100 miles of recycled water pipelines in place, and approximately 60 additional miles of recycled water pipelines are being planned for future installation to allow for increased use of recycled water (WBMWD 2018).

Existing Water Use

The existing Victoria Golf Course uses approximately 75 million gallons to 80 million gallons of recycled water per year and approximately 5 million gallons of potable water per year (Greenway Golf 2018). It is assumed that the project site consumes approximately half of the golf course's total water use. As such, this analysis will assume that the project site has an existing water demand of 40 million gallons of recycled water per year and 2.5 million gallons of potable water per year. This equates to a total water use of 42.5 million gallons of water per year, or 116,438 gallons per day.

Stormwater

Drainage Facilities

Drainage facilities in the City are provided and maintained by Los Angeles County Public Works (PW), California State Department of Transportation (Caltrans), and the City. PW is responsible for regional flood control protection within the County. PW owns and maintains three regional flood control facilities in and around the City: Dominquez Channel, Compton Creek, and Wilmington Creek. Two drainage reaches are classified as unimproved watercourses within the City. The first reach is aligned through the Victoria Golf Course, extending from Dominguez Channel to Martin Luther King Jr. Street. This drainage is called the "Dominguez Branch Channel." A portion of this unimproved watercourse extends through the project site. The second reach of unimproved watercourse is aligned through Carson Harbor Village Mobile Home Park, from Victoria Street to Albertoni Street.

Caltrans operates and maintains several drainage facilities within state operating rights-of-way associated with Interstate (I-) 110, State Route 91, I-405 Freeways. I-405 and I-110 are within the vicinity of the project site. Near the project site, I-405 extends northwest–southeast approximately 0.1 miles southwest of the project site. I-110 extends north–south approximately 0.6 miles west of the project site. Both freeways are separated from the project site by the Dominguez Channel.

In addition to the PW and Caltrans drainage facilities, approximately 130 storm drains exist within the City, which are owned and maintained by the City. At the time of General Plan adoption in 2002, the City determined that the existing drainage facilities were sufficient to handle current and projected future use. Additionally, the City monitors the storm drain system and improves it as necessary, to ensure its adequacy in accommodating future development (City of Carson 2002).

The existing site has three outfall locations for stormwater. One outfall is the County-maintained Dominguez Channel, which is to the west of the project site and consists of a soft-bottom channel with concrete sides. There are two existing storm drain headwalls that discharge into the Dominguez Channel. The second outfall consists of various discharge locations flowing into the Dominguez Branch Channel. The Dominguez Branch Channel is an earthen channel that extends through the project site from the northern site border to the southeastern site border. The Dominguez Branch Channel confluences with the Dominguez Channel near the southwestern corner of the project site. The third outfall is a drain line within Avalon Boulevard, consisting of a reinforced concrete pipe within the roadway, just to the east of the project site. This drain line is owned and maintained by the Los Angeles County Flood Control District. An existing storm drain lateral serves the project site and connects to the storm drain that extends in a southerly direction within Avalon Boulevard (PW 2018a; Appendix H-1–2).

Existing Stormwater Runoff

The existing site consists of a golf course with approximately 5% impervious cover. However, due to the high clay content of the soil and the capped waste landfill below the surface, most of the storm water develops into runoff and does not infiltrate on site. The topography of the site is relatively flat with slopes varying from 0% to 10%. The existing drainage pattern consists of overland flow across the golf course terrain. Small storm drain inlets are scattered across the golf course. Runoff travels via storm drain and direct overland sheet flow to the Dominguez Channel, the Dominguez Branch Channel, and the Avalon Boulevard storm drain (see Drainage Facilities) (Appendix H-1–2).

Solid Waste

Solid Waste Collection and Disposal Systems

The collection, transport, and disposal of solid waste and recyclables from business uses in the City are provided by Waste Management Incorporated. Solid waste collected by Waste Management is taken to the company's transfer station at 321 West Francisco Street in Carson, where it is sorted. The 10-acre facility has a permitted capacity of 5,300 tons per day. Once the materials are sorted, wastes such as tires, green waste, steel, and wood are sent to special facilities for disposal and recycling (City of Carson 2002). Commingled commercial recycling is separated and sold to different markets according to value. Green waste is trucked to landfills for use as daily cover. Any remaining waste is primarily hauled to El Sobrante Landfill or to H.M Holloway Landfill (County of Los Angeles 2017). Details on these two landfills are provided below.

- El Sobrante Landfill is located approximately 45 miles east of the City in Riverside County. It is owned and operated by Waste Management. El Sobrante Landfill has a maximum permitted daily throughput of 16,054 tons of solid waste per day and receives an average of 8,503 tons per day. The landfill has a remaining capacity of 141,000,000

tons, a maximum permitted capacity of 184,930,000 tons, and receives 2,653,000 tons of solid waste per year. As of 2017, the landfill was expected to remain open for another 54 years (CalRecycle 2018; County of Los Angeles 2017).

- H.M. Holloway Landfill is located approximately 150 miles northwest of the City in Kern County. H.M. Holloway Landfill has a maximum permitted daily throughput of 2,000 tons of solid waste per day and receives an average of 357 tons per day. The landfill has a remaining capacity of 4,100,000 tons, a maximum permitted capacity of 12,600,000 cubic yards, and receives 111,372 tons of solid waste per year. As of 2017, the landfill was expected to remain open for another 10 years (CalRecycle 2018; County of Los Angeles 2017).

The City currently operates several solid waste diversion programs, such as composting, source reduction, recycling, waste to energy, and material recovery. On an annual basis, the City has met or exceeded the waste diversion goals set forth by the state, meaning that the City diverts at least 50% of its solid waste from landfills (City of Carson 2005).

Construction waste is typically disposed at inert landfills, which are facilities that accept materials such as soil, concrete, asphalt, and other construction and demolition debris. The Azusa Land Reclamation landfill is the only permitted Inert Waste Landfill in the County that has a full solid waste facility permit. The Azusa Land Reclamation landfill is located 27 miles northeast of the project site. The landfill has a maximum permitted daily capacity of 6,500 tons of waste and receives an average of 1,183 tons of inert waste per day. The landfill has a remaining capacity of 56,335,860 tons and is expected to remain open for approximately 30 years, as of 2017. There are other facilities that process inert waste and other construction and demolition waste in the County. Collectively, these facilities have a maximum daily capacity of 32,496 tons per day and process an average of 6,813 tons per day. There are numerous processing facilities for construction and demolition wastes throughout the County, the nearest of which is Construction and Demolition Recycling, located at 9309 Rayo Avenue, South Gate. This facility is 8 miles northeast of the project site, has a permitted capacity of 3,000 tons of waste per day, and has a recycling rate of 80% (County of Los Angeles 2017).

Existing Solid Waste Generation

The solid waste currently generated at the project site is estimated to be approximately 72 tons per year (Appendix C, Air Quality Analysis).

Electric Power

Electric power is currently provided to the site by Southern California Edison (SCE). Based on the SCE Atlas Maps of the project area, a Bureau of Power and Light transmission line is located within the center median of South Avalon Boulevard, along the eastern property line. In addition, electrical light poles are present along the southeastern property boundary (SCE 2019).

Natural Gas

Natural gas is currently provided to the site vicinity by Southern California Gas Company (SoCalGas). Based on SoCalGas Atlas Maps of the project area, a gas line extends within Avalon Boulevard, adjacent to the southeast portion of the site. However, based on these maps, a gas lateral connection line does not extend onto the subject property (SoCalGas 2018).

Telecommunication

Telecommunication facilities are installed in the City by a variety of private utility companies, including AT&T U-verse, Frontier Communications, and Spectrum Communication. The Technology & Innovation Department of the City of Long Beach is responsible for monitoring these cable franchises (Long Beach Technology & Innovation 2019).

4.16.2 Relevant Plans, Policies, and Ordinances

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 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.

National Pollutant Discharge Elimination System

Carson is under the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB) Region 4, which implements the NPDES permit for the County of Los Angeles. The Municipal NPDES permit, a requirement under the CWA, addresses pollution from urban runoff that impacts water quality of receiving waters (such as streams and lakes). Under the NPDES permit, developers must implement measures to reduce urban runoff during all phases of development: planning, construction, and existing uses. Requirements include incorporating best management practices (BMPs) to reduce runoff from construction and current uses, reporting any violations to the Los Angeles RWQCB, and education regarding the negative water quality impacts of urban runoff.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (Code Fed. Regs., Title 40, Section 268, Subpart D), contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs that include federal landfill criteria. The federal regulations address the location, operation, design, and closure of landfills, as well as groundwater monitoring requirements.

State

Porter-Cologne Water Quality Control Act

In the State of California, the State Water Resources Control Board (SWRCB) and nine RWQCBs are responsible for implementing the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The Porter-Cologne Act authorizes the SWRCB to implement programs to control polluted discharges into state waters. In compliance with the Porter-Cologne Act, the nine RWQCBs establish the wastewater concentrations of a number of specific hazardous substances in treated wastewater discharge.

Sanitary Sewer General Waste Discharge Requirements

On May 2, 2006, the SWRCB adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than 1 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system in order to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

Senate Bill 610 and Senate Bill 221: Water Supply Assessments

Senate Bill (SB) 610 and SB 221, amended into state law effective January 1, 2002, improve the linkage between certain land use decisions made by cities and counties and water supply availability. The statutes require detailed information regarding water availability and reliability with respect to certain developments to be included in the administrative record to serve as evidentiary basis for an approval action by the City or County on such projects. Under SB 610, a water supply assessment must be furnished to local government for inclusion in any environmental documentation for certain types of projects, as defined in Water Code Section 10912 [a] and subject to CEQA. A fundamental source document for compliance with SB 610 is the Urban Water Management Plan (UWMP). The UWMP can be used by the water supplier to meet the standard for SB 610. SB 221 applies to the Subdivision Map Act, conditioning a tentative map on the applicant to verify that the public water supplier has sufficient water available to serve the proposed development.

California Code of Regulations Title 24, Part 11

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code, Part 11 of Title 24, is commonly referred to as CALGreen, and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all new construction of residential and non-residential buildings. CALGreen standards are updated periodically. The latest version (CALGreen 2016) became effective on January 1, 2017.

Mandatory CALGreen standards pertaining to water, wastewater, and solid waste include the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings.
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance.
- Diversion of 65% of construction and demolition waste from landfills.

California Code of Regulations Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified

through the California Energy Commission (CEC) to demonstrate compliance with standards. New appliances regulated under Title 20 include, but are not limited to, refrigerators, freezers, air conditioners, dishwashers, clothes washers and dryers, cooking products, televisions, and consumer audio and video equipment. Title 20 presents protocols for testing for each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

Executive Order B-29-15

In response to the ongoing drought in California, Executive Order (EO) B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives became permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Assembly Bills 939 and 341: Solid Waste Reduction

The California Integrated Waste Management (CIWM) Act of 1989 (Assembly Bill [AB] 939) was enacted as a result of a national crisis in landfill capacity, as well as a broad acceptance of a desired approach to solid waste management of reducing, reusing, and recycling. 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 the California Department of Resources Recycling and Recovery (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 are implemented through a disposal-based reporting system by local jurisdictions under California Integrated Waste Management Board (CIWMB) regulatory oversight. Since the adoption of AB 939, landfill capacity is no longer considered the statewide crisis it once was. 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.

Assembly Bill 1327: California Solid Waste Reuse and Recycling Access Act of 1991

AB 1327, which was established in 1991, required CalRecycle to develop a model ordinance for the use of recyclable materials in development projects. Local agencies were then required to adopt the model ordinance, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects.

Senate Bill 1374: Construction and Demolition Waste Reduction

SB 1374 requires that annual reports submitted by local jurisdictions to CIWMB include a summary of the progress made in diversion of construction and demolition waste materials. In addition, SB 1374 requires the CIWMB to adopt a model ordinance suitable for adoption by any local agency that required 50–75% diversion of construction and demolition waste materials from landfills by March 1, 2004. Local jurisdictions are not required to adopt their own construction and demolition ordinances, nor are they required to adopt CIWMB's model by default. However, adoption of such an ordinance may be considered by CIWMB when determining whether to impose a fine on a jurisdiction that has failed to implement its Source Reduction and Recycling Element.

Assembly Bill 1826: Mandatory Commercial Organics Recycling

In October 2014, Governor Brown signed AB 1826 Chesbro (Chapter 727, Statutes of 2014), requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste generated per week. (Organic waste is defined as food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.) This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consists of five or more units. This law phases in the mandatory recycling of commercial organics over time. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to recycle organic waste.

California Code of Regulations, Titles 14 and 27

Title 14 (Natural Resources, Division 7) and Title 27 (Environmental Protection, Division 2 (Solid Waste)) of the California Code of Regulations govern the handling and disposal of solid waste and operation of landfills, transfer stations, and recycling facilities.

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley)—collectively known as the Sustainable

Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, sustainability should be achieved by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through SGMA, the California Department of Water Resources provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably, and requires those GSAs to adopt Groundwater Sustainability Plans for crucial groundwater basins in California. A GSA has not been established for the West Coast Basin, as it is not considered a high priority basin (California DWR 2018).

Local

County Sanitation Districts of Los Angeles County – Sewer Connection Fees

The LACSD is empowered by the California Health and Safety Code to charge a fee for connection (directly or indirectly) to the LACSD sewer system, for the purpose of increasing the strength or quantity of wastewater discharged from connected facilities. The connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the sewer system to accommodate a development project. Payment of connection fees is required before sewer connection permits are issued.

Water Quality Control Plans (Basin Plans)

The Porter-Cologne Act, Section 13000, directs each RWQCB to develop a water quality control plan (Basin Plan) for all areas within its region. The Basin Plan is the basis for each RWQCB's regulatory program. The project site is located within the purview of the Los Angeles RWQCB (Region 4), and the proposed project must comply with applicable elements of the Basin Plan for Region 4. The Basin Plan gives direction on the beneficial uses of state waters, describes the water quality that must be maintained, and provides programs necessary to achieve the standards established in the Basin Plans.

Stormwater Pollution Prevention Plans

The SWRCB administers the NPDES permit program regulating stormwater from construction activities for projects with a disturbed area of 1 acre or more. The SWRCB has issued a statewide general NPDES permit for stormwater discharges from construction sites (Order No. 2009-0009-DWQ, as amended; NPDES No. CAS000002). Under this Statewide General Construction Activity permit (Construction General Permit), discharges of stormwater from construction sites with a disturbed area of 1 acre or more are required to either obtain individual NPDES permits for stormwater discharges or be covered by the Construction General Permit. In order to obtain coverage under the

Construction General Permit, a Notice of Intent must be filed with the SWRCB, and a stormwater pollution prevention plan (SWPPP) must be developed and implemented. The SWPPP must be prepared prior to ground disturbance and must be implemented during construction. The SWPPP must also list BMPs to be implemented on the construction site to protect stormwater runoff and must contain a visual monitoring program, a chemical monitoring program, and a monitoring plan if the site discharges directly to a water body listed on the state's list of impaired waters.

Urban Water Management Plans

Urban water purveyors are required to prepare and update an Urban Water Management Plan (UWMP) every 5 years. UWMPs are prepared by California's urban water suppliers to support long-term resource planning and ensure adequate water supplies. Every urban water supplier that either delivers more than 3,000 acre-feet per year (AFY) of water annually or serves more than 3,000 connections is required to assess the reliability of its water sources over a 20-year period under normal-year, dry-year, and multiple-dry-year scenarios in an UWMP. UWMPs must be updated and submitted to the California Department of Water Resources every 5 years for review and approval. The proposed project site is within the area addressed by Cal Water's Dominguez District UWMP. The site is also located within the areas covered by other relevant water planning documents including the West Basin Municipal Water District (WBMWD) UWMP, and the Metropolitan Water District of Southern California (MWD) UWMP. The Cal Water Dominguez District UWMP takes into account the projections and findings of the WBMWD UWMP and the MWD UWMP. The UWMP Act (CWC Section 10631) specifies the data necessary to document the existing and projected future water demand over a 20-year planning horizon and requires that the projected demands be presented in 5-year increments.

Integrated Regional Water Management Plans

UWMPs serve as building blocks for integrated regional water management plans (IRWMPs). IRWMPs define a clear vision and strategy 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.

During the planning process, all stakeholders, including water distributors and purveyors, regional waterworks and sanitation districts, local public works departments, environmental organizations, nonprofits, and other vested interests work together to develop common goals, objectives, and strategies. Since water-related issues are addressed on a regional, watershed

basis, these plans are instrumental in building consensus among the various stakeholders in the development and prioritization of an action plan that is complementary and leverages inter-jurisdictional cooperation, resources, and available funding. The project site is within the Greater Los Angeles County IRWMP area. The IRWMP for this area was last updated in 2014.

County Integrated Waste Management Plan

In compliance with AB 939, the County has implemented an Integrated Waste Management Plan that contains the County's and the Cities' solid waste reduction planning documents plus the Integrated Waste Management Summary Plan (Summary Plan) and County-Wide Siting Element (CSE). PW is responsible for preparing and administering the Summary Plan and the CSE. The existing CSE, approved by CalRecycle on June 24, 1998, identifies how the County and cities would meet their long-term disposal capacity needs to safely handle solid waste that cannot be reduced, recycled, or composted.

PW also prepares an annual report to summarize the changes that have taken place since the approval of the existing Summary Plan and the existing CSE. The annual reports include assessments of the County's disposal capacity needs, provide detailed updates on the remaining permitted in-County disposal capacity, and include the County's strategy for maintaining adequate disposal capacity through 2027.

Los Angeles County General Plan

The Los Angeles County General Plan was adopted by the Board of Supervisors on October 6, 2015. The Public Services and Facilities Element establishes goals and policies for effective service and facilities planning and maintenance. The following goals and policies pertaining to wastewater, water, and solid waste may be applicable to the project (County of Los Angeles 2015):

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 1.1: Discourage development in areas without adequate public services and facilities.

Policy PS/F 1.2: Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.

Policy PS/F 1.3: Ensure coordinated service provision through collaboration between County departments and service providers.

Policy PS/F 1.4: Ensure the adequate maintenance of infrastructure.

Policy PS/F 1.5: Focus infrastructure investment, maintenance and expansion efforts where the General Plan encourages development.

Policy PS/F 1.7: Consider resource preservation in the planning of public facilities.

Goal PS/F 2: Increased water conservation efforts.

Policy PS/F 2.1: Support water conservation measures.

Policy PS/F 2.2: Support educational outreach efforts that discourage wasteful water consumption.

Goal PS/F 3: Increased local water supplies through the use of new technologies.

Policy PS/F 3.1: Increase the supply of water though the development of new sources, such as recycled water, gray water, and rainwater harvesting.

Policy PS/F 3.2: Support the increased production, distribution and use of recycled water, gray water, and rainwater harvesting to provide for groundwater recharge, seawater intrusion barrier injection, irrigation, industrial processes and other beneficial uses.

Goal PS/F 4: Reliable sewer and urban runoff conveyance treatment systems.

Policy PS/F 4.1: Encourage the planning and continued development of efficient countywide sewer conveyance treatment systems.

Goal PS/F 5: Adequate disposal capacity and minimal waste and pollution.

Policy PS/F 5.1: Maintain an efficient, safe and responsive waste management system that reduces waste while protecting the health and safety of the public.

Policy PS/F 5.2: Ensure adequate disposal capacity by providing for environmentally sound and technically feasible development of solid waste management facilities, such as landfills and transfer/processing facilities.

Policy PS/F 5.5: Reduce the County's waste stream by minimizing waste generation and enhancing diversion.

Policy PS/F 5.7: Encourage the recycling of construction and demolition debris generated by public and private projects.

Policy PS/F 5.8: Ensure adequate and regular waste and recycling collection services.

Policy PS/F 5.9: Encourage the availability of trash and recyclables containers in new developments, public streets, and large venues.

Goal PS/F 6: A County with adequate public utilities.

Policy PS/F 6.1: Ensure efficient and cost-effective utilities that serve existing and future needs.

Policy PS/F 6.4: Protect and enhance utility facilities to maintain the safety, reliability, integrity and security of utility services.

County of Los Angeles Code of Ordinances

Title 12, Chapter 12.84: Low Impact Development Ordinance

This ordinance is designed to promote sustainability and improve the County's watersheds by preserving drainage paths and natural water supplies in order to lessen the adverse impacts of stormwater runoff from development and urban runoff on natural drainage systems, receiving waters, and other water bodies. The ordinance requires development projects of certain sizes and types to develop and implement a low impact development (LID) plan that demonstrates compliance with the standards of Chapter 12.84.

Title 20, Chapter 20.87: Construction and Demolition Debris Recycling and Reuse Ordinance

The County Board of Supervisors adopted the Construction and Demolition Debris Recycling and Reuse Ordinance on January 4, 2005. The ordinance added Chapter 20.87 to the Los Angeles County Code, which requires projects in the unincorporated areas to recycle or reuse 50% by weight of all construction and demolition debris removed from a site. Its purpose is to increase the diversion of construction and demolition debris from disposal facilities and will assist the County in meeting the state's waste reduction mandates. The code also requires submission of a recycling and reuse plan and associated annual reporting to demonstrate compliance with the plan.

In January 2011, the County adopted the Green Building Standards Code, which also sets forth recycling requirements for construction and demolition projects in the unincorporated areas of Los Angeles County. The provisions of the Green Building Standards Code are more stringent than those of the Construction and Demolition Debris Recycling and Reuse Ordinance that was adopted in 2005. For non-residential construction projects, 65% of the debris generated (by weight) must be recycled (PW 2018b).

4.16.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to utilities and service systems are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to utilities and service systems would occur if the project would:

1. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
2. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
3. 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 projects demand in addition to the provider's existing commitments.
4. 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.
5. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.16.4 Impacts Analysis

UTL-1 Would the project result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water Facilities

The proposed project would involve construction of water distribution infrastructure (i.e., pipes, valves, meters, etc.) on the project site. The on-site facilities would be connected to off-site water lines in the adjacent rights-of-way. For water service, the proposed project would connect to existing lines within Martin Luther King Jr. Street and Avalon Boulevard, as described in Section 4.16.1, Existing Conditions. The on-site facilities and installation/construction of tie-ins are considered part of the proposed project. All construction work within the City public right-of-way would be subject to City municipal code requirements. Other than the lateral connections from the project site to existing water mains, the proposed project is not expected to require or result in construction or expansion of off-site infrastructure.

Upgrades would likely be completed by either trenchless technology or completion of open trenching, to the depth of the underground water lines. Trenching would result in temporary stockpiling of soil, which in turn could result in temporary soil erosion. However, project construction would occur in accordance with the requirements of the City of Carson Municipal NPDES Permit. In accordance with this permit, BMPs and pollutant control measures would be employed during project construction to minimize pollutants and reduce runoff to levels that comply with applicable water quality standards. As a result, impacts associated with upgrades of water lateral connections to the project site would be **less than significant,** and no mitigation is required.

Wastewater Treatment Facilities

The proposed project would include construction of private wastewater collection facilities necessary to serve the development (i.e., pipes, valves, meters, etc.). These facilities are considered part of the proposed project. A sewer main (8 inches in diameter) would be installed on the project site, along the east–west roadways that would extend westerly from Avalon Boulevard into the project site. A proposed on-site sewer pump station would pump the sewage from the area near the proposed southerly bridge to the existing 8-inch-diameter local sewer line within Avalon Boulevard. As described in Section 4.16.1, Existing Conditions, this line connects to a 15-inch-diameter main line, which then connects to the LACSD Del Amo Trunk Sewer, located in Avalon Boulevard at Del Amo Boulevard, approximately 0.4 mile southeast of the project site. Sewage from this trunk line is treated at LACSD's JWPCP.

The proposed project would increase the amount of wastewater that is generated on the project site. The proposed project is expected to generate an average flow of approximately 197,971 gallons of wastewater per day, as calculated by the LACSD.[1,2] LACSD's Del Amo Trunk Sewer has a capacity of 3.7 mgd, and was conveying a peak flow of 2.4 mgd when last measured in 2015. Assuming the potential wastewater generation of approximately 197,971 gallons of wastewater per day, the wastewater from the proposed project equate to approximately 5% of the trunk line's capacity. Even with the proposed sewage generation, the line's capacity would not be exceeded.[3] Furthermore, the LACSD has confirmed that they have capacity to accommodate the proposed project.

[1] The LACSD reported that the proposed project would have the potential to generate 197,971 gallons of wastewater per day. This number is based on a project square footage of 617,673 square feet, which is slightly larger than the square footage that is being proposed (Appendix K). As such, the project's wastewater generation, as reported by LACSD, is conservative.

[2] As explained in Chapter 3 of this EIR, a 30,000-square-foot specialty grocery store may be developed in place of 28,600 square feet of restaurant uses. For wastewater generation, 28,600 square feet of restaurant use would generate more wastewater than 30,000 square feet of grocery use. As such, for the purposes of ensuring a conservative analysis, the more intensive use (restaurant) is analyzed by Tait in Appendix K, as well as in this section.

[3] 197,971 gallons of wastewater per day (proposed) + 2,400,000 gallons of wastewater per day (existing) = 2,597,971 gallons = 2.6 million gallons

The Del Amo Trunk Sewer ultimately conveys wastewater to LACSD's JWPCP in Carson, which is located approximately 3.5 miles south of the project site. As stated in Section 4.16.1, Existing Conditions, the JWPCP has a total permitted capacity of 400 mgd and currently processes approximately 260 mgd of wastewater. Assuming the potential wastewater generation of approximately 197,971 gallons of wastewater per day, the increase in wastewater generation attributable to the proposed project would be 0.05% of the JWPCP's permitted capacity, and 0.08% of the JWPCP's remaining permitted capacity. This increase in wastewater generation would, therefore, be minor and would not require or result in the construction, relocation, or expansion of wastewater treatment facilities. Furthermore, as stated above, the LACSD confirmed that they have capacity to accommodate the proposed project.

Additionally, the proposed project would incorporate water efficiency measures to ensure that water is conserved to the extent feasible, which would include use of low-flow plumbing fixtures. In addition to reducing water use, low-flow fixtures also reduce wastewater generation. As such, the proposed project would be designed to minimize wastewater generation to the maximum extent practicable.

For the reasons described above, with the exception of project related sewer tie-ins/lateral connections, the proposed project is not expected to require or result in the construction, relocation, or expansion of off-site water/wastewater treatment facilities. All construction work of sewer tie-ins/lateral connections within the City public right-of-way would be subject to City municipal code requirements. On-site sewer upgrades and off-site lateral connection upgrades would likely be completed by either trenchless technology or completion of open trenching, to the depth of the underground sewer lines. Trenching would result in temporary stockpiling of soil, which in turn could result in temporary soil erosion. However, project construction would occur in accordance with the requirements of the City of Carson Municipal NPDES Permit. In accordance with this permit, BMPs and pollutant control measures would be employed during project construction to minimize pollutants and reduce runoff to levels that comply with applicable water quality standards. As a result, impacts associated with new wastewater treatment facilities would be **less than significant,** and no mitigation is required.

Stormwater Drainage

Upon project implementation, the impervious areas of the site would increase. Due to the proposed increase of impervious materials on the project site, there is potential for stormwater runoff volumes and/or stormwater runoff rates to increase upon project implementation. However, under existing conditions, most stormwater exits the project site as runoff, due to the high clay content of the underlying soils and the capped waste landfill that underlies the site. Upon project implementation, the same site conditions would continue to preclude on-site infiltration of stormwater.

The proposed project is required to be designed so that post-development stormwater runoff would be less than or equal to existing conditions. Stormwater detention would be accomplished in part by increased stormwater travel time on site, due to the circuitous route of the proposed shallow-sloped storm drain system, in combination with a proposed biofiltration system. The proposed drainage system has been designed so that it would biofilter 1.5 times the volume of the Stormwater Quality Design Volume (SWQDv) (Appendix H-2). As such, drainage basins would capture all runoff from the site. Details of the proposed biofiltration basins are enumerated in a LID Plan, which is required to be prepared and implemented per local and state law. The LID Plan for the proposed project is included in this EIR as Appendix H-2. Once stormwater exits the biofiltration basins, it would pipe-flow to the public storm drain or street.

The proposed project would also be designed to minimize impervious areas, thereby minimizing the quantity and rate of stormwater runoff to the extent practicable. Measures that would be put in place to minimize stormwater runoff are listed in Section 4.8, Hydrology and Water Quality, of this EIR.

For these reasons, upon implementation and compliance with the required LID Plan for the project, stormwater volumes from the site would be equivalent to existing conditions or would be reduced upon project implementation relative to existing conditions. While stormwater drainage improvements would occur as previously described, these improvements are considered part of the proposed project and are analyzed in this EIR for potential environmental effects. As such, implementation of the proposed project would not increase the volume and/or rate of stormwater flows that enter the existing storm drain system and may even decrease the volume and/or rate of stormwater flows relative to existing conditions. The project would not result in expansion of any existing off-site facilities or in the construction or relocation of new off-site facilities. Upon compliance with the proposed LID Plan, impacts associated with new stormwater drainage facilities would be **less than significant,** and no mitigation is required.

Electric Power, Natural Gas, and Telecommunication

Upgrades would be required with respect to electric power, natural gas, and telecommunication facilities (i.e., cable television services), based on the change in land use (i.e., greater intensification). These utilities would be part of a dry utility package that would be installed in the on-site public roadways to provide service to the project. Upgrades would be confined to the connections to the project site and not any off-site centralized facilities. The existing infrastructure is directly adjacent to the project site within the public streets. Connection to these existing utilities would require limited construction, which would be temporary and limited to trenching, to the depth of the underground lines. Project construction would occur in accordance with all applicable regulatory requirements. As a result, impacts associated with upgrades of electric, natural gas, and telecommunication lateral connections to the project site would be **less than significant,** and no mitigation is required.

UTL-2 Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The proposed project would change the amount of water demand on the project site. The proposed project's demand for potable water and reclaimed water is shown below in Table 4.16-1.

Table 4.16-1
Anticipated Water Use

Pad No.	Use	Water Use (in millions of gallons per year)
Pad 1	Multi-use indoor sports complex	14.47
Pad 2	Youth learning experience	1.78
Pad 3	Indoor skydiving building	0.55
Pad 4	Enhanced driving range experience	3.55
Pad 5	Marketplace	9.66
Pad 6	Marketplace	3.04
Pad 7	Clubhouse	9.77
Pad 8	Recreation and dining facility	6.67
Pad 9 and 11	Restaurants[1]	6.41
Pad 10	Sports wellness building	4.22
Pad 12	Zipline and adventure course	2.67
Pad 13	Community park	5.50
Pad 14	Putting green	0.11
Pad 15	Jogging/walking path[2]	—
	Total	**68.40**

Sources: Appendix C; CAPCOA 2016.
Notes:
1 As explained in Chapter 3, Project Description, of this EIR, a 30,000-square-foot specialty grocery store may be developed in place of 28,600 square feet of restaurant uses. For water demand, 28,600 square feet of restaurant use would have a greater water demand than 30,000 square feet of grocery use. As such, for the purposes of ensuring a conservative analysis, the more water-intensive use (restaurant) is analyzed.
2 As explained in Chapter 3 of this EIR, the jogging/walking path would wind through landscaped areas within the project site. As such, water use associated with the landscaping alongside the jogging/walking path is represented by the outdoor water use for all of the other proposed project uses shown in Table 4.16-1. The jogging/walking path itself would not be watered.

According to the UWMP for Cal Water's Dominguez District, water demand in Cal Water's Dominguez District totaled 37,372 acre feet (AF) in 2015. Of this amount, 6,081 AF was recycled water, used for industrial and irrigation purposes (this does not include recycled water used for groundwater recharge, which is treated to different standards than water used for industrial or irrigation purposes and, therefore, is not available for industrial or irrigation uses). In 2020 (around the time that the project would become operational), the water supply in Cal Water's Dominguez District is projected to be 42,746 AF. Of this amount, 7,950 AF is expected to be recycled water for industrial and irrigation purposes (again, this excludes recycled water use for groundwater recharge). In 2040 (approximately 20 years after the project would become

operational), water supply in Cal Water's Dominguez District is projected to be 46,971 AF. Of this amount, 11,800 AF is expected to be recycled water that is produced for industrial or irrigation purposes. As noted in the UWMP, it is expected that purchased water will be sufficient to serve all demands that are not served by groundwater or recycled water supplies through 2040, during normal, dry, and multiple dry years. As such, the supply projections in the UWMP are equal to the anticipated future demand projections.

As shown in Table 4.16-1, the proposed project is expected to use 68.40 million gallons of potable water per year, which equates to 210 AFY of potable water. While the proposed project would involve an intensification of uses on the site, the site is already developed with recreational uses under existing conditions, and the increased water use would be minor and incremental in the context of the total water portfolio managed by Cal Water Dominguez District. By way of comparison, gross water demand from the proposed project would equate to approximately 0.60% of the service provider's projected potable water supplies and 0.50% of the service provider's total projected water supplies (including recycled water) in 2020, which is around the time of project buildout. In 2040, gross water demand from the proposed project would equate to 0.60% of projected potable water supplies and 0.45% of the service provider's total projected water supplies (including recycled water) in 2040, which is approximately 20 years into project operation. These calculations are conservative, because they represent gross water use at the project site.4 Furthermore, some of the project's water demand would be fulfilled through recycled water, which would decrease reliance on potable water supplies.

Cal Water has provided a "will serve" letter for the proposed project, indicating that it would provide water service to the proposed project if it is approved and barring any unforeseen changes in legislative, regulatory, or environmental factors (Cal Water 2018). For these reasons, Cal Water and WBMWD have planned for sufficient supplies of potable and recycled water to serve the project, and no new water facilities or infrastructure would be required for the project, aside from the on-site infrastructure improvements and necessary utility connections and any associated improvements.

The UWMP includes plans for provision of water (including drought scenarios) for the Cal Water Dominguez District service area. The plan uses regional population, land use plans, and projections of future growth as the basis of planning for future water supply and demonstrating compliance with state water conservation goals and policies. As demonstrated in Section 4.9, Land Use, the proposed project is consistent with the underlying County land use designations

[4] The gross increase in water demand (rather than the net change) for the project site is used in this analysis, because a majority of the existing water demand is met by recycled water. While the proposed project would use recycled water, the percentage of the proposed demand that would be met by recycled water is currently unknown. As such, to ensure a conservative analysis, no credits are taken for the existing water demand in this analysis.

for the project site.[5] As such, the UWMP projections include recreational use at the project site. Furthermore, the proposed project would incorporate site-specific water efficiency measures to ensure that water is conserved to the extent feasible. Water use reduction and recycled water use would be a central focus of project design. The project applicant would pursue LEED certification, which would involve implementation of water efficiency practices, including outdoor water use reduction, indoor water use reduction, building-level water metering, etc. Landscaping would include low-water plants and turf of a low-water-use variety. Plumbing facilities would be designed to reduce water consumption and meet LEED goals. Low-flow fixtures would be installed that would meet or exceed CALGreen requirements, and sub-metering would be used to monitor water demands.

For the reasons described above, the project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts would be **less than significant,** and no mitigation is required.

UTL-3 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?

As previously described for UTL-1, the Del Amo Trunk Sewer ultimately conveys wastewater to LACSD's JWPCP in Carson, which has a total permitted capacity of 400 mgd and currently processes approximately 260 mgd of wastewater. Assuming the potential wastewater generation of approximately 197,971 gallons of wastewater per day, the increase in wastewater generation attributable to the proposed project would be 0.05% of the JWPCP's permitted capacity, and 0.08% of the JWPCP's remaining permitted capacity. This increase in wastewater generation would be minor and, as stated above, the LACSD confirmed that they have capacity to accommodate the proposed project. As a result, the project would result in a determination by LACSD that it has adequate capacity to serve the project's projected demand, in addition to the LACSD's existing commitments. Impacts would be **less than significant,** and no mitigation is required.

[5] As explained in Section 4.9 of this EIR, the proposed project would not be subject to land use-related regulations of the City General Plan. The City designates the land use on the project site as Recreational Open Space. As stated in Section 4.9 of this EIR, although the project would not comply with the existing City land use designation for the site, the project would largely maintain the recreational and open space character of the site.

UTL-4 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?

Construction

Construction of the proposed project would result in the generation of solid waste such as scrap lumber, concrete, residual wastes, packing materials, plastics, and soils. Per CALGreen, 65% of construction and demolition waste must be diverted from landfills. As such, at least 65% of all construction and demolition debris from the site would be diverted. The County also has construction and demolition debris diversion requirements; however, the CALGreen standards require an equivalent level of diversion (65% diversion). Any hazardous wastes that are generated during construction activities would be managed and disposed of in compliance with all applicable federal, state, and local laws. The remaining 35% of construction and demolition material that is not required to be recycled would either be disposed of or voluntarily recycled at a solid waste facility with available capacity. As described in Section 4.16.1, Existing Conditions, the inert landfill in the County (Azusa Land Reclamation landfill) has a remaining capacity of 56,335,860 tons and is expected to remain open for approximately 30 years, as of 2017 (County of Los Angeles 2017).

There are other facilities that process inert waste and other construction and demolition waste in the County, which collectively have a maximum daily capacity of 32,496 tons per day and process an average of 6,813 tons per day. There are also numerous processing facilities for construction and demolition wastes throughout the County, the nearest of which is Construction and Demolition Recycling, located at 9309 Rayo Avenue, in South Gate. This facility is 8.5 miles northeast of the project site and has a permitted capacity of 3,000 tons of waste per day. This facility has a recycling rate of 80% (County of Los Angeles 2017). Construction of the proposed project is expected to conclude in 2020. As such, any construction and demolition debris requiring disposal at an inert waste landfill would be sufficiently accommodated by existing landfills.

For the reasons stated above, project construction would not 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.g., CALGreen standards). Impacts would be **less than significant,** and no mitigation is required.

Operations

Once operational, the proposed project would produce solid waste on a regular basis, in association with operation and maintenance activities. Anticipated solid waste generation attributable to the proposed project is shown in Table 4.16-2. The solid waste generation rates assume compliance with AB 341.

Table 4.16-2
Anticipated Solid Waste Generation

Pad No.	Use	Solid Waste Generation (tons per year)
Pad 1	Multi-use indoor sports complex	283.58
Pad 2	Youth learning experience	6.91
Pad 3	Indoor skydiving building	10.69
Pad 4	Enhanced driving range experience	106.88
Pad 5	Marketplace	118.40
Pad 6	Marketplace	37.27
Pad 7	Clubhouse	57.00
Pad 8	Recreation and dining facility	77.35
Pad 9 and 11	Restaurants[1]	74.38
Pad 10	Sports wellness building	97.20
Pad 12	Zipline and adventure course	0.72
Pad 13	Community park	0.14
Pad 14	Putting green	0.03
Pad 15	Jogging and walking path[2]	—
Total		**870.55**
Net increase (from existing solid waste generation)		**798.55**

Sources: Appendix C; CAPCOA 2016.
Notes:
1 As explained in Chapter 3 of this EIR, a 30,000-square-foot specialty grocery store may be developed in place of 28,600 square feet of restaurant uses. For solid waste generation, 28,600 square feet of restaurant use would generate more solid waste than 30,000 square feet of grocery use. As such, for the purposes of ensuring a conservative analysis, the more intensive use (restaurant) is analyzed.
2 As explained in Chapter 3 of this EIR, the jogging/walking path would wind through the project site. Solid waste generated by the jogging/walking path would be negligible and would be captured by the surrounding land uses and associated calculations in Table 4.16-2.

As described in Section 4.16.1, Existing Conditions, the City's commercial uses are currently served by Waste Management for solid waste collection and disposal. Waste Management owns and operates a landfill in Riverside County (El Sobrante Landfill). This landfill has a remaining capacity of 141,000,000 tons, a maximum permitted capacity of 184,930,000 tons, and is expected to remain open for another 54 years (CalRecycle 2018; County of Los Angeles 2017). The net solid waste that is anticipated to be produced by the proposed project would equate to approximately 0.03% of the available capacity of the El Sobrante Landfill through its estimated closure date. Solid waste from the City is also disposed at the H.M. Holloway Landfill, which has a remaining capacity of 4,100,000 tons, a maximum permitted capacity of 12,600,000 cubic yards, and is expected to remain open for another 10 years (CalRecycle 2018; County of Los Angeles 2017). The net solid waste that is anticipated to be produced by the proposed project would equate to approximately 0.2% of the available capacity of the H.M. Holloway Landfill through its estimated closure date. As such, the proposed project's solid waste generation would be minimal to negligible relative to available landfill capacity and relative to existing and future

solid waste generation in the region. As such, the landfills that serve the City are anticipated to have adequate capacity to accommodate the waste disposal needs of the proposed project.

The County Integrated Waste Management Plan includes an assessment of the County's ability to accommodate solid waste disposal demands throughout a 15-year planning horizon. As shown in the County's latest annual report for the Countywide Integrated Waste Management Plan, there are numerous scenarios through which the County could meet the disposal needs of all jurisdictions. Future disposal needs are calculated through 2031 based on employment, population, and taxable sales projections based on long-term forecasts for the County. (All scenarios would meet the County's projected disposal needs except for a scenario in which out-of-county landfills are not used.) The Countywide Integrated Waste Management Plan is updated to include strategies for the County and local jurisdictions to continue meeting long-term needs and to maintain adequate disposal capacities. As such, the County is required to continue identifying ways to meet its disposal needs well into the future.

Once the El Sobrante Landfill and H.M. Holloway Landfill reach capacity, additional landfills and strategies are required to be identified so that disposal needs continue to be met. Further, according to the latest annual report for the Countywide Integrated Waste Management Plan, there are landfills used by the County with up to 100 years of remaining life. For example, the Prima Deshecha Sanitary Landfill in Orange County is expected to remain open for another 85 years, the Mesquite Regional Landfill in Imperial County is expected to remain open for another 100 years, and the Simi Valley Landfill in Ventura County is expected to remain open for another 67 years. As such, in the event of closure of the El Sobrante and H.M. Holloway landfills, other landfills in the region would be able to accommodate solid waste from the proposed project, and regional planning efforts would ensure continued landfill capacity into the foreseeable future.

For the reasons described above, project operations would not 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.g., County Integrated Waste Management Plan). Impacts would be **less than significant,** and no mitigation is required.

UTL-5 Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

As described in Section 4.16.1, Existing Conditions, solid waste from commercial uses in the City is brought to the Waste Management transfer station in Carson. From there, it is taken to the El Sobrante Landfill or the H.M. Holloway Landfill. These facilities are regulated under federal, state, and local laws. Additionally, the County and the City are required to comply with the solid waste reduction and diversion requirements set forth in AB 939, AB 341, AB 1327, and AB 1826 (see Section 4.16.2, Relevant Plans, Policies, and Ordinances). Specifically, AB 1826

requires businesses that generate a specified amount of organic waste per week to arrange for recycling services for that organic waste.[6] Currently, businesses that generate 4 cubic yards or more of organic waste per week are required to arrange for recycling services for the organic waste. After January 2019, businesses that generate 4 cubic yards or more of commercial solid waste per week are required to arrange for organic waste recycling services. The threshold for recycling requirements may be decreased by 2 cubic yards per week as of January 2020.

In addition, as described in Impact UTL-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 proposed project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Impacts are considered **less than significant,** and no mitigation is required.

4.16.5 Mitigation Measures

Impacts to utilities and services would be less than significant. No mitigation measures are required.

4.16.6 Level of Significance After Mitigation

Impacts to utilities and services from the proposed project would be **less than significant**.

4.16.7 Cumulative Impacts

Water Facilities

Completion of related projects in the cities of Carson, Gardena, and Torrance, as listed in Table 3-3, Related Projects, would involve construction of water distribution infrastructure (i.e., pipes, valves, meters, etc.) on the project sites. The related project facilities would be connected to off-site water lines in the adjacent rights-of-way. The construction of the laterals would be temporary and limited to trenching, to the depth of the underground water lines. Project construction would occur in accordance with all applicable regulatory requirements. Other than the lateral connections from the related project sites to existing water mains, these related projects are not expected to require or result in construction or expansion of off-site infrastructure. As a result, indirect cumulative impacts associated with upgrades of water lateral connections to related project sites would not be cumulatively considerable. Impacts would be **less than significant,** and no mitigation is required.

[6] Organic waste is defined as food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

Wastewater Treatment Facilities

Wastewater generated in the City is treated at the Joint Water Pollution Control Plant (JWPCP), which consists of a tertiary treatment system. It is governed under the Los Angeles Regional Water Quality Control Board Order R4-2017-0180, which establishes performance criteria and effluent limitations to ensure that treated effluent discharges do not violate basin plan objectives. As such, the proposed project and any related projects within the JWPCP service area would discharge their wastewater to a treatment plant that is in compliance with a permit issued by the RWQCB. The wastewater that would be generated by the proposed project is anticipated to constitute approximately 0.08% of the remaining capacity of this treatment plant.

The proposed project and related projects are required to pay development fees and connection fees that are used by wastewater treatment providers to update and expand their facilities pursuant to applicable permit requirements. Further, such facilities are planned based on regional growth projections, such as those produced by SCAG. The available capacity of treatment facilities is generally limited to levels associated with growth identified by SCAG. The proposed project is within population and employment growth projections that have been identified by SCAG. So long as projects fall within these projections, existing wastewater treatment facilities have been planned to accommodate commensurate increases in wastewater generation across the region. Because the wastewater treatment plant that would serve the project and many of the related projects is subject to an existing permit, because the project and related projects would be required to pay development fees that fund updates to wastewater facilities, and because the project falls within regional growth projections, impacts would not be cumulatively considerable with respect to potential relocation, construction, or expansion of wastewater treatment facilities.

In addition, as described for water facilities, the related project facilities would be connected to off-site sewer lines in the adjacent rights-of-way. The construction of the laterals would be temporary and limited to trenching, to the depth of the underground sewer lines. Project construction would occur in accordance with all applicable regulatory requirements. Other than the lateral connections from the related project sites to existing sewer mains, these related projects are not expected to require or result in construction or expansion of off-site infrastructure. As a result, indirect cumulative impacts associated with upgrades of sewer lateral connections to related project sites would not be cumulatively considerable. Impacts would be **less than significant,** and no mitigation is required.

Storm Drainage Facilities

The proposed project is located in an urban area where most of the surrounding properties are developed. The existing storm drainage system serving the project area has been designed to accommodate runoff from this built-out environment. Most redevelopment projects, including the

proposed project, would be subject to the most recent Municipal Stormwater Permit for Los Angeles County, which includes a requirement that post-development stormwater runoff be less than or equal to existing conditions. Compliance with this permit generally results in a reduction in stormwater runoff from redevelopment and infill sites, when compared with existing conditions. Upon project implementation, stormwater runoff from the project site would be less than or equal to runoff that occurs under existing conditions. As such, the project would not contribute to a cumulative effect. For most of the related projects that are infill and redevelopment projects, stormwater runoff would be expected to be equal to or less than runoff under existing conditions. Therefore, it is unlikely that downstream flood control improvements would be required as a condition of related project completion. As a result, cumulative impacts associated with upgrades of sewer lateral connections to related project sites would be **less than significant,** and no mitigation is required.

Electric Power, Natural Gas, and Telecommunication

The cities of Carson, Gardena, and Torrance are built out and upgrades in electrical power, natural gas, and telecommunication capabilities are anticipated primarily due to development in the form of revitalization of outdated or underserved areas, and redevelopment of specific properties that will increase density and require more sophisticated technology, such as the proposed project. However, such upgrades would generally be confined to the lateral connections to the individual project sites and not any centralized facilities. Upgrades to centralized power, natural gas, and telecommunication facilities would be determined by the individual city Public Works departments and private utilities, as build-out continues within the region. Individual projects would be required to provide for the needs of their projects. As a result, cumulative impacts associated with upgrades of electric, natural gas, and telecommunication facilities not be cumulatively considerable. Impacts would be **less than significant,** and no mitigation is required.

Water Supply

Development of related projects would increase land use intensities in the area, resulting in increased water usage. The proposed project and some of the related projects are served by Cal Water Dominguez. As such, development of the proposed project and the related projects would increase the amount of water used in Cal Water's service area. Cal Water's Dominguez District UWMP has planned for the provision of regional water, during normal, dry, and multiple dry years. The plan uses regional population, land use plans, and projections of future growth as the basis for planning water system improvements (including but not limited to water treatment plants) and demonstrating compliance with state water conservation goals and policies. As such, to the extent that related projects are generally consistent with regional growth patterns and projections, the projects would not be expected to result in increased water usage causing the need for new entitlements, resources, and/or treatment facilities that are not already being planned to

accommodate regional growth forecasts. Further, compliance with the California Green Building Standards Code would be required for new developments. This would ensure that many of the related projects, as well as the proposed project, do not result in wasteful or inefficient use of limited water resources, and may in fact result in an overall decrease in water use per person. Due to water planning efforts, water conservation standards, and the urban infill/redevelopment nature of the proposed project and many of the related projects, impacts would not be cumulatively considerable. Impacts would be **less than significant,** and no mitigation is required.

Solid Waste

Development of related projects would increase land use intensities in the area, resulting in increased solid waste generation in the service area for Los Angeles County landfills. However, the proposed project and many of the related projects are urban infill and/or redevelopment projects. As such, solid waste will be generated at the proposed project site and many of the related project sites prior to development of the projects. Further, AB 939, or the Integrated Waste Management Act of 1989, mandates that cities divert 50% of the total solid waste generated away from landfills. In order to maintain state requirements of diverting 50% of solid waste and to offset impacts associated with solid waste, the proposed project and all related projects would be required to implement waste reduction, diversion, and recycling during both demolition/construction and operation. (Specifically, during construction, diversion of at least 65% of construction and demolition waste is required.) Additionally, AB 341 will require local agencies to adopt strategies that will enable 75% diversion of all solid waste by 2020. Through compliance with waste diversion requirements, and due to the recycling collection features that would be part of the proposed project design and the design of many typical urban infill projects, impacts would not be cumulatively considerable. Impacts would be **less than significant,** and no mitigation is required.

4.16.8 References

Cal Water (California Water Service). 2016. *2015 Urban Water Management Plan – Dominguez District*. June 2016. Accessed September 6, 2018. https://www.calwater.com/conservation/uwmp/.

Cal Water. 2018. "Will Serve Letter – 20099 block of Avalon Boulevard; North of E. Del Amo Blvd, West of S. Avalon Blvd, South of E. 192nd St, and East of Dominguez Channel; at intersection of E. Turmont St and Avalon Blvd, APN 7339-017-917 Carson, CA." Letter from Cal Water to Tait and Associates Inc. December 13, 2018.

California DWR (Department of Water Resources). 2018. "SGMA Portal." Accessed November 20, 2018. https://sgma.water.ca.gov/portal/.

CalRecycle (California Department of Resources Recycling and Recovery). 2018. Solid Waste Information System Facility Detail for El Sobrante Landfill (33-AA-0217) and H.M. Holloway Landfill (15-AA-0308). Accessed September 5, 2018. https://www2.calrecycle.ca.gov/swfacilities/Directory/33-AA-0217/Index.

CAPCOA (California Air Pollution Control Officers Association). 2016. "Appendix D – Default Data Tables" in California Emissions Estimator Model. Prepared by BREEZE Software in collaboration with the South Coast Air Quality Management District and the California Air Districts. September 2016. Accessed November 20, 2018. http://www.aqmd.gov/caleemod/user's-guide.

City of Carson. 2002. *Carson General Plan Environmental Impact Report*. Public Review Draft. SCH No 2001091120. Prepared by RBF Consulting. October 30, 2002. Accessed August 22, 2018. http://ci.carson.ca.us/communitydevelopment/generalplan.aspx.

City of Carson. 2005. *The Boulevards at South Bay Environmental Impact Report*. Draft. SCH No. 2005051059. Prepared by PCR Services Corporation. November 2005. Accessed September 4, 2018. http://ci.carson.ca.us/communitydevelopment/deir.aspx.

County of Los Angeles. 2015. *Los Angeles County General Plan*. Adopted October 6, 2015. Accessed August 21, 2018. http://planning.lacounty.gov/generalplan/generalplan.

County of Los Angeles. 2017. County of Los Angeles Countywide Integrated Waste Management Plan 2016 Annual Report. September 2017. Accessed September 5, 2018. https://dpw.lacounty.gov/epd/swims/ShowDoc.aspx?id=6530&hp=yes&type=PDF.

Greenway Golf. 2018. "Victoria Links Golf Course 5 Year Water Usage." Data from Greenway Golf. September 26, 2018.

HDR Inc. 2018. "Water Recycling Facility Expansions." Webpage. Accessed September 6, 2018. https://www.hdrinc.com/portfolio/water-recycling-facility-expansions.

Integral Group Inc. 2018. *The Creek at Dominguez Hills 100% Schematic Design Sustainability Narrative*. Prepared by Integral Group, Inc. August 15, 2018.

LACSD (County Sanitation Districts of Los Angeles County). 2018. "Joint Water Pollution Control Plant (JWPCP)." Webpage. Accessed August 31, 2018. https://www.lacsd.org/wastewater/wwfacilities/jwpcp.

Long Beach Technology & Innovation. 2019. "Cable Television and Telephone Service". Accessed February 19, 2019. http://www.longbeach.gov/ti/telecommunications/.

PW (Los Angeles County Public Works). 2018a. Los Angeles County Storm Drain System. Web mapping application. Accessed September 10, 2018. http://dpw.lacounty.gov/fcd/stormdrain/index.cfm.

PW. 2018b. "Construction and Demolition Debris Recycling and Reuse Program." Webpage. Accessed November 26, 2018. http://dpw.lacounty.gov/epd/cd/.

SCE (Southern California Edison). 2019. Atlas Maps.

SoCalGas (Southern California Gas Company). 2018. Atlas Maps.

Tait (Tait and Associates Inc.). 2018a. *Draft Conceptual Water Exhibit – Creek at Dominguez Hills*. Prepared for Plenitude Holdings LLC. September 7, 2018

Tait. 2018b. "Conceptual Sanitary Sewer." Prepared for Plenitude Holdings LLC. September 7, 2018.

WBMWD (West Basin Municipal Water District). 2017. "West Basin Recycled Water System." Webpage. Accessed September 6, 2018. http://www.westbasin.org/water-supplies-recycled-water/facilities.

WBMWD. 2018. "Edward C. Little Water Recycling Facility." Webpage. Accessed September 6, 2018. http://www.westbasin.org/water-supplies-recycled-water/facilities.

4.17 ENERGY

This section describes the existing setting of the project site related to energy, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of The Creek at Dominguez Hills project (project or proposed project). This section also includes a discussion of the potential energy impacts of the project, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (14 CCR 15000 et seq.). The section is also related to the potential impacts to energy consumption, including electricity, natural gas, and gasoline, from implementation of the proposed project.

4.17.1 Existing Conditions

Electricity

According to the California Energy Commission, California used approximately 288,613 gigawatts per hour of electricity in 2017 (CEC 2018a). Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Because of the state's energy efficiency standards and efficiency and conservation programs, California's per-capita energy use has remained stable for more than 30 years, while the national average has steadily increased (CEC 2018).

Electrical service in the County is provided by Southern California Edison (SCE). SCE was established in 1896 and serves the 15 counties and 180 cities within the Southern California region (SCE n.d.). For 2016, the largest proportion (34%) of the local electrical supply was generated from the burning of natural gas. Renewable energy sources, including wind, solar, and biomass/waste, account for 29%. Coal accounts for 4%, hydroelectric 15%, and nuclear 9%. The remaining portion (15%) comes from unspecified sources of power, which are not traceable to specific generation sources (CEC 2018b).

Natural Gas

One third of energy commodities consumed in California is natural gas and mainly falls into four sectors: residential, commercial, industrial, and electric power generation. In addition, natural gas is a viable alternative to petroleum for use in cars, trucks, and buses (CEC 2017). According to the U.S. Energy Information Administration, California used approximately 2.382 quadrillion British thermal units (BTU) of natural gas in 2015 (EIA 2017a). By sector, industrial uses utilized approximately 35.8% of the state's natural gas, followed by approximately 35.0% from electric power, approximately 17.5% from residential uses, approximately 10.3% from commercial uses, and approximately 1.5% from transportation uses (EIA 2017a).

Petroleum

According to the U.S. Energy Information Administration, California used approximately 651.1 million barrels of petroleum in 2015 (EIA 2017b). By sector, transportation uses utilize 85.7% of the state's petroleum, 11.1% from industrial uses, 2.4% from commercial uses, 0.8% from residential uses, and 0.01% for electric power generation (EIA 2017c). In California, petroleum fuels refined from crude oil are the dominant source of energy for transportation sources.

According to the U.S. Energy Information Administration, California used approximately 651.1 million barrels of petroleum in 2015 (EIA 2017d). This equates to a daily use of approximately 1.78 million barrels of petroleum. There are 42 U.S. gallons in a barrel, so California consumes approximately 74.8 million gallons of petroleum per day, adding up to an annual consumption of 27.3 billion gallons of petroleum. California has implemented policies to improve vehicle efficiency and to support use of alternative transportation, which are described in Section 4.17.2, Relevant Plans, Policies, and Ordinances.

4.17.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2010, fuel economy standards were set at 27.5 miles per gallon (mpg) for new passenger cars and 23.5 mpg for new light trucks. Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions:

GHG-1 Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022

GHG-2 Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks

GHG-3 Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

EPA and NHTSA Joint Rule for Vehicle Standards

On April 1, 2010, the EPA and the NHTSA announced a joint final rule to establish a national program consisting of new standards for light-duty vehicles model years 2012 through 2016. The joint rule is intended to reduce GHG emissions and improve fuel economy. The EPA promulgated the first-ever national GHG emissions standards under the Clean Air Act, and NHTSA promulgated Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act (EPA 2010). This final rule follows the EPA and Department of Transportation's joint proposal on September 15, 2009, and is the result of the President Obama's May 2009 announcement of a national program to reduce GHGs and improve fuel economy. The final rule became effective on July 6, 2010 (EPA and NHTSA 2010).

The EPA GHG standards require new passenger cars, light-duty trucks, and medium-duty passenger vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide (CO_2) per mile in model year 2016, equivalent to 35.5 mpg if the automotive industry were to meet this CO_2 level through fuel economy improvements alone. The CAFE standards for passenger cars and light trucks will be phased in between 2012 and 2016, with the final standards equivalent to 37.8 mpg for passenger cars and 28.8 mpg for light trucks, resulting in an estimated combined average of 34.1 mpg. Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program. The rules will simultaneously reduce GHG emissions, improve energy security, increase fuel savings, and provide clarity and predictability for manufacturers (EPA and NHTSA 2010).

In August 2012, the EPA and NHTSA approved a second round of GHG and CAFE standards for model years 2017 and beyond (EPA and NHTSA 2012). These standards will reduce motor vehicle GHG emissions to 163 grams of CO_2 per mile, which is equivalent to 54.5 mpg if this level were achieved solely through improvements in fuel efficiency, for cars and light-duty trucks by model year 2025. A portion of these improvements, however, will likely be made through improvements in air-conditioning leakage and through use of alternative refrigerants, which would not contribute to fuel economy. The first phase of the CAFE standards (for model years 2017 to 2021) are projected to require, on an average industry fleet-wide basis, a range from 40.3 to 41.0 mpg in model year 2021. The second phase of the CAFE program (for model years 2022 to 2025) is projected to require, on an average industry fleet-wide basis, a range from 48.7 to 49.7 mpg in model year 2025. The second phase of standards has not been finalized due to the statutory requirement that NHTSA set average fuel economy standards not more than five model years at a time. The regulations also include targeted

incentives to encourage early adoption and introduction into the marketplace of advanced technologies to dramatically improve vehicle performance, including the following:

- Incentives for electric vehicles, plug-in hybrid electric vehicles, and fuel cell vehicles
- Incentives for hybrid technologies for large pickups and for other technologies that achieve high fuel economy levels on large pickups
- Incentives for natural gas vehicles
- Credits for technologies with potential to achieve real-world GHG reductions and fuel economy improvements that are not captured by the standards' test procedures

State

The following state regulations pertaining to utilities and service systems would apply to the proposed project.

Protection of Underground Infrastructure

California Government Code Section 4216 et seq. requires any entity performing excavating to contact a regional notification center (e.g., Underground Service Alert or Dig Alert) at least 2 days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert Southern California, the regional notification center for Southern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities, once notified, are required to mark the specific locations of their facilities within the work area prior to the start of project activities.

Title 24, Part 6

Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. The California Energy Commission (CEC) is required by law to adopt standards every 3 years that are cost effective for homeowners over the 30-year lifespan of a building. These standards are updated to consider and incorporate new energy efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2016 Title 24 building energy efficiency standards, which became effective January 1, 2017, will further reduce energy used and associated GHG emissions. In general, single-family homes built to the 2016 standards are anticipated to use about 28% less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards, and nonresidential buildings built to the 2016 standards will use an estimated 5% less energy than those built to the 2013 standards (CEC 2016a).

Title 24, Part 11

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen, and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals. The CALGreen 2016 standards will become effective January 1, 2017. The mandatory standards require the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance
- 65% of construction and demolition waste must be diverted from landfills
- Mandatory inspections of energy systems to ensure optimal working efficiency
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15% improvement in energy requirements; stricter water conservation, 65% diversion of construction and demolition waste, 10% recycled content in building materials, 20% permeable paving, 20% cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30% improvement in energy requirements, stricter water

conservation, 75% diversion of construction and demolition waste, 15% recycled content in building materials, 30% permeable paving, 25% cement reduction, and cool/solar-reflective roofs.

The California Public Utilities Commission, CEC, and CARB also have a shared, established goal of achieving zero net energy (ZNE) for new construction in California. The key policy timelines include: (1) all new residential construction in California will be ZNE by 2020 and (2) all new commercial construction in California will be ZNE by 2030.[1]

Assembly Bill 1493

In a response to the transportation sector accounting for more than half of California's CO_2 emissions, Assembly Bill (AB) 1493 (Pavley) was enacted in July 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22% in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30%.

Renewable Energy Sources

Established in 2002 under Senate Bill (SB) 1078, and accelerated by SB 107 (2006) and SB 2 (2011), California's Renewables Portfolio Standard obligates investor-owned utilities, energy service providers, and community choice aggregators to procure 33% of their electricity from renewable energy sources by 2020. Eligible renewable resources are defined in the 2013 RPS to include biodiesel; biomass; hydroelectric and small hydro (30 megawatts or less); Los Angeles Aqueduct hydro power plants; digester gas; fuel cells; geothermal, landfill gas; municipal solid waste; ocean thermal, ocean wave, and tidal current technologies; renewable derived biogas; multifuel facilities using renewable fuels; solar photovoltaic; solar thermal electric; wind; and other renewables that may be defined later. Governor Jerry Brown signed SB 350 on October 7, 2015, which expands the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations

[1] See, e.g., CPUC, California's Zero Net Energy Policies and Initiatives, September 18, 2013, accessed at http://www.cpuc.ca.gov/NR/rdonlyres/C27FC108-A1FD-4D67-AA59- 7EA82011B257/0/3.pdf. It is expected that achievement of the zero net energy goal will occur via revisions to the Title 24 standards.

consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process**.**

Local

Southern California Association of Governments

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG serves as the federally designated Metropolitan Planning Organization for the Southern California region and is the largest Metropolitan Planning Organization in the United States. With respect to air quality planning, GHG emissions, and other regional issues, SCAG has prepared the 2016 RTP/SCS (SCAG 2016). Specifically, the 2016 RTP/SCS links the goals of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging all residents affected by socioeconomic, geographic, and commercial limitations to be provided with fair access. See Section 3.2, Air Quality, for additional discussion on SCAG.

County of Los Angeles Community Climate Action Plan.

The County adopted the Community Climate Action Plan (CCAP) in August 2015 (County of Los Angeles 2015b). The County's CCAP is intended to address the main sources of the emissions that cause climate change, which include emissions from the energy consumed in buildings and for transportation, as well as the solid waste sent to landfills. The purpose of the County's CCAP is to guide the development, enhancement, and implementation of actions that would reduce the County's GHG emissions by 11% below existing (2010) levels by 2020. See Section 3.6, GHG Emissions, for additional discussion on the County's CCAP.

4.17.3 Thresholds of Significance

Energy Thresholds

Appendix G of the CEQA Guidelines does not contain significance thresholds related to energy. The following significance criteria included in Appendix F of the CEQA Guidelines (14 CCR 15000 et seq.) assist in determining the significance of an energy consumption impact.

A significant impact related to energy consumption would occur if the project would:

1. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
2. Conflict with existing or obstruct a state or local plan for renewable energy or energy efficiency.

4.17.4 Impacts Analysis

ENG-1 Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation??

The electricity and natural gas used for construction of the proposed project would be temporary and would be substantially less than that required for project operation and would have a negligible contribution to the project's overall energy consumption. Additionally, although natural gas and electricity usage would increase due to the implementation of the project, the project's energy efficiency would go beyond code compliance and would increase through the LEED certification program or equivalent standards. Although the project would see an increase in petroleum use during construction and operation, vehicles would use less petroleum due to advances in fuel economy and potential reduction in VMT over time. Impacts would be considered **less than significant.**

Construction

Electricity

Temporary electric power for as-necessary lighting and electronic equipment such as computers inside temporary construction trailers would be provided by SCE. The electricity used for such activities would be temporary and would be substantially less than that required for project operation and would have a negligible contribution to the project's overall energy consumption.

Natural Gas

Natural gas is not anticipated to be required during construction of the proposed project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed as a result of project construction would be substantially less than that required for project operation and would have a negligible contribution to the project's overall energy consumption.

Petroleum

Heavy-duty construction equipment associated with demolition and construction activities for construction would rely on diesel fuel, as would haul trucks involved in removing the materials from demolition and excavation. Construction workers would travel to and from the project site throughout the duration of construction. It is assumed in this analysis that construction workers would travel to and from the site in gasoline-powered passenger vehicles.

Heavy-duty construction equipment of various types would be used during each phase of project construction. Appendix C lists the assumed equipment usage for each phase of construction.

Fuel consumption from construction equipment was estimated by converting the total carbon dioxide (CO_2) emissions from each construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Construction is estimated to occur in the years 2019–2020 based on the construction phasing schedule. The conversion factor for gasoline is 8.78 kilograms per metric ton CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO_2 per gallon (The Climate Registry 2018). The estimated diesel fuel usage from construction equipment is shown in Table 4.17-1.

Table 4.17-1
Construction Equipment Diesel Demand

Phase	Pieces of Equipment	Equipment CO_2 (MT)	kg/CO_2/Gallon	Gallons
Site Preparation	9	91.49	10.21	8,960.82
Temporary Bridge Construction	3	9.02	10.21	883.45
Waste Relocation	11	407.21	10.21	39.883.45
Grading/Landfill Cap Construction	16	540.3	10.21	52,918.71
Pile Foundations	24	208.26	10.21	20,397.65
Building Construction	18	691.6	10.21	67,737.51
Paving	18	208.33	10.21	20,404.51
Temporary Bridge Removal	3	8.83	10.21	864.84
Architectural Coating	10	187.24	10.21	18,338.88
			Total	**230,389.81**

Sources: Pieces of equipment and equipment CO_2 (Appendix C); kg/CO_2/Gallon (The Climate Registry 2018).
Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

Fuel consumption from worker and vendor trips are estimated by converting the total CO_2 emissions from each construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline and vendor/hauling vehicles are assumed to be diesel.

Calculations for total worker, vendor, and haul truck fuel consumption are provided in Tables 4.17-2, 4.17-3, and 4.17-4.

Table 4.17-2
Construction Worker Gasoline Demand

Phase	Trips	Vehicle MT CO_2	kg/CO_2/ Gallon	Gallons
Site Preparation	2,952	15.04	8.78	1,713.53
Temporary Bridge Construction	256	1.31	8.78	149.20
Waste Relocation	7,920	40.36	8.78	4,597.27
Grading/Landfill Cap Construction	9,312	47.46	8.78	5,405.26
Pile Foundations	7,632	38.90	8.78	4,430.09
Building Construction	1,649,652	8211.71	8.78	935,274.35
Paving	5,280	26.07	8.78	2,969.75
Temporary Bridge Removal	256	1.26	8.78	143.51
Architectural Coating	124,960	617.09	8.78	70,284.02
			Total	**1,024,966.98**

Sources: Trips and vehicle CO_2 (Appendix C); kg/CO_2/Gallon (The Climate Registry 2018).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram.

Table 4.17-3
Construction Vendor Diesel Demand

Phase	Trips	Vehicle MT CO_2	kg/CO_2/Gallon	Gallons
Site Preparation	0	0	10.21	0
Temporary Bridge Construction	210	3.96	10.21	387.86
Waste Relocation	0	0	10.21	0
Grading/Landfill Cap Construction	1,164	4.80	10.21	470.41
Pile Foundations	636	7.87	10.21	771.09
Building Construction	650,520	8,007.98	10.21	784,326.85
Paving	0	0	10.21	0
Temporary Bridge Removal	320	1.30	10.21	127.33
Architectural Coating	0	0	10.21	0
			Total	**786,083.53**

Sources: Trips and vehicle CO_2 (Appendix B); kg/CO_2/Gallon (The Climate Registry 2018).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram.

Table 4.17-4
Construction Hauler Diesel Demand

Phase	Trips	Vehicle MT CO_2	kg/CO_2/Gallon	Gallons
Site Preparation	4,000	152.47	10.21	14,933.40
Temporary Bridge Construction	0	0	0	0
Waste Relocation	0	0	10.21	0
Grading/Landfill Cap Construction	25,000	952.96	10.21	93,335.51
Pile Foundations	0	0	10.21	0

Table 4.17-4
Construction Hauler Diesel Demand

Phase	Trips	Vehicle MT CO_2	kg/CO_2/Gallon	Gallons
Building Construction	0	0	10.21	0
Paving	0	0	10.21	0
Temporary Bridge Removal	0	0	0	0
Architectural Coating	0	0	10.21	0
			Total	**108,268.91**

Sources: Trips and vehicle CO_2 (Appendix C); kg/CO_2/Gallon (The Climate Registry 2018).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram.

In summary, construction of the project is conservatively anticipated to consume 1,024,967 gallons of gasoline and 1,124,742.25 gallons of diesel, which would last approximately 18 months. By comparison, California's consumption of petroleum is approximately 40.4 billion gallons over the course of construction. By comparison, Countywide total petroleum use by vehicles is expected to be 6.9 billion gallons per year by 2019 (CARB 2018). Based on these assumptions, approximately 38 billion gallons of petroleum would be consumed in California over the course of the construction period (EIA 2017d).

Summary

The electricity and natural gas used for construction of the project would be temporary and would be substantially less than that required for project operation and would have a negligible contribution to the project's overall energy consumption. Construction is anticipated to consume 1,024,674 gallons of gasoline and 1,107,545 gallons of diesel. This would be approximately 0.0053% of the 40.4 billion gallons of petroleum would be consumed in California and 0.0311% of the 6.9 billion gallons of petroleum consumed Countywide over the course of the construction period (EIA 2017d). Therefore, impacts associated during construction would be **less than significant**.

Operation

Electricity

The operation of the project buildout would require electricity for multiple purposes, including cooling, lighting, appliances, and various equipment. Additionally, the supply, conveyance, treatment, and distribution of water would indirectly result in electricity usage. Electricity consumption associated with project operation is based on the California Emissions Estimator Model (CalEEMod) outputs presented in Appendix C.

CalEEMod default values for energy consumption for each land use were applied for the project analysis. The energy use from non-residential land uses is calculated in CalEEMod based on the California Commercial End-Use Survey database. Energy use in buildings (both natural gas and electricity) is divided by the program into end use categories subject to Title 24 requirements (end uses associated with the building envelope, such as the HVAC system, water heating system, and integrated lighting) and those not subject to Title 24 requirements (such as appliances, electronics, and miscellaneous "plug-in" uses).

Title 24 of the California Code of Regulations serves to enhance and regulate California's building standards. The most recent amendments to Title 24, Part 6, referred to as the 2016 standards, became effective on January 1, 2017. According to these estimations, the proposed project would consume approximately 9,856,815 kWh per year during operation. The non-residential electricity demand in 2017 was 48,100 GWh for the County (CEC 2018). As such, the project would have a negligible impact on demand for the County and SCE.

Natural Gas

The operation would require natural gas for various purposes, including water heating and natural gas appliances. Natural gas consumption associated with operation is based on the CalEEMod outputs Appendix C.

CalEEMod default values for energy consumption for each land use were applied for the project analysis. The energy use from non-residential land uses is calculated in CalEEMod based on the California Commercial End-Use Survey database. The program uses data collected during the Residential Appliance Saturation Survey to develop energy intensity values (electricity and natural gas usage per square foot per year) for residential buildings. Energy use in buildings (both natural gas and electricity) is divided by the program into end use categories subject to Title 24 requirements (end uses associated with the building envelope, such as the HVAC system, water heating system, and integrated lighting) and those not subject to Title 24 requirements (such as appliances, electronics, and miscellaneous "plug-in" uses).

Title 24 of the California Code of Regulations serves to enhance and regulate California's building standards. The most recent amendments to Title 24, Part 6, referred to as the 2016 standards, became effective on January 1, 2017. According to these estimations, the proposed project would consume approximately 26,901,285 kilo-British Thermal Units (kBtu) per year. The non-residential natural gas consumption in 2017 was 1840.6 million MMBtu for the County (CEC 2018).

Petroleum

During operations, the majority of fuel consumption resulting from the project would involve the use of motor vehicles traveling to and from the project site, as well as fuels used for alternative modes of transportation that may be used by students and employees.

Petroleum fuel consumption associated with motor vehicles traveling to and from the project site is a function of the vehicle miles traveled (VMT) as a result of project operation. As shown in Appendix C (CalEEMod outputs and as discussed in Section 4.2, Air Quality; and 4.6, Greenhouse Gas Emissions), the annual net new VMT attributable to the proposed project is expected to be 29,967,441 VMT. Similar to the construction worker and vendor trips, fuel consumption from worker and vendor trips are estimated by converting the total CO_2 emissions from operation of the project to gallons using the conversion factors for CO2 to gallons of gasoline or diesel. Based on the annual fleet mix provided in CalEEMod, 93.3% of the fleet range from light-duty to medium-duty vehicles and motorcycles are assumed to run on gasoline. The remaining 6.6% of vehicles represent medium-heavy duty to heavy-duty vehicles and buses and are assumed to run on diesel.

Calculations for annual mobile source fuel consumption are provided in Tables 4.17-5 (gasoline) and 4.17-6 (diesel).

Table 4.17-5
Annual Mobile Source Gasoline Demand

	Vehicle MT CO_2	kg/CO_2/Gallon	Gallons
Operation	13,428.33	8.78	1,529,422.82

Sources: Trips and vehicle CO_2 (Appendix C); kg/CO_2/Gallon (The Climate Registry 2018).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram

Table 4.17-6
Annual Mobile Source Diesel Demand

	Vehicle MT CO_2	kg/CO_2/Gallon	Gallons
Operation	857.13	10.21	83,949.81

Sources: Trips and vehicle CO_2 (Appendix C; kg/CO_2/Gallon (The Climate Registry 2018).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram

By comparison, California as a whole consumes approximately 19.3 billion gallons of petroleum per year (CEC 2016b). Countywide total petroleum use by vehicles is expected to be 4.5 billion gallons per year by 2021 (CARB 2018).

Summary

Statewide emission reduction measures proposed in the CARB-adopted amendments to the Pavley regulations include measures aimed at reducing GHG emissions associated with transportation. These amendments are part of California's commitment to a nationwide program to reduce new passenger vehicle GHGs from 2012 through 2016. Pavley regulations reduced GHG emissions from California passenger vehicles by about 22% in 2012. It is expected that Pavley regulations will reduce GHG emissions from California passenger vehicles by about 30% in 2016, all the while improving fuel efficiency and reducing motorists' costs. As such, vehicle trips associated with the project are expected to use less petroleum due to advances in fuel economy over time.

CARB has adopted a new approach to passenger vehicles—cars and light trucks—by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California (CARB 2017).

The proposed project would create additional electricity and natural gas demand by adding recreational and commercial facilities. New facilities associated with the proposed project would be subject to the State Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations. The efficiency standards apply to new construction of nonresidential buildings and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting.

To meet the prerequisite energy performance design standards for LEED certification, the project would be required to meet minimum energy performance standards, energy commissioning requirements, energy metering, and refrigerant management (including the elimination of chlorofluorocarbon-based refrigerants in new heating, ventilating, air-conditioning, and refrigeration systems (USGBC 2017)). It should be noted that these energy-efficiency measures are required prerequisites under the LEED certification system; however, the proposed project could exceed the LEED standards to achieve additional credits under the LEED certification program, which would result in additional on-site electricity use reductions.

In summary, although natural gas and electricity usage would increase due to the implementation of the project, the project's energy efficiency would go beyond code compliance and would be increased through the LEED certification program or equivalent standards. Although the project would see an increase in petroleum use during construction and operation, vehicles would use less petroleum due to advances in fuel economy and potential reduction in VMT over time. Therefore, impacts would be **less than significant**.

ENG-2 Conflict with existing or obstruct a state or local plan for renewable energy or energy efficiency?

The proposed project would be subject to and would comply with, at a minimum, the 2016 California Building Code Title 24 (24 CCR, Part 6). Additionally, the proposed project would go beyond the requirements of the 2016 California Building Code Title 24 requirements because new facilities would be designed to meet LEED Silver and Gold certifications. The proposed project would not conflict with existing energy standards and regulations; therefore, impacts during construction and operation of the proposed project would be **less than significant**.

As discussed in ENG-1, the electricity and natural gas used for construction of the project would be temporary and would be substantially less than that required for project operation and would have a negligible contribution to the project's overall energy consumption. Additionally, despite creating additional electricity and natural gas demand by adding recreational space and a general increase in the number of visitors, the proposed project would increase energy efficiency through the LEED certification program or equivalent standards.

Construction

The electricity and natural gas used for construction of the project would be temporary and would be substantially less than that required for project operation and would have a negligible contribution to the project's overall energy consumption. Construction of the project is anticipated to consume 1,024,967 gallons of gasoline and 1,124,742 gallons of diesel. This would be approximately 0.0053% of the 40.39 billion gallons of petroleum would be consumed in California and 0.0311% of the 6.9 billion gallons of petroleum consumed Countywide over the course of the construction period (EIA 2017d). Therefore, construction would have a **less-than-significant impact** with regards to regional energy supplies.

Operation

As discussed under the previous thresholds, the proposed project would result in an increased demand for electricity, natural gas, and petroleum. Design features would reduce the project's energy consumption by what is required by the 2016 California Building Code Title 24 standards because new facilities would be designed to meet LEED Gold and Silver certification.

The proposed project would create additional electricity and natural gas demand by adding recreational space and a general increase in the number of visitors. New facilities associated with the proposed project would be subject to the State Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations. The efficiency standards apply to new construction of both residential and nonresidential buildings and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting.

One of the goals of this project is to achieve LEED gold and silver certifications. LEED requires at least 10% improvement in energy efficiency over Title 24 requirements (USGBC 2011; VCA Green 2015). As such, the proposed project would exceed California code requirements for energy efficiency. To meet the prerequisite energy performance design standards for LEED certification, the project would be required to meet minimum energy performance standards, energy commissioning requirements, energy metering, and refrigerant management (including the elimination of chlorofluorocarbon-based refrigerants in new heating, ventilating, air-conditioning, and refrigeration systems (USGBC 2017)). It should be noted that these energy-efficiency measures are required prerequisites under the LEED certification system; however, the proposed project could exceed the LEED standards to achieve additional credits under the LEED certification program, which would result in additional on-site electricity use reductions.

In addition, it is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 22% in 2012 and about 30% in 2016, all while improving fuel efficiency. By 2025, when the Advanced Clean Cars rules are fully implemented, one in seven new cars sold in California (1.4 million) will be non-polluting or nearly so, including plug-in hybrids, fully electric battery-powered cars, and hydrogen-powered fuel cell vehicles. Meanwhile, gasoline- and diesel-powered passenger vehicles would grow ever cleaner and more efficient. A variety of new technologies, from direct fuel injection to lower rolling resistance tires, will also cut pollution and create more energy-efficient vehicles (CARB 2011). As such, petroleum usage associated with operation of the proposed project is anticipated to decrease due to a reduction in vehicle miles traveled in the region and due to advances in fuel economy over time. Therefore, impacts related to energy supplies and capacity would be **less than significant**.

4.17.5 Mitigation Measures

Project impacts related to energy conservation were determined to be less than significant; therefore, no mitigation measures are required.

4.17.6 Level of Significance After Mitigation

Project impacts related to energy conservation would remain less than significant without mitigation implemented.

4.17.7 Cumulative Impacts

Cumulative projects that could exacerbate the proposed project's impacts include any projects that could result in wasteful, inefficient, or unnecessary use of energy. However, the project would not result in wasteful, inefficient, or unnecessary use of energy in large part due to the short-term and temporary nature of the construction period, and because there is no alternative location to obtain the necessary construction materials that would result in the use of less petroleum. Additionally, the

operational activity would be minimized through energy reduction strategies pursuant to the project's aim for Gold and Silver LEED certifications, as described in Section 3.5.3. Finally, the project would also incorporate project design features **PDF-GHG-1** through **PDF-GHG-3**, which would result in decreased energy use. Therefore, cumulative impacts to energy use would be **less than significant**.

4.17.8 References

CEC (California Energy Commission). 2016a. "2016 Building Energy Efficiency Standards Frequently Asked Questions." http://www.energy.ca.gov/title/24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf

CEC. 2016b. "Statewide Energy Demand." Updated April 2016. http://energy.ca.gov/renewables/tracking_progress/documents/statewide_energy_demand.pdf.

CEC. 2017. California Natural Gas Industry. Accessed October 2017. http://energy.ca.gov/almanac/naturalgas_data/.

CEC. 2018a. "Tracking Progress: Statewide Energy Demand." Accessed December 2018. https://www.energy.ca.gov/renewables/tracking_progress/documents/statewide_energy_demand.pdf.

CEC. 2018b. 2017 Power Content Label. Accessed October 2018. https://www.sce.com/sites/default/files/inline-files/2017PCL_0.pdf

The Climate Registry. 2018. The Climate Registry 2018 Default Emission Factors. May 1, 2018. Accessed February 2019. https://www.theclimateregistry.org/wp-content/uploads/2018/06/The-Climate-Registry-2018-Default-Emission-Factor-Document.pdf. EIA (U.S. Energy Information Administration). 2017a. "Table F19: Natural Gas Consumption Estimates, 2015." Accessed October 2017. https://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_use_ng.html&sid=US&sid=CA.

EIA. 2017b. "California Profile Data." Updated September 21, 2017. https://www.eia.gov/state/data.php?sid=CA#ConsumptionExpenditures.

EIA. 2017c. Table F15: Total Petroleum Consumption Estimates, 2015. https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US&sid=CA

EIA. 2017d. California Profile Data. Updated October 19, 2017. https://www.eia.gov/state/data.php?sid=CA#ConsumptionExpenditures

EPA (U.S. Environmental Protection Agency). 2010. *Construction Fleet Inventory Guide*. EPA-420-B-10-025. Prepared by Eastern Research Group Inc. July 2010.

EPA and NHTSA (National Highway Traffic Safety Administration). 2010. *Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule*. EPA–HQ–OAR–2009–0472. NHTSA-2009-0059. http://www.gpo.gov/fdsys/pkg/FR-2010-05-07/pdf/2010-8159.pdf.

EPA and NHTSA. 2012. *2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards*. EPA–HQ–OAR–2010–0799, NHTSA-2010-0131.

SCE (Southern California Edison). n.d. "About Us." Accessed March 8, 2019. https://www.sce.com/about-us/who-we-are.

USGBC (U.S. Green Building Council). 2011. "How Does California's Green Building Code Compare to LEED?" December 31, 2013. Accessed October 2017. http://usgbclouisiana.org/news/151328/How%ADdoes%ADCalifornias%ADGreen%ADbuilding%ADcode%ADcompare%ADto%ADLEED.htm.

USGBC. 2017. "LEED Credit Library." Accessed October 2017. http://www.usgbc.org/credits/newconstruction/v4/energy%26atmosphere.

VCA Green. 2015. "Title 24 and LEED for Multi-Family: A Practical Approach to Compliance." By Moe Fakih.

CHAPTER 5
OTHER CEQA CONSIDERATIONS

5.1 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL IMPACTS

This section is prepared in accordance with Section 15126.2(b) of the California Environmental Quality Act (CEQA) Guidelines, which requires the discussion of any significant environmental effects that cannot be avoided if a project is implemented. These include impacts that can be mitigated, but cannot be reduced to a less-than-significant level. An analysis of environmental impacts caused by The Creek at Dominguez Hills project (project or proposed project) has been conducted and is contained in this environmental impact report (EIR). In Chapter 4, Environmental Impact Analysis, 16 issue areas were analyzed in detail. Table 1-1, Summary of Project Impacts, in Chapter 1, Executive Summary, summarizes the project impacts, mitigation measures, and levels of significance before and after mitigation. According to the analysis presented in Chapter 4, the proposed project would result in significant unavoidable adverse impacts related to Air Quality, Noise, Recreation, and Transportation, as summarized below.

Air Quality: As discussed in Section 4.2, Air Quality, of this EIR, the proposed project would exceed the South Coast Air Quality Management District (SCAQMD) regional significance thresholds for nitrogen oxides (NO_X) and carbon monoxide (CO) during some periods of construction. Implementation of all feasible mitigation measures would reduce, but not eliminate, these impacts. As such, project construction would result in significant and unavoidable short-term project-level impacts with regard to NO_X and CO emissions.

Accordingly, because the proposed project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations[1], the project would conflict with Consistency Criterion No. 1 of the SCAQMD CEQA Air Quality Handbook. Implementation of all feasible mitigation measures would reduce NO_X and CO emissions, but would not reduce impacts to a level of significance below SCAQMD thresholds. As such, implementation of the project would result in a significant and unavoidable impact related to the project's potential to conflict with or obstruct implementation of the applicable air quality plan.

Regional operational emissions associated with the project would exceed SCAQMD daily emissions thresholds for NO_X. Implementation of all feasible mitigation measures would reduce, but not eliminate, these impacts. Therefore, operation of the proposed project would have significant and unavoidable project-level impacts on regional air quality.

Accordingly, based on the project-generated construction and operational emissions of NO_X, the proposed project would expose sensitive receptors to substantial pollutant concentrations.

[1] In this case, the proposed project would exceed the SCAQMD daily construction emissions threshold for NO_x and CO.

Implementation of all feasible mitigation measures would reduce, but not eliminate, these impacts. Therefore, construction and operation of the proposed project would have significant and unavoidable project-related impact on sensitive receptors.

Finally, based on the project-generated construction and operational emissions of NO_X and CO, the project would result in a cumulatively considerable increase in emissions of non-attainment pollutants. Implementation of all feasible mitigation measures would reduce, but not eliminate, these impacts. Therefore, construction and operation of the proposed project would have significant and unavoidable cumulative impacts on regional air quality.

Noise: As discussed in Section 4.10, Noise, the construction noise analysis determined that the noise from project construction would exceed the County's construction noise significance threshold of 60 A-weighted decibels (dBA) during the day; if construction were to occur at night, the anticipated noise levels would exceed the nighttime limit of 50 dBA. Applying the County's construction noise limits, the project would have potentially significant short-term construction impacts. A temporary sound barrier along the Avalon Boulevard frontage (prescribed in **MM-NOI-1**) would address construction noise sources for everything except pile driving, which includes noise generating components well above the elevation of any feasible noise barrier. Therefore, even with the implementation of mitigation measures **MM-NOI-1**, **MM-NOI-2**, and **MM-NOI-3**, temporary noise impacts from pile driving during construction activities would be significant and unavoidable.

Recreation: As discussed in Section 4.13, Recreation, the proposed project would result in significant impacts to recreation as a result of the significant and unavoidable impacts to Air Quality, Noise, and Transportation. As the project in and of itself consists of the construction of recreational facilities, the resulting impacts related to recreation would translate directly to the most severe impact determination, as demonstrated in the environmental impact analysis. The project would represent an increase in the available recreation resources, as it represents an improvement to and expansion of the existing capacity of recreational facilities. With implementation of the mitigation measures described in this EIR, impacts would be reduced to below a level of significance for the majority of resource areas. However, as previously discussed, impacts to Air Quality, Noise, and Transportation would remain significant and unavoidable. Therefore, the project involves the construction of recreational facilities that would have an adverse physical effect on the environment, resulting in significant and unavoidable impacts.

Transportation: As discussed in Section 4.14, Transportation, the proposed project would result in a significant impact at multiple study intersections under Existing plus Project and Existing plus Project plus Cumulative conditions. Mitigation measures **MM-TRAF-1**, **MM-TRAF-3, MM-TRAF-10, MM-TRAF-16, and MM-TRAF-17** have been proposed that would reduce the project's impacts to less than significant per the County's significance criteria. The remaining mitigation measures, **MM-TRAF-2** through **MM-TRAF-15,** have been proposed that would

reduce the project's impacts to the County's satisfactory level of service (LOS) of LOS D or better, with exception of Intersection #25 (Hamilton Avenue/I-110 southbound ramps), which is forecast to continue to operate at LOS F, but would still be considered significant per the County's significance criteria methodology.

Significant project impacts were identified at Avalon Boulevard/Victoria Street (#8), Avalon Boulevard/University Drive (#10), and I-110 southbound ramps/190th Street (#22), as discussed in detail in the TIA (Appendix J). County staff directed the TIA to further consider operational improvements to improve the operation of the intersection (e.g., adding protected left-turn signal phasing or extending inadequate turn pockets) when an impact occurs at an intersection operating at a satisfactory LOS (LOS D or better), rather than add more approach lanes. Based on that direction, queue lengths provided in the TIA were compared to existing turn storage lengths at those three intersections, and no deficiencies were found. Therefore, no operational improvements are needed or required per the County's direction. The effect of the addition of cumulative and project traffic would not result in operational deficiencies at Avalon Boulevard/Victoria Street (#8), Avalon Boulevard/University Drive (#10), and I-110 southbound ramps/190th Street (#22). However, mitigation measures in the form of fair-share payment to physical improvements have been proposed in **MM-TRAF-12**, **MM-TRAF-13**, and **MM-TRAF-15**, respectively, for those intersections.

However, all of the significantly impacted intersections, except Intersection #24 (Hamilton Avenue/Del Amo Boulevard), are within the jurisdiction of another public agency (City of Carson or California Department of Transportation [Caltrans]), and the County cannot impose mitigation outside of its jurisdiction. Physical improvements requiring implementation by another public agency would be monitored by Los Angeles County Public Works and implemented to the extent feasible. If the physical improvements are deemed infeasible by the other public agency, cannot be implemented, or implementation is delayed, a significant impact would remain until the improvement is implemented. Since the County is not assured of timely implementation of the physical improvement, the impacts at these intersections under Existing plus Project and Existing plus Project plus Cumulative Projects conditions would remain significant and unavoidable.

5.2 EFFECTS FOUND NOT TO BE SIGNIFICANT

Section 15128 of the CEQA Guidelines requires a statement that briefly indicates the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. As stated in the CEQA Guidelines, such a statement may be contained in an attached copy of an initial study. The initial study for the proposed project is included in this EIR as Appendix A. As described and substantiated in Appendix A, the following issue areas were not found to be significant and were not further analyzed in the EIR: agriculture and forestry resources, and mineral resources. CEQA checklist items that were

screened out for other environmental resource areas and described in the Initial Study are identified in each resource section.

5.2.1 Wildfire

An analysis of wildfire impacts was not discussed in the Initial Study for this project, as it was not required by the CEQA Guidelines at the time of preparation. As stated in the updated Appendix G of the CEQA Guidelines, the project would result in an impact related to wildfires, if the project site is located in or near state responsibility areas or lands classified as very high fire hazard severity zones, and the project:

a) Would substantially impair an adopted emergency response plan or emergency evacuation plan.

b) Due to slope, prevailing winds, and other factors, would exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

c) Would 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) Would 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.

Existing Conditions

Wildfire is a continuous threat in Southern California and is particularly concerning in the wildland-urban interface, the geographic area where urban development either abuts or intermingles with wildland or vegetative fuels. During the summer season, dry vegetation, prolonged periods of drought, and Santa Ana wind conditions can combine to increase the risk of wildfires. The threat of wildland fire in or near the project site is low due to the developed environment and lack of wildland resources in and around the City.

Undeveloped areas near the City present a potential wildfire hazard, including the cliffs and hillside areas along the Palos Verdes Peninsula and numerous open space wildland areas to the north.

Fire Hazard Mapping

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped areas of significant fire hazards in the state through its Fire and Resources Assessment Program (FRAP). These maps place areas of the state into different fire hazard severity zones (FHSZ). CAL FIRE uses FHSZs to classify anticipated fire-related hazards for the entire state and includes classifications for State Responsibility Areas, Local Responsibility Areas (LRAs), and Federal

Responsibility Areas. Fire hazard severity classifications take into account the following elements: vegetation, topography, weather, crown fire production, and ember production and movement.

The project site is located within an LRA, indicating that a local agency (in this case, the County) assumes responsibility for fire suppression and protection of the project site. The nearest state responsibility area is approximately 16.5 miles northeast of the project site in the Worsham Canyon Open Space area, which is designated as a Very High FHSZ (CAL FIRE 2012a; CAL FIRE 2012b). Further, the project site is not classified as a very high FHSZ. The nearest very high FHSZ is located approximately 5.75 miles southwest of the project site within the Palos Verdes peninsula, which is also within an LRA (CAL FIRE 2012b). As such, the project site is not located in or near State Responsibility Areas or lands classified as very high FHSZ, and therefore no further analysis related to wildfire impacts will be discussed in this EIR. The project would result in **no impact** related to wildfires.

5.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(c) of the CEQA Guidelines requires that an EIR analyze the extent to which the proposed project's primary and secondary effects would impact the environment and commit nonrenewable resources to uses that future generations will not be able to reverse. Nonrenewable resources that would be used on site during construction and operation include natural gas, other fossil fuels, water, concrete, steel, and lumber. The proposed project would result in the commitment of such resources. (The proposed project's energy consumption is discussed in greater detail in Section 4.6.)

Uses of nonrenewable resources during the initial and continued phases of the proposed project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts, and particularly, secondary impacts (such as a highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project.

Implementation of the proposed project would occur on the existing Links at Victoria Golf Course (Victoria Golf Course). Proposed development would include the irreversible commitment of natural resources, energy, and human resources. Implementation of the proposed project would increase the intensity of the site compared to existing conditions. Ongoing maintenance and operation of the proposed project would entail a further irreversible commitment of energy resources in the form of petroleum products (diesel fuel and gasoline), natural gas, and electricity. The proposed project has incorporated voluntary sustainable design factors described in Chapter 3, Project Description. As such, the proposed project is not anticipated to consume substantial amounts of energy in a wasteful manner (see Section 4.16, Utilities and Service Systems, for details), and it would not result in significant impacts from consumption of utilities. However, long-term impacts would result from an increase in vehicular traffic, as well as the associated air pollutant and GHG emissions.

5.4 GROWTH-INDUCEMENT AND INDIRECT IMPACTS

According to Section 15126.2(d) of the CEQA Guidelines, growth-inducing impacts of the proposed project shall be discussed in the EIR. Growth-inducing impacts are those effects of the proposed project that might foster economic or population growth or the construction of new housing, either directly or indirectly, in the surrounding environment. According to CEQA, increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.

Induced growth is any growth that exceeds planned growth and results from new development that would not have taken place without the implementation of the proposed project. Typically, the growth-inducing potential of a project would be considered significant if it results in growth or population concentration that exceeds those assumptions included in pertinent master plans, land use plans, or projections made by regional planning authorities. However, the creation of growth-inducing potential does not automatically lead to growth, whether it would be below or in exceedance of a projected level.

The environmental effects of induced growth are secondary or indirect impacts of the proposed project. Secondary effects of growth could result in significant, adverse environmental impacts, which could include increased demand on community or public services, increased traffic and noise, degradation of air and water quality.

Section 4.11, Population and Housing, describes the potential growth inducement of the proposed project. The proposed project would remove approximately 87 acres of the existing Victoria Golf Course and replace it with new recreational, wellness, and retail uses. No new homes would be constructed as part of the proposed project; additionally, no significant impacts in the category of population and housing would occur. The proposed project is not expected to draw substantial numbers of new residents to the City or to the County, if at all. The proposed project would be located in a densely populated metropolitan area that typically provides a robust and diverse employment pool, such that the increases in employment at the project site are not expected to cause people to move into the City or the County from areas outside the City or County. Furthermore, the employment growth that may be caused by the project falls well within current projections for the City and County.

It is anticipated that most of the jobs associated with the proposed project would be filled by existing City residents or by residents of neighboring cities and communities in the densely populated Los Angeles metropolitan area. Therefore, it is not anticipated that the employment generated by the proposed project would lead to a substantial influx of residents to the City or County. Due to the ability of the existing regional population to provide an ample employment pool within proximity to the project site, and due to the minor increase in employment relative to

total jobs available in the City and County, the proposed project would not generate substantial population growth.

As such, the growth-inducing impacts of the project would not be significant. The proposed project is consistent with growth forecasts and implementing policy goals and would not induce substantial population growth, and therefore not require the construction of new facilities for the provision of police and emergency services.

Additionally, the project would be consistent with applicable general plan goals and policies related to the provision of public services.

Therefore, as discussed above, the proposed project would not result in significant adverse secondary effects related to induced growth.

5.5 POTENTIAL SECONDARY EFFECTS

Section 15126.4(a)(1)(D) of the CEQA Guidelines requires that "if a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed." The following subsections address the potential secondary impacts that could occur as a result of the implementing the proposed project mitigation measures.

Aesthetics

MM-AES-1 requires that the project sign lighting facing I-405 along the exterior of the multi-use indoor sports complex building on Pad 1 shall conform to a maximum luminance of 500 candelas per square meter (cd/m^2) for the period beginning 20 minutes prior to sunset until 20 minutes after sunrise, when ambient luminance levels reach minimum levels in order to avoid high contrast glare conditions. This mitigation measure was developed based on the results of the Lighting Study (Appendix B) conducted for the project. As discussed in Section 4.1, Aesthetics, implementation of the mitigation measure would result in less-than-significant impacts to existing light and glare conditions. The mitigation is based on the existing lighting and glare conditions and reflects existing regulatory requirements. Further, implementation of the mitigation would be beneficial in that it would reduce the lighting and glare conditions resulting from the project at all surrounding sensitive receptors and roadways reduce the project's overall energy use. Therefore, implementation of the mitigation measure would not result in adverse secondary impacts.

Air Quality

MM-AQ-1, **MM-AQ-2**, and **MM-AQ-3** are applicable to construction of the proposed project. **MM-AQ-1** requires the use of tier 4 final diesel engines in off-road equipment used during

construction. The implementation of this change to the project would be largely procedural in nature and not result in a physical change to the environment beyond the reduction in criteria air pollutants from the higher tired diesel engines, which would be a benefit to local and regional air quality comparted to use of standard equipment. The rest **MM-AQ-1** addresses the use construction equipment including maintenance and tuning, engine idling times for vehicles in loading and unloading queues, implantation of a construction traffic control plan, and use of electrical hook ups to minimize use of generators. Limits on idling time and tuning of equipment and implementation construction traffic control plan would have no physical impact on the environment. The use of electricity during project construction is discussed in Section 4.6, which found impacts related to electricity consumption during construction to be less than significant.

MM-AQ-2 requires implementation of a Fugitive Dust Plan, which includes the addition of a construction relations officer and prioritization of construction activities that would minimize fugitive dust emissions. The addition of a single worker to the site would have negligible impact to vehicle emissions and would be accounted for in the traffic control plan. The use of water in dust control activities during project construction would be minimal compared to operational water demands and would be short-term in nature. Additionally, the use of chemical soil stabilizers would help reduce the amount of water required for dust control during construction.

MM-AQ-3 requires the use of super compliant VOC exterior and interior paints as defined by SCAQMD. The use of super complaint paints during project construction would have no physical impact on the environment compared to use of standard paints outside of the reduction in VOC emissions. Therefore, implementation of mitigation measures **MM-AQ-1**, **MM-AQ-2**, and **MM-AQ-3** would be beneficial in reducing air quality impacts during project construction.

MM-AQ-4 and **MM-AQ-5** are applicable to operation of the proposed project. **MM-AQ-4** is a series of design features meant to reduce the use of single-occupancy vehicles and vehicles miles traveled. Specifically the inclusion of pedestrian design features to interconnect on-site and off-site land uses. The inclusion of paved walkways and bike lanes in and around the project site are accounted for in the project's construction scenario, therefore impacts related to the construction of these design measures are accounted for in this analysis in Section 4.2.

MM-AQ-5 requires that 2% of all available parking spaces on site have EV charging stations. The additional construction of these EV stations would be minimal compared to the scale of construction proposed and would not increase peak emissions. During operation, the use of EV stations would promote use of electric vehicles and reduce emissions from criteria air pollutants and GHGs from mobile sources. Therefore, the implementation of **MM-AQ-4** and **MM-AQ-5** would be beneficial in reducing air quality impacts and would not result in adverse secondary impacts.

Biological Resources

MM-BIO-1 requires preconstruction surveys by a qualified biologist to sweep areas of suitable habitat for special-status species, specifically bank swallow. If bank swallow are found and cannot be avoided by the project, additional mitigation will be required to comply with the California Endangered Species Act, such as applying for an Incidental Take Permit under Section 2081 of California Fish and Game Code. Additionally, occupied habitat for this species will require compensatory habitat-based mitigation through the purchase of mitigation credits at a minimum 1:1 ratio from an approved mitigation bank.

MM-BIO-2 requires that construction activities avoid the migratory bird nesting season to reduce any potential significant impact to birds that may be nesting on the study area. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the project site and contiguous habitat within 500 feet of all impact areas must be surveyed by a qualified wildlife biologist within 72 hours prior to the start of construction.

MM-BIO-3 requires that direct and indirect impacts to CDFW jurisdictional wetland and non-wetland waters be addressed through the regulatory application process to implement Section 1602 of the California Fish and Game Code.

MM-BIO-4 requires that the 21 impacted City-protected parkway trees are replaced at a 1:1 ratio. This would be in accordance with the City's Tree Protection and Preservation Ordinance.

MM-BIO-1 through **MM-BIO-4** are regulatory in nature, based on the known potential impacts that may occur to special-status biological resources on the site, and reflect existing regulatory requirements. They also would not be required if, during final project design, these biological resources were avoided or determined to be absent from the project site; therefore, these mitigation measures are based on a worst case scenario of potential project-related impacts. Therefore, these mitigation measures would not result in adverse secondary impacts.

As stated in Section 4.3, Biological Resources, the project's secondary and indirect impacts to water quality would be less than significant.

Cultural Resources

MM-CUL-1 and **MM-CUL-2** are regulatory in nature based on the known, albeit limited, potential for cultural resources to be discovered as a result of project implementation, and in accordance with the existing regulatory framework. As stated in Section 4.4, Cultural Resources, project impacts would be considered less than significant with the implementation of mitigation measures **MM-CUL-1** and **MM-CUL-2**, and no potential secondary impacts would occur.

Geology and Soils

MM-GEO-1 requires implementation of recommendations in a site-specific geotechnical report. **MM-GEO-1** is a procedural requirement that would ensure that geotechnical impacts would be reduced to less-than-significant levels. As such, implementation of the mitigation measure would not result in adverse secondary and indirect impacts related to geology and soils.

MM-GEO-2 is regulatory in nature based on the known, albeit limited, potential for paleontological resources to be discovered as a result of project implementation, and in accordance with the existing regulatory framework, requires that a qualified paleontologist be retained prior to commencement of any grading activities. As such, implementation of the mitigation would not result in adverse secondary impacts related to paleontological resources.

Greenhouse Gas Emissions

As stated in Section 4.6, Greenhouse Gas Emissions, impacts associated with GHG emissions would be less than significant, and no mitigation measures are required. Therefore, no potential secondary impacts would occur.

Hazards and Hazardous Materials

MM-HAZ-1 requires a Site-Specific Hazardous Materials Contingency Plan to be developed and followed during demolition, excavation, and construction activities for the project. **MM-HAZ-2** requires a lead-based paint and asbestos survey be conducted prior to demolition or renovation of site structures. **MM-HAZ-3** requires implementation of the programs specified in the RAP; the County has been and will continue to be responsible for implementing the RAP. **MM-HAZ-4** requires analysis of surface soils in the area of the former shooting range. **MM-HAZ-1**, **MM-HAZ-2**, and **MM-HAZ-4** are regulatory in nature, based on the known potential hazards to the site, and reflect existing regulatory requirements. They also assist in removal or reduction of existing hazards. **MM-HAZ-3** has been in process, and will continue to be regardless of construction of the project. Therefore, these mitigation measures would not result in adverse secondary impacts.

Hydrology and Water Quality

As stated in Section 4.8, Hydrology and Water Quality, impacts on hydrology and water quality would be less than significant and no mitigation measures are required. Therefore, no potential secondary impacts would occur.

Land Use and Planning

As stated in Section 4.9, Land Use, project impacts associated with land use would be considered less than significant and no mitigation measures are required. Therefore, no potential secondary impacts would occur.

Noise

MM-NOI-1 requires the construction of a temporary noise barrier along the Avalon Boulevard frontage of the project site, to be removed at the completion of project construction. The construction of the barrier would involve materials that could be reused or recycled, and the identified construction equipment fleet for project construction would be suitable for wall construction and dismantling. Short-term visual impacts associated with the wall would be minimal, and would interrupt views to a site undergoing construction, not an intact scenic resource. **MM-NOI-2** and **MM-NOI-3** address construction equipment operational restrictions, which are a procedural requirement that would not result in physical changes to the environment, and would serve to reduce construction-related noise and vibration impacts. As such, implementation of mitigation measures addressing short-term construction noise impacts would not result in adverse secondary impacts.

Population and Housing

As stated in Section 4.11, project impacts associated with population and housing would be considered less than significant and no mitigation measures are required. Therefore, no potential secondary impacts would occur.

Public Services

As stated in Section 4.12, Public Services, project impacts associated with community or public services would be considered less than significant and no mitigation measures are required. Therefore, no potential secondary impacts would occur.

Recreation

As stated in Section 4.13, project impacts associated with recreation would be considered significant and unavoidable as a result of significant and unavoidable impacts to Air Quality, Noise, and Transportation. With implementation of mitigation measures, impacts to all other resource areas would be reduced to below a level of significance, and none of the proposed mitigation measures would result in secondary impacts. Further, as discussed in this section, implementation of mitigation measures for Air Quality, Noise, and Transportation would not result

in secondary impacts and would be beneficial in reducing any adverse effects on the environment. Therefore, there would be no secondary impacts related to recreation.

Transportation

MM-TRAF-1, **MM-TRAF-3, MM-TRAF-4, MM-TRA-7** through **MM-TRAF-10**, and **MM-TRAF-16** and **MM-TRAF-17** could be accomplished within the existing right-of-way and involve restriping or other non-earthmoving activities. Therefore, they require no physical construction activity and would not result in adverse secondary environmental impacts. **MM-TRAF-2** and **MM-TRAF-11** would require widening approaches in order to provide new turn lanes at Intersection #4 (Main Street/Del Amo Boulevard). **MM-TRAF-14** would require widening the northbound approach in order to provide a new turn lane at #14 (Avalon Boulevard/Del Amo Boulevard). It is not anticipated that these improvements would result in significant secondary impacts or growth inducement.

The proposed project is obligated to provide its fair-share contribution for transportation improvements at various intersections to address cumulative impacts, as required in **MM-TRAF-10** through **MM-TRAF-17**. The affected roadway's applicable jurisdiction maintains long-range transportation plans and capital improvement programs that include transportation improvements for cumulative projects. Such plans and programs are subject to review in compliance with CEQA. Therefore, the proposed project's mitigation requirements to contribute to roadway improvements via fair-share contributions will have the environmental effects of those improvements addressed through the lead agency's environmental review of their long-range transportation plans and capital improvement programs.

Tribal Cultural Resources

As stated in Section 4.15, Tribal Cultural Resources, project impacts would be considered less than significant with the implementation of mitigation measure **MM-TCR-1. MM-TCR-1** is regulatory in nature based on the known, albeit limited, potential for tribal cultural resources to be discovered as a result of project implementation. No potential secondary impacts would occur.

Utilities and Service Systems

As stated in Section 4.16, project impacts associated with utilities and service systems would be considered less than significant and no mitigation measures are required. Therefore, no potential secondary impacts would occur.

Energy

As stated in Section 4.17, Energy, project impacts associated with energy would be considered less than significant, and no mitigation measures are required. Therefore, no potential secondary impacts would occur.

Conclusion

Therefore, as discussed in this chapter, the proposed project would not result in significant adverse secondary effects related to mitigation measures.

5.6 REFERENCES

CAL FIRE (California Department of Forestry and Fire Protection). 2012a. "State Responsibility Area Viewer" [online database]. Accessed February 5, 2019. http://www.fire.ca.gov/firepreventionfee/sraviewer_launch.

CAL FIRE. 2012b. "Los Angeles County Fire Hazard Severity Zones in SRA" [map]. 1:150,000. Adopted November 7, 2007. Accessed February 5, 2019. http://www.fire.ca.gov/fire_prevention/fhsz_maps_losangeles.

Takeshita, M.Y. 2018. Request for fire department service information. Letter correspondence between M.Y. Takeshita (Acting Chief, Forestry Division, Los Angeles County Fire Department – Prevention Services Bureau) and Dudek. December 27, 2018.

INTENTIONALLY LEFT BLANK

CHAPTER 6
ALTERNATIVES

6.1 INTRODUCTION

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, an Environmental Impact Report (EIR) is required to "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. An EIR need not consider every conceivable alternative to a project." (14 CCR 15126.6(a)). An EIR "must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation" (14 CCR 15126.6(a)). This alternatives discussion is required even if these alternatives "would impede to some degree the attainment of the project objectives, or would be more costly" (14 CCR 15126.6(b)).

The Guidelines further provide that the range of alternatives is guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are included. (14 CFR 15126.6(f)). The EIR need only examine alternatives that could feasibly attain most of the basic objectives of the project. "Among the factors that may be taken into account when addressing feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries…, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site…"

The inclusion of an alternative in an EIR does not constitute definitive evidence that the alternative is in fact "feasible." The final decision regarding the feasibility of alternatives lies with the decision maker for a given project, who must make the necessary findings addressing the potential feasibility of an alternative, including whether it meets most of the basic project objectives or reduces the severity of significant environmental effects pursuant to CEQA (California Public Resources Code, Section 21081; see also 14 CCR 15091).

Beyond these factors, the Guidelines require the analysis of a "no project" alternative and an evaluation of alternative location(s) for the project, if feasible. Based on the alternatives analysis, an environmentally superior alternative is to be designated. If the environmentally superior alternative is the "no project" alternative, then the EIR shall identify an environmental superior alternative among the other alternatives.

6.2 SELECTION OF ALTERNATIVES

The range of alternatives and methods for selection is governed by CEQA and applicable CEQA case law. As stated in CEQA Guidelines Section 15126.6(a), the lead agency is responsible for

selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. This chapter includes the range of project alternatives that have been selected by the lead agency (in this case, the County of Los Angeles (County)) for examination, as well as its reasoning for selecting these alternatives.

As stated in Section 15126.6(a) of the CEQA Guidelines, there is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason. This rule is described in Section 15126.6(f) of the CEQA Guidelines and requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. As defined in Section 15126.6(f), the rule of reason limits alternatives analyzed to those that would avoid or substantially lessen one or more of the significant effects of a project. Of those alternatives, an EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. Other relevant provisions set forth in the CEQA Guidelines state that EIRs do not need to consider every conceivable alternative to a project, nor are they required to consider alternatives that are infeasible. The project objectives and the significant impacts of a project are key determiners of the alternatives that are initially examined by the lead agency and the alternatives that are ultimately carried forward for detailed analysis in an EIR. As such, the following subsections describe the proposed project including (a) a summary of the proposed project's characteristics to facilitate comparison between the proposed project and its alternatives, (b) the list of project objectives, and (c) a summary of the project's significant impacts.

6.2.1 Project Summary

The Creek at Dominguez Hills project (project or proposed project) would consist of the development of the project site with recreation, health, and fitness uses. The project site would be developed with approximately 509,500 square feet of buildings, including a multi-use indoor sports complex, enhanced driving range experience, youth learning experience facility, indoor skydiving facility, marketplace, clubhouse, recreation and dining center, restaurants (optionally, a specialty grocery store may be developed in place of some of the restaurant uses), and a sports wellness center. The proposed project would also provide ziplining facilities, a community park, open space areas, a putting green, and a jogging path. Table 6-1, Summary of Project Facilities, summarizes the building area of proposed project facilities. The proposed sports park uses would be located in the northwestern portion of the site while the proposed Main Street Park would be located in the southeastern portion of the site.

Table 6-1
Summary of Project Facilities

	Use	Building Area (square feet)	Parking (number of spaces)
Pad 1	Multi-use indoor sports complex	199,000	749[1]
Pad 2	Youth learning experience	30,000	
Pad 3	Indoor skydiving building	7,500	
Pad 4	Enhanced driving range experience	75,000	429
Pad 5	Marketplace	54,000	408[2]
Pad 6	Marketplace	17,000	
Pad 7	Clubhouse	40,000	469
Pad 8	Recreation and dining facility	26,000	
Pad 9 & 11	Restaurants[3]	25,000	
Pad 10	Sports wellness building	36,000	
Pad 12	Zipline and adventure course	—	—
Pad 13	Community park	—	—
Pad 14	Putting green	—	—
Pad 15	Jogging/walking path	—	—
		Street Parking	*58*
	Total	**509,500**	**2,113**

Notes:
1 Includes overflow parking.
2 Includes parking for 36,000 square feet of sports wellness use located on the north side of the Turmont Street access road.
3 Optionally, a 30,000-square-foot specialty grocery store may be developed on Pad 11 in place of the 28,600 square feet of restaurant uses.

A detailed project description is included in Chapter 3, Project Description.

6.2.2 Project Objectives

In developing the alternatives to be addressed in this chapter, consideration was given to the ability to meet the basic objectives of the project and eliminate or substantially reduce the identified significant environmental impacts. As stated in Chapter 3, Project Description, of this Draft EIR, the project objectives against which the alternatives were analyzed include the following:

- Convert the underperforming golf course into a more-accessible economically viable recreational facility that would provide new active and passive recreational amenities, including a multipurpose indoor sports facility, enhanced driving range experience, park and community gathering areas, meeting rooms, along with complementary commercial uses that would serve the public recreation facilities, located within a safe environment to better serve the surrounding community and region at large
- Support high-quality sports training, instruction, and competition activities, as well as health and youth education, while simultaneously creating a destination for community gatherings and entertainment

- Provide a balance between both passive and active recreational uses that meets the demands of the community and surrounding area
- Provide the opportunity for a wider range of recreational amenities and activities for the community and surrounding area, compared to the current golf course use
- Provide the opportunity for a healthier community through an increase of recreational facilities and the provision of an extensive trail system
- Provide facilities where community gatherings and events can be held
- Create a successful and significant regional sports and events venue that is economically viable and self-sustaining because of the complementary commercial uses
- Maintain and enhance the economic vitality of the region by providing job opportunities
- Preserve the sensitive riparian areas within the Dominguez Branch Channel that bisects the property and provide viewing and interpretive opportunities as part of the overall project plan
- Provide adequate traffic access into and through the project area
- Provide adequate parking facilities within the project area; and
- Provide for signage that supports and enhances the future success of the project

6.2.3 Environmental Impacts of the Proposed Project

As discussed in detail in Chapter 4, Environmental Analysis, the proposed project would result in significant, unavoidable impacts in certain environmental categories including Air Quality (construction and operation), Noise (construction), Recreation, and Transportation (construction and operation).

6.3 ALTERNATIVES SCREENING CRITERIA

As stated in Section 15126.6(c) of the CEQA Guidelines, a reasonable range of alternatives should be considered and a brief explanation provided for the reasons underlying the determination. The CEQA Guidelines emphasize that the selection of alternatives should be based primarily on the ability to avoid or significantly lessen significant impacts relative to the proposed project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." Among the factors that may be used to eliminate alternatives from detailed consideration in the EIR are:

i. Failure to meet most of the basic project objectives,

ii. Infeasibility, or

iii. Inability to avoid significant environmental impacts (CEQA Guidelines Section 15126.6(c)).

Section 15126.6(f)(1) of the CEQA Guidelines states 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…and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives."

- The No Project (No Development) Alternative, which is a required element of an EIR pursuant to Section 15126.6(e) of the CEQA Guidelines, examines the environmental effects that would occur if the project were not to proceed and no development activities were to occur. The other alternatives are discussed as part of the "reasonable range of alternatives" selected by the lead agency. The alternatives addressed in this section are listed below, followed by a more detailed discussion of each in Section 6.4:
- **Alternative 1**: No Project
- **Alternative 2**: Passive Use Park
- **Alternative 3**: Alternative Land Use – Active Sports Complex

Certain alternatives were also considered and rejected as described below.

6.3.1 Alternatives Considered but Rejected

As set forth in CEQA Guidelines Section 15126.6(c), an EIR should identify any alternatives that were considered for analysis but rejected as infeasible and briefly explain the reasons for rejection. According to the CEQA Guidelines, among the factors that may be used to eliminate an alternative from detailed consideration is the alternative's failure to meet most of the basic project objectives, the alternative's infeasibility, or the alternative's inability to avoid significant environmental impacts. The following discussion presents information on alternatives to the project that were considered but rejected. These alternative are not discussed in further detail and has been eliminated from further consideration.

Residential Subdivision Alternative

Under this alternative, the golf course would close and the site would be developed with single-family homes consistent with the lot sizes and home sizes of the residential tract immediately east of the project site. This alternative was dismissed because it would not meet the objectives of the proposed project. Additionally, a residential subdivision would be inconsistent with the recreational land use designation of the project site by the County. Moreover, the project site includes areas of a former landfill, and the Remedial Action Plan (Burns & McDonnell 2016) for the project site includes Institutional Controls that prohibit sensitive land uses, such as residential (also school, hospital, daycare uses), from being located on site.

Commercial Shopping Center Alternative

Under this alternative, the golf course would close and the site would be developed with a retail commercial shopping center. The center would contain a range of larger retailers, such as a grocery store, and smaller retailers, such as a dry cleaner or restaurants. This alternative was dismissed because it would not meet the objectives of the proposed project. Additionally, a retail commercial shopping center would be inconsistent with the County recreational land use designation for the project site.

Industrial Business Park Alternative

Under this alternative, the golf course would close and the site would be developed with an industrial business park similar to other business parks in the nearby community (e.g., on South Main Street). This alternative was dismissed because it would not meet the objectives of the proposed project. Additionally, an industrial business park would be inconsistent with the County recreational land use designation for the project site.

Off-Site Location Alternative

The County considered whether any feasible alternative locations exist. Very few, if any, available properties with similar characteristics exist in the project vicinity, and none are owned by the County or controlled by the project applicant, circumstances which present significant challenges to locating a suitable alternative site to construct the project. Furthermore, development of the project at an alternative location (if one were owned by the County, controlled by the project applicant, or available for purchase) would likely result in environmental impacts similar to those identified for the project in this EIR.

Only alternative locations that would avoid or substantially lessen any of the significant effects of the project need to be considered pursuant to Section 15126.6(f)(2) of the CEQA Guidelines. 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, and whether the applicant can reasonably acquire, control, or otherwise have access to the alternative site. As such, this alternative would be considered infeasible, and in accordance with Section 15126.6(f) of the CEQA Guidelines, this alternative was eliminated from further evaluation.

6.4 ALTERNATIVES CARRIED FORWARD FOR CONSIDERATION

This section discusses the alternatives to the project, including the No Project Alternative, under consideration. The No Project (No Development) Alternative, which is a required element of an EIR pursuant to Section 15126.6(e) of the CEQA Guidelines, examines the environmental effects

that would occur if the project were not to proceed and no development activities were to occur. The other alternatives are discussed as part of the "reasonable range of alternatives" selected by the lead agency.

Pursuant to Section 15126.6(d) of the CEQA Guidelines, each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less than, similar to, or greater than the corresponding impacts of the project. Each alternative is also evaluated to determine whether the project objectives would be substantially attained.

The analysis methodology uses the following process:

- Determination of environmental impact resulting from the alternative
- Comparison of the project impact and the alternative impact with determinations of:
    - **Less**: where the alternative impact would be clearly less adverse or more beneficial than the impact of the project
    - **Similar**: where the alternative and project have roughly equivalent impacts
    - **Greater**: where the alternatives impact would be clearly more adverse or less beneficial than the project
- The comparative analysis is followed by a general discussion of the alternative's ability to meet the project objectives and based on CEQA resource topic area

In several cases, the severity of the impact may be the same under the alternatives as measured against the CEQA significance thresholds (e.g., both the project and a given alternative would result in a less-than-significant impact). However, the actual magnitude of the impact may be slightly different, providing the basis for a conclusion of greater or lesser impacts, even though both are considered less than significant.

Table 6-2, Comparison of Impacts from Alternatives to the Proposed Project, presents a summary matrix of the proposed project impacts in comparison with the three alternatives. Environmental areas previously dismissed from further consideration in this EIR as clearly insignificant and unlikely to occur are not included in the comparison table.

Table 6-2
Comparison of Impacts from Alternatives to the Proposed Project

Environmental Topic Area	Proposed Project Level of Impact	Impact Compared to Proposed Project		
		Alternative 1: No Project	*Alternative 2: Passive Use Park*	*Alternative 3: Alternative Land Use – Active Sports Complex*
Aesthetics	Less than significant with mitigation	Less	Less	Similar
Air Quality	Significant unavoidable	Less	Less	Similar (construction) Less (operation)
Biological Resources	Less than significant with mitigation	Less	Less	Similar
Cultural Resources	Less than significant with mitigation	Less (construction) Similar (operation)	Similar	Similar
Geology and Soils	Less than significant with mitigation	Less	Less	Similar (construction) Less (operation)
Greenhouse Gas Emissions	Less than significant	Less	Less	Less
Hazards/Hazardous Materials	Less than significant with mitigation	Less (construction) Similar (operation)	Less (construction) Similar (operation)	Less
Hydrology & Water Quality	Less than significant	Less	Less	Similar (construction) Less (operation)
Land Use	Less than significant	Less	Less	Similar (construction) Less (operation)
Noise	Significant unavoidable	Less	Less	Similar
Population and Housing	Less than significant	Less	Less	Less
Public Services	Less than Significant	Less	Less	Less
Recreation	Significant unavoidable	Less	Less	Similar
Transportation	Significant unavoidable	Less	Less	Less
Tribal Cultural Resources	Less than significant with mitigation	Less (construction) Similar (operation)	Similar	Similar
Utilities and Service Systems	Less than significant	Less	Less	Similar (construction) Less (operation)
Energy	Less than significant	Less	Less	Less

6.4.1 Alternative 1: No Project Alternative

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate the specific alternative of "no project" along with its impact. As stated in this section of the CEQA Guidelines, the purpose of describing and analyzing a No Project Alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. As specified in Section 15126.6(e)(3)(B) of the CEQA Guidelines, the "no project" alternative for a development project consists of the circumstance under which a proposed project does not proceed. Section 15126.6(e)(3)(B) further states that "in certain instances, the no project alternative means 'no build' wherein the existing environmental setting is maintained." Accordingly, Alternative 1: No Project Alternative assumes the proposed project would not proceed, no new permanent development or land uses would be introduced within the project site, and the existing environment would be maintained. Under Alternative 1, while the existing golf course is underperforming and could continue to decline, this analysis assumes that the project site would continue to operate as a County-owned golf course.

Alternative 1:
No Project Alternative (i.e., Existing Development)

Use	Building Area (square feet)	Parking (number of spaces)
Clubhouse and Cart Storage	35,700	225
Golf Course and Driving Range	—	
Driving Range	—	

Ability to Meet Project Objectives

Alternative 1 would not achieve any of the project objectives. The ongoing use as a golf course will not provide new active and passive recreational amenities, including a multipurpose indoor sports facility, enhanced driving range experience, park and community gathering areas, meeting rooms, along with complementary commercial uses that would serve the public recreation facilities, located within a safe environment to better serve the surrounding community and region at large. Additionally, Alternative 1 would fail to create pedestrian walking paths or public gathering spaces. It would also fail to redevelop and revitalize an underutilized site, would not provide new jobs, and would not generate new tax revenues.

Feasibility

The operation of the site as a municipal golf course is feasible in the short term; however, the long-term economic viability of the use is questionable. Based on studies conducted of municipal golf courses, the results demonstrate that there have been significant operating losses for municipal

golf courses that have had a direct negative financial impact on the communities that own and operate the courses. These findings are "widespread in the municipal golf course industry in the United States" (Ingram et al. 2013). Additionally, the number of US golfers has continued to drop. In 2013, there was a decline of 1.1 million players, which represented a 24% decline from golf's peak in 2002 (Rupp and Coleman-Lochner 2013). These trends strongly suggest a negative economic impact on the operating municipality and therefore the economic infeasibility of continued golf course operation.

Comparison of the Effects of Alternative 1 to the Proposed Project

Aesthetics

Construction: Alternative 1 would not alter the existing condition of the project site or require any construction activities and therefore would not result in any change to the visual character or quality of the project area. No construction impacts associated with aesthetics would occur under this alternative. Therefore, construction-related aesthetics impacts would be less than those anticipated from the proposed project.

Operation: Alternative 1 would not result in new development or increased intensity of golf course operations that could result in permanent change to the visual character or quality of the area. No operational impacts associated with aesthetics would occur under this alternative. Therefore, operation-related aesthetics impacts would be less than those anticipated from the proposed project.

Air Quality

Construction: Alternative 1 would not alter the existing condition of the project site or require any construction activities and therefore would not result in any construction emissions associated with construction worker and construction truck traffic, or the use of heavy-duty construction equipment, and construction-related regional and localized air quality impacts would not occur. Therefore, the construction-related air quality impacts would be less than those anticipated from the proposed project.

Operation: Alternative 1 would not result in new development or increased operations that could generate additional operational emissions related to vehicular traffic or the consumption of energy resources. Therefore, the operation-related air quality impacts would be less than those anticipated from the proposed project.

Biological Resources

Construction: The project site contains biological resources and jurisdictional waters associated with the Dominguez Branch Channel freshwater marsh habitat and Dominguez Channel open water, as well as shrubland and scrub area at the interface of non-native ornamental grasses of the golf

course. Under Alternative 1, the golf course would remain and potential construction impacts to riparian corridors and scrub/shrub habitats would not occur. The existing golf-cart bridges that span over the Dominguez Branch Channel would not be replaced with new bridges that can support two-lane automobile access and encroach within the CDFW jurisdictional limits of Dominguez Branch Channel. Additionally, the four proposed storm drain outlets would not be constructed within the CDFW jurisdictional limits of the Dominguez Branch Channel or the Dominguez Channel. Therefore, the construction-related biological resources impacts would be less than those anticipated from the proposed project.

Operation: The use of the golf course would continue and associated routine mowing and vegetation maintenance would continue to maintain tees, fairways, and greens. Therefore, the operation-related biological resources impacts would be less than those anticipated from the proposed project.

Cultural Resources

Construction: No significant historical resources were identified as a result of cultural resources studies conducted for this project. Therefore, Alternative 1 is not anticipated to impact culturally significant resources because no known resources exist on site. Furthermore, the golf course would remain and potential construction impacts (including ground-disturbing activities such as grading or other earthwork) would not occur. Therefore, the construction-related cultural resources impacts would be less than those anticipated from the proposed project.

Operation: The use of the golf course would continue and given the lack of culturally significant resources, the operation-related impacts on cultural resources would be similar to those anticipated from the proposed project.

Geology and Soils

Construction: Alternative 1 would not construct new development on the project site that would require grading or other earthwork activities. Therefore, Alternative 1 would not cause or accelerate geologic hazards related to fault rupture, strong seismic shaking, liquefaction, seismically induced settlement, soil stability, subsidence, or expansive soils, which would result in substantial damage to structures or infrastructure or expose people to substantial risk of injury. No impacts related to geology and soils would occur under this alternative, and therefore construction-related geology and soils impacts would be less than those anticipated from the proposed project.

Operation: Under Alternative 1, the use of the golf course would continue subject to the ongoing Remedial Action Plan overseen by the DTSC. The golf course use would not change or increase the exposure of humans or structures to potential landslides, liquefaction, subsidence or other geological hazards. As such, the operation-related geology and soils impacts anticipated would be less than those from the proposed project.

Greenhouse Gas Emissions

Construction: Since there would be no development, Alternative 1 would not generate any short-term construction-related GHG emissions. This alternative would have no impact on GHG emissions, and therefore construction-related GHG emissions impacts would be less than those anticipated from the proposed project.

Operation: Operation of the golf course would not increase or intensify the current use nor require additional traffic trips or other potential GHG sources. Therefore, the operation-related GHG emissions impacts would be less than those anticipated from the proposed project.

Hazards and Hazardous Materials

Construction: Because Alternative 1 would not include any new construction activities, exposure to potentially hazardous materials associated with construction (e.g., exposure of people to previously unidentified contaminated soils) or generation of hazardous waste would not occur. Furthermore, the potential to disturb underlying landfill deposits would not occur. Therefore, the construction-related hazards/hazardous materials impacts would be less than those anticipated under the proposed project.

Operation: The continued operation of the golf course would require the use of some pesticides, including herbicides, for pest control and vegetation maintenance. However, the use of pesticides/herbicides would be consistent with current usage. Based on research conducted to assess potential risk of harmful exposure from golf courses, data suggest that pesticide exposure levels do not pose a short or long-term health risk (Borgert et al. 1994). However, a growing volume of scientific research suggests that there may be risk to humans and the environment related to certain herbicides (Meyers et al. 2016). Continued operation of the proposed facilities would involve ongoing use of hazardous chemicals such as commercially available cleaning products, landscaping chemicals, herbicides and fertilizers, and various other commercially available substances. Workers and the public could be exposed to these hazardous substances while working at or visiting the project facilities. The levels of potential exposure to hazardous materials under Alternative 1 are considered to be similar to those anticipated under the proposed project.

Hydrology and Water Quality

Construction: Under Alternative 1, no construction would occur and therefore there would be no potential for runoff from the site to be affected by sedimentation or other potential contaminants nor a change in drainage patterns. Therefore, construction-related impacts to hydrology and water quality would be less than those anticipated from the proposed project.

Operation: Continued operation of the golf course would require limited use of herbicides and use of mechanized equipment and golf carts which could potentially cause some impact to hydrology and water quality. There would be no changes to the impermeable surfaces, and the existing drainage pattern would remain unchanged. Consequently, operational impacts related to hydrology and water quality would be less than those anticipated from the proposed project.

Land Use and Planning

Construction: Under this alternative, no construction would occur and therefore there would be no potential to impact the existing golf course land use or surrounding land uses. Therefore, construction-related impacts to land use and planning would be less than those anticipated from the proposed project.

Operation: Continued operation of the golf course would maintain the existing on-site land use and consistency with the County recreational designation. Consequently, operation-related land use and planning impacts would be less than those anticipated under the proposed project.

Noise

Construction: Alternative 1 would not result in any construction and would not cause any noise impacts. Therefore, construction-related noise impacts would be less than those anticipated from the proposed project.

Operation: Operation of the golf course would continue consistent with current practices. Tee times begin as early as 6:30 am with the course open until 8 pm. Although hours of operation for the proposed project would likely not begin as early as 6:30 am, there will be more recreational uses on site that have the potential to generate noise. As such, operation-related noise impacts would be less than those anticipated from the proposed project.

Population and Housing

Construction: Alterative 1 would have no effect on the local labor pool and there would be no indirect effect on population or housing. Therefore, construction-related impacts on population and housing would be less than those anticipated from the proposed project.

Operation: Alternative 1 would have no effect on the golf course workforce; therefore, there would be no indirect effect on population or housing. Operation-related impacts on population and housing would be less than those anticipated from the proposed project.

Public Services

Construction: Under Alternative 1, there would be no construction and associated increase in public service demands; therefore, construction-related public services impacts would be less than those anticipated from the proposed project.

Operation: The existing golf course would continue operating without intensifying the use and therefore there would be no increased demand on public services. Therefore, operation-related public services impacts would be less than those from the proposed project.

Recreation

Construction: Alternative 1 would not cause any short-term recreational impacts because no construction would occur. Existing activities associated with the golf course would continue uninterrupted. Therefore, construction-related impacts on recreation would be less than those anticipated from the proposed project.

Operation: Alternative 1 would continue the operation of an underperforming golf course. It would not generate population that could cause or accelerate physical deterioration of existing parks and recreational facilities or create the need for construction or expansion of recreational facilities. Therefore, operation-related recreation impacts would be less than those anticipated under the proposed project. It should be noted that Alternative 1 would not provide the same level of recreational benefits as the proposed project.

Transportation

Construction: Alternative 1 would not cause any short-term traffic/transportation impacts because no construction would occur. Therefore, construction-related traffic impacts would have no impact compared to those anticipated from the proposed project.

Operation: Alternative 1 would maintain the existing traffic and circulation patterns associated with golf course operations and therefore operation-related traffic impacts would be less than those anticipated from the proposed project.

Tribal Cultural Resources

Construction: Alternative 1 would not impact culturally significant tribal cultural resources because no known resources were determined to exist on site. Furthermore, the golf course would remain and potential construction impacts (including ground disturbing activities such as grading or other earthwork) would not occur. Therefore, the construction-related tribal cultural resources impacts would be less than those anticipated from the proposed project.

Operation: Under Alternative 1, use of the golf course would continue and given the lack of known culturally significant tribal cultural resources, the operation-related cultural resources impacts would be similar to those anticipated from the proposed project.

Utilities and Service Systems

Construction: Under Alternative 1, there would be no construction and associated increase in demand for utilities; therefore, construction-related impacts on utilities and service systems would be less than those anticipated from the proposed project.

Operation: The existing golf course would continue operating without intensifying the use and therefore there would be no increased demand on utilities and services systems. Therefore, operation-related impacts on utilities and service systems would be less than those anticipated from the proposed project.

Energy

Construction: Under Alternative 1, there would be no construction and associated increase in demand for additional energy use to support construction. Therefore, construction-related impacts on energy would be less than those anticipated from the proposed project.

Operation: The existing golf course would remain and continue operating at current intensity and participant levels without increasing the demand for additional energy. Therefore, operation-related impacts on energy would be less than those anticipated from the proposed project

6.4.2 Alternative 2: Passive Use Park

Alternative 2 would result in the closure of the existing golf course and conversion of the property into a passive use recreational park. Features associated with the golf course, such as sand traps, would be removed and the land would be re-contoured to establish a more natural setting. Duration to complete demolition and re-contouring would be estimated at 2 to 4 months and with noise-generating activity conducted in accordance with the County's Noise Control Ordinance. Construction equipment similar to the proposed project (e.g., excavators, backhoes, bulldozers) would be used; however, less equipment would be necessary due to the smaller scope of construction required for Alternative 2. Grading depth would not exceed 3 feet below existing grade and minimal compaction would be required for site improvements like playgrounds. Standard erosion control measures and best management practices would be implemented during grading and work done in accordance with California Building Code requirements. Construction-related hazardous materials (e.g., oils, lubricants) and hazardous waste would be stored and disposed of in compliance with manufacturer's specifications and applicable laws and regulations. Disturbed areas would be planted with drought-tolerant landscaping and would require minimal irrigation to establish the vegetation. The existing golf course parking lot would remain to provide

parking for visitors to the site. Minimal security lighting would be incorporated. Passive uses would be similar to some of the improvements in the proposed project, such as a jogging trail, open lawn areas, flexible event space, a picnic grove, a playground, natural reflection spaces, and shaded terraces. However, no active uses such as sports fields would be included. The passive use under Alternative 2 would not be anticipated to generate revenue sufficient to offset maintenance cost. Additionally, limited job opportunities would be created by Alternative 2.

Alternative 2:
Passive Use Park

Use	Building Area (square feet)	Parking* (number of spaces)
Community park	—	225
Jogging/walking path	—	

* Existing parking lot would remain to provide on-site parking

Ability to Meet Project Objectives

Alternative 2 would meet some of the stated proposed project objectives such as additional community trails and gathering locations, and availability and protection of open space and riparian resources. However, this alternative would not provide unique recreational opportunities such as an indoor sports complex with the capability to accommodate many different sports and activities, indoor skydiving, or ziplining. Complementary commercial uses such as restaurants would not be available to the nearby community.

Comparison of the Effects of Alternative 2 to the Proposed Project

Aesthetics

Construction: Under Alternative 2, some construction activity would be required to remove golf course features and establish a passive use park. Construction could be accomplished in a relatively short time period (2 to 4 months) given the limited scope of demolition, site re-contouring and landscaping. Construction equipment and debris stockpiling could potentially be visible from nearby public roadways. Given the smaller scope of construction activity, shorter duration, and minimal visibility of the worksites to the public, construction-related aesthetic impacts would be less than those anticipated under the proposed project.

Operation: Alternative 2 would have a similar visual character and quality as the existing golf course given that the park would have open space, walking trails, and a putting green. This is in comparison to the proposed project, which would result in approximately 509,500 square feet of new structural development and 2,113 parking spaces. Therefore, operation-related aesthetic impacts would be less than those anticipated from the proposed project.

Air Quality

Construction: Under Alternative 2, short-term construction impacts could occur due to demolition activities, dust generation, operation of construction equipment and additional worker traffic trips to and from the site (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing) and off-site sources (i.e., vendor trucks and worker vehicle trips). Construction emissions can vary substantially from day to day depending on the level of activity, the specific type of operation, and prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts. However, these activities under Alternative 2 would be significantly shorter in duration compared to the proposed project. Additionally, the total number of construction equipment operating on a daily basis required to complete the demolition and re-contouring would be less than that of the proposed project. Standard best management practices would minimize dust. As with the proposed project, the implementation of Mitigation Measure **MM-AQ-1** would require the use of California Air Resources Board certified Tier 4 equipment reducing air emissions. Therefore, the construction-related air quality impacts would be less than those anticipated from the proposed project.

Operation: Alternative 2 would generate air quality emissions only through the transportation of visitors to and from the park and limited maintenance activities requiring mechanized equipment. Therefore, the operation-related air quality impacts would be less than those anticipated from the proposed project.

Biological Resources

Construction: Under Alternative 2, short-term impacts to biological resources could occur due to construction equipment disturbance while removing golf course features and re-contouring of the site. However, these impacts would be short-term and site restoration activities would restore impacted areas. The existing golf-cart bridges that span over the Dominguez Branch Channel would not be replaced with new bridges that can support two-lane automobile access and encroach within the CDFW jurisdictional limits of Dominguez Branch Channel. Additionally, the four proposed storm drain outlets would not be constructed within the CDFW jurisdictional limits of the Dominguez Branch Channel or the Dominguez Channel. As with the proposed project, **MM-BIO-1**, **MM-BIO-2**, **MM-BIO-3**, and **MM-BIO-4** would reduce impacts under this alternative to less-than-significant levels by requiring preconstruction surveys, bird nest avoidance, compensation for loss of jurisdictional waters and tree protection. Therefore, the construction-related biological resources impacts would be less than those anticipated from the proposed project.

Operation: Additional habitat would be created by the conversion of the golf course to a passive use park. Areas of the site, such as the Dominguez Branch Channel freshwater marsh habitat as well as shrubland and scrub area at the interface of non-native ornamental grasses of the golf

course, could be enhanced with native vegetation creating additional biological habitat. Furthermore, ongoing maintenance of the golf course would cease, allowing for natural vegetation growth to occur. Under the proposed project, a larger portion of the site would be developed with structures removing land that could provide biological habitat. Therefore, the operation-related biological resources impacts would be less that those anticipated from the project.

Cultural Resources

Construction: No significant historical resources were identified as a result of cultural resources studies conducted for this project. As such, Alternative 2 is not anticipated to impact culturally significant resources because no known resources exist on site. In the event that previously unknown buried resources are discovered during construction, Mitigation Measures **MM-CUL-1** and **MM-CUL-2** would be implemented to stop work and redirect effort until the resource is evaluated, a paleontologist is retained on site, and the County coroner would be contacted if human remains are discovered. Therefore, as the location of buried resources is unknown, the construction-related cultural resources impacts would be similar to those anticipated from the proposed project.

Operation: As previously noted, the project site does not contain significant cultural resources. Therefore, operation-related impacts would be similar to those anticipated from the proposed project.

Geology and Soils

Construction: Alternative 2 would require some minimal grading and earthwork activities to re-contour the site. Grading activities would be accomplished using standard best management practices. Small structures like a playground would be installed and the underlying surface compacted per building code requirements but no major infrastructure installed. Given the shallow depth of grading activity there would be no potential to encounter landfill deposits. Construction-related geology and soils impacts would be less than those anticipated from the proposed project.

Operation: Alternative 2 would consist of low-intensity and low-density development. A passive use park would not cause or accelerate geologic hazards related to fault rupture, strong seismic shaking, liquefaction, seismically induced settlement, soil stability, subsidence, or expansive soils, which would result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury. Therefore, operation-related geology and soils impacts anticipated would be less than those from the proposed project.

Greenhouse Gas Emissions

Construction: Under Alternative 2, short-term operation of construction equipment and additional worker traffic trips to and from the site could cause GHG emissions. However, these activities

would be significantly shorter in duration than the proposed project and the corresponding GHG emissions would be less. Additionally, the total number of construction equipment required to complete the demolition and re-contouring would be less than that of the proposed project, also reducing the corresponding GHG emissions. Therefore, the construction-related GHG emission impacts would be less than those anticipated from the proposed project.

Operation: Alternative 2 is anticipated to generate GHG emissions only through the transportation of visitors to and from the park and limited maintenance activities requiring mechanized equipment. Therefore, the operation-related GHG emission impacts would be less than those anticipated from the proposed project.

Hazards and Hazardous Materials

Construction: Under Alternative 2, limited demolition and construction activities would be required to establish the park use. Hazardous materials and waste would be generated but in relatively small quantities due to the minimal scope of the demolition and re-contouring. As with the proposed project, **MM-HAZ-1**, **MM-HAZ-2**, **MM-HAZ-3**, and **MM-HAZ-4** would be implemented to address potential impacts related to hazards/hazardous materials. Therefore, the construction-related impacts from hazards/hazardous materials would be less than those anticipated from the proposed project.

Operation: Alternative 2 would require the use of some herbicides for vegetation maintenance. However, the use of herbicides would remain equal or less to the current golf course use. The operation of a passive use park would be in compliance with the Remedial Action Plan administered by DTSC. Therefore, the operation-related impacts from hazards/hazardous materials are considered to be similar to the proposed project.

Hydrology and Water Quality

Construction: Under Alternative 2, limited construction activity would occur to demolish existing golf course features and to re-contour the site. Grading would be conducted in accordance with California Building Code requirements and to minimize potential for uncontrolled runoff. Appropriate design would minimize or eliminate runoff from the site to be affected by sedimentation or other potential contaminants nor a change in drainage patterns. Therefore, construction-related impacts to hydrology and water quality would be less than those anticipated from the project.

Operation: Use of the site under Alternative 2 would provide vegetative open space that could potentially provide beneficial groundwater infiltration thereby minimizing runoff, sedimentation off site, and scouring. The preservation and enhancement of the Dominguez Branch Channel also could enhance on-site hydrology and water quality by creating natural creek habitat. The existing

drainage pattern would largely remain unchanged. Consequently, operation-related impacts to hydrology and water quality would be less than anticipated from the proposed project.

Land Use and Planning

Construction: Limited construction activity to remove golf course features as part of Alternative 2 would align with the site's land use designation by the County. Construction would not result in any change in land use adjacent to the project site nor would any divide an existing community. Therefore, construction-related impacts to land use and planning would be less than those anticipated from the proposed project.

Operation: Alternative 2 would be consistent with the existing recreational land use designation of the County. Alternative 2 would not substantially or adversely change the relationship of the project site with the surrounding area nor alter the community character. Consequently, operation-related impacts to land use and planning would be less than those anticipated from the proposed project.

Noise

Construction: Under Alternative 2, demolition and grading activities may cause short-term noise due to the use of construction equipment to remove golf course features and establish the passive use park. Construction noise is difficult to quantify because of the many variables involved, including the specific equipment types, size of equipment used, percentage of time, condition of each piece of equipment, and number of pieces of equipment that will actually operate on site. The duration of construction noise would be approximately 2 to 4 months and occurring Monday to Saturday, excluding Sundays and holidays, consistent with the County Noise Ordinance. The nearest sensitive receptors to the project site are single-family homes located as close as 155 feet east of the southeastern extension of the project site. This distance is representative of the residences along the east side of Avalon Boulevard, across from the project site. As with the proposed project, implementation of **MM-NOI-1**, **MM-NOI-2**, and **MM-NOI-3** would require construction to occur consistent with the County's Noise Ordinance, establishment of noise barriers, and outfitting construction equipment with noise attenuating features. As such, construction-related impacts resulting from noise would be less than those anticipated from the proposed project.

Operation: Operational activities under Alternative 2 would be low-intensity and low-density. Some community gatherings could occur, which may result in noise generating activities such as live music. However, these types of events would be conducted infrequently and located in areas of the passive park at least 100 feet from any sensitive receptors. As such, impacts of this alternative from operational noise would be less than those anticipated from the proposed project.

Population and Housing

Construction: Under Alternative 2, construction would be relatively short in duration and reduced in scope, thereby having a minimal effect on the local labor pool, and there would be no indirect effect on population or housing. Therefore, construction-related impacts on population and housing would be less than those anticipated from the proposed project.

Operation: Operation of Alternative 2 would be anticipated to have similar or fewer employees than currently required to operate the golf course (the golf course includes 9 full-time and 5 part-time employees for maintenance and 4 full-time and 13 part-time employees for operation). There would be no anticipated increase in population or housing demand. Therefore, operation-related impacts on population and housing would be less than those anticipated from the proposed project.

Public Services

Construction: Under Alternative 2, construction would be relatively short in duration and scope therefore not causing the need for public services above what is already available to serve the golf course use. The proposed project would result in approximately 509,500 square feet of structural development, and although existing infrastructure is available to serve the proposed project or would be added as part of the proposed project, it represents a significant increase in land use intensity above a passive park use. Therefore, construction-related impacts on public services would be less than those anticipated from the proposed project.

Operation: Operation of Alternative 2 would have similar or fewer employees than currently required to operate the golf course (13 full-time and 18 part-time employees). Additionally, the volume of visitors would be anticipated to be similar to the golf course use. The proposed project is anticipated to generate a net increase of 733 employees. As discussed in Section 4.11, Population and Housing, the expected number of new jobs that would be generated by the proposed project is within employment growth projections for the City and County, as calculated by SCAG. Alternative 2 would generate far fewer employment opportunities than the proposed project, thereby reducing potential for operational impacts to public services. Therefore, operation-related impacts on public services would be less than those anticipated from the proposed project.

Recreation

Construction: Under Alternative 2, short-term construction activities could limit access to a portion or all of the project site; however, once complete, the recreational use of the site would resume. These impacts are considered to be minor and therefore construction-related recreation impacts would be less than those anticipated from the proposed project.

Operation: Alternative 2 would provide some recreational opportunities however much less than the wide-range of recreational amenities and facilities under the proposed project. The proposed project would provide an indoor sports complex, indoor skydiving, sports wellness building, ziplining facilities, a community park, open space areas, a putting green, and a jogging path. Therefore, operation-related recreation impacts would be less than those anticipated from the proposed project. It should be noted that Alternative 2 would not provide the same level of recreational benefits as the proposed project.

Transportation

Construction: Short-term construction activities would increase worker vehicle trips to the site but the closure of the golf course would eliminate vehicle trips from golf course users thereby offsetting some of the additional trips. As noted in Section 4.14, Transportation, all study area intersections currently operate at an acceptable LOS (i.e., LOS D or better) in the a.m. and p.m. peak hours except for the unsignalized intersection of Hamilton Avenue/I-110 southbound ramps, which operates at LOS F during both peak hours. Restoring the project site under Alternative 2 would create construction impacts for 2 to 4 months, which is a much shorter duration that the proposed project. Therefore, construction-related traffic impacts would be less than those anticipated from the proposed project.

Operation: The Institute of Traffic Engineers (ITE) *Trip Generation Manual, 10th Edition* (2017) provides estimated land use trip generation rates based on compiled data from trip surveys conducted at similar existing land uses. Alternative 2 incorporates a land use with specified trip generation rates. Based on ITE's accepted rate generation for a park land use designation and including the other proposed recreational features, total operational average daily traffic trips would be approximately 385 average daily trips, which is significantly lower when compared to the proposed project's estimated 16,137 net average daily trips (ADT). As such, operation-related traffic impacts would be less than those anticipated from the proposed project.

Tribal Cultural Resources

Construction: Alternative 2 would not impact culturally significant tribal resources because no known resources were determined to exist on site. As with the proposed project, in the event of unanticipated discovery of tribal cultural resources (TCRs), **MM-TCR-1** would be implemented and the County and Native American tribes that have been identified by the Native American Heritage Commission to be traditionally and culturally affiliated with the geographic area of the project would be consulted. Therefore, the construction-related tribal cultural resources impacts would be similar to those anticipated from the proposed project. **Operation**: Under Alternative 2, given the lack of known culturally significant TCRs, the operation-related TCRs impacts would be similar to those anticipated from the proposed project.

Utilities and Service Systems

Construction: Under Alternative 2, construction activities would be relatively short in duration and scope. Existing water supply for the golf course would be sufficient for dust control and other construction uses. Similar to the proposed project, during construction, temporary facilities such as portable restrooms would be provided by the contractor at the site, and sewage from these facilities would be collected and hauled off site. Solid waste is anticipated to be minimal under this alternative as most demolition work includes removal of sand traps. The proposed project would result in approximately 509,500 square feet of structural development, and although existing infrastructure is available to serve the proposed project or would be added as part of the proposed project, it represents an increase above Alternative 2 construction activities. Therefore, construction-related impacts on utilities and service systems would be less than those anticipated from the proposed project.

Operation: The proposed project would result in approximately 509,500 square feet of structural development, and although existing infrastructure is available to serve the proposed project or would be added as part of the proposed project, it represents an increase in service demands above a passive use park. Alternative 2 would result in water use, wastewater generation and solid waste quantities significantly lower than the proposed project. The proposed project is anticipated to generate a net increase of 733 employees. Therefore, operational-related impacts on utilities and service systems would be less than those anticipated from the proposed project.

Energy

Construction: In the short-term, construction equipment would require electric power for lighting, petroleum to fuel vehicles, and potentially natural gas for generators or other industrial construction uses (e.g., concrete). However, construction activities would be relatively short in duration and scope. Therefore, construction-related impacts on energy would be less than those anticipated from the proposed project.

Operation: Under Alternative 2, the use of the project site would convert to a passive use park, requiring very little energy in the form of electricity, natural gas, or petroleum. Use of some mechanized equipment and vehicles would be required to maintain the park; however, the energy demand would be much less than the project. Therefore, operation-related impacts on energy would be less than those anticipated from the proposed project.

6.4.3 Alternative 3: Alternate Land Use – Active Sports Complex

Alternative 3 would result in the closure of the existing golf course and conversion of the property into an active sports complex including all recreational uses under the proposed project without any complementary commercial uses, except for the clubhouse building. Facilities would include multiuse indoor sports complex, youth learning experience, indoor skydiving, driving range, zipline,

community park, putting green, and jogging/walking paths. The clubhouse building would be suitable for community-serving uses and include a full kitchen/prep area to support catering and food service, storage space, support facilities (restrooms, administrative and mechanical space, etc.), and a rooftop deck. The community park would be expanded to replace the buildings on Pads 5, 6, and 8–11, along with most of the surface parking areas surrounding those buildings. The overall structural development would be reduced from 509,500 square feet to 351,500 square feet (roughly 68% of the project's square footage), a change of 158,000 square feet. Consequently, construction duration would be reduced to approximately 13 months instead of 18 months. Grading would also be reduced to 136,000 cubic yards (68% of the 200,000 cubic yards proposed by the project). The equipment operating daily during site preparation and grading activities would be substantially similar to the project. However due to the smaller building square footage proposed under this alternative, total construction equipment would be less than the project during building construction. Standard erosion control measures and best management practices would be implemented during grading and work done in accordance with California Building Code requirements. Noise-generating activity conducted in accordance with the County's Noise Control Ordinance. Construction-related hazardous materials (e.g., oils, lubricants) and hazardous waste would be stored and disposed of in compliance with manufacturer's specifications and applicable laws and regulations. Revenue from rental of the facilities would not cover the costs of the building improvements and would be anticipated to be less than maintenance costs but not significantly less.

Alternative 3:
Alternate Land Use – Active Sports Complex

	Use	Building Area (square feet)	Parking (number of spaces)
Pad 1	Multi-use indoor sports complex	199,000	704
Pad 2	Youth learning experience	30,000	
Pad 3	Indoor skydiving building	7,500	
Pad 4	Enhanced driving range experience	75,000	450
Pad 7	Clubhouse	40,000	142
Pad 12	Zipline and adventure course	—	—
Pad 13	Community park	—	—
Pad 14	Putting green	—	—
Pad 15	Jogging/walking path	—	—
	Total	**351,500**	**1,296**

Ability to Meet Project Objectives

Alternative 3 would meet most of the stated project objectives such providing active and passive recreational amenities and community gathering locations. However, removing the complementary commercial uses would not meet a stated project objective to have an

economically viable and self-sustaining project due to the revenue from the commercial uses. Some job opportunities would be created by Alternative 3 but less than under the proposed project.

Comparison of the Effects of Alternative 3 to the Proposed Project

Aesthetics

Construction: Similar to the proposed project, Alternative 3 would temporarily alter the visual appearance of the site due to the proposed construction activities, including grading, staging, and building construction. However, Alternative 3 would incorporate similar project design features, including the installation of temporary construction fencing that would screen much of the construction activity from view at street level. In addition, any pedestrian walkways and construction fencing would be monitored for graffiti removal throughout the construction period. Alternative 3 could have a shorter duration of construction, but would similarly alter the visual character and quality of the project area on a short-term basis by repurposing the golf course use into a recreational facility with many active and passive amenities. Therefore, construction-related aesthetic impacts would be similar to those anticipated from the proposed project.

Operation: Similar to the project, the visual impacts of Alternative 3 would be based on whether the Alternative 3 would result in substantial degradation of visual character and quality, as well as the overall character and visual quality of the site, and the surrounding area. The surrounding area is characterized by urban development consisting of residential, commercial, recreational and industrial land use. Alternative 3 would eliminate the commercial component of the project, which corresponds to 158,000 square feet less structural development than the proposed project. As with the proposed project, lighting would include architectural lighting for the buildings, and exterior lights adjacent to buildings, along pathways, and within parking areas for aesthetic, security and wayfinding purposes. Additionally, the outdoor driving range and recreation field adjoining the multi-use sports complex would be illuminated. All project lighting would comply with current energy standards. All light sources would be shielded and/or directed toward areas to be illuminated, thereby minimizing spillover onto nearby sensitive areas. As with the proposed project, project signage under Alternative 3 would be required to comply with **MM-AES-1** to address luminesce at sensitive receptors. Therefore, Alternative 3 would not substantially degrade or eliminate the existing visual character or quality of the site or introduce elements that would substantially detract from the visual character of the area. As such, operation-related aesthetic impacts would be similar to those anticipated from the proposed project.

Air Quality

Construction: Under Alternative 3, short-term construction impacts could occur due to demolition activities, dust generation, operation of construction equipment and additional worker traffic trips to and from the site. While the amount of excavation and building construction would be less than what

is proposed under the project due to the reduction in square footage and corresponding grading, the intensity of air emissions and fugitive dust from site preparation and construction activities would be similar on days with all construction activities occurring. The South Coast Air Quality Management District has established Air Quality Significance Thresholds based on pounds per day of criteria pollutants. Given that this alternative and the project would have similar air emissions and fugitive dust on similar days, it is likely that Alternative 3 would also exceed maximum pounds per day for criteria pollutants established by the South Coast Air Quality Management District. Under Alternative 3, construction trip generation would be proportionately reduced by approximately 32%. The overall truck trip reduction from reduced fill quantities would represent the largest reduction in air emissions. As with the proposed project, the implementation of **MM-AQ-1** would require the use of California Air Resources Board certified Tier 4 equipment reducing air emissions. The construction-related air quality impacts would be similar to those anticipated from the proposed project.

Operation: Under Alternative 3, primary sources of air quality emissions during operation would be vehicle trips. Trip generation during operation would be approximately 80% less than the Project (3,125 ADT compared to the proposed project's 16,137 net ADT). The operation-related air quality impacts would be less than those anticipated from the proposed project.

Biological Resources

Construction: Based on reconnaissance level and focused special status species surveys for plant and wildlife species, none were observed on site. Portions of the vegetation within the Dominguez Branch Channel support freshwater marsh habitat and non-native woodland habitat. However, the majority of the freshwater marsh vegetation within the Dominguez Branch Channel is proposed to remain intact. Under Alternative 3, site disturbance is assumed to cover a smaller area of the entire site since fewer buildings and parking areas would be constructed. It is anticipated that the existing golf-cart bridges that span over the Dominguez Branch Channel would be removed. However, the four proposed storm drain outlets would not be constructed within the CDFW jurisdictional limits of the Dominguez Branch Channel or the Dominguez Channel. As such, the construction impacts to biological resources under Alternative 3 would be similar to the proposed project, although less of the site would be disturbed. Given the nature of the biological impacts for both the proposed project and Alternative 3, **MM-BIO-1**, **MM-BIO-2**, **MM-BIO-3**, and **MM-BIO-4** would reduce impacts under Alternative 3 to less-than-significant levels by requiring preconstruction surveys, bird nest avoidance, compensation for loss of jurisdictional waters and tree protection. Therefore, the construction-related biological resources impacts would be similar to those anticipated from the proposed project.

Operation: Under Alternative 3 structural development on site would be 351,500 square feet, 158,000 square feet less structural development. The additional undeveloped land could be used for recreational open space, resulting in potentially greater biological habitat value. However,

under both the proposed project and Alternative 3, a substantial portion of the project site would be developed with structures and associated uses (hardscape for parking, walking paths, etc.), although significant areas used as surface parking under the project would be eliminated in this alternative. As such, operation-related biological resources impacts would be similar to those anticipated from the proposed project.

Cultural Resources

Construction: No significant historical resources were identified as a result of cultural resources studies conducted for this project. As a result, Alternative 3 is not anticipated to impact culturally significant resources because no known resources exist on site. In the event that previously unknown buried resources are discovered during construction, **MM-CUL-1** and **MM-CUL-2** would be implemented to stop work and redirect effort until the resource is evaluated, a retained paleontologist is retained on site, and the County coroner would be contacted if human remains are discovered. Therefore, as the location of the buried resources is unknown, the construction-related cultural resources impacts of Alternative 3 would be similar to the proposed project.

Operation: As previously noted, the project site does not contain significant cultural resources. Operation of Alternative 3 would be similar to those from the proposed project.

Geology and Soils

Construction: Alternative 3 would require grading and earthwork activities less than the proposed project. Impacts related to the exacerbation of site-specific geologic hazards including seismic fault rupture, strong seismic ground shaking, liquefaction, landside/lateral spreading, seismic-induced settlement, subsidence, erosion and expansive soils would be similar to those under the project because such impacts are a function of the underlying geologic conditions rather than the type of land use proposed. Construction-related geology and soils impacts would be similar to those anticipated from the proposed project.

Operation: Alternative 3 would result in development substantially similar in nature to the project. The Alternative 3 would be subject to the same California Building Code requirements as the project. Operation of Alternative 3 would not cause or accelerate geologic hazards related to fault rupture, strong seismic shaking, liquefaction, seismically induced settlement, soil stability, subsidence, or expansive soils, which would result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury greater than the project. Therefore, operation-related geology and soils impacts would be less than those anticipated from the proposed project.

Greenhouse Gas Emissions

Construction: Under Alternative 3, short-term construction impacts related to GHG emissions could occur due to operation of construction equipment and additional worker traffic trips to and from the site; however, they would be expected to be lower than under the project. Construction trip generation would be proportionately reduced by approximately 32%. The overall truck trip reduction from reduced fill quantities would represent the largest reduction in air emissions. The construction-related GHG emissions would be less than the project.

Operation: Primary sources of air quality emissions during operation would be vehicle trips. Under Alternative 3, trip generation during operation would be reduced by approximately 80%, resulting in 3,125 ADT compared to the project's 16,137 net ADT. GHG emissions resulting from energy use under this alternative would also be related to lighting and building usage. However, given that the total square footage of occupied structures is less than the proposed project, energy use is anticipated to be less than the project. The operation-related GHG emissions impacts would be less than those anticipated under the proposed project.

Hazards and Hazardous Materials

Construction: Under Alternative 3, the same land uses excluding most of the commercial components would be developed on site and within a smaller footprint than the project. Hazardous materials and waste would be generated in smaller quantities to the proposed project and stored and disposed of consistent with applicable regulations. Additionally, imported fill material would be placed on site to create building pads but in smaller quantities due to the smaller square footage of structural development. The fill would be required at the same depth as under the proposed project to meet Remedial Action Plan requirements. The potential for construction equipment to impede emergency vehicles would be addressed through coordination with local first responders. As with the proposed project, **MM-HAZ-1**, **MM-HAZ-2**, **MM-HAZ-3**, and **MM-HAZ-4** would be implemented to address potential impacts related to hazards/hazardous materials. Therefore, the construction-related impacts from hazards/hazardous materials would be less than those anticipated from the proposed project.

Operation: Alternative 3 would have similar operational impacts related to hazards/hazardous materials with the exception of any hazards generated by commercial uses. Hazardous chemicals would be used in compliance with existing regulations and guidelines of OSHA, Cal/OSHA, National Institute for Occupational Safety and Health (NIOSH), US DOT, the US EPA, California Department of Public Health, and LACFD. The use, storage, and transport of hazardous materials and hazardous wastes in compliance with the use of these substances is subject to all applicable federal, state, and local health and safety laws and regulations that are intended to minimize health risk to the public and the environment associated with hazardous materials. In addition, coordination with DTSC would

occur to address Remedial Action Plan requirements. As such, these proposed land uses would not result in a foreseeable significant hazard to public health or the environment by routine use, transport, and disposal of hazardous chemical. Therefore, the operation-related impacts from hazards/hazardous materials would be less those anticipated from the proposed project.

Hydrology and Water Quality

Construction: Under Alternative 3, development also would comply with the provisions of NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002), the GCP. Because this alternative is also greater than 1 acre in size, a Notice of Intent to the Los Angeles RWQCB would be required in order to obtain approval to complete construction activities under the CGP. This permit would include a number of design, management, and monitoring requirements for the protection of water quality and the reduction of construction phase impacts related to stormwater (and some non-stormwater) discharges. Alternative 3 would also comply with the Los Angeles Water Quality Ordinance (CAS004001, Order No. R4-2012-0175), with the goal of reducing the amount of pollutants in stormwater and urban runoff. Appropriate best management practices would be implemented during construction activity. Given that the proposed development footprint is 351,500 square feet under the Alternative 3 compared to 509,500 square feet under the project, construction-related impacts to hydrology would be similar to those anticipated from the proposed project.

Operation: Alternative 3 would have similar uses developed as the proposed project. Given the reduced footprint, additional vegetative open space could be provided. The overall square footage being 158,000 square feet less than the project and the elimination of large areas of surface parking would result in less impervious surfaces and beneficial groundwater infiltration thereby minimizing runoff, sedimentation off site and scouring. The preservation and enhancement of the Dominguez Branch Channel also could enhance on-site hydrology and water quality by creating natural creek habitat. Consequently, operation-related impacts to hydrology and water quality would be less than those anticipated from the proposed project.

Land Use and Planning

Construction: Alternative 3 would have similar construction impacts to the proposed project. Construction would not result in any change in land use adjacent to the project site nor would any divide an existing community. Therefore, construction-related impacts to land use and planning would be similar to those anticipated from the proposed project.

Operation: As with the project, Alternative 3 would provide a recreational facility with both passive and active uses available to the community. However, except for the clubhouse, no complementary commercial uses would be provided or corresponding employment opportunities. Alternative 3 would be consistent with the existing recreational land use designation of the County

and would not substantially or adversely change the relationship of the project site with the surrounding area nor would it alter the community character. A reduction in the intensity of use by removing the commercial components, except the clubhouse, would result in operation-related land use and planning impacts less than those from the proposed project.

Noise

Construction: Under Alternative 3, demolition, grading and structural construction activities may cause short-term noise due to the use of construction equipment. The duration of construction noise would be approximately thirteen months and occurring Monday to Saturday, excluding Sundays and holidays, consistent with the County Noise Ordinance. Alternative 3 would thus require similar excavation and grading construction phases that would utilize the same vibration-generating equipment as the project – excavators, scrapers, graders, auger drills, haul trucks, etc. Hauling trucks and other construction trips would generate noise and be similar in timing and concentration to the project. As with the proposed project, implementation of **MM-NOI-1**, **MM-NOI-2**, and **MM-NOI-3** would require construction would occur consistent with the County's Noise Ordinance, establishment of noise barriers, and outfitting construction equipment with noise attenuating features. As such, construction-related noise impacts would be similar to those anticipated from the proposed project.

Operation: The types of on- and off-site noise sources identified for the project would also exist at the site under Alternative 3. Similar to the project, on-site noises, including HVAC and mechanical equipment use, would be subject to the requirements of the County's Noise Ordinance to ensure compliance with the noise standards. With regard to traffic, Alternative 3 would generate fewer ADT than the project. The reduction of daily trips would have a nominal effect on roadside ambient noise levels associated with the alternative when compared with the project. As such, operation-related noise impacts would be similar to those anticipated from the proposed project.

Population and Housing

Construction: Under Alternative 3, construction would be shorter than the duration to the project. The labor pool is largely expected to come from the Los Angeles region and would not require relocation or major population growth to support construction needs. Therefore, construction-related impacts on population and housing would be less than those anticipated from the proposed project.

Operation: Under Alternative 3, no new homes or the extension of roads or other infrastructure that would induce population growth would occur, as with the project. Any infrastructure improvements would generally occur within the project site and in the immediate area and would be implemented for the purposes of supporting the Alternative 3. As with the project, the Alternative 3 would increase the number of jobs available at the site relative to the number of jobs that are currently available. Since the recreational uses proposed are the same as the project, this

alternative would be expected to have the same resulting employee count relative to recreational employment however due to the loss of the complementary commercial uses (except for the clubhouse), fewer total job opportunities would be anticipated. Overall, population and housing estimates for the region by SCAG have noted that population forecasts for the area would accommodate potential workforce associated with the project. Given that Alternative 3 would have fewer employees, operation-related impacts to population and housing would be less than those anticipated from the proposed project.

Public Services

Construction: Under Alternative 3, construction would be shorter in duration than the project due to a reduced footprint. Construction workforce is anticipated to come from the Los Angeles area and would not require additional police or fire protection above what is contemplated with the project. Therefore, construction-related impacts on public services would be less than those anticipated from the proposed project.

Operation: Under Alternative 3, land uses would be the same as the project with the removal of all commercial uses, except for the clubhouse, and with a smaller footprint. As with the project, the proposed uses could result in events that would result in intermittent, temporary increases in visitors to the site relative to existing conditions and relative to the project's anticipated daily operations. These proposed increases in activity at the project site could increase the potential for emergencies to occur, some of which may require LACFD or LASD response. Increased emergency calls could increase the need for fire and police services at the project site. Under Alternative 3, the reduction in intensity of use by removing the commercial uses, except the clubhouse, would result in impacts to fire and police services that would be less than those anticipated from the proposed project.

Recreation

Construction: Short-term construction activities could limit access to a portion or all of the site however, once complete, the recreational use of the site would resume. These impacts are considered to be minor and therefore construction-related impacts on recreation would be similar to those anticipated from the proposed project.

Operation: Operation of Alternative 3 would provide the same recreational amenities proposed with the project, although the passive park area would be enlarged. The project would provide an indoor sports complex, indoor skydiving, sports wellness building, ziplining facilities, a community park, open space areas, a putting green, and a jogging path. Therefore, operation-related impacts to recreation would be similar to those anticipated from the proposed project.

Transportation

Construction: Short-term construction activities would increase worker vehicle trips to the site but the closure of the golf course would eliminate vehicle trips from golf course users thereby offsetting some of the additional trips. All study area intersections currently operate at an acceptable LOS (i.e., LOS D or better) in the AM and PM peak hours except for the Hamilton Avenue/I-110 southbound ramp, which operates at LOS F during both peak hours. Construction of this alternative would be anticipated to take approximately 13 months, which would be shorter than the duration of the project's construction. As such, construction-related impacts to transportation would be less those anticipated for the proposed project.

Operation: Based on ITE trip generation rates, Alternative 3 would generate approximately 5,337 net daily trips as compared to the project's 16,132 net daily trips. Intersections in the study area of the project are currently operating at acceptable levels, except the unsignalized intersection of Hamilton Avenue/I-110 southbound ramps. Based on the trip generation estimate, using ITE rates, for Alternative 3, total net daily operational traffic trips would be approximately 5,337 daily trips, which is significantly lower when compared to the proposed project's estimated 16,132 net daily trips. This is approximately 67% less daily traffic than the proposed project. In also comparing peak hour trips, Alternative 3 would generate approximately 81% fewer AM peak hour trips, and 53% fewer PM peak hour trips than the proposed project. As with the project, certain off-site measures could be constructed to improve roadway conditions and maintain intersections at satisfactory LOS. Given that the anticipated traffic would be less than the project, the nature of off-site traffic improvements would be expected to be much smaller in scope. However, in light of the required improvements, operation-related impacts to transportation would be less than those anticipated for the proposed project.

Tribal Cultural Resources

Construction: The project site was evaluated and determined not to contain TCRs. As with the proposed project, Alternative 3 would not impact culturally significant tribal resources because none were determined to exist on site. However, in the event of unanticipated discovery of TCRs, **MM-TCR-1** would be implemented, and the County and Native American tribes that have been identified by the Native American Heritage Commission to be traditionally and culturally affiliated with the geographic area of the project would be consulted. Therefore, the construction-related TCRs impacts would be similar to those anticipated from the proposed project.

Operation: Given the lack of tribal cultural resources on site, Alternative 3 would result in similar operation-related tribal cultural resources impacts as those anticipated from the proposed project.

Utilities and Service Systems

Construction: Similar to the project, Alternative 3 would involve an intensification of uses on the site. The site is already developed with recreational uses under existing conditions, and the increased water use would be minor and incremental in the context of the total water portfolio managed by Cal Water Dominguez District Similar to the project, during construction, temporary facilities such as portable restrooms would be provided by the contractor at the site, and sewage from these facilities would be collected and hauled off site. Therefore, construction-related impacts on utilities and service systems would be less than those anticipated from the proposed project.

Operation: The proposed project would result in approximately 509,500 square feet of structural development, whereas Alternative 3 would result in 351,500 square feet. Infrastructure would be constructed as part of Alternative 3, as it is similar in scope and scale as the proposed project. Alternative 3 would result in water use, wastewater generation, and solid waste quantities similar to the proposed project. Therefore, operation-related impacts on utilities and service systems would be less than those anticipated from the proposed project.

Energy

Construction: Similar to the project, Alternative 3 would involve an intensification of uses on the site. Alternative 3 would require energy such as electric power for lighting, petroleum to fuel vehicles, and potentially natural gas for generators or other industrial construction uses (e.g., concrete). However, construction activities would be shorter in duration and scope than the proposed project. Therefore, construction-related impacts on energy would be less than those anticipated from the proposed project.

Operation: Operation of Alternative 3 would provide the same recreational amenities proposed with the project, although the passive park area would be enlarged. The project would provide an indoor sports complex, indoor skydiving, sports wellness building, ziplining facilities, a community park, open space areas, a putting green, and a jogging path. Many of these uses would require some energy, such as lighting for a jogging path; however, the overall demand for energy resources such as electricity, natural gas and petroleum would be less than the proposed project. Therefore, operation-related impacts on energy would be less than those anticipated from the proposed project.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(2) indicates that an analysis of alternatives to a project shall identify an Environmentally Superior Alternative among the alternatives evaluated in an EIR. The CEQA Guidelines also state that should it be determined that the No Project Alternative is the Environmentally Superior Alternative, the EIR shall identify another Environmentally Superior Alternative among the remaining alternatives.

Based on the comparative analysis of the project alternatives, Alternative 2 – Passive Use Park is considered the Environmentally Superior Alternative because it reduces the potential project impacts in every issue area. However, Alternative 2 does not meet the stated project objectives and likely would not be economically self-sustaining over the long term.

6.6 REFERENCES

Borgert, C.J., Roberts, S.M., Harbison, R.D., Cisar, J.L., Snyder, G.H. Assessing Chemical Hazards on Golf Courses. University of Florida. March/April 1994.

Burns & McDonnell. 2016. *Remedial Action Plan for Soil and Landfill Gas Media, Former BKK Landfill, Carson Dump, Operable Unit 2.* Prepared for The Department of Toxic Substances Control. Prepared by Burns McDonnell. June 2016.

Ingram, M.A., L. Hoke, and J. Meyer. (2013). The declining economic viability of municipal golf courses. *Public and Municipal Finance*, 2(1).

ITE (Institute of Transportation Engineers). 2017. *Trip Generation Manual*. 10th edition.

Myers, J.P., M.N. Antoniou, B. Blumberg, et al. 2016. Concerns over use of glyphosate-based herbicides and risks associated with exposures: a consensus statement. *Environ Health*. 15:19. doi:10.1186/s12940-016-0117-0

Rupp, L. and L. Coleman-Lochner. 2014. How Golf Got Stuck in the Rough. *Bloomberg*. June 14, 2014.

CHAPTER 7
LIST OF PREPARERS

The following individuals participated in the preparation of the Creek at Dominguez Hills EIR and its associated technical studies:

Lead Agency

Ryan Kristan, County of Los Angeles

Applicant

Randy Blanchard, Plenitude Holding LLC
Sean Masterson, Plenitude Holding LLC

Environmental Consultants

Dudek

Ruta K. Thomas, Principal in Charge
Carey Fernandes, Project Manager
Tamseel Mir, Project Manager
Dana Link-Herrera, Deputy Project Manager
Michele Webb, Environmental Analyst
Paul Caligiuri, Computer-Aided Design/Digital Simulations Specialist
Josh Saunders, Environmental Analyst
Nicholas Lorenzen, Air Quality and Greenhouse Gas Emissions Specialist
Johanna Page, Senior Biologist
Tommy Molioo, Senior Biologist
Jonathan Leech, Noise Specialist/Acoustician
Samantha Murray, RPA, Archaeologist/Architectural Historian
Linda Kry, Cultural Archaeologist
Erica Nicolay, Archaeologist
Sarah Coder, Architectural Historian
Glenna McMahon, Principal Engineer
Audrey Herschberger, Environmental Engineer
Matt Naftaly, Hydrogeologist
Perry Russell, Acoustics, Air Resources & Transportation Planner
John Holder, Environmental Analyst
Patrick Cruz, Environmental Analyst
Dennis Pascua, Transportation Senior Project Manager

Matthew Watson, GIS Technician
David Mueller, Publications Specialist Lead
Amy Seals, Senior Technical Editor
Corinne Price, Technical Editor
Nicole Sanchez-Sullivan, Technical Editor
Chelsea Ringenback, Publications Specialist
Kara Murphy, Publications Specialist
Daniel Kil, Publications Production Coordinator

Fred MacFarlane

Fred MacFarlane

LSA

Ken Wilhelm

Arthur Black

Perkins and Will

Randy Larsen, AIA, LEED AP

Roux Associates Inc.

Tony Ward, PG
Jaydeep Purandare, PE

Snyder Langston

Kelly McCarty

Tait & Associates Inc.

Jacob Vandervis
Nick Flores