DRAFT ENVIRONMENTAL IMPACT REPORT 22-001
SCH NO. 2022090009



ANTELOPE VALLEY COMMERCE CENTER SPECIFIC PLAN PROJECT
GENERAL PLAN AMENDMENT 22-001; ZONE CHANGE 22-001; SPECIFIC PLAN 22-001; SITE PLAN REVIEW 22-008; TENTATIVE PARCEL MAP 83738

City of Palmdale, California

Lead Agency
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June 2024

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Lead Agency Discretionary Permits
General Plan Amendment 22-001
Zone Change 22-001
Specific Plan 22-001
Site Plan Review. 22-008
Tentative Parcel Map. 83738

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ACRONYMS AND ABBREVIATIONS

Acronym	Definition
§	Section
§§	Sections
>	greater than
≥	greater than or equal to
a.m.	Ante Meridiem (between the hours of midnight and noon)
AB	Assembly Bill
AB 32	California Global Warming Solutions Act of 2006
AB 52	Assembly Bill 52, Native Americans: California Environmental Quality Act
AB 341	Assembly Bill 341, Mandatory Commercial Recycling Program
AB 939	Assembly Bill 939, Integrated Waste Management Act of 1989
AB 1279	Assembly Bill 1279, California Climate Crisis Act
AB 1327	California Solid Waste Reuse and Recycling Act
AB 1358	Assembly Bill 1358, Complete Streets Act
AB 1493	Pavley Fuel Efficiency Standards
AC	Acres
AC or A/C	air conditioning
ACM	Alternative Calculation Method
ADT	Average Daily Traffic
AF	acre-feet
AFY	Acre Feet per Year
AGL	above ground level
AI	Aerospace Industrial
AIA	Airport Influence Area
AICUZ	Air Installation Compatible Use Zone
AIRFA	American Indian Religious Freedom Act
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
ALUP	Airport Land Use Plan
amsl	Above Mean Sea Level
ANSI	American National Standards Institute
AOC	areas of concern
A-P Act	Alquist-Priolo Earthquake Fault Zoning Act
APS	Alternative Planning Strategy
APSA	Aboveground Petroleum Storage Act
APN	Assessor Parcel Number
APY	Acre feet per year
APZ	Accident Potential Zone

AQIA	Air Quality Impact Analysis
AQMIS	Air Quality and Meteorological Information System
AQMP	Air Quality Management Plan
ASTM	American Society of Testing and Materials
AV	autonomous vehicle
AVAQMD	Antelope Valley Air Quality Management District
AVEK	Antelope Valley-East Kern Water Agency
AVTA	Antelope Valley Transit Authority
AVUHSD	Antelope Valley Union High School District
BAAQMD	Bay Area Air Quality Management District
BACM	Best Available Control Measure
BAU	Business as Usual
BER	business environmental risk
BERD	Built Environmental Resources Directory
BFFP	Board of Forestry and Fire Protection
bgs	Below ground surface
BLM	Bureau of Land Management
BMP	Best Management Practice
B.P.	Before Present
BTU	British thermal unit
C_2Cl_4	perchloroethylene
C_2F_6	Hexafluoroethane
C_2H_6	Ethane
C_2H_4O	acetaldehyde
C_4H_6	1,3-butadiene
C_6H_6	benzene
CA	California
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAB	California Architects Board
CadnaA	Computer Aided Noise Abatement
cal	calibrated
CalARP	California Accidental Release Prevention
CalEnviroScreen	California Communities Environmental Health Screening Tool Version 3.0
CalEPA	California Environmental Protection Agency
CalFire/CAL FIRE	California Department of Forestry and Fire Protection
Cal-IPC	California Invasive Plant Council
CALGAPS	California LBNL GHG Analysis of Policies Spreadsheet
CALGreen	California Green Building Standards Code
CALGreen Code	California Green Building Standards Code

Cal OES	Governor's Office of Emergency Services
CalRecycle	California Department of Resources Recycling and Recovery
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPP	Community Air Protection Program
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CBECC	California Building Energy Code Compliance
CBSC	California Building Standards Code
CBSC	California Building Standards Commission
CCAA	California Clear Air Act
CCR	California Code of Regulations
CCRUS	Carbon Capture, Removal, Utilization and Storage
CCUS	carbon capture, utilization, or storage
CDC	California Department of Conservation
CDCA	California Desert Conservation Area
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CDNPA	California Desert Native Plants Act
CDR	carbon dioxide removal
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFCs	Chlorofluorocarbons
CF_4	Tetraflouromethane
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CGC	California Government Code
CGS	California Geologic Survey
CH_4	Methane
CH_2O	formaldehyde
CH_3CF_2	1,1-difluoroethane
CH_2FCF	1,1,1,2-tetrafluoroethane
CHF_3	fluoroform
CHP	California Highway Patrol
CHSRA	California High-Speed Rail Authority
CII	commercial, industrial and institutional
City	City of Palmdale

CIWMB	California Integrated Waste Management Board
CIWMP	Countywide Integrated Waste Management Plan
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
COG	Council of Governments
COH	coefficient of haze
COHb	carboxyhemoglobin
COPSM	County of Palmdale Public Works, Sewer Maintenance Division
CPEP	Clean Power and Electrification Pathway
CPUC	California Public Utilities Commission
CREC	controlled recognized environmental condition
CRHR	California Register of Historical Resources
CRI	Cultural Resources Investigation
CRNA	California Natural Resources Agency
CRPR	California Rare Plant Rank
Cr(VI)	hexavalent chromium
CTC	California Transportation Commission
CTP	Clean Truck Program
CTR	California Toxics Rule
CUPA	California Unified Program Agency
CWA	Clean Water Act
CWC	California Water Code
cy	Cubic Yards
CZ	Clear Zone
dB	Decibel
dBA	A-weighted Decibels
DF	Design Features
DIF	Development Impact Fee
DIVCA	Digital Infrastructure and Video Competition Act
DMM	Demand Measurement Measures
DMV	Department of Motor Vehicles
DNL	day-night average A-weighted sound level
DOE	Determination of Eligibility
DOE	United States Department of Energy
DOF	Department of Finance
DOSH	Division of Occupational Safety and Health

DPM	Diesel Particulate Matter
DRRP	Diesel Risk Reduction Plan
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EC	elemental carbon
EDD	Employment Development Department
EI	Expansion Index
EIA	Energy Information Administration
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMFAC	Emission Factor Model
EMPFX	Employment Flex
EO	Executive Order
EO S-01-07	Executive Order S-01-07, Low Carbon Fuel Standard
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-To-Know Act
EPS	Emission Performance Standard
ERO	Electric Reliability Organization
ESA	Endangered Species Act
ESA	Phase I Environmental Site Assessment
ESFR	Early Suppression, Fast Response (fire sprinkler system)
et seq.	*et sequentia*, meaning "and the following"
ETW	equivalent test weight
EV	Electric Vehicle
F	Fahrenheit
FAA	Federal Aviation Administration
FAR	floor area ratio
FAUNMAP	The Quaternary Faunal Mapping Project
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FGC	Fish and Game Code
FHWA	Federal Highway Administration
FIMA	Federal Insurance and Mitigation Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FRA	Federal Responsibility Area
ft	feet
ft^3/s	cubic feet per second

FTA	Federal Transit Administration
FY	Fiscal Year
FYI	For Your Information
GCC	Global Climate Change
Gg	Gigagram
GHG	Greenhouse Gas
GHGA	Greenhouse Gas Analysis
GOBiz	Governor's Office of Business and Economic Development
GPA	General Plan Amendment
gpd	Gallons per Day
gpm	Gallons per minute
GSA	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plan
GVWR	Gross Vehicle Weight Rating
GWh	gigawatt hours
GWP	Global Warming Potential
GWTS	Groundwater Treatment System
HAPs	hazardous air pollutants
HBW	home-based work
HCD	Department of Housing and Community Development
HCP	Habitat Conservation Plan
HDC	High Desert Corridor
HDT	heavy duty truck
HFCs	Hydrofluorocarbons
HFC	Hydrofluorocarbons
HFC-23	Fluoroform
HFC-134a	1,1,1,2-tetrafluoroethane
HFC-152a	1,1-difluoroethane
HHD	heavy-heavy duty trucks
HHDT	heavy-heavy duty trucks
HI	Hazard Index
HMBEP	Hazardous Materials Business Emergency Plan
HMIS	Hazardous Materials Inventory Statements
HMMD	Hazardous Materials Management Division
HMMP	Hazardous Materials Management Plan
HMTA	Hazardous Materials Transportation Act
HMTUSA	Hazardous Materials Transportation Uniform Safety Act
Hp	horsepower
Hp-hr-gal	horsepower hour per gallon
HRA	Health Risk Assessment

HREC	historical recognized environmental condition
HSC	Health and Safety Code
HSR	High-Speed Rail
HSWA	Hazardous and Solid Waste Amendments
HWCL	Hazardous Waste Control Law
I	Interstate
i.e.	that is
IBank	California Infrastructure and Economic Development Bank
IEPR	Integrated Energy Policy Report
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Planning
ISO	Independent Service Operator
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
IRP	Installation Restoration Program
ITIP	Interregional Transportation Improvement Plan
ITP	incidental take permit
ITS	intelligent transportation systems
IWMA	Integrated Waste Management Act of 1989
IWMP	Integrated Waste Management Plan
JPA	Joint Powers Authority
KEC	KEC Engineers, Inc.
kWh	kilowatt-hour
LACC	Los Angeles County Code
LACFD	Los Angeles County Fire Department
LACM VP	LA County Museum Vertebrate Paleontology
LACPW	Los Angeles County Public Works
LACSD	Los Angeles County Sanitation District
LACSD	Los Angeles County Sheriff Department
LACWD	Los Angeles County Waterworks District
LACWD 40	Los Angeles County Waterworks District No. 40
LADWP	Los Angeles Department of Water and Power
LBNL	Lawrence Berkley National Laboratory
lbs	pounds
lbs/day	pounds per day
LCD	liquid crystal display
LCFS	low carbon fuel standard

LDA	Light duty autos
LDT1	light duty trucks 1
LDT2	light duty trucks 2
Leq	equivalent continuous noise level
LHDT1	light-heavy duty trucks 1
LHDT2	light-heavy duty trucks 2
LHMP	Local Hazard Mitigation Plan
LI	Light Industrial
LID	Low Impact Development
LOS	Level of Service
LRA	local responsibility area
LRWQCB	Lahontan Regional Water Quality Control Board
LSA	Lake and Streambed Alteration
LSD	Lancaster School District
LTF	Local Transportation Fund
Lw	sound power level
LWRP	Lancaster Water Reclamation Plant
M^3	Cubic Meter
M-2	General Industrial zone
MBTA	Migratory Bird Treaty Act
MCY	motorcycle
MDAB	Mojave Desert Air Basin
MDP	Master Drainage Plan
MDV	medium duty vehicles
MEISC	maximally exposed individual school child
MEIR	maximally exposed individual receptor
MEIW	maximally exposed individual worker
MEP	maximum extent practicable
Metro	Los Angeles County Metropolitan Transportation Authority
mg	milligrams
MG	million gallons
mgd	million gallons per day
MGS	Mohave ground squirrel
MHD	medium-heavy duty truck
MHDT	medium-heavy duty truck
MICR	Maximum Individual Cancer Risk
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MMTs	million metric tons
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
mpg	miles per gallon

Mph	Miles per hour
MPO	Metropolitan Planning Organization
MPO/RTPA	Metropolitan Planning Organizations/Regional Transportation Planning Agencies
MRZ	Mineral Resource Zone
MRR	Mandatory Reporting Rule
MS4	Municipal Separate Storm Sewer System
MT	metric ton
MT/yr	metric ton per year
$MTCO_2e$	Metric Tons of Carbon Dioxide Equivalent
MWELO	Model Water Efficient Landscape Ordinance
N/A	Not Applicable
N_2	Nitrogen
n.d.	no date
NAHC	Native American Heritage Commission
NAAQS	National Ambient Air Quality Standards
NCCP	Natural Community Conservation Plan
NDA	No Development Alternative
NDC	nationally determined contributions
NERC	North American Electric Reliability Corporation
NESHAP	National Emission Standards for Hazardous Air Pollutants
NF_3	nitrogen trifluoride
NF_6	sulfur hexafluoride
NFIP	National Flood Insurance Program
NHL	National Historic Landmark
NHMLAC	National History Museum of Los Angeles County
NIOSH	National Institute for Occupational Safety and Health
No.	Number
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
N_2	Nitrogen
N_2O	Nitrous Oxide
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
n.p.	No page
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NPS	Non-point source
NRHP	National Register of Historic Places
NTR	National Toxics Rule
NVIA	Noise and Vibration Impact Assessment

O_2	Oxygen
O_3	Ozone
OBD-II	On-Board Diagnostic
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OFX	Office Flex
OHWM	Ordinary High Water Mark
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
Ord.	Ordinance
OSHA	Occupational Safety and Health Act
OSHA	Occupational Safety and Health Administration
PA	Program Agency
Pb	Lead
PBDB	Paleobiology Database
PCBs	Polychlorinated biphenyls
PCEs	Passenger Car Equivalents
PFCs	Perfluorocarbons
p.m.	Post Meridiem (between the hours of noon and midnight)
PM	Particulate Matter
$PM_{2.5}$	Fine Particulate Matter (2.5 microns or smaller)
PM_{10}	Fine Particulate Matter (10 microns or smaller)
PMC	Palmdale Municipal Code
POLA	Port of Los Angeles
POLB	Port of Long Beach
ppb	parts per billion
ppm	parts per million
pp.	pages
ppt	parts per trillion
PPV	peak particle velocity
PRC	Public Resources Code
PRMMP	Paleontological Resources Mitigation and Monitoring Plan
PRPA	Paleontological Resources Preservation Act
PRWAP	Palmdale Regional Water Augmentation Project
PSD	Palmdale School District
psi	per square inch
PV	photovoltaic
PWD	Palmdale Water District
PWL	Power Level
PWRP	Palmdale Water Reclamation Plant

Qa	surficial sediments
R&D	research and development
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
Rd.	Road
REC	Recognized environmental condition
REL	Reference Exposure Level
RFG-2	Reformulated Gasoline Regulation
RHNA	The SCAG Regional Housing Needs Assessment
RMP	Risk Management Plan
ROG	reactive organic gases
ROW	Right-of-Way
RPS	Renewable Portfolio Standards
RPZ	Runway Protection Zone
RR	Regulatory Requirement
RTIP	regional transportation improvement plan
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SB 1	Senate Bill 1, Road Repair and Accountability Act of 2017
SB 18	Senate Bill 18, Traditional Tribal Cultural Places Act, 2004
SB 50	Senate Bill 50, Leroy F. Greene School Facilities Act
SB 325	Senate Bill 325, Mills-Alquist-Deddeh Act
SB 350	Senate Bill 350, Clean Energy and Pollution Reduction Act of 2015
SB 375	California Senate Bill 375, Sustainable Communities and Climate Protection Act of 2008
SB 535	Senate Bill 53, Disadvantaged Communities
SB 1000	California Senate Bill 1000, Environmental Justice in Local Land Use Planning of 2016
SB 1020	Senate Bill 1020, Clean Energy, Jobs and Affordability Act of 2022
SB 1078	Senate Bill 1078, Renewable Portfolio Standards
SB 1374	Senate Bill 1374, Construction and Demolition Waste Materials Diversion Requirements
SB 2095	Senate Bill 2095, Water Recycling Landscaping Act
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District

SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCG	Southern California Geotechnical
SCH	California State Clearinghouse (Office of Planning and Research)
SCRRA	Southern California Regional Rail Authority
SCS	Sustainable Communities Strategy
SDNHM	San Diego Natural History Museum
SDWA	Safe Drinking Water Act
SED	socio-economic data
SF_6	Sulfur Hexafluoride
SF/s.f.	square foot or square feet
SFP	School Facilities Program
SGC	Strategic Growth Council
SGMA	Sustainable Groundwater Management Act
SHMA	Seismic Hazards Mapping Act
SHPO	State Historic Preservation Office
SHRC	State Historical Resources Commission
SIP	State Implementation Plan
SLCP	Short-Lived Climate Pollutants
SLF	Sacred Lands File
SLPS	Short-Lived Climate Pollutant Strategy
SNUR	Significant New Use Rule
SO_2	Sulfur Dioxide
SO_4	Sulfates
SO_X	Sulfur Oxides
SOC	Statement of Overriding Considerations
SoCalGas	Southern California Gas Company
SORE	small off-road engines
SP	service population
SP	Specific Plan
sp	species
spp	multiple species
SPR	Site Plan Review
SPRR	Southern Pacific Railroad
SR	State Route
SRA	State responsibility area
SSC	species of special concern
SSMP	Sewer System Management Plan
STA	State Transit Assistance
STIP	Statewide Transportation Improvement Plan
SUSMP	Standard Urban Stormwater Management Plan
SVP	Society of Vertebrate Paleontology

SWITRS	Statewide Integrated Traffic Records System
SWMP	Stormwater Management Plan
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SWRCC	Southwest Regional Council of Carpenters
TAC	Toxic Air Contaminants
TBD	To be determined
TCRs	Tribal Cultural Resources
TDA	Transportation Development Act
TDM	transportation demand management
TEA-21	Transportation Equality Act for 21st Century
tpd	tons per day
TPM	tentative parcel map
tpy	tons per year
TRUs	Transportation Refrigeration Units
TSCA	Toxic Substances Control Act
TSF	Thousand Square Feet
µg	microgram
µg/m^3	microgram per cubic meter
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
UPA	Unified Program Agency
UPL	Upland
UPRR	Union Pacific Railroad
U.S.	United States
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USCB	United States Census Bureau
USDA	U.S. Department of Agriculture
U.S. DOE	United States Department of Energy
U.S DOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United Stated Geological Survey
UWMP	Urban Water Management Plan
UWMP Act	Urban Water Management Plan Act
VCP	vitrified clay pipe
VdB	vibration decibel notation

VDE	visible dust emissions
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
VPH	Vehicles per Hour
WAIRE	Warehouse Actions and Investments to Reduce Emissions
WDR	Water discharge report
WDRs	Waste Discharge Requirements
WestLAND	WestLand Group, Inc.
WMI	Watershed Management Initiative
WOTUS	Waters of the United States
WRI	World Resources Institute
WRP	Water Reclamation Plant
WRRA	Water Reuse and Recycle Act
WSA	Water Supply Assessment
WUCOLS	Water Use Classification of Landscape Species
yr	year
ZC	Zone Change
ZE/NZE	zero and near-zero emission
ZEV	zero-emission vehicles
ZORI	Zones of Required Investigation

S.0 EXECUTIVE SUMMARY

S.1 INTRODUCTION

The California Environmental Quality Act (CEQA), Public Resources Code Section 21000, *et seq.* requires that before a public agency makes a decision to approve a project that could have one or more adverse effects on the physical environment, the agency must inform itself about the project's potential environmental impacts, give the public an opportunity to comment on the environmental issues, and take feasible measures to avoid or reduce potential harm to the physical environment. This Executive Summary complies with CEQA Guidelines Section 15123, "Summary." Included are a concise description of the proposed Antelope Valley Commerce Center Project, a summary of the physical environmental effects that could result from its implementation, a list of the mitigation measures that would be imposed by the City of Palmdale with resulting significance conclusions regarding environmental effects, and a summary of alternatives to the Project that would avoid or lessen the significant environmental effects.

This Environmental Impact Report (EIR), having California State Clearinghouse (SCH) No. 2022090009 was prepared in accordance with CEQA Guidelines Article 9, Sections 15120-15132 to evaluate the potential environmental impacts associated with planning, constructing, and operating the proposed Project. The Project entails the proposed development of approximately 432.9 gross acres of vacant land located directly south of Columbia Way / East Avenue M; approximately 0.02-mile east of the active Union Pacific Railroad (UPRR) mainline tracks located adjacent to Sierra Highway; and directly north of Avenue M-12. The Project site is located approximately 0.25-mile (1,305 feet) north of Runway 7 of USAF Plant 42.

The entitlement applications filed by the Project Applicant with the City of Palmdale pertaining to the proposed Project include the following:

- **General Plan Amendment (GPA 22-001)** to change the site's General Plan land use designation from Employment Flex (EMPFX) to Specific Plan (SP);
- **Zone Change (ZC 22-001**) to change the site's zoning classification from Office Flex (OFX) to Specific Plan (SP);
- **Antelope Valley Commerce Center Specific Plan** (herein, SP 22-001) that sets forth standards and guidance for the development and phasing of industrial, commercial, and open space uses with supporting infrastructure on the Project site;
- **Tentative Parcel Map 83738** to subdivide the Project site into lots to facilitate its development;
- **Site Plan Review 22-008** pertaining to the development of six (6) proposed buildings and supporting infrastructure in the Project's first phase of development; and,
- **Development Agreement 22-001** which contains terms and agreements between the City and the Project Applicant pertaining to implementation of the Project.

These actions and the physical and operational aspects of the Project's construction and operation are more fully described in Section 3.0, *Project Description.* The Antelope Valley Commerce Center Specific Plan No. 22-001 (herein, SP 22-001) provides guidance for the phased development of a contemporary master-planned commerce center at a location near major transportation facilities. The Antelope Valley Commerce Center is envisioned to contain industrial and commercial buildings supported by public roads and utility infrastructure systems, private driveways, parking lots, truck courts, lighting, landscaping, signage, and other functional and decorative features. The commercial and industrial uses in smaller buildings are positioned along Columbia Way / East Avenue M in the northwestern segment of the site, while industrial uses in larger warehouse buildings comprise the balance of the Specific Plan Area. The Specific Plan serves as the regulatory document for land use, development standards, and design guidelines and standards within the Specific Plan Area. In topics where the Specific Plan is silent, the Palmdale Municipal Code (PMC) serves as the governing document for any decision on land use, development standards, and design guidelines and standards. Development of the proposed Project would be consistent with the requirements set forth in the Specific Plan and with all other applicable City regulations.

SP 22-001 would establish three land uses; Industrial, Commercial, and Open Space. Industrial land uses would be developed on approximately 378.4 acres in the central portion of the Project site. The maximum allowable building square footage within the Industrial land use would be 8,241,552 s.f. Commercial land uses would be developed on 7.0 acres in the northern portion of the Project site adjacent to Columbia Way / East Avenue M. The maximum allowable building square footage within the Commercial land use would be 60,984 s.f. The Open Space land use would comprise 29.3 acres along the western boundary and in the northeastern corner of the Project site. The Open Space land use would be reserved for the proposed drainage basin and for western Joshua Tree conservation. The remaining 18.2 acres of the Project site would be designated for proposed roadways.

The Project site would be developed in phases. Phase I includes the construction of six industrial warehouse buildings, a drainage basin positioned in the northeastern portion of the Project site and supporting roadways and utility infrastructure. Building 1 would have a total of 22 docking doors for trucks along the southern side of the building. Access to the Building 1 site would be accommodated via two driveways (Driveway 5 and Driveway 6) along Columbia Way / East Avenue M. Building 2 would have a total of 25 docking doors for trucks along the southern side of the building. Access to the Building 2 site would be accommodated via two driveways (Driveway 6 and Driveway 7) along Columbia Way / East Avenue M. Building 3 would have a total of 18 docking doors for trucks along the southern side of the building. Access to the Building 3 site would be accommodated via one driveway along Columbia Way / East Avenue M, and one driveway along Public Street B. Building 4 would have a total of 107 docking doors for trucks along the northern and southern sides of the building, with 53 docking doors on the northern side and 54 docking doors in the southern side of the building. Access to the Building 4 site would be accommodated via four driveways along Public Street A. Building 5 would have a total of 184 docking doors for trucks along the northern and southern sides of the building, with 92 docking doors on each side of the building. Access to the Building 5 site would be accommodated via four driveways along Public Street B. Building 6 would have a total of 38

docking doors for trucks along the southern side of the building. Access to the Building 6 site would be accommodated via three proposed driveways along Public Street B.

As part of the Project, a drainage basin is proposed in the northeastern portion of the Project site. Other site features include landscaping, lighting, and paved areas for vehicle movement and parking.

The City of Palmdale determined that the scope of this EIR should cover 16 subject areas. The scope includes all of the subject areas listed in Appendix G to the CEQA Guidelines that the City determined could be significantly and adversely affected by the Project, taking into consideration public comment received by the City in response to this EIR's Notice of Preparation (NOP) and comments made at the EIR's Scoping Meeting. The 16 environmental subject areas that could be reasonably and significantly affected by planning, constructing, and/or operating the proposed Project are analyzed herein, including:

1. Aesthetics
2. Air Quality
3. Biological Resources
4. Cultural Resources
5. Energy
6. Geology / Soils
7. Greenhouse Gas Emissions
8. Hazards and Hazardous Materials
9. Hydrology Water Quality
10. Land Use and Planning
11. Noise
12. Public Services
13. Transportation
14. Tribal Cultural Resources
15. Utilities / Service Systems
16. Wildfire

Refer to EIR Section 4.0, *Environmental Analysis*, for a full account and analysis of the subject matters listed above. For each of the aforementioned subject areas, this EIR: 1) describes the physical conditions that existed at the approximate time this EIR's NOP was filed with the California State Clearinghouse (September 2022); 2) discloses the type and magnitude of potential environmental impacts resulting from Project planning, construction, and operation; and 3) if warranted, recommends feasible mitigation measures that would reduce or avoid significant adverse environmental impacts that the proposed Project may cause. A summary of the proposed Project's significant environmental impacts and the mitigation measures that the City of Palmdale would impose on the Project to lessen or avoid those impacts is included in this Executive Summary as Table S-1. The City of Palmdale applies mitigation measures that it determines: 1) are feasible and practical for project applicants to implement; 2) are feasible and practical for the City of Palmdale to monitor and enforce; 3) are legal for the City of Palmdale to impose; 4) have an essential nexus to the Project's impacts; and 5) would result in a benefit to the physical environment. CEQA does not require the Lead Agency to impose mitigation measures that are duplicative of project design features or mandatory regulatory requirements.

S.2 PROJECT SITE LOCATION AND REGIONAL SETTING

The Project site encompasses approximately 432.9 gross acres of vacant land and is located within the City of Palmdale, California, which is located within the Antelope Valley portion of Los Angeles

County. Los Angeles County abuts Ventura County to the west, Kern County to the north, San Bernardino County to the east, and Orange County to the south. The Antelope Valley is located in the northern portion of Los Angeles County and is disconnected from the Southern California coastal and Central California valley regions by the Tehachapi Mountains to the northwest and by the San Gabriel Mountains to the south.

The vacant 432.9-acre Project site is located within the central portion of the City of Palmdale. Communities surrounding the City include the City of Lancaster and the unincorporated community of Quartz Hill to the north, as well as other unincorporated communities such as Lake Los Angeles to the east; Sun Village, Littlerock, and Pearblossom to the southeast; Acton to the south; Agua Dulce to the southwest; and Leona Valley to the west. The Project site is located approximately 0.03-mile east of Sierra Highway and approximately 1.45 miles east of State Route 14 (SR-14). The Project site is located approximately 0.25 mile (1,305 feet) north of Runway 7 of USAF Plant 42.

The census tract containing the Project site (Census Tract 6037980004) is reported by CalEPA's Office of Environmental Health Hazard Assessment (OEHHA) using the OEHHA's California Communities Environmental Health Screening Tool (CalEnviroScreen 4.0), and ranks in the 52nd percentile of communities that are disproportionately burdened by multiple sources of pollution (OEHHA, 2023). The Project site is not located in a SB 535 Disadvantaged Community identified by the CalEPA.

S.3 PROJECT OBJECTIVES

CEQA Guidelines Section 15124(b) requires a statement of project objectives. The underlying purpose and goal of the proposed Project is to accomplish the development of vacant property with an economically viable, employment-generating use that is compatible with the surrounding area. This underlying goal aligns with various aspects of the SCAG's 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS; also referred to as "Connect SoCal"), particularly the facilitation of goods movement industries and the generation of local employment opportunities that can reduce the need for long commutes to and from work. The following objectives are intended to achieve these underlying purposes:

A. To develop a master-planned commerce center that attracts industrial and commercial users to the City of Palmdale;

B. To diversify the mix of developed land uses in the City of Palmdale to support the growing goods movement supply chain;

C. To develop supply chain uses in close proximity to designated truck routes and the State highway system to avoid or shorten vehicular trip lengths on other roadways;

D. To expand economic development, facilitate job creation, and increase the tax base for the City of Palmdale by accommodating and diversifying facilities needed to support the goods movement supply chain;

E. To develop Class A light industrial buildings in the City of Palmdale that are designed to meet contemporary industry standards and be economically competitive with similar industrial buildings in the local area and region;

F. To attract new employment-generating businesses in the City of Palmdale, thereby growing the economy and providing a more equal jobs-housing balance in the local area that will reduce the need for members of the local workforce to commute outside the area for employment;

G. To develop supply chain buildings that have architectural design and operational characteristics that are compatible with other existing and planned developments in the local area;

H. To develop a property that has access to available infrastructure, including roads and utilities; and,

I. To develop a master planned commerce center that includes commercial uses that allows for commercial retail, restaurants, and small-scale retail commercial goods and services that would benefit residents, employees, and visitors in and around the Specific Plan Area and surrounding neighborhoods.

S.4 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

CEQA Guidelines Section 15123(b)(2) requires the Lead Agency (City of Palmdale) to identify any known issues of controversy in the Executive Summary. The Lead Agency has not identified any issues of controversy. Notwithstanding, the Lead Agency has identified several issues of local concern including impacts to air quality, greenhouse gas emissions, and transportation among others listed in Table 1-1 in Section 1.0, *Introduction.*

S.5 PROJECT ALTERNATIVES

S.5.1 NO DEVELOPMENT ALTERNATIVE

The No Development Alternative (NDA) considers no development on the Project site beyond what occurs on the site under existing conditions. Under this Alternative, the approximately 432.9 gross acres would remain vacant and undeveloped for the foreseeable future and would be subject to routine maintenance for weed abatement. This Alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project with an alternative that would leave the Project site in its existing condition.

S.5.2 NO PROJECT (EXISTING GENERAL PLAN DESIGNATION) ALTERNATIVE - NPA

The No Project (Existing General Plan Designation) Alternative (NPA), assumes development of the property in accordance with the site's existing General Plan land uses and zoning. Figure 2-4 in EIR Subsection 2.0 depicts the site's existing General Plan designation and Figure 2-5 depicts the site's existing zoning. As discussed in EIR Section 2.0, under existing conditions, the General Plan

designates the Project site for Employment Flex (EMPFX) land uses. The Employment Flex (EMPFX) land use designation is a transition zone intended to permit mixed development of lighter industrial uses and more intensive service, retail, and commercial uses, with a floor area ratio (FAR) of up to 1.0. Under existing conditions, the Project site is zoned Office Flex (OFX) that is intended to allow mixed-use development of office/flex uses and supportive service, retail, and commercial uses. It allows a mix of businesses that provide a wide variety of employment-generating activities, including office, medical, research and development (R&D), and flex/makerspaces. Office uses may be standalone, or part of a large business/office park development. The OFX zone implements the Industrial and Employment Flex General Plan land use designations.

This Alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project with an alternative that would allow for buildout of the Project site in accordance with the site's existing General Plan land use designations and zoning.

S.5.3 Reduced Project Alternative – Phase I (RPA - Phase I)

The Reduced Project Alternative - Phase I (RPA - Phase I) considers the development of Phase I and no development under Phases II – IV. Under this Alternative, Parcels 1, 2, 3, 4, 5, 6, and Lot D of TPM No. 83738 would be developed with industrial buildings and a detention basin along with associated roadways, public utilities, and infrastructure improvements. Phases II - IV would remain undeveloped as they are under existing conditions.

S.5.4 Reduced Project Alternative – Phases I & II (RPA -Phase I & II)

The Reduced Project Alternative - Phases I & II (RPA – Phases I & II) considers the development of Phase I and Phase II and no development under Phases III and IV. Under this Alternative, Parcels 1, 2, 3, 4, 5, 6, 7, 8, 9, and Lot D would be developed with industrial buildings, a detention basin, and associated roadways, public utilities, and infrastructure improvements.

S.6 EIR Process

This EIR has been prepared as a Project EIR pursuant to CEQA Guidelines Section 15161. As described by CEQA Guidelines Section 15161, a Project EIR is the most common type of EIR that: 1) examines the environmental impacts of a specific development project; 2) focuses primarily on the changes in the environment that would result from the development of the project; and 3) examines all phases of the project, including planning, construction, and operation.

This Draft EIR will be available for public review and comment for a minimum of 45 days. Following public review, the City of Palmdale will prepare responses to written comments concerning environmental topics and publish a Final EIR. Before taking action to approve the Project, the City of Palmdale (serving as the CEQA Lead Agency) has the obligation to: 1) ensure this EIR has been completed in accordance with CEQA; 2) review and consider the information contained in this EIR as part of its decision-making processes; 3) make a statement that this EIR reflects the City of Palmdale's independent judgment; 4) ensure that all significant effects on the environment are avoided or

substantially lessened where feasible; and, if necessary 5) make written findings for each unavoidable significant environmental effect stating the reasons why mitigation measures or project alternatives identified in this EIR are infeasible and citing the specific benefits of the proposed Project that outweigh its unavoidable adverse effects (CEQA Guidelines Sections 15090-15093).

S.7 SUMMARY OF IMPACTS, MITIGATION MEASURES AND CONCLUSIONS

S.7.1 EFFECTS FOUND NOT TO BE SIGNIFICANT

The scope of detailed analysis in this EIR includes 16 subject areas prepared pursuant to CEQA Guidelines Section 15063 and CEQA Statute Section 21002(e). An Initial Study was not prepared for the proposed Project because the City determined that an EIR was required, although the Project's NOP did scope out certain issue areas from detailed environmental review. The NOP and public comments received in response to the NOP and scoping meetings, are attached to this EIR as *Technical Appendix A*. Subject areas for which the City concluded that impacts clearly would be less than significant and that do not warrant detailed analysis in this EIR include: agriculture and forestry resources; mineral resources; population and housing; and recreation. This EIR addresses these four topics in EIR Subsection 5.0, *Other CEQA Considerations*.

S.7.2 SIGNIFICANT AND UNAVOIDABLE IMPACTS OF THE PROPOSED PROJECT

Table S-1, *Summary of Impacts, Mitigation Measures*, *and Conclusions*, provides a summary of the proposed Project's environmental impacts, as required by CEQA Guidelines Section 15123(a). Also presented are the mitigation measures recommended by the City of Palmdale to further avoid adverse environmental impacts or to reduce their level of significance. After the application of all feasible mitigation measures within the City of Palmdale's jurisdictional authority, the Project would result in the following significant and unavoidable environmental effects.

- Air Quality (Thresholds a and b): Significant and Unavoidable Direct and Cumulatively Considerable Impact. As shown in Table 4.2-17, Summary of Peak Operational Emissions - With Mitigation, with the implementation of mitigation measures, Phase I VOC emissions resulting from operation of the Project would be reduced and would not exceed the threshold established by the AVAQMD. However, Phase I NO_X and PM_{10} emissions would still exceed applicable thresholds established by the AVAQMD. Phase II – IV VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions would still exceed applicable thresholds established by the AVAQMD. Therefore, with implementation of the mitigation measures, operational activities associated with the Project would still 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. Impacts would be significant and unavoidable.

- Greenhouse Gas Emissions (Threshold a): Significant Unavoidable Cumulatively-Considerable Impact. After implementation of mitigation measures, as shown previously on Table 4.7-5, Project GHG Emissions Summary – With Mitigation, emissions resulting from Phase I of the Project

would result in 39,953.73 $MTCO_2e$/yr and Phases II - IV would result in 108,240.42 $MTCO_2e$/yr. Project Buildout emissions are estimated to be 148,194.15 $MTCO_2e$/yr beginning in 2032 when the entire Project is completed and becomes operational. Thus, the proposed Project would exceed the SCAQMD screening threshold of 3,000 $MTCO_2e$ per year. Because the majority (89 percent) of the Project GHG emissions would be generated by Project vehicular sources, the Project cannot feasibly achieve the SCAQMD 3,000 $MTCO_2e$ per year threshold. Because responsibility and authority for regulation of vehicular-source emissions resides with the State of California (CARB, et al.), neither the Applicant nor the Lead Agency can affect or mandate substantial reductions in vehicular-source GHG emissions, much less reductions that would achieve the SCAQMD's 3,000 $MTCO_2e$ per year threshold. In effect, all Project traffic would need to be eliminated or be "zero GHG emissions sources" to achieve the SCAQMD's numeric threshold. There are no feasible means to or alternatives to eliminate all Project traffic, or to ensure that Project traffic would be zero GHG emissions sources. In terms of its practical application, this would constitute a "no build" condition. On this basis, even with implementation of applicable Project Design Features and Mitigation Measures AIR MM-1 through AIR MM-5, the Project could generate direct or indirect GHG emissions that would result in a significant impact on the environment. This is a significant and unavoidable impact.

- Transportation (Threshold b): Significant and Unavoidable Direct and Cumulatively-Considerable Impact. Because the future building tenants are not known for the Project, the effectiveness of any potential commute trip reduction measure may be limited. In addition to specific tenancy considerations, locational context is also a major factor relevant to the potential application and effectiveness of Transportation Demand Management (TDM) measures. A project may only realize a quantifiable reduction in commute VMT under the most favorable circumstances and ideal local conditions when implementing trip reduction measures. In practical terms, ideal conditions are rarely realized due to variables such as locational context limitations (i.e., non-urban areas). Additionally, to achieve ideal conditions a project must achieve 100 percent employee participation, and maximum employee eligibility, which are not generally expected. This is even more difficult to presume since future building tenants are not known at this time. Although the Project would be subject to compliance with Mitigation Measure TRN RR-1, which would reduce the Project's VMT, the effectiveness of commute trip reduction measures such as those listed in Mitigation Measure TRN MM-1 cannot be guaranteed to reduce Project VMT to a level of less than significant. No additional feasible mitigation measures are available to measurable reduce the Project's VMT. Therefore, the Project's VMT impacts are considered significant and unavoidable.

Table S-1 Summary of Impacts, Mitigation Measures and Conclusions

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
4.1 Aesthetics					
Summary of Impacts					
Threshold a: The Project site does not comprise a scenic vista and no unique views to scenic vistas are visible from the property that are not also visible from other areas surrounding the site. The Project would not substantially change a scenic vista or substantially block or obscure a scenic vista; therefore, because the Project would not have a substantial adverse effect on a scenic vista, no impact would occur.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold b: Because the Project site is not located within a State scenic highway, the Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; therefore, no impact would occur.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold c: The Project site is located within an urbanized area. Because the Project would not conflict with applicable zoning and other regulations governing scenic quality either during short-term construction or long-term operation of the Project, impacts would be less than significant, and no mitigation is required.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
Threshold d: Project-related development would not create substantial light or glare. Compliance with the design standards and guidelines proposed by SP 22-001 and the PMC where applicable when SP 22-001 is silent would ensure that implementation of the Project would not create a new source of substantial light or glare which would	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
adversely affect day or nighttime views in the area. Impacts would be less than significant and no mitigation is required.					
4.2 Air Quality					
Summary of Impacts					
Threshold a: During construction of the Project, prior to mitigation, the Project's daily construction emissions would exceed the AVAQMD threshold for VOC. Project operations, prior to mitigation, would exceed the AVAQMD daily thresholds in Phase I for NO_X, CO, PM_{10}, and in Phases II – IV for VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$. Therefore, prior to mitigation, the Project has the potential to conflict with the AVAQMD AQMP during both construction and operational activities, resulting in a significant direct and cumulatively-considerable impact. As shown in Table 4.2-22, Emissions Summary of Construction (With Mitigation), with the implementation of mitigation measures, emissions resulting from construction of the Project would be reduced and would not exceed criteria pollutant thresholds established by the AVAQMD for emissions of any criteria pollutant. Therefore, with implementation of the mitigation measures, construction activities associated with the Project would not 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.	**AIR MM-1** "Super-Compliant" low volatile organic compounds (VOC) paints shall be used during architectural coatings, which have been reformulated to exceed the regulatory VOC limits put forth by AVAQMD's Rule 1113. Super-Compliant low VOC paints shall be no more than 10 grams per liter (g/L) of VOC. Alternatively, the applicant may utilize pre-coated tilt-up concrete buildings that do not require the use of architectural coatings (painting). **AIR MM-2** The Project shall implement the following measures in order to reduce operational mobile source air pollutant emissions to the extent feasible: • Only haul trucks meeting model year 2010 engine emission standards shall be used for the on-road transport of materials to and from the Project site. • Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: (1) instructions for truck drivers to shut off engines when not in use; (2) instructions for drivers of diesel trucks to restrict idling to no more than 5 minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged; and (3) telephone numbers of the building facilities manager and CARB	Project Applicant; Construction Contractor(s) Project Applicant or successor in interest; Future Building Tenant(s)	City of Palmdale or its designee City of Palmdale or its designee	During Project construction activities Prior to the issuance of an occupancy permit; Prior to tenant occupancy; During operation of the Project	Significant Direct and Cumulatively-Considerable Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
As shown in Table 4.2-23, Summary of Peak Operational Emissions (With Mitigation), with the implementation of Mitigation Measures, Phase I VOC emissions resulting from operation of the Project would be reduced and would not exceed the threshold established by the AVAQMD. After implementation of feasible mitigation, NO_X and PM_{10} emissions from Phase I of the Project would still exceed applicable daily air pollutant significance thresholds established by the AVAQMD. Emissions of VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$ from Phases II - IV of the Project also would still exceed applicable daily air pollutant significance thresholds established by the AVAQMD. Therefore, the Project would result in a cumulatively-considerable net increase of air pollutants for which the Project region is non-attainment under an applicable federal or State ambient air quality standard. It should be noted that a majority of the Project's NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions are derived from vehicle usage which the City does not have the regulatory authority to control or enforce. Neither the Project Applicant nor the Lead Agency can substantively or materially affect reductions in Project-related vehicular source emissions beyond the regulatory requirements and the feasible mitigation measures identified in this EIR. While there are no feasible mitigation measures that would reduce vehicular emissions to less	to report violations. Prior to the issuance of each occupancy permit, the City of Palmdale shall conduct a site inspection to ensure that the signs are in place. • Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the City demonstrating that occupants/tenants of the Project site have been provided documentation on funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment. • The minimum number of automobile electric vehicle (EV) charging stations required by the California Code of Regulations Title 24 shall be provided. In addition, the buildings shall include electrical infrastructure sufficiently sized to accommodate the potential installation of additional auto and truck EV charging stations in the future. • Conduit shall be installed to tractor trailer parking areas in logical locations determined by the Project Applicant during construction document plan check, for the purpose of accommodating the future installation of EV truck charging stations at such time this technology becomes commercially available. **AIR MM-3** The Project shall implement the following measure in order to reduce operational energy source air pollutant emissions to the extent feasible: • The Project shall include rooftop solar panels to the extent feasible, with a capacity that matches the maximum	Project Applicant	City of Palmdale or its designee	Prior to issuance of building permits; During operation of the Project	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
than significant, the Project will install EV supply equipment in accordance with the California Building Code which will allow charging stations to be supplied on the Project site based on demand. Charging stations could lead to less use of gasoline-burning automobiles and thus, less air pollutant emissions. Hence, overall, there are no feasible mitigation measures that would reduce emissions to less than significant and this impact is considered significant and unavoidable.	allowed for distributed solar connections to the grid. • Install Energy Star-rated heating, cooling, lighting, and appliances. • Provide information on energy efficiency, energy-efficient lighting and lighting control systems, energy management, and existing energy incentive programs to future tenants of the Project. • Structures shall be equipped with outdoor electric outlets in the front and rear of the structures to facilitate use of electrical lawn and garden equipment.				
	AIR MM-4 The Project shall include the following language within tenant lease agreements in order to reduce operational air pollutant emissions to the extent feasible: • Require tenants to use the cleanest technologies available and to provide the necessary infrastructure to support zero-emission vehicles, equipment, and appliances that would be operating on site. This requirement shall apply to equipment such as forklifts, handheld landscaping equipment, yard trucks, office appliances, etc. • Require future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans, when economically feasible. • Tenants shall be in, and monitor compliance with, all current air quality regulations for on-road trucks including the CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation.	Project Applicant; Future Building Tenant(s)	City of Palmdale or its designee	Prior to issuance of certificate of occupancy	

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	AIR MM-5 Prior to the issuance of a building permit, Developer shall provide documentation to the City of Palmdale demonstrating that the Project could achieve Leadership in Energy and Environmental Design (LEED) certification to meet or exceed CalGreen Tier 2 standards in effect at the time of building permit application.	Developer	City of Palmdale or its designee	Prior to issuance of a building permit	
	AIR MM-6 During Project construction, Developer will comply with the following: • Require all generators, and all diesel-fueled off-road construction equipment greater than 75 horsepower, to be zero-emissions or equipped with CARB Tier IV-compliant engines (as set forth in Section 2423 of Title 13 of the California Code or Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. After either (1) the completion of grading or, (2) the completion of an electrical hook-up at the site, whichever is first, require all generators and all diesel-fueled off-road construction equipment, to be zero-emissions or equipped with CARB Tier IV-compliant engines (as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. An exemption from these requirements may be granted by the City in the event that	Developer	City of Palmdale or its designee	During Project construction	

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	the Project Applicant documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment (for example, if a Tier IV Final piece of equipment is not necessarily available at the time of construction and a lower tier equipment is used instead (e.g., Tier IV interim), and another piece of equipment could be upgraded from a Tier IV Final to a higher tier (i.e., Tier V) or replaced with an alternative-fueled (not diesel-fueled) equipment to offset emissions associated with using a piece of equipment that does not Meet Tier IV Final standards). Before an exemption may be considered by the City, the Project Applicant shall be required to demonstrate that at least two construction fleet owners/operators in the Region were contacted and that those owners/operators are confirmed Tier IV Final or better equipment could not be located in the Region. To ensure that Tier IV Final construction equipment or better would be used during the proposed Project's construction, the Project Applicant shall include this requirement in applicable bid documents, purchase orders, and contracts. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities. • Provide infrastructure for zero-emission off-road construction equipment if the				

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	contractors selected to construct the Project plan to use zero-emission off-road construction equipment. • Provide electrical hook-ups to the power grid, rather than diesel-fueled generators, for contractors' electric construction tools, such as saws, drills, and compressors. In applicable bid documents and contracts with contractors selected to construct the Project, include language requiring all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers, etc. (used during Project construction to be electric. • Require construction equipment to be turned off when not in use. • Recycle and/or salvage to reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1 of the California Green Building Standards Code Part 11. • On days when the hourly average wind speed for the City of Palmdale exceeds 20 miles per hour, additional dust control measures shall be implemented, such as increased surface watering. Grading and excavation shall be prohibited when sustained wind speeds exceed 30 miles per hour. • Apply and maintain surface treatments (such as PURETi Coat or PlusTi) on impervious ground surfaces that lessen				

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	impervious surface-related radiative forcing. • Use paints, architectural coatings, and industrial maintenance coatings for all interior painting that have volatile organize compound levels of less than 10 g/L.				
	AIR MM-7 During operation of the proposed Project, Developer will comply with the following: • All outdoor cargo handling equipment (including yard trucks, hostlers, yard goats, forklifts, and landscaping equipment) shall be zero- emission vehicles. Each building shall include the necessary charging stations or other necessary infrastructure for cargo handling equipment. The building manager or their designee shall be responsible for enforcing these requirements. • In anticipation of a transition to zero emissions truck fleets during the lifetime of the Project, install at least ten (10) heavy-duty truck vehicle charging stations by buildout of Phase 1 of the Project, install at least ten (10) heavy-duty truck vehicle charging stations by buildout of Phase II of the Project, and install at least five (5) heavy-duty truck vehicle charging stations by buildout of Phase 1 of the Project • Commit to on-site solar generation sufficient to meet at least 75% of the Project's total operational energy requirements from within the building envelope.	Developer	City of Palmdale or its designee	During operation of the Project	

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	• Prior to certificate of occupancy, install conduit and infrastructure for Level 2 (or faster) electric vehicle charging stations on-site for employees for the percentage of employee parking spaces commensurate with Title 24 requirements in effect at the time of building permit issuance plus additional plus charging stations equal to 5 percent of the total employee parking spaces in the building permit, whichever is greater. By buildout of each phase of the Project, install Level 2 (or faster) electric vehicle charging stations for 25 percent of the employee parking spaces required. • Install HVAC and/or HEPA air filtration systems in all warehouse facilities. • Prior to tenant occupancy, provide documentation to the City of Palmdale demonstrating that occupants/tenants of the Project site have been provided documentation that: ▪ Recommends the use of electric or alternatively fueled sweepers with high efficiency particulate air (HEPA) filters; ▪ Recommends the use of water-based or low VOC cleaning; and ▪ For occupants with more than 250 employees, require the establishment of a transportation demand management program (TDM) to reduce employee commute vehicle emissions.				

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	• Include contractual language in tenant lease agreements requiring that any facility operator shall: ▪ Ensure that site enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies, for example, by requiring attendance at California Air Resources Board (CARB)-approved courses. ▪ Be required to train managers and employers on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks. The building manager or their designee shall be responsible for enforcing these requirements. ▪ Be in, and monitor compliance with, all current air quality regulations for on-road trucks including CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program (PSIP), and the Statewide Truck and Bus Regulation.				
	AIR DF-1 Water Conservation. To reduce water demands and associated energy use, the Project would implement a Water Conservation Strategy and demonstrate a minimum 20 percent (%) reduction in indoor and outdoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy). Prior to the issuance of building permits for the Project, the Project applicant shall provide building plans that include the following water conservation measures:	Project Applicant	City of Palmdale or its designee	Prior to the issuance of building permits	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	• Install low-water use appliances and fixtures • Restrict the use of water for cleaning outdoor surfaces and prohibit systems that apply water to non-vegetated surfaces • Implement water-sensitive urban design practices in new construction • Install rainwater collection systems where feasible.				
	AIR DF-2 Solid Waste Reduction. In order to reduce the amount of waste disposed at landfills, the Project would implement a 75% waste diversion program. Prior to the issuance of building permits for the Project, the Project applicant shall provide building plans that include the following solid waste reduction measures: • Provide storage areas for recyclables and green waste in new construction, and food waste • storage, if a pick-up service is available. • Evaluate the potential for onsite composting.	Project Applicant	City of Palmdale or its designee	Prior to the issuance of building permits	
	AIR RR-1 The Project shall comply with the provisions of AVAQMD Rule 401, Visible Emissions, which requires that a person shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant for a period or periods aggregating more than three minutes in any one hour which is: a. As dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or **b.** Of such opacity as to obscure an observer's view to a degree equal to or greater than	Project Applicant; Construction Contractor(s); Building Tenant(s)	City of Palmdale or its designee	During Project construction activities and during operation of the Project	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	does smoke described in subparagraph (b)(1)(A) of Rule 401.				
	AIR RR-2 The Project shall comply with the provisions of AVAQMD Rule 402, Nuisance, which requires that a person shall not discharge air contaminants or other materials that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.	Project Applicant; Construction Contractor(s); Building Tenant(s)	City of Palmdale or its designee	During Project construction activities and during operation of the Project	
	AIR RR-3 The Project shall comply with the provisions of AVAQMD Rule 403, Fugitive Dust, by implementing the following dust control measures during construction activities, such as earth-moving activities, grading, and equipment travel on unpaved roads. Prior to grading permit issuance, the following notes shall be included on the grading plans. Project contractors shall be required to ensure compliance with the notes. The notes also shall be specified in bid documents issued to prospective construction contractors. • All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per AVAQMD guidelines in order to limit fugitive dust emissions, or water shall be applied to the soil not more than 15 minutes prior to moving such soil to limit Visible Dust Emissions (VDE) to 20 percent opacity. • The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered or subject to the application of dust	Project Applicant; Construction Contractor(s)	City of Palmdale or its designee	Prior to issuance of a grading permit or any permit that authorizes ground disturbance; During Project construction activities	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	suppressants sufficient to limit VDE to 20 percent opacity. • The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 mph or less.				
	AIR RR-4 The Project shall comply with AVAQMD rules related to sulfur content in fuels, including Rule 431.1, Sulfur Content of Gaseous Fuels; Rule 431.2, Sulfur Content of Liquid Fuels; and Rule 431.3, Sulfur Content of Fossil Fuels.	Project Applicant; Construction Contractor(s); Building Tenant(s)	City of Palmdale or its designee	During Project construction activities and during operation of the Project	
	AIR RR-5 The Project shall comply with the provisions of AVAQMD Rule 1113, Architectural Coatings, by requiring that all architectural coatings must comply with the VOC limits established in Table 1 of Rule 1113.	Project Applicant; Construction Contractor(s)	City of Palmdale or its designee	During Project construction activities	
Threshold b: During construction of the Project, prior to mitigation, the Project's daily construction emissions would exceed the AVAQMD threshold for VOC. Project operations, prior to mitigation, would exceed the AVAQMD thresholds in Phase I for NO_X, CO, PM_{10}, and in Phases II – IV for VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$. Therefore, prior to mitigation, the Project has the potential to result in a cumulatively considerable net increase of a criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard, resulting in a significant direct and cumulatively-considerable impact. As shown in Table 4.2-22, Emissions Summary of Construction (With Mitigation), with the implementation of mitigation measures, emissions resulting	**AIR MM-1** through **AIR MM-5** shall apply.				Significant Direct and Cumulatively-Considerable Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
from construction of the Project would be reduced and would not exceed criteria pollutant thresholds established by the AVAQMD for emissions of any criteria pollutant. Therefore, with implementation of the mitigation measures, construction activities associated with the Project would not 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. As shown in Table 4.2-23, Summary of Peak Operational Emissions (With Mitigation), with the implementation of Mitigation Measures, Phase I VOC emissions resulting from operation of the Project would be reduced and would not exceed the threshold established by the AVAQMD. After implementation of feasible mitigation, NO_X and PM_{10} emissions from Phase I of the Project would still exceed applicable daily air pollutant significance thresholds established by the AVAQMD. Emissions of VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$ from Phases II - IV of the Project also would still exceed applicable daily air pollutant significance thresholds established by the AVAQMD. Therefore, the Project would result in a cumulatively-considerable net increase of air pollutants for which the Project region is non-attainment under an applicable federal or State ambient air quality standard.					

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
It should be noted that a majority of the Project's NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions are derived from vehicle usage which the City does not have the regulatory authority to control or enforce. Neither the Project Applicant nor the Lead Agency can substantively or materially affect reductions in Project-related vehicular source emissions beyond the regulatory requirements and the feasible mitigation measures identified in this EIR. While there are no feasible mitigation measures that would reduce vehicular emissions to less than significant, the Project will install EV supply equipment in accordance with the California Building Code which will allow charging stations to be supplied on the Project site based on demand. Charging stations could lead to less use of gasoline-burning automobiles and thus, less air pollutant emissions. Hence, overall, there are no feasible mitigation measures that would reduce emissions to less than significant and this impact is considered significant and unavoidable.					
Threshold c: The Project would not produce the volume of traffic required to generate a CO "hot spot." The Project also would not expose people to cancer risks that would exceed the AVAQMD significance threshold of 10 in one million or non-cancer health risks exceeding the applicable significance threshold of 1.0. Therefore, the Project would not expose sensitive receptors to substantial pollutant concentration. Impacts would be less than significant and no mitigation is required.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold d: The Project does not propose land uses typically associated with emitting objectionable odors. The proposed Project would be required to comply with AVAQMD Rule 402, Nuisance, to prevent occurrences of public nuisances. Therefore, odors associated with the construction and operation of the Project would be less than significant and no mitigation is required.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
4.3 Biological Resources					
Summary of Impacts					
Threshold a: Phase I of the Project would impact 75.28 acres of Joshua tree woodland. Phases II – IV of the Project would impact 123.05 acres of Joshua tree woodland and 6.17 acres of disturbed Joshua tree woodland. Phase I and Phases II – IV would directly impact 7,184 western Joshua trees. The Project also has the potential to directly and indirectly impact nesting migratory birds protected by the MBTA and the CDFW if active nests are disturbed during the nesting season (February 1 through September 15). Additionally, the Project has the potential to directly impact desert kit fox that may utilize the Project site for denning and the burrowing owl that may utilize the Project for nesting/burrowing. Phase 1 of the Project would impact a total of nine cactus individuals protected by the California Desert Native Plants Act (CDNPA). One special status reptile, the northern legless lizard may occur in Phase I. With implementation of Mitigation Measures BIO MM-1, BIO MM-2, BIO	**BIO MM-1 Avoidance and Minimization Measures to Avoid Incidental Take of Joshua Tree/Joshua Tree Woodland and Species of Special Concern**. For all vegetation removal activities, the Project Applicant shall retain a qualified biologist to ensure that incidental construction impacts on Joshua trees and special status wildlife species are avoided or minimized to the maximum extent practical. The following shall be required: a. **Biological Monitor**. Prior to the issuance of a grading permit or any other permit that would authorize vegetation removal from or ground disturbance on the site, the Project Applicant shall retain a qualified biologist ("Dedicated Biologist") to monitor vegetation removal and initial ground disturbing construction activities for the potential presence of sensitive wildlife species. The Dedicated Biologist shall possess Scientific Collection Permits from CDFW for sensitive species that have a reasonable potential of being encountered on the site on the basis of suitable habitat. The Dedicated Biologist shall be on the site full time during vegetation removal and	Project Applicant; Construction Contractor(s); qualified professional biologist retained by Project Applicant	City of Palmdale or its designee	Prior to the issuance of a grading permit or any other permit that would authorize vegetation removal from or ground disturbance on the site; during ground disturbing construction activities	Less than Significant with Mitigation Incorporated

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
MM-7, and BIO MM-8, the direct and indirect impacts of the Project to sensitive wildlife species would be reduced to less than significant. With implementation of Mitigation Measures BIO MM-1, BIO MM-3, BIO MM-4, and BIO MM-5, direct impacts to the western Joshua tree would be reduced to less than significant. With implementation of BIO MM-6, direct impacts to the nine cactus individuals that occur in the Phase I area and that are protected by the California Desert Native Plants Act (CDNPA), would be reduced to less than significant.	grading activities. Should any sensitive species be observed, the Dedicated Biologist shall have the authority to pause or redirect construction equipment away from observed sensitive species and direct or move the species out of harm's way to the extent practicable, to a location of suitable habitat outside of the Project's impact footprint. Construction work may recommence in areas where sensitive species were observed only after the Dedicated Biologist has determined it is safe to do so. The Dedicated Biologist shall remain on site daily during ground disturbing activities and vegetation removal to advise workers to proceed with caution and ensure that sensitive wildlife, if present, is not unnecessarily harmed. b. **Wildlife Relocation Plan**. Prior to issuance of the first permit that authorizes vegetation removal or ground disturbance, the Dedicated Biologist shall prepare and submit to the City a Wildlife Relocation Plan. The Wildlife Relocation Plan shall describe all wildlife species that could occur within the Project site and proper handling and relocation protocols. The Wildlife Relocation Plan shall include species-specific relocation areas, at least 200 feet outside of the Project site and in suitable and safe relocation areas. No wildlife nests, eggs, or nestlings may be removed or relocated at any time. c. **Injured or Dead Wildlife**. If the Dedicated Biologist or construction contractor observe that any wildlife species of special concern (SSC) are harmed or a dead or injured animal is found,				

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	construction work in the immediate area shall stop immediately, the Dedicated Biologist shall be notified, and the dead or injured wildlife shall be documented. A formal report shall be sent to CDFW and the City within three calendar days of the incident or finding. The report shall include the date, time of the finding or incident (if known), and location of the carcass or injured animal and circumstances of its death or injury (if known). Work in the immediate area may only resume once the proper notifications have been made and additional measures have been identified to prevent additional injury or death. d. **Contractor Coordination**. The Dedicated Biologist shall coordinate with the Project's construction Contractor(s) involved in vegetation clearing and ground-disturbing construction activities to accomplish the following: i. Attendance at the pre-construction tailboard meeting (i.e., on-site meeting prior to work activities) to ensure that timing and location of construction activities do not conflict with other mitigation requirements (e.g., seasonal surveys for nesting birds). The meeting shall be conducted with the Construction Contractor and other key construction personnel to describe the importance of restricting work to designated areas. ii. Discussion with the Construction Contractor of procedures to minimize harm/harassment of wildlife that may be encountered during construction.				

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	iii. Review/designation of the construction area with the Construction Contractor in accordance with the Final Grading Plan. Haul roads, access roads, and on site staging and storage areas shall be sited in grading areas to minimize degradation of habitat adjacent to these areas. If activities outside these limits are necessary, they shall be evaluated by the Biologist to ensure no special status species or habitats will be affected. iv. A field review that is conducted to stake designated construction limits (to be set by a Surveyor retained by the Project Applicant). Any construction activity areas immediately adjacent to Joshua tree woodland may be flagged or temporarily fenced by the Biological Monitor at their discretion. v. Submittal of a brief report to the City discussing any unapproved disturbances resulting in impacts to special status resources within 48 hours of the incident.				
	BIO MM-2 Nesting Birds/Raptors. To avoid impacts on active nests for common and special status birds and raptors, the Project Applicant shall schedule vegetation clearing and blasting (blasting is not anticipated) during the non-breeding season (i.e., September 16 to January 31) to the extent feasible. If Project timing requires that vegetation clearing occur between February 1 and September 15, the Project Applicant or its designee shall retain a qualified Biologist to conduct a pre-construction survey for	Project Applicant; Construction Contractor(s); qualified professional biologist retained by Project Applicant	City of Palmdale or its designee	During the non-breeding nesting season; 3 days prior to the clearing of vegetation if scheduled during the nesting season; During construction of the Project; Prior to the initiation of construction activities	

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	nesting birds and raptors. The pre-construction survey shall be conducted by a qualified Biologist within three days prior to vegetation clearing. The pre-construction nesting bird survey area shall include the Project impact area (i.e., disturbance footprint) plus a 250-foot buffer to search for nesting birds and a 500 foot buffer to search for nesting raptors. If no active nests are found, no further mitigation would be required. If an active nest is located in the pre-construction nesting bird survey area, the Biologist shall delineate an appropriate buffer to protect the nest based on the sensitivity of the species. A protective buffer of 500 feet shall be used to protect nesting raptors. If appropriate, a smaller buffer may be considered (as determined by the Biologist) based on site topography, existing disturbance, sensitivity of the individuals (established by observing the individuals at the nest), and the type of construction activity. No construction activities shall be allowed in the designated buffer until the Biologist determines that nesting activity has ended. Construction may proceed within the buffer area once the Biologist determines that nesting activity has ceased (i.e., fledglings have left the nest or the nest has failed). The designated buffer shall be clearly marked in the field and shall be mapped as Environmentally Sensitive Areas (ESAs) on construction plans. Prior to the initiation of construction activities, an email summary of the results shall be submitted to the City by the Project Applicant with a map of any active nests found and their designated buffers. Construction shall be allowed to proceed if standard buffer distances are employed for any active nests. The Biologist shall then prepare a formal Letter Report describing methods used, results of the survey, recommended				

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	buffers, and/or justification for buffer reductions. The Letter Report shall be submitted to the City within one week of completion of the survey. If an active nest is observed during the survey, the Letter Report shall include a map showing the designated protective buffer.				
	BIO MM-3 Take Permits. Prior to the issuance of grading or building permits, the Project Applicant shall obtain a CESA Section 2081 Incidental Take Permit (ITP) or a Joshua Tree Conservation Act ITP from the California Department of Fish and Wildlife (CDFW) allowing impacts to western Joshua tree, a State Candidate species. Compensatory mitigation for impacts on Joshua tree woodland are described in BIO MM-4. If regulatory status changes at any point prior to impacts, and the species is no longer designated as a State Candidate for listing or a State listed species, an ITP would no longer be required.	Project Applicant	California Department of Fish and Wildlife (CDFW)	Prior to issuance of a grading or building permits or any permit that authorizes ground disturbance	
	BIO MM-4 Joshua Tree Woodland. The Project Applicant shall provide mitigation for permanently impacting Joshua tree woodland and disturbed Joshua tree woodland. The goal of this mitigation is to ensure no net loss of habitat following implementation of the Project. Mitigation ratios (i.e., the amount of mitigation acreage compared to the amount of impacted habitat) shall be negotiated with the resource agencies but shall be no less than 1:1, replacing each acre of habitat lost with of one acre of equivalent or higher quality habitat. This mitigation may be in the form of habitat preservation, restoration, enhancement, and/or establishment (i.e., creation), or an in-lieu fee program, discussed below. The Project Applicant shall implement one or a combination of these options, as approved by CDFW in the permit described in BIO MM-3. Successful implementation	Project Applicant	CDFW	As approved by the CDFW during the biological permitting process	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	of BIO MM-3 shall eliminate the requirements of BIO MM-4. 1. Preservation consists of acquisition of mitigation lands containing viable occurrences of the species, or that enhance the sustainability of the occurrences by protecting buffer lands and protecting those occurrences in perpetuity under a conservation easement or an in-lieu fee program that is transferred to a qualified land trust or public agency. 2. Restoration consists of the re-establishment or rehabilitation of mitigation land with the goal of returning natural or historic functions and characteristics. Restoration may result in a gain in habitat function, acreage, or both. 3. Enhancement consists of activities that heighten, intensify, or improve one or more habitat functions. Enhancement results in a gain in habitat function but does not result in a net gain in habitat acreage. 4. Establishment consists of the development of habitat in an area where it did not previously exist through manipulation of the physical, chemical, and/or biological characteristics of the site. Compensatory mitigation may be in the form of permittee-responsible mitigation, in which the permittee maintains liability for the construction and long-term success of the mitigation site or through mitigation banking/in-lieu fee program, where liability for Project success is transferred to a third party (i.e., a mitigation bank/in lieu fee sponsor). If the Project Applicant elects to provide mitigation through mitigation banking/in-lieu fee program, the mitigation bank/program shall be selected by the Project				

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	Applicant and approved by CDFW and payment shall be made prior to the issuance of grading or building permits. The Joshua Tree Conservation Act ITP process establishes an in-lieu fee program directly with CDFW (See BIO MM-3). For permittee-responsible mitigation involving establishment, restoration, or enhancement of habitat, the Project Applicant shall retain a qualified Biologist to prepare a Habitat Mitigation Monitoring Plan (HMMP) to mitigate for loss Joshua tree woodland habitat. The HMMP shall be reviewed/approved by the CDFW prior to issuance of grading or building permits. The detailed HMMP shall contain the following items: a. **Responsibilities and Qualifications of the Personnel to Implement and Supervise the Plan**. The responsibilities of the Project Applicant or its designee, specialists, and maintenance personnel, as well as the qualifications of specialists and maintenance personnel that will supervise and implement the plan, shall be specified. b. **Site Selection**. Site selection for restoration, establishment, enhancement, and/or preservation mitigation shall be determined in coordination with the Project Applicant, or its designee, and resource agencies. The mitigation site(s) shall be located in a dedicated open space area or on land that shall be dedicated and/or purchased off site. c. **Site Preparation and Planting Implementation**. Site preparation shall include the following, as determined by specific site conditions and permit requirements: protection of existing native species, trash and weed removal, native				

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	species salvage and reuse (i.e., duff), soil treatments (i.e., imprinting, decompacting), temporary irrigation installation, erosion-control measures (i.e., rice or willow wattles), seed mix application, and container species. d. **Schedule**. A schedule that requires planting to occur between October 1 and March 1 shall be developed. e. **Maintenance Plan/Guidelines**. The maintenance plan shall include the following, as determined by specific site conditions and permit requirements: weed control, herbivory control, trash removal, irrigation system maintenance, maintenance training, and replacement planting. f. **Monitoring Plan**. The site shall be monitored and maintained for a minimum of five years to ensure successful establishment of riparian habitat within the restored and created areas. The monitoring plan shall include qualitative monitoring (i.e., photographs and general observations); quantitative monitoring (e.g., randomly placed transects); performance criteria, as approved by the resource agencies; and monthly reports for the first year with quarterly reports thereafter and annual reports for all five years. g. **Long-Term Preservation**. Long-term preservation of the site shall be outlined in the restoration and enhancement plan to ensure the mitigation site is not impacted by future development.				

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	Although monitoring plans are typically scheduled for five years, if performance standards are successfully met prior to five years, the Project Applicant may request to be released from remaining monitoring requirements by CDFW.				
	BIO MM-5 City of Palmdale Permit. Per the City of Palmdale Emergency Ordinance No. 1556, a City approved Biologist shall prepare a Desert Vegetation Preservation Plan and the City shall issue a permit for Joshua tree removal prior to Project impacts. The City may defer to a CDFW ITP (See BIO MM-3), with no additional requirements, if one is issued for the project.	Project Applicant; City-approved Biologist	City of Palmdale or its designee	Prior to the initiation of construction	
	BIO MM-6 California Desert Native Plant Harvesting Permits. Prior to the initiation of construction, the Project Applicant shall obtain the necessary permits, tags, and/or seals, and shall pay the appropriate fees for removal of any individuals of a species protected by the California Desert Native Plant Protection Act. This includes nine silver cholla.	Project Applicant	City of Palmdale or its designee	Prior to the initiation of construction	
	BIO MM-7 Burrowing Owl Pre-Construction Survey. Per the Staff Report on Burrowing Owl Mitigation (CDFG 2012), the Project Applicant shall retain a qualified Biologist to conduct a pre-construction survey for the burrowing owl no less than 14 days prior to any ground disturbance by the Project and no greater than 30 days prior to ground disturbance in each Project area. The pre-construction survey shall include the area of proposed disturbance plus a 500-foot buffer (if access is available). If an active burrow is observed outside the breeding season (i.e., September 1 to January 31) and it cannot be avoided, the burrowing owl shall be passively excluded from the burrow following methods described in CDFG 2012. One-way doors shall be used	Project Applicant; professional qualified biologist retained by the Project Applicant	City of Palmdale or its designee	No less than 14 days and no more than 30 days prior the initiation of ground disturbance/construction activities	

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	to exclude owls from the burrows; doors shall be left in place for at least 48 hours. Once the burrow is determined to be unoccupied, as verified by site monitoring, the burrow shall be closed by a qualified Biologist who shall excavate the burrow using hand tools. Prior to excluding an owl from an active burrow, a receptor burrow survey shall be conducted to confirm that at least two potentially suitable unoccupied burrows are within approximately 688 feet prior to installation of the one-way door. If two natural receptor burrows are not located, one artificial burrow shall be created for every burrow that would be closed. If an active burrow is observed outside the breeding season (i.e., September 1 to January 31) and it can be avoided, the Biologist shall determine an appropriate protective buffer for the burrow based on CDFW guidelines. The buffer shall range from 160 feet to 1,640 feet depending on the level of impact and the time of year (See Table below). The designated buffer shall be clearly marked in the field and shall be mapped as an ESA on construction plans. The Project Applicant or its designee shall contact CDFW to determine whether a reduced buffer can be accommodated without adversely impacting occupied burrows. If an active burrow is observed during the breeding season (i.e., February 1 to August 31), the active burrow shall be protected until nesting activity has ended (i.e., all young have fledged from the burrow). The Biologist shall determine the appropriate protective buffer for the burrow based on CDFW guidelines. The buffer shall range from 650 to 1,640 feet depending on the level of impact and the time of year (See Table below). The designated buffer shall be clearly marked in the field and shall be mapped as an ESA on construction plans. The Project Applicant or				

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE

its designee shall contact CDFW to determine whether a reduced buffer can be accommodated without adversely impacting occupied burrows. Construction shall be allowed to proceed when the qualified Biologist has determined that all fledglings have left the nest. Compensatory mitigation for the loss of foraging habitat shall be satisfied with implementation of MM BIO 6.

Burrowing Owl Protective Buffer Sizes

	Time of Year	Level of Disturbance		
		Low	Medium	High
Nesting sites	April 1 to August 15	656 feet (200 meters)	1,640 feet (500 meters)	1,640 feet (500 meters)
Nesting sites	August 16 to October 15	656 feet (200 meters)	656 feet (200 meters)	1,640 feet (500 meters)
Nesting sites	October 16 to March 31	164 feet (50 meters)	328 feet (100 meters)	1,640 feet (500 meters)

Upon completion of the pre-construction burrowing owl survey, a Letter Report shall be prepared and submitted to CDFW documenting the results of the survey within two weeks of completion of the survey effort. If an active burrow is observed, the Letter Report shall include a description of the protective buffer that has been designated and a summary of any additional correspondence with the CDFW.

If time lapses of greater than 30 days occur during construction in a particular portion of the work area,

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	an additional survey shall be conducted by a qualified Biologist within 24 hours prior to vegetation clearing and/or ground disturbance in that area. If any new burrowing owl burrows are observed, the conditions above shall be applied. **BIO MM-8 Desert Kit Fox/American Badger Burrows**. The Project Applicant shall retain a qualified Biologist to conduct a pre-construction burrow survey for desert kit fox and American badger no less than 14 days and no more than 30 days prior to initiation of ground disturbance/construction activities. Ideally, this survey shall be conducted outside the breeding season (i.e., February 1 to September 15) to allow for passive exclusion, if necessary. The pre-construction survey shall include the Project site plus a 200-foot buffer (if access is available). If no active burrows are found, no further mitigation would be required. If an active burrow is observed outside the breeding season (i.e., September 16 to January 31) and it cannot be avoided, the burrow shall be closed using passive exclusion. One-way doors shall be used to exclude American badgers from their burrows; doors shall be left in place for at least five nights. Progressive soil blocking shall be used to discourage use by desert kit fox. Once the burrow is determined to be unoccupied (i.e., not used for five nights), as verified by site monitoring (e.g., wildlife cameras), the burrow shall be closed by a qualified Biologist who shall excavate the burrow using hand tools. If an active burrow is observed outside the breeding season (i.e., September 16 to January 31) and it can be avoided, a 50-foot protective buffer shall be delineated around the burrow. The designated buffer shall be clearly marked in the field and shall be mapped as an	Project Applicant; professional qualified biologist retained by the Project Applicant	California Department of Fish and Wildlife (CDFW) and City of Palmdale or its designee	No less than 14 days and no more than 30 days prior the initiation of ground disturbance/construction activities; Upon completion of the pre-construction burrow survey	

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	ESA on construction plans. The Project Applicant shall consult with CDFW to determine whether a reduced buffer can be accommodated without adversely impacting occupied burrows. If an active den is observed during the breeding season (i.e., February 1 to September 15), the active den shall be protected with a 100-foot buffer until breeding activity has ended. The designated buffer shall be clearly marked in the field and shall be mapped as an ESA on construction plans. The Project Applicant shall contact CDFW to determine whether a reduced buffer can be accommodated without adversely impacting the occupied den. Construction shall be allowed to proceed when the qualified Biologist has determined that the burrow is no longer active based on site monitoring (i.e., no activity has been observed at the burrow for five nights). Upon completion of the pre-construction burrow survey, a Letter Report shall be prepared and submitted to CDFW documenting the results of the survey within two weeks of completing the survey effort. If an active burrow/den is observed, the Letter Report shall include a description of the protective buffer that has been designated and a summary of any additional correspondence with the CDFW.				
	BIO MM-9 Best Management Practices. The Project Applicant shall incorporate Best Management Practices (BMPs), including applicable measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of runoff discharged by Project activities does not adversely affect the Project area. In particular, BMPs shall be designed to prevent (to the extent feasible) the runoff of toxins, chemicals, petroleum products, or other elements that might	Project Applicant; professional qualified biologist retained by the Project Applicant; Construction Contractor(s)	City of Palmdale or its designee	Prior to construction initiation and during Project construction activities	

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	degrade water quality. Additionally, BMPs shall be used to minimize erosion. The areas where stockpiling can occur shall be selected in consultation with the monitoring Biologist. Spoils shall be stockpiled in disturbed areas lacking native vegetation. The Construction Contractor shall clearly mark stockpile areas to define the limits where stockpiling can occur. The Construction Contractor shall designate an area for vehicle maintenance that is not within or adjacent to drainages or native vegetation. Fueling and maintenance of equipment shall take place within the vehicle maintenance area. Impervious ground surfaces or plastic covering shall be used to prevent spillage or leakage onto the ground surface. Any spilled hazardous materials shall be immediately cleaned and hazardous materials properly disposed of. Construction Contractor equipment shall be checked for leaks prior to operation and repaired as necessary.				
	BIO MM-10 Night Lighting. The Project Applicant or its designee shall ensure that night lighting shall be directed away from open space areas and shielding shall be incorporated in the final Project design to minimize spillover of night lighting into adjacent open space to the greatest extent practicable. Any such light fixtures installed adjacent to open space areas shall direct/reflect light downward and away from adjacent habitat areas.	Project Applicant or its designee; Construction Contractor(s); Building Tenants	City of Palmdale or its designee	During Project construction activities and during operation of the Project	
	BIO MM-11 Landscaping. The Project Applicant or its designee shall retain a qualified Biologist to review the landscaping plan to ensure that any landscaping component of the Project does not include the planting of exotic, invasive species that would potentially degrade the quality of the surrounding natural open	Project Applicant or its designee; qualified professional biologist retained by Project Applicant	City of Palmdale or its designee	Prior to City approval of landscaping plan	

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	space. A list of potential landscaping plant species shall be submitted to the Biologist for review; the Biologist shall ensure that exotic plant species known to be invasive (e.g., those on the California Invasive Plant Council's [Cal-IPC's] invasive plant inventory) are not included on the list. The Biologist shall make recommendations for more suitable plant species if necessary. Once a final plant palette is prepared, landscaping installed in the development area shall include only species on the approved palette.				
	BIO RR-1 National Pollutant Discharge Elimination System (NPDES) Compliance. The Project Applicant or its designee shall incorporate Best Management Practices (BMPs) during Project construction, including applicable measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of water runoff discharged by Project activities does not adversely affect biological resources. BMPs shall be designed to prevent, to the extent feasible, the runoff of toxins, chemicals, petroleum products, or other elements that might degrade water quality. Additionally, BMPs shall be used to minimize erosion.	Project Applicant or its designee; Construction Contractor(s)	City of Palmdale or its designee	During Project construction activities	
	BIO RR-2 Clean Up Requirements for Accidental Hazardous Waste Spills. Construction contractors shall immediately stop work and, pursuant to pertinent State and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so, to minimize impacts to biological resources.	Construction Contractor(s); State and Federal entities	City of Palmdale or its designee	Immediately during construction of the Project should any hazardous waste spills occur on the site	
	BIO DF-1 Landscaping. The Project Applicant or its designee shall retain a qualified biologist to review the landscaping plan to ensure that any landscaping				

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	component of the Project does not include the planting of exotic, invasive species that would potentially degrade the quality of the surrounding natural open space. A list of potential landscaping plant species shall be submitted to the qualified biologist for review; the qualified biologist shall ensure that exotic plant species known to be invasive (e.g., those on the California Invasive Plant Council's (Cal-IPC's) invasive plant inventory)) are not included on the list. The qualified biologist shall make recommendations for more suitable plant species if necessary. The qualified biologist shall sign the landscaping plan as approved prior to City approval of the landscaping plan. Once a final plant palette is prepared and approved by the City, landscaping installed in the development area shall include only species on the approved palette.				
	BIO DF-2 Contractor Education. Prior to the initiation of ground-disturbing construction activities, the Project's construction contractor supervisors shall be trained by a qualified biologist on the topic of best management construction practices to avoid and minimize impacts to sensitive biological resources present on and around the Project site. The construction supervisors shall be responsible for enforcement of best practices by its personnel. The training shall occur within 30 days of the contractor initiating work on the Project site.	Construction Contractor(s) Supervisors; qualified biologist retained by the Project Applicant and Construction Contractors	City of Palmdale or its designee	Prior to the initiation of ground-disturbing construction activities	
	BIO DF-3 Construction Monitoring Notebook. The qualified biologist shall maintain a construction-monitoring notebook on the site throughout the construction period, which shall include a copy of the biological resources mitigation measures with attachments and a list of signatures of all construction supervisory personnel who have successfully completed the education program. The Project	Project Applicant; qualified professional biologist retained by the Project Applicant	CDFW	During Project construction activities	

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	Applicant or successor in interest shall ensure that a copy of the construction monitoring notebook is available for review at the Project site upon request by the CDFW.				
	BIO DF-4 Delineation of Property Boundaries. Before beginning activities that would cause ground-disturbing impacts, the contractor shall, in consultation with a qualified biologist, clearly delineate the boundaries of construction activity with fencing, stakes, or flags, consistent with the grading plan, within which the impacts would occur. All impacts outside the fenced, staked, or flagged areas shall be avoided, and all fencing, stakes, and flags shall be maintained until the completion of impacts in that area as determined by the qualified biologist.	Qualified biologist retained by the Project Applicant; Construction Contractor(s)	City of Palmdale or its designee	Prior to ground-disturbing activities	
	BIO DF-5 Stockpiling. During Project construction, areas where stockpiling can occur shall be selected in consultation with a qualified biologist. Spoils shall be stockpiled in disturbed areas lacking native vegetation. The construction contractor in coordination with a qualified biologist shall clearly mark stockpile areas in the field to define the limits where stockpiling can occur.	Qualified professional biologist retained by the Project Applicant; Construction Contractor(s)	City of Palmdale or its designee	During Project construction activities	
	BIO DF-6 Designation of Construction Vehicle Maintenance Area. The construction contractor shall designate an area for vehicle maintenance that is not within or adjacent to any drainage area or native vegetation. Fueling and maintenance of equipment shall take place within the vehicle maintenance area. Impervious ground surfaces or plastic covering shall be used to prevent spillage or leakage onto the ground surface. Any spilled hazardous materials shall be immediately cleaned and hazardous materials properly disposed of. Contractor equipment shall be checked for leaks prior to operation and repaired as necessary.	Construction Contractor(s)	City of Palmdale or its designee	During Project construction activities	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	BIO DF-7 Prevention of the Spread of Weed Seeds. The introduction of exotic plant species shall be avoided and minimized to the extent practicable. Weed seeds entering the construction area via vehicles shall be minimized by requiring construction vehicles to be washed prior to delivery to the Project site. Track-clean or other methods of vehicle cleaning shall be used by the construction contractor to prevent weed seeds from entering/exiting the construction areas on vehicles. Additionally, wattles used for erosion control shall be certified as weed-free.	Construction Contractor(s)	City of Palmdale or its designee	During Project construction activities	
	BIO DF-8 Lighting. Lighting for construction activities and operations shall be directed inward toward the Project site and lighting shall not be directed toward adjacent undeveloped areas.	Project Applicant; Construction Contractor(s); Building Tenant(s)	City of Palmdale or its designee	During Project construction activities and during operation of the Project	
	BIO DF-9 Trash and Debris. The following avoidance and minimization measures shall be implemented during project construction: a. Fully covered trash receptacles that are animal-proof shall be installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash contained within the receptacles shall be removed at least once a week from the Project site. b. Construction work areas shall be kept clean of debris, such as cable, trash, and construction materials. All construction/contractor personnel shall collect all litter, vehicle fluids, and food waste from the Project site on a daily basis.	Construction Contractor(s); Building Tenant(s)	City of Palmdale or its designee	During Project construction activities	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	BIO DF-10 Herbicides and Rodenticides. The Project Applicant or successor in interest shall limit herbicide use for invasive plant species and shall use herbicides only if it has been determined by a qualified biologist that hand or mechanical efforts are infeasible. To prevent drift, the Project Applicant or successor in interest shall apply herbicides only when wind speeds are less than seven miles per hour. All herbicide application shall be performed by a licensed applicator and in accordance with all applicable federal, State, and local laws and regulations. In addition, no rodenticides and second-generation anticoagulant rodenticides shall be used during Project construction and operational activities.	Project Applicant or Successor in interest; qualified professional biologist; Building Tenant(s)	City of Palmdale or its designee	During Project construction activities and during operation of the Project	
Threshold b: Based on the proposed limits of disturbance of Phase I and Phases II – IV of the Project, the jurisdictional sandy wash, located in the northwest corner of the Project site, would be avoided and no direct impacts to jurisdictional waters would occur. Therefore, impacts would be less than significant and no mitigation would be required.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
Threshold c: Because no wetland conditions occur on the Project site, there is no potential for the Project to 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. Therefore, no impact would occur and no mitigation is required.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold d: The Project has the potential to impact nesting birds if active nests are disturbed during the nesting season (February 1 through September 15). The Project would not substantially interfere	**BIO MM-2** shall apply.				Less than Significant with Mitigation Incorporated

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
with the movement of any other 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. With implementation of Mitigation Measure BIO MM-2, the direct and cumulatively considerable impacts of the project on migratory birds protected by the MBTA would be reduced to less than significant.					
Threshold e: Phase I of the Project would impact 75.28 acres of Joshua tree woodland. Phases II – IV of the Project would impact 123.05 acres of Joshua tree woodland and 6.17 acres of disturbed Joshua tree woodland. Phase I and Phases II – IV would directly impact 7,184 western Joshua trees. No California juniper trees are present on the site under existing conditions. The Project's disturbance footprint is intentionally designed to avoid the unnamed sandy wash located in the northwest corner of the Project site. With implementation of Mitigation Measures BIO MM-1, BIO MM-3, BIO MM-4, and BIO MM-5, direct impacts to the western Joshua tree would be reduced to less than significant.	**BIO MM-1, BIO MM-3, BIO MM-4** and **BIO MM-5** shall apply.				Less than Significant with Mitigation Incorporated
Threshold f: Implementation of the Project would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	No mitigation is required.	N/A	N/A	N/A	No Impact
4.4 Cultural Resources					
Summary of Impacts					
Threshold a: Although fifteen cultural resources were identified on the Project site,	**CUL MM-1** Cultural Resource Sensitivity Training. Prior to construction and as needed throughout the	Professional cultural resources specialist	City of Palmdale or its designee	Prior to construction and as needed throughout the	Less than Significant with Mitigation Incorporated

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
all of which are comprised of refuse scatter dating to the historic period, none of the sites are recommended eligible for listing in the California Register of Historical Resources (CRHR). Additionally, the Project site has a low to moderate sensitivity for buried historical resources. However, although unlikely, there is a remote potential that significant historical resources could be uncovered during grading and trenching activities associated with the Project's construction. If significant historical resources are encountered and not properly identified and treated, the Project would have a significant direct and cumulatively considerable impact for which mitigation would be required. Implementation of Mitigation Measures CUL MM-1 through CUL MM-4 and CUL RR-1 would ensure the proper identification and subsequent treatment of any significant historical or archaeological resources that may be encountered during ground-disturbing activities associated with Project construction. With implementation of the required mitigation, the Project's potential impacts to important historical and archaeological resources would be reduced to less than significant.	construction period involving ground-disturbing construction activities, a construction worker Cultural Resource Sensitivity Training program shall be provided to all construction workers involved in ground-disturbing activities prior to employment at the Project site. The training shall be prepared and conducted by a qualified professional that meets the Secretary of Interior's Professional Qualification Standards in conjunction with a Tribal Historic Preservation Officer or a designated Tribal Representative from one of the consulting Native American tribes, retained by the construction contractor or by the Project Applicant. The training session shall focus on the historic, archaeological, and tribal cultural resources that may be encountered during ground-disturbing activities, as well as the procedures to be followed in such an event. Workers attending the training shall sign a form that shall be kept by the construction contractor or Project Applicant and made available to the City upon request. **CUL MM-2** Tribal Monitoring Agreement. Prior to the issuance of grading permits, the Project Applicant shall enter into an Tribal Monitoring Agreement with the consulting tribe(s) for a Tribal Monitor. The designated Tribal Monitor(s) shall be on-site during all initial ground-disturbing activities, including but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post replacement, construction excavation for all utility and irrigation lines, and landscaping of any kind. In conjunction with a qualified professional that meets the Secretary of Interior's Professional Qualification Standards, the designated Tribal Monitor(s) shall have the authority to temporarily divert, redirect, or halt the ground-disturbing activities to allow identification, evaluation, and potential recovery of cultural resources. The Project Applicant shall submit a fully executed copy	retained by the Project Applicant or the Construction Contractor(s); Tribal Historic Preservation Officer or a designated Tribal Representative from one of the consulting Native American tribe Project Applicant; Construction Contractor(s); qualified cultural resource specialist that meets the Secretary of Interior's Professional Qualification Standards; Tribal Monitor(s)	City of Palmdale or its designee	construction period involving ground-disturbing activities Prior to the issuance of grading permits	

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	of agreement(s) to the City of Palmdale to ensure compliance with this requirement. Upon verification, the City shall clear this condition. The agreement(s) shall not modify any condition of approval or mitigation measure.				
	CUL MM-3 Cultural Resource Management Plan. Prior to any ground-disturbing activities the qualified professional that meets the Secretary of Interior's Professional Qualification Standards shall develop a Cultural Resource Management Plan (CRMP) and/or Archaeological Monitoring and Treatment Plan (AMTP) to address the details, timing, and responsibilities of all archaeological and cultural resource activities that occur on the Project site. This Plan shall be written in consultation with the consulting tribe(s).	Qualified professional that meets the Secretary of Interior's Professional Qualification Standards; Native American consulting tribe	City of Palmdale or its designee	Prior to any ground-disturbing activities	
	CUL MM-4 On-Site Monitoring. During all ground-disturbing activities the qualified professional that meets the Secretary of Interior's Professional Qualification Standards and the Tribal Monitor(s) shall be on-site full-time. The frequency of inspections shall depend on the rate of excavation, the materials excavated, and any discoveries of Tribal Cultural Resources (TCRs) as defined in California Public Resources Code Section 21074. Archaeological and tribal monitoring shall be discontinued when the depth of grading and the soil conditions no longer retain the potential to contain cultural deposits. The qualified professional that meets the Secretary of Interior's Professional Qualification Standards, in consultation with the Tribal Monitor(s) shall have the authority to temporarily divert and/or temporarily halt ground-disturbance operations in the area of discovery to allow for the evaluation of potentially significant cultural resources. Isolates and clearly non-significant deposits shall be minimally documented in the field	Qualified cultural resource specialist that meets the Secretary of Interior's Professional Qualification Standards; Tribal Monitor(s); Construction Contractor(s); Native American consulting tribe	City of Palmdale or its designee	During all ground-disturbing activities	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	and collected so that the monitored grading can proceed. If a potentially significant cultural resource(s) is discovered, work shall stop within a 100-foot perimeter of the discovery and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. All work shall be diverted away from the vicinity of the find, so that the find can be evaluated by the qualified professional that meets the Secretary of Interior's Professional Qualification Standards and Tribal Monitor(s). The archaeologist shall notify the Lead Agency (City of Palmdale) and consulting Tribe(s) of said discovery. The qualified professional that meets the Secretary of Interior's Professional Qualification Standards, in consultation with the Lead Agency, the consulting Tribe[s], and the Tribal Monitor, shall determine the significance of the discovered resource. A recommendation for the treatment and disposition of the Tribal Cultural Resource (TCR) shall be made by the qualified professional that meets the Secretary of Interior's Professional Qualification Standards in consultation with the Tribe(s) and the Tribal Monitor(s) and be submitted to the Lead Agency for review and approval. Below are the possible treatments and dispositions of significant cultural resources in order of CEQA preference: a. Full avoidance. b. If avoidance is not feasible, preservation in place. c. If preservation is not feasible, all items shall be reburied in an area away from any future Project impacts and reside in a permanent conservation easement or Deed Restriction. d. If all other options are proven infeasible, data recovery through excavation and then				

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	in a curation facility that meets Federal Curation Standards (CFR 79.1). **CUL RR-1** If human remains are encountered during ground-disturbing construction activities, compliance with California Health and Safety Code § 7050.5 and Public Resources Code § 5097 et. seq. shall be required. State Health and Safety Code § 7050.5 states that no further disturbance shall occur until the Los Angeles County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resource Code § 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Los Angeles County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the "most likely descendant." The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code § 5097.98. Evidence of compliance with this mitigation measure, if human remains are found, shall be provided to the City Planning Department upon the completion of a treatment plan and final report detailing the significance and treatment finding.	Construction Contractor(s); Los Angeles County Coroner; Native American Heritage Commission	Los Angeles County Coroner	If human remains are encountered during ground-disturbing construction activities	
Threshold b: No known significant archaeological resources are present on the property and the Project site has a low to moderate sensitivity for buried prehistoric archaeological resources. However, although unlikely, there is a remote potential that significant archaeological resources could be uncovered during grading and trenching activities associated with the Project's construction. If	**CUL MM-1** through **CUL MM-4** shall apply.				Less than Significant with Mitigation Incorporated

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
significant archaeological resources are encountered and not properly identified and treated, the Project would have a significant direct and cumulatively considerable impact for which mitigation would be required. Implementation of Mitigation Measures CUL MM-1 through CUL MM-4 and CUL RR-1 would ensure the proper identification and subsequent treatment of any significant historical or archaeological resources that may be encountered during ground-disturbing activities associated with Project construction. With implementation of the required mitigation, the Project's potential impacts to important historical and archaeological resources would be reduced to less than significant.					
Threshold c: In the unlikely event that human remains are discovered during Project grading or other ground disturbing activities, the Project's contractors would be required to comply with the applicable provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097 et seq. Mandatory compliance with State law would ensure that human remains, if encountered, are appropriately treated and would preclude the potential for significant impacts to human remains.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
4.5 Energy					
Summary of Impacts					
Threshold a: The amount of energy and fuel estimated to be consumed by construction and operation of the Project would not be inefficient, wasteful, or unnecessary. Furthermore, the Project would not cause or	No mitigation is required; however, mitigation measures **AIR MM-1** through **AIR MM-5** shall be implemented.	N/A	N/A	N/A	Less than Significant Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
result in the need for additional energy facilities or energy delivery systems.					
Threshold b: The Project would not cause or result in the need for additional energy production or transmission facilities. The Project would not conflict with or obstruct the achievement of energy conservation goals within the State of California identified in State and local plans for renewable energy and energy efficiency.	No mitigation is required; however, mitigation measures **AIR MM-1** through **AIR MM-5** shall be implemented.	N/A	N/A	N/A	Less than Significant Impact
4.6 Geology and Soils					
Summary of Impacts					
Threshold a: The Project site is not located within an Alquist-Priolo Earthquake Fault Zone or within a fault zone depicted on the City's Fault Map and thus the risk of fault rupture to occur on the site is considered low. Although the Project site is located in a seismically active area of southern California and is expected to experience moderate to severe ground shaking during the lifetime of the Project, mandatory compliance with the California Building Standards Code (CBSC), the City Building Code, and the recommendations of the site-specific Geotechnical Investigation would ensure that potential effects associated with strong seismic ground shaking would be less than significant. Based on the lack of a historic high ground water table within the upper approximately 50 feet of the ground surface, and the mapping performed by the California Geological Survey (CGS), the Project would not be subject to seismic-related ground failure, including liquefaction, and impacts would be less than significant. The Project site and areas	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
immediately surrounding the Project site do not contain steep slopes capable of producing landslide hazards that could affect future development on site, and there are no components of the proposed Project that would result in the potential for landslide hazards; thus, impacts would be less than significant.					
Threshold b: Approximately 87.2 percent of the Project site contains soils that have a slight susceptibility to erosion, while the remaining 12.8 percent of the Project site contains soils that have a moderate susceptibility to erosion. However, the Project would not result in substantial soil erosion or loss of topsoil as the Project would implement the recommendations provided in the Project's Geotechnical Investigation to reduce soil erosion and the potential for water and/or wind erosion impacts to soils during Project construction would be reduced to less than significant levels. Additionally, the Project Applicant would be required to obtain an NPDES permit for construction activities and adhere to a Stormwater Pollution Prevention Plan (SWPPP) and the City's Stormwater Management Plan (SWMP), as well as the PMC, and AVAQMD Rule 403. With mandatory compliance to these regulatory requirements, the potential for water and wind erosion impacts during construction would be less than significant. Following development, wind and water erosion on the Project site would be minimized, because the areas disturbed during construction would be landscaped or covered with impervious surfaces and drainage would be	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
controlled through a storm drain system. Furthermore, because all runoff generated on-site would be retained on site and allowed to infiltrate into site soils, the Project has no potential to result in or contribute to erosion hazards downstream. Impacts would be less than significant.					
Threshold c: The Project site and surrounding areas exhibit little topographic variation, indicating that the potential for landslide hazards is low. Additionally, the Project would not involve the creation of any large slopes that would have the potential to result in landslide hazards. Accordingly, no impact due to landslide hazards would occur. Due to the lack of potential liquefaction hazards on site and the geotechnical conditions of the Project site, the potential for lateral spreading and subsidence is considered low, resulting in less than significant impacts. The results of laboratory testing indicate that the near-surface soils within the upper approximately 5 to 6 feet possess a slight to moderate potential for collapse when exposed to moisture infiltration. However, mandatory compliance with the CBSC, the City Building Code, and the recommendations of the site-specific Geotechnical Investigation would ensure that potential effects associated with collapse would be less than significant. In addition, based on the lack of a historic high ground water table within the upper approximately 50 feet of the ground surface, and the mapping performed by the CGS, SCG concludes that the Project would not be subject to seismic-related ground	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
failure, including liquefaction, and impacts would be less than significant.					
Threshold d: Laboratory testing performed on a representative sample of the near surface soils indicates that these materials are non-expansive, with an Expansion Index (EI) of 0. Therefore, the Project would not be located on expansive soil, as defined in Section 1803.5.3. of the California Building Code (2022) and would not create substantial direct or indirect risks to life or property, and no impact would occur.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold e: Sewer service to the proposed Project is owned and maintained by the City of Palmdale Public Works, Sewer Maintenance Division (COPSM). Connection plans for the proposed Project would be reviewed and approved by the City of Palmdale Engineering Division, and no septic tanks or alternative wastewater disposal systems are proposed or allowed as part of the Project. Accordingly, no impact related to septic systems would occur. Wastewater produced by the Project would be conveyed via the new sewer laterals to the City's collection and conveyance system to be treated at the LACSD No. 14's Lancaster Water Reclamation Plant.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold f: The presence of documented Pleistocene fossil localities in the vicinity of the Project site at a depth of four feet and less combined with the lack of mapped exposures of Pleistocene sediments within the Project area would give surficial sediments (Qa) an "Undetermined Sensitivity." Excavations may impact Pleistocene deposits of Qa, which should be	**GEO MM-1** Prior to the issuance of grading permits, the Project Applicant shall retain a qualified paleontologist approved by the City to create and implement a Project-specific plan for monitoring site grading/earthmoving activities (Project paleontologist). The Project paleontologist retained shall review the approved development plan and grading plan and conduct any pre-construction work necessary to render appropriate monitoring and	Project Applicant; qualified paleontologist approved by the City; Construction Contractor(s); all field personnel	City of Palmdale or its designee	Prior to the issuance of grading permits	Less than Significant with Mitigation Incorporated

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
treated as "High Sensitivity." As such, ground-disturbing activities conducted in previously undisturbed portions of the Project site may result in significant impacts to previously undiscovered paleontological resources, such as destruction, damage, or loss of scientifically important paleontological resources. This is evaluated as a potentially significant impact for which mitigation would be required.	mitigation requirements as appropriate. These requirements shall be documented by the project paleontologist in a Paleontological Resources Mitigation and Monitoring Plan (PRMMP). The PRMMP shall describe the monitoring levels required during excavations, and the location of areas deemed to have a high paleontological resource potential. This PRMMP shall be submitted to the City for approval prior to issuance of a grading permit. Requirements to be included in the PRMMP are as follows: • Worker's Environmental Awareness Program. Prior to the start of the proposed Project activities, the PRMMP shall require that all field personnel shall receive a worker's environmental awareness training on paleontological resources. The training shall provide a description of the laws and ordinances protecting fossil resources, the types of fossil resources that may be encountered in the Project area, the role of the Project paleontologist, outline steps to follow in the event that a fossil discovery is made and provide contact information for the Project paleontologist. The training shall be developed by the Project paleontologist and can be delivered concurrent with other training including cultural, biological, safety, etc. • Paleontological Mitigation Monitoring. The PRMMP shall describe the monitoring levels required during excavations, and the location of areas deemed to have a high paleontological resource potential. Monitoring shall entail the visual inspection of excavated or graded areas and trench sidewalls. If the Project paleontologist determines full-time				

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	monitoring is no longer warranted, based on the geologic conditions at depth, he/she/they may recommend that monitoring be reduced or cease entirely. • Fossil Discoveries. If a paleontological resource is discovered, the Project paleontologist shall have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project paleontologist shall complete the following: o *Salvage of Fossils*. If fossils are discovered, all work in the immediate vicinity shall be halted to allow the Project paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the Project paleontologist shall recover them following standard field procedures for collecting paleontological as outlined in the PRMMP prepared for the Project. The Project paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. o *Fossil Preparation and Curation*. The PRMMP shall identify the museum that has agreed to accept fossils that may be discovered during Project-related excavations. Upon completion of fieldwork, all				

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	significant fossils collected shall be prepared in a properly equipped laboratory to a point ready for curation. Preparation may include the removal of excess matrix from fossil materials and stabilizing or repairing specimens. During preparation and inventory, the fossil specimens shall be identified to the lowest taxonomic level practical prior to curation at an accredited museum. The fossil specimens shall be delivered to the accredited museum or repository no later than 90 days after all fieldwork is completed. The cost of curation shall be assessed by the repository and shall be the responsibility of the Project Applicant. • Final Paleontological Mitigation Report. Upon completion of ground-disturbing activities (and curation of fossils if necessary), the Project paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.				
	GEO RR-1 Prior to issuance of grading or building permits, the City of Palmdale Building and Safety Division shall verify that all of the recommendations provided in the Project's Geotechnical Investigation prepared by Southern California Geotechnical and included as Technical Appendix F1 to the Project's	Project Applicant	City of Palmdale Building and Safety Division	Prior to issuance of grading or building permits	

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	EIR, are incorporated into the Project's grading and building plans and implemented by the construction contractors. Recommendations are made for, but are not limited to: 1) Seismic Design Considerations; 2) Geotechnical Design Considerations: all grading activities shall be completed in accordance with the Grading Guide Specifications included as Appendix D of the Geotechnical Investigation; 3) Site Grading Recommendations; 4) Construction Considerations; 5) Foundation Design and Construction; 6) Floor Slab Design and Construction; 7) Retaining Wall Design and Construction; and 8) Pavement Design Parameters.				
	GEO RR-2 The Project is required to comply with the provisions of PMC Chapter 8.04, Adoption of Health, Safety and Technical Construction Codes which generally require that all projects comply with California Building Codes and the International Building Codes. These codes establish site-specific investigation requirements, construction standards, and inspection procedures to ensure that development does not pose a threat to the health, safety, and welfare of the public, and include requirements related to erosion.	Project Applicant; Construction Contractor(s)	City of Palmdale or its designee	During Project construction activities	
	GEO RR-3 The Project is required to comply with the provisions of AVAQMD Rule 403 by addressing blowing dust from the Project's construction activities.	Project Applicant; Construction Contractor(s)	City of Palmdale or its designee	During Project construction activities	
	GEO RR-4 The Project is required to comply with the provisions of the Project's NPDES permit, the Project's SWPPP as well as the City's SWMP. Compliance would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from stormwater and non-stormwater discharges.	Project Applicant; Construction Contractor(s)	City of Palmdale or its designee	During Project construction activities and during operation of the Project	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
4.7 Greenhouse Gas Emissions					
Summary of Impacts					
Threshold a: The Project would generate approximately 40,288.20 $MTCO_2e$/yr from construction and operational activities in Phase I, 109,009.41 MTCO2e/yr from construction and operational activities in Phases II - IV, and 149,297.79 $MTCO_2e$/yr, from construction and operational activities at Project buildout, which is above the SCAQMD screening threshold of 3,000 $MTCO_2e$ per year. Accordingly, prior to mitigation, the Project's GHG emissions represent a significant cumulatively-considerable impact on the environment. As shown on Table 4.7-5, Project GHG Emissions Summary (With Mitigation), after implementation of feasible mitigation, greenhouse gas (GHG) emissions resulting from Phase I of the Project are calculated to be 39,953.73 $MTCO_2e$/yr and GHG emissions from Phases II - IV of the Project are calculated to be 108,240.42 $MTCO_2e$/yr. Project Buildout emissions are estimated to be 148,194.15 $MTCO_2e$/yr beginning in 2032 when the entire Project is completed and becomes operational. Thus, the proposed Project's GHG emissions would exceed the SCAQMD screening threshold of 3,000 $MTCO_2e$ per year. Because the majority (89 percent) of the Project GHG emissions would be generated by Project-related vehicular sources that are outside of the City's regulatory authority to control and enforce, the Project cannot	**AIR MM-3** through **AIR MM-5** shall apply. **GHG DF-1 Water Conservation**. To reduce water demands and associated energy use, the Project is required to implement a Water Conservation Strategy and demonstrate a minimum 20 percent reduction in indoor and outdoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy). Prior to the issuance of building permits for the Project, the Project applicant shall provide building plans that include the following water conservation measures: a) Install low-water use appliances and fixtures b) Restrict the use of water for cleaning outdoor surfaces and prohibit systems that apply water to non-vegetated surfaces c) Implement water-sensitive urban design practices in new construction d) Install rainwater collection systems where feasible **GHG DF-2 Solid Waste Reduction**. To reduce the amount of waste disposed at landfills, a 75 percent waste diversion program shall be implemented during Project construction. Prior to the issuance of building permits, the City shall verify that building plans contain the following solid waste reduction measure requirements: a) Provide storage areas for recyclables, as well as for green waste and food waste storage, if a pick-up service is available.	Project Applicant; Construction Contractor(s); Future Building Tenant(s) Project Applicant; Construction Contractor(s); Building Tenant(s)	City of Palmdale or its designee City of Palmdale or its designee	During Project construction activities and during operation of the Project; Prior to issuance of building permits During Project construction activities and during Project operation; Prior to issuance of building permits	Significant Unavoidable Cumulatively-Considerable Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
feasibly achieve the SCAQMD 3,000 $MTCO_2e$ per year threshold. Because responsibility and authority for regulation of vehicular-source emissions resides with the State of California (CARB, et al.), neither the Applicant nor the Lead Agency can affect or mandate substantial reductions in vehicular-source GHG emissions, much less reductions that would achieve the SCAQMD's 3,000 $MTCO_2e$ per year threshold. In effect, all Project traffic would need to be eliminated or be "zero GHG emissions sources" to achieve the SCAQMD's numeric threshold. There are no feasible means to or alternatives to eliminate all Project traffic, or to ensure that Project traffic would be zero GHG emissions sources. In terms of its practical application, this would constitute a "no build" condition. On this basis, even with implementation of applicable Project Design Features and Mitigation Measures AIR MM-1 through AIR MM-5, the Project would generate direct or indirect GHG emissions that would result in a significant impact on the environment. This is a significant and unavoidable impact.	b) Compost on site if feasible. **GHG DF-3** Cargo handling equipment shall be non-diesel. If more than one piece of cargo handling equipment is required by the building user, the equipment shall be zero-emission. **GHG RR-1** The Project is required to comply with the PMC Chapter 14.05, Water Efficient Landscape. Efficient water use lowers GHG emissions by reducing the consumption of energy resource required to treat and deliver water. **GHG RR-2** The Project is required to directly or indirectly comply with all applicable GHG reduction mandates imposed by the State of California and the AVAQMD. Those that are applicable to the Project either directly or indirectly and that would reduce GHG emissions are: a) Pavley Fuel Efficiency Standards (AB 1493). Establishes fuel efficiency ratings for new vehicles. b) Title 24 California Code of Regulations (California Building Code). Establishes energy efficiency requirements for new construction. c) Title 20 California Code of Regulations (Appliance Energy Efficiency Standards). Establishes energy efficiency requirements for appliances. d) Title 17 California Code of Regulations (Low Carbon Fuel Standard). Regulates the carbon content of fuel sold in California. e) Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions.	Building Tenant(s) Project Applicant; Construction Contractor(s); Building Tenant(s) Project Applicant; Construction Contractor(s); Building Tenant(s)	City of Palmdale or its designee City of Palmdale or its designee City of Palmdale or its designee; AVAQMD	During operation of the Project During Project construction activities and during operation of the Project During Project construction activities and during operation of the Project	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	f) Renewable Portfolio Standards (SB 1078). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources.				
Threshold b: The Project would not conflict with any of the CARB Scoping Plan elements as any regulations adopted would apply directly or indirectly to the Project. Additionally, the Project would not conflict with the GHG reduction goals of the City's General Plan, and impacts would therefore be less than significant. The Project's mitigation measures, design features, and regulatory requirements specified below in Subsection 4.7.7 and 4.7.8 would further ensure that the Project does not conflict with the GHG reduction policies of the City's General Plan. Impacts would be less than significant.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
4.8 Hazards and Hazardous Materials					
Summary of Impacts					
Thresholds a and b: With mandatory compliance with applicable hazardous materials regulations, the Project would result in less than significant impacts due to the creation of a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials during the construction phase. Additionally, with mandatory regulatory compliance, potential hazardous materials impacts associated with long-term operation of the Project would be less than significant; thus no mitigation is required.	No mitigation is required. **HAZ RR 4-1** All construction contractors are required to comply with all applicable regulations and requirements promulgated by the federal Occupational Safety and Health Administration (OSHA). **HAZ RR 4-2** The Project is required to comply with Title 22, Division 4.5 of the California Code of Regulations, which requires residents and employees to dispose of household hazardous waste, including pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals, at a Household Hazardous Waste Collection Facility.	N/A Construction Contractor(s) Construction Contractor(s); Building Tenant(s)	N/A City of Palmdale or its designee City of Palmdale or its designee	N/A During Project construction activities During Project construction activities and during operation of the Project	Less than Significant Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	HAZ RR 4-3 The Project is required to comply with Title 22, Division 4.5, Chapter 11 of the California Code of Regulations which requires fluorescent lamps, batteries, and mercury thermostats be recycled or taken to a Household Hazardous Waste Collection Facility.	Construction Contractor(s); Building Tenant(s)	City of Palmdale or its designee	During Project construction activities and during operation of the Project	
	HAZ RR 4-4 In accordance with the California Accidental Release Prevention (CalARP) program, if any businesses occupies the Project site that handles more than a specific threshold quantity of a regulated substance listed in the CalARP regulations, the business is required to prepare a Risk Management Plan (RMP) detailing the potential accident factors present and the measures that will be implemented to reduce accident potential. The RMP must include, but not be limited to, safety information, a hazard review, operating procedures, training requirements, maintenance requirements, compliance audits, and incident investigation procedures. The CalARP program requirements are implemented and enforced at the local government level by Unified Program Agencies (UPAs), such as the Los Angeles County Fire Department. The UPAs determine the level of detail needed in the RMPs, review the RMPs, conduct facility inspections, and provide public access to most of the relevant information.	Building Tenant(s)	Unified Program Agencies (UPAs), such as the Los Angeles County Fire Department	If any businesses occupies the Project site that handles more than a specific threshold quantity of a regulated substance listed in the CalARP regulations; During occupation of the building	
Threshold c: Because there are no existing schools located within 0.25-mile of the Project site, there is no potential for 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. Therefore, no impact would occur.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold d: Because the Project site is not located on any list of hazardous materials sites compiled pursuant to Government	No mitigation is required.	N/A	N/A	N/A	No Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Code Section 65962.5, no impact would occur and no mitigation is required.					
Threshold e: Because the Project's would be consistent with the FAA, the ALUC, and the AICUZ Final Report, implementation of the Project would not result in a safety hazard or excessive noise for people residing or working in the Project area; therefore, impacts would be less than significant.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
Threshold f: The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route, and there are no components of the Project with the potential to conflict with or interfere with the City's Emergency Operation Plan (EOP). Accordingly, implementation of the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan. Therefore, impacts would be less than significant and no mitigation is required.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
Threshold g: Because the Project site is not located in close proximity to wildlands or areas with high fire hazards, development of the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires significant wildfire risk.	No mitigation is required.	N/A	N/A	N/A	No Impact
4.9 Hydrology and Water Quality					
Summary of Impacts					

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold a: As required by the National Pollutant Discharge Elimination System (NPDES) permit, an approved Stormwater Pollution Prevention Plan (SWPPP) would be implemented during construction activities; therefore, impacts to water quality during construction would be less than significant. Under long-term operation, the Project would not discharge any surface waters from the Project site, and the proposed aboveground infiltration basin would address erosion and other water quality pollutants of concern. As such, the Project has no potential to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality under long-term operational conditions. Impacts would be less than significant.	No mitigation is required. **HYDRO RR-1** As required by the provisions of the NPDES permit, the Project Applicant would be required to obtain an NPDES permit for construction activities, which includes the preparation and implementation of a Stormwater Pollution Prevention Plan. The Project's construction contractors will be required to follow the requirements outlined in the SWPPP. Compliance with the NPDES permit and the SWPPP would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from storm water and non-stormwater discharges during construction activities.	N/A Project Applicant; Construction Contractor(s)	N/A Regional Water Quality Control Board (RWQCB)	N/A During Project construction activities	Less than Significant Impact
Threshold b: The Project would be served with potable water by Los Angeles County Waterworks District (LACWD) District 40, and the Project would not involve direct groundwater extraction via existing or proposed groundwater wells. Because the Project's proposed land uses are accounted for by the LACWD 2020 Urban Water Management Plan (UWMP), and because the UWMP demonstrates that the LACWD would have sufficient supply to meet projected demand through 2045, it is concluded that the LACWD would have sufficient water supply available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years. Thus, the Project would not result in a decrease in groundwater	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
supplies that may impede sustainable groundwater management of the basin. In addition, because all runoff generated on the Project site would infiltrate into the groundwater table, the Project would not interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. Impacts would be less than significant.					
Threshold c: The Project Applicant would be required to obtain an NPDES permit, which involves the preparation and implementation of a SWPPP to address erosion and siltation hazards during Project construction. The potential for erosion hazards on site would be substantially decreased as compared to existing conditions with build-out of the Project site. The Project has no potential to contribute runoff to off-site areas that may increase erosion hazards off-site. The Project has no potential to substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site, and no impact would occur. Additionally, the Project has no potential to exceed the capacity of any existing or proposed stormwater drainage systems, and no impact would occur. Furthermore, the Project would not impede or redirect flood flows, and impacts would be less than significant.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
Threshold d: The Project site is not subject to inundation by flood hazards, seiches, or tsunamis. As such, the Project has no potential to risk release of pollutants due to site inundation. Therefore, no impact would	No mitigation is required.	N/A	N/A	N/A	No Impact

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
occur as result of implementation of the Project.					
Threshold e: The Antelope Valley Groundwater Basin is exempt from the requirements of the Sustainable Groundwater Management Act (SGMA), Los Angeles County Water District (LACWD) District 40 has not adopted a groundwater management plan, and no regional groundwater management plan currently exists for the Antelope Valley Groundwater Basin. As such, the Project has no potential to conflict with or obstruct implementation of a sustainable groundwater management plan, and no impact would occur. Furthermore, the Project has no potential to conflict with or obstruct implementation of a water quality control plan. Therefore, no impact would occur as result of implementation of the Project.	No mitigation is required.	N/A	N/A	N/A	No Impact
4.10 Land Use and Planning					
Summary of Impacts					
Threshold a: The Project would not disrupt or divide the physical arrangement of an established community. Impacts would be less than significant.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
Threshold b: Implementation of the Project would be consistent with Federal Aviation Administration (FAA) regulations, the Los Angeles County Airport Land Use Plan (ALUP), and the USAF Plant 42 Air Installation Compatible Use Zone (AICUZ) Final Report. The Project would not conflict with any SCAG Connect SoCal goals. With approval of General Plan Amendment (GPA) 22-001 and Specific Plan (SP) 22-					Less than Significant Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
001, the Project would be fully consistent with the City's General Plan. Finally, the Project would not conflict with the Palmdale Municipal Code (PMC) or any other land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Additionally, there are no impacts due to land use incompatibility that have not already been evaluated and mitigated to the maximum feasible extent in other relevant sections of this EIR.					
4.11 Noise					
Summary of Impacts					
Threshold a: Noise levels generated by short-term construction of the Project would be less than significant at the nearest receptors. On-site operational noise levels would be less than significant at the nearest receptors. In addition, the off-site traffic noise levels generated by the Project would be less than significant. Therefore, the Project would not generate 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. Impacts would be less than significant and no mitigation is required.	No mitigation is required. **NOI RR-1** All construction activities shall adhere to PMC Section 8.28.030, limiting construction-activities to the hours of 6:00 AM and 6:00 PM, prohibiting earth excavating and similar activities between 8:00 PM and 6:30 AM and on Sundays in any residential zone or within 500 feet of any residence, hotel, motel, or recreational vehicle park. This requirement shall be noted on all grading and building plans and in bid documents issued to construction contractors.	N/A Project Applicant; Construction Contractor(s)	N/A City of Palmdale or its designee	N/A During Project construction activities	Less than Significant Impact
Threshold b: The vibration impacts of the Project are considered less than significant during typical construction activities at the Project site. Vibration levels reported at the receiver locations are unlikely to be sustained during the entire construction period but would occur only during the	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
times that heavy construction equipment is operating adjacent to the Project site perimeter. Therefore, the construction and operational activities of the Project would not result in a perceptible groundborne vibration or noise that exceeds thresholds of significance. Impacts would be less than significant and no mitigation is required.					
Threshold c: Although the Project site is located within the AIA, the Project's industrial and commercial land uses are considered normally acceptable within the AIA; therefore, because the Project would not expose people residing or working in the Project area to excessive noise levels related to a private airstrip, airport land use plan or public airport our public use airport, impacts would be less than significant and no mitigation is required.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
4.12 Public Services					
Summary of Impacts					

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold a.i: The Project would place demand on fire protection services but would not result in the need for new or physically altered fire protection facilities. No impact would occur.	No mitigation is required.	N/A	N/A	N/A	No Impact
	PS RR-1 As a condition of Project approval, the proposed Project shall conform to all mandatory local, State, and federal laws, ordinances, and standards relating to fire safety. Among other items, these requirements include conformance with the Uniform Building Code Section 1503, which requires that all buildings be constructed with fire retardant roofing material. Access routes in the Project area would be required to be maintained throughout construction and buildout of the proposed Project.	Project Applicant, Construction Contractors; Building Tenants	City of Palmdale or its designee	During Project construction activities and during operation of the Project	
	PS RR- 2 The Project shall adhere to PMC Chapter 3.45, Public Facility Development Impact Fee Requirements, which requires payment of a Development Impact Fee to assist the City in providing for fire protection facilities, including fire stations; providing for police protection facilities; and providing for other public services and facilities. Payment of the Development Impact Fees would ensure that funds are available for capital improvements, such as land/equipment purchases and fire station construction.	Project Applicant	City of Palmdale or its designee	Prior to issuance of building permits	
	PS RR-3 Prior to issuance of occupancy permits, the Project Applicant shall contribute appropriate school impact fees to the Palmdale School District (PSD), the Lancaster School District (LSD), and the Antelope Valley Unified School District (AVUHSD) at the rates established by the PSD, the LSD, and the AVUHSD, as required by Public Education Code § 17072.10-18.	Project Applicant	City of Palmdale or its designee	Prior to issuance of occupancy permits	
Threshold a.ii: The Project would place demand on sheriff's services but would not result in the need for new or physically altered sheriff station facilities. No impact would occur.	No mitigation is required.	N/A	N/A	N/A	No Impact
	No mitigation is required.	N/A	N/A	N/A	No Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold a.iii: The Project would not directly generate a residential population, and thus would not directly or indirectly impact school services in the local area or cause the need for new or physically altered school facilities. No impact would occur.					
Threshold a.iv: The Project does not propose any residential uses or other land use that may directly or indirectly generate a population that would increase the use of existing neighborhood and regional parks or other recreational facilities such that they would experience physical change or cause the need to construct or physically alter a park or other recreation facility. However, the Project's workforce may utilize park facilities during their lunch hour or workday breaks, therefore, although the Project as well as other development projects in the area would be required to pay Development Impact fees, impacts are deemed to be less than significant.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
Threshold a.v: The Project would not directly generate a residential population, and thus would not directly or indirectly impact other public facilities in the local area such that they would experience physical change or cause the need to construct or physically alter a public facility. No impact would occur.	No mitigation is required.	N/A	N/A	N/A	No Impact
4.13 Transportation					
Summary of Impacts					
Threshold a: The Project is consistent with the RTP/SCS, the City's General Plan, including the goals and policies of the General Plan Circulation and Mobility Element, and also would be required to	No mitigation is required.	N/A	N/A	N/A	No mitigation is required.

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
comply with all applicable requirements of the PMC. As there are no other applicable programs, plans, ordinances, or policies addressing the circulation system, Project impacts due to a conflict with a program, plan, ordinance or policy addressing the circulation system would be less than significant.					
Threshold b: Both Phase I and Buildout of the Project-generated VMT per employee were determined to be 32.0 percent above the County's currently adopted impact threshold of 13.6 percent below Baseline VMT for Los Angeles County as a whole. As such, the Project's impacts due to VMT would be significant on both a direct and cumulatively considerable basis. The Project would have a significant and unavoidable vehicle miles traveled (VMT) impact. Because the future building tenants are not known for the Project, the effectiveness of any potential commute trip reduction measure may be limited. In addition to specific tenancy considerations, locational context is also a major factor relevant to the potential application and effectiveness of Transportation Demand Management (TDM) measures. A project may only realize a quantifiable reduction in commute VMT under the most favorable circumstances and ideal local conditions when implementing trip reduction measures. In practical terms, ideal conditions are rarely realized due to variables such as locational context limitations (i.e., non-urban areas). Additionally, to achieve ideal conditions a	**TRN MM-1** The Project Applicant shall submit a Transportation Demand Management (TDM) plan prepared by a qualified transportation consultant acceptable by the City to reduce the Project's vehicle miles traveled. The TDM plan shall be approved by the City prior to the issuance of the first industrial building occupancy permit. The TDM plan shall apply to industrial building Project tenant(s) through tenant leases. The TDM plan shall discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking. Examples of trip reduction measures may include, but are not limited to: a) Transit passes b) Car-sharing programs c) Telecommuting and alternative work schedules d) Ride sharing programs Although not required to reduce transportation impacts, the following mitigation would further ensure that the Project's traffic construction-related activities occur in compliance with the applicable standards and requirements as disclosed in this Section and in the Project's Traffic Impact Analysis (*Technical Appendix L1*). **TRN MM-2** Prior to each phase of construction, the Project Applicant shall provide a Construction	Project Applicant	City of Palmdale or its designee	Prior to issuance of the first industrial building occupancy permit	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
project must achieve 100 percent employee participation, and maximum employee eligibility, which are not generally expected. This is even more difficult to presume since future building tenants are not known at this time. Although the Project would be subject to compliance with Mitigation Measure TRN MM-1, which would reduce the Project's VMT, the effectiveness of commute trip reduction measures such as those listed in Mitigation Measure TRN MM-1 cannot be guaranteed to reduce Project VMT to a level of less than significant. No additional feasible mitigation measures are available to measurable reduce the Project's VMT. Therefore, the Project's VMT impacts are considered significant and unavoidable.	Management Plan to the City to further ensure that a) adequate emergency access is required to be maintained during construction of the Project in accordance with City and Fire Department requirements, and b) all proposed improvements within the public right-of-way shall be installed in conformance with City design standards and project construction activities that would occur in the public right-of-way shall adhere to the applicable construction control practices that are specified in the State of California Department of Transportation Construction Manual and the California Manual on Uniform Traffic Control Devices, to minimize potential safety hazards				
Threshold c: With mandatory compliance with City roadway and private driveway design standards, the Project would not substantially increase hazards due to a geometric design feature. Additionally, due to the short distance between the Project site and the designated truck routes, the Project would not result in increased hazards to transportation as a result of incompatible uses.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
Threshold d: Adequate emergency access is required to be maintained during both construction and long-term operation of the Project, in accordance with City and Fire Department requirements. Accordingly, the Project would not result in inadequate emergency access, and impacts would be less than significant.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
4.14 Tribal Cultural Resources					
Summary of Impacts					
Threshold a: The Project site does not contain any known TCRs. If TCRs are unearthed during the Project's excavation activities, a potentially significant impact could occur if the resources are not properly identified and treated. Implementation of Mitigation Measures CUL MM-1 through CUL MM-4 and CUL RR-1 would ensure the proper identification and subsequent treatment of any TCRs that may be encountered during ground-disturbing activities associated with Project construction. With implementation of the required mitigation, the Project's potential impacts to important subsurface TCRs (if such resources are unearthed during Project construction) would be reduced to less than significant levels.	**CUL MM-1** through **CUL MM-4**, and **CUL RR-1** shall apply.	N/A	N/A	N/A	Less than Significant with Mitigation Incorporated
4.15 Utilities and Service Systems					
Summary of Impacts					
Threshold a: The Project's wet and dry utility infrastructure facilities have been evaluated throughout this EIR under the appropriate subject headings (e.g., air quality, biological resources, etc.). There are no significant environmental impacts that would occur specifically related to the Project's proposed water, sewer, drainage, and dry improvements that have not already been addressed.	No mitigation is required. **UTIL RR-1** Project construction contractors are required to comply with the requirements of the California Green Building Standards Code (CalGreen, Part 11 of Title 24, California Code of Regulations), which requires among other items the installation of low water-use appliances and the diversion of a certain amount of construction waste from landfills. **UTIL RR -2** The Project design is required to comply with the provisions of the California Solid Waste Reuse and Recycling Act (AB 1327), which requires that an adequate area for collecting and loading recyclable materials over the lifetime of the Project	N/A Construction Contractor(s) Project Applicant	N/A City of Palmdale or its designee City of Palmdale or its designee	N/A During Project construction activities Prior to issuance of building permits	Less than Significant Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	must be provided. The City of Palmdale shall ensure the Project applicant has met this requirement prior to the issuance of building permits.				
	UTIL RR-3 The Project applicant, construction contractors, and operators, shall comply with all applicable provisions of PMC Chapter 5.52, Solid Waste Handling and Recycling Services.	Project Applicant; Construction Contactor(s); Building Operator(s)	City of Palmdale or its designee	During Project construction activities and during operation of the Project	
	UTIL RR-4 The Project applicant, construction contractors, and operators, shall comply with all applicable provisions of PMC Title 13, Sanitary Sewers and Industrial Waste.	Project Applicant; Construction Contactor(s); Building Operator(s)	City of Palmdale or its designee	During Project construction activities and during operation of the Project	
	UTIL RR-5 The Project applicant, construction contractors, and operators, shall comply with all applicable provisions of PMC Chapter 14.05, Water Efficient Landscape.	Project Applicant; Construction Contactor(s); Building Operator(s)	City of Palmdale or its designee	During Project construction activities and during operation of the Project	
Threshold b: Existing water supplies in combination with identified future and potential water supply opportunities and demand reduction responses would enable Los Angeles County Waterworks District (LACWD) District 40 to meet all future water demands under all hydrologic conditions through 2045. Additionally, because the Project's proposed land uses are accounted for by the LACWD 2020 UWMP, and because the UWMP demonstrates that the LACWD would have sufficient supplies to meet projected demands, it is determined that the LACWD will have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years. Thus,	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
Project impacts to water supply would be less than significant.					
Threshold c: The Project's wastewater generation would represent approximately 1.25 percent of the daily design capacity at the Lancaster Water Reclamation Plant (LWRP). Because the Project's individual wastewater treatment capacity need represents only 1.25 percent of the total treatment capacity of the LWRP, impacts due to implementation of the Project would be less than significant.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
Threshold d: Solid waste generated by construction and operation of the Project would represent less than one percent of the disposal capacities at landfills that service the area. Existing landfills have a sufficient capacity to accept the Project's solid waste for disposal and the Project 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. Therefore, impacts would be less than significant.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
Threshold e: There is no potential for the Project to conflict with applicable federal, State, and local statutes and regulations related to the management and reduction of solid waste and pertaining to waste disposal, reduction, and recycling. Impacts would be less than significant.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
4.16 Wildfire					
Summary of Impacts					
Threshold a: Because the Project site is not located in or near SRAs or lands classified	No mitigation is required.	N/A	N/A	N/A	No Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
as very high fire severity zones, implementation of the Project would not substantially impair an adopted emergency response plan or an emergency evacuation plan; therefore, no impact would occur and no mitigation is required.	**WF DF-1** The proposed structures shall be equipped with an early suppression fast response (ESFR) fire sprinkler system. Installation of the ESFR system shall be assured through City review and approval of building permits. **WF RR-1** Prior to issuance of building permits, the City shall assure that the Project's building plans comply with required fire protection ratings specified in the applicable California Code of Regulations Title 24 requirements.	Project Applicant; Construction Contractor(s) Project Applicant	City of Palmdale or its designee City of Palmdale or its designee	Prior to issuance of building permits Prior to issuance of building permits	
Threshold b: Because the Project is not located in or near SRAs or lands classified as very high fire severity zones, the Project, due to slope, prevailing winds, and other factors, would not exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Therefore, no impact would occur and no mitigation is required.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold c: The Project is not located in or near SRAs or lands classified as very high fire severity zones. Therefore, due to the lack of wildfire susceptibility in the areas surrounding the Project site, the Project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Accordingly, no impact would occur.	No mitigation is required.	N/A	N/A	N/A	No Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold d: Because the Project site is not located in or near an SRA or lands classified as very high fire severity zones, the Project would not 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. Therefore, no impact would occur and no mitigation is required.	No mitigation is required.	N/A	N/A	N/A	No Impact

1.0 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that all public agencies within the State of California having land use approval over activities with the potential to adversely affect the quality of the environment, regulate such activities so that impacts to the environment can be prevented to the extent feasible. Such activities are reviewed and monitored through the CEQA compliance process, as provided in the CEQA Statute (Public Resources Code Sections 21000 - 21177, as amended) and the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387, as amended).

Under CEQA, if there is substantial evidence that a project may have a significant effect on the physical environment, an Environmental Impact Report (EIR) must be prepared (CEQA Guidelines Section 15064(a)(1)). This document serves as an EIR for the proposed Antelope Valley Commerce Center Specific Plan Project [General Plan Amendment (GPA 22-001); Zone Change (ZC 22-001); Specific Plan (SP 22-001); Tentative Parcel Map (TPM 83738); and Site Plan Review (SPR 22-008)]. For purposes of this EIR, the term "Project" refers to all actions associated with implementing the Antelope Valley Commerce Center Specific Plan Project (GPA 22-001; ZC 22-001; SP 22-001; TPM 83738; and SPR 22-008) including planning, construction, and ongoing operations. The term "Project Applicant" used herein refers to AVCC Master, LLC., which is the entity that submitted proposed GPA 22-001; ZC 22-001; SP 22-001; TPM 83738; and SPR 22-008 to the City of Palmdale (City) to entitle the Project. The term "Project site" refers to the property upon which the Project is proposed. The public agency with the principal responsibility for carrying out or approving a project or the first public agency to make a discretionary decision to proceed with a proposed project should ordinarily act as the Lead Agency pursuant to CEQA Guidelines Sections 15050-15051. The term "Lead Agency" used herein refers to the City of Palmdale. Throughout this document, the terms "Draft EIR" and "Final EIR" may be used interchangeably since both are part of the ultimate EIR record; however, "Draft EIR" may be used specifically when referring to information provided in the volume made available for the CEQA-required 45-day public review period.

1.1 PURPOSES OF CEQA AND THIS EIR

As stated by CEQA Guidelines Section 15002(a), the basic purposes of CEQA are to:

- Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and

- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The purposes of this EIR are to inform public agency decision-makers and the general public about the potentially significant environmental effects of the Project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the Project that would feasibly attain most of the basic Project objectives but would avoid or substantially lessen its significant environmental effects (CEQA Guidelines Section 15121(a)). This EIR is an informational document that represents the independent judgment of the City. The City reviewed and, as necessary, directed revisions to all submitted drafts, technical studies, and reports supporting this EIR for consistency with City policies and requirements, to ensure that this EIR reflects the City's independent judgment.

1.2 SUMMARY OF THE PROJECT EVALUATED BY THIS EIR

The Project site encompasses approximately 432.9 gross acres of vacant land and is located within the City of Palmdale, Los Angeles County, California. The Project site is located directly south of Columbia Way / East Avenue M; approximately 0.02-mile east of the active Union Pacific Railroad (UPRR) mainline tracks located adjacent to Sierra Highway; and directly north of Avenue M-12. Challenger Way runs north to south through the eastern portion of the Project site. The Project site is located approximately 0.03- mile east of Sierra Highway and approximately 1.45 miles east of State Route 14 (SR-14). The Project site is located approximately 0.25-mile (1,305 feet) north of Runway 7 of United States Air Force (USAF) USAF Plant 42.

The Project Applicant, AVCC Master, LLC proposes to entitle and develop the Antelope Valley Commerce Center Specific Plan Project (herein, "Project") on a 432.9 gross-acre undeveloped site located in the City of Palmdale, Los Angeles County, California. The Project would allow for the phased development of a master-planned commerce center containing industrial, commercial, and open space land uses, as well as roadways. The four phases of development would allow for a maximum of 8,302,536 square feet (s.f.) of building footprint, to be comprised of approximately 8,241,552 s.f. of industrial and 60,984 s.f. of commercial uses. Associated improvements to the Project site would include, but are not limited to, paved roads, paved parking areas, drive aisles, truck courts, utility infrastructure, landscaping, water quality basins, signage, lighting, property walls, gates, and fencing, including perimeter fencing. Buildout of the Project would be phased. Six (6) buildings are proposed in the first phase and their development details are described in Section 3.0, *Project Description.* Site-specific detail for subsequent phases of development would be determined in the future but reasonable assumptions are made about the future phases of development to enable a complete and comprehensive analysis of the whole of the Project. This EIR analyzes the physical environmental effects associated with all components and all phases of the Project, including planning, grading, construction, and on-going operation. The Project includes the above-described development and all required entitlements to implement that development.

Refer to Section 3.0, *Project Description*, for a detailed description of proposed GPA 22-001; ZC 22-001; SP 22-001; TPM 83738; and SPR 22-008 and the physical and operational characteristics of the

Project. Other related discretionary and administrative actions required of the City of Palmdale and other agencies to authorize construction and operation of the Project also are listed in Section 3.0.

1.3 CEQA Compliance Process

As a first step in the CEQA compliance process and pursuant to the procedural requirements of CEQA, on September 1, 2022, the City filed a Notice of Preparation (NOP) with the State Clearinghouse (SCH), a division of the Governor's Office of Planning and Research (OPR), to indicate that an EIR would be prepared to evaluate the Project's potential to impact the environment. The NOP also was distributed to potential responsible and trustee agencies and other interested parties for a 30-day public review period that commenced on September 1, 2022. The NOP was subsequently filed with the Los Angeles County Clerk on September 27, 2022, which extended the local review period to October 27, 2022. The purpose of distributing the NOP was to solicit responses to assist the City in identifying the full scope and range of potential environmental concerns associated with the Project so that these issues could be fully examined in this EIR.

In addition, the City held a publicly-noticed EIR Scoping Meeting on September 19, 2022, using an internet-based virtual platform (Zoom). At the Scoping Meeting, the City provided information about the proposed Project, the intended scope of the EIR, and provided opportunity for agencies and members of the general public to comment on the scope of environmental issues to be addressed in this EIR.

An Initial Study was not prepared for the proposed Project because the City determined that an EIR was required, although the Project's NOP did scope out certain issue areas from detailed environmental review. The NOP, public review distribution list, and written comments received by the City during the NOP public review period are provided in *Technical Appendix A* to this EIR. Please refer to Table 1-1, *Summary of NOP Comments*, for summarized comments received during the NOP public review period. The purpose of this table is to present a summary of the environmental topics that were expressed by public agencies and interested parties to be of primary interest. Table 1-1 is a summary and does not list every comment received by the City during the NOP review period. Regardless of whether or not an environmental or CEQA-related comment is listed in the table, all relevant comments received in response to the NOP and during the EIR Scoping Meeting are addressed in this EIR.

Table 1-1 Summary of NOP Comments

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
State			
California Department of Fish and Wildlife (CDFW)	September 27, 2022	• States that based on imagery, western Joshua trees occur on the Project site. Provides information, survey requirements, avoidance measures, compensatory mitigation information, and guidance for treatment of impacts to western Joshua Tree.	*4.3, Biological Resources*
		• States that take authorization under the California Endangered Species Act (CESA) will be required for the western Joshua Tree, which may include an Incidental Take Permit (ITP) or a Consistency Determination in certain circumstances, among other options.	*4.3, Biological Resources*
		• States that observations of Mohave ground squirrels have been documented within a mile of the Project site. Provides information, survey requirements, and guidance for treatment of impacts to the Mohave ground squirrel (MGS).	*4.3, Biological Resources*
		• States that if the Project would impact Mohave ground squirrel and habitat, the EIR should provide measures to avoid and/or mitigate potential impacts to Mohave ground squirrel and habitat supporting the species States that for unavoidable impacts to the MGS, mitigation may include consultation with CDFW and obtaining appropriate take authorization under the CESA.	*4.3, Biological Resources*
		• States that the Project is within the home range of the desert tortoise. Provides information, survey requirements, and guidance for treatment of impacts to Desert tortoise.	*4.3, Biological Resources*
		• States impacts on desert tortoise requires a mandatory finding of significance under CEQA. If the Project would impact desert tortoise and habitat, the EIR should provide measures to avoid and/or mitigate potential impacts to desert tortoise as	*4.3, Biological Resources*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		well as habitat. Also states that for unavoidable impacts to the Desert tortoise, mitigation may include consultation with CDFW and/or United States Fish and Wildlife Service (USFWS) and obtaining appropriate take authorization under the CESA and the Endangered Species Act (ESA) prior to implementing the Project.	
		• States that Swainson's hawk have been observed within a mile of the Project site. Provides information, survey requirements and guidance for treatment of impacts to Swainson's hawk.	*4.3, Biological Resources*
		• States that impacts to Swainson's hawk requires a mandatory finding of significance under CEQA. Also states that if the Project would result in loss of nesting and/or foraging habitat, the EIR should include measures to mitigate for those impacts. Any proposed compensatory mitigation should ensure no net loss of foraging habitat for Swainson's hawk. Appropriate mitigation may also include consulting with CDFW and obtaining appropriate take authorization under CESA prior to implementing the Project.	*4.3, Biological Resources*
		• Provides information regarding two reptile species of special concern (SSC): the coast horned lizard and the Northern California legless lizard, survey requirements, avoidance information, and guidance for treatment of impacts to these reptile species. States that both species have been observed and recorded within a mile of the Project site.	*4.3, Biological Resources*
		• States that take of SSC could require a mandatory finding of significance. Also states that if the Project would result in loss of suitable habitat for these SSC, CDFW recommends the EIR include measures to mitigate for those impacts.	*4.3, Biological Resources*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		• Recommends that measures be taken to avoid impacts on nesting birds and raptors. Recommends that the EIR include a measure to avoid ground-disturbing activities and vegetation removal during the avian breeding season from February 15 through September 15 (as early as January 1 for some raptors) to avoid take of birds, raptors, or their eggs. Also, asks that the EIR provide recommended mitigation measures if impacts to nesting birds cannot be avoided.	*4.3, Biological Resources*
		• Recommends that the Project include a native plant palette as part of the Project's landscaping plan. Recommends avoiding non-native, invasive species for landscaping and restoration.	*3.0, Project Description*
		• States that Assembly Bill 1788 prohibits the use of any second-generation anticoagulant rodenticides because they have a higher toxicity and are more dangerous to nontarget wildlife. Recommends the EIR include a discussion as to the Project's use of herbicides, pesticides, and second-generation anticoagulant rodenticides to maintain the restored areas within the Project site in perpetuity. CDFW recommends the City include measures that would prohibit the use of any second-generation anticoagulant rodenticides throughout the Project.	*4.3, Biological Resources*
		• Recommends that an adequate biological resources assessment provide a complete assessment and impact analysis of the flora and fauna within and adjacent to the Project area and where the Project may result in ground disturbance. Recommends that emphasis be placed on identifying endangered, threatened, rare, and sensitive species; regionally and locally unique species; and sensitive habitats.	*4.3, Biological Resources*
		• Recommends that the EIR include information on the regional setting and	*4.3, Biological Resources*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		on resources that are rare or unique to the region.	
		• Recommends a thorough, recent, floristic-based assessment of special status plants and natural communities following CDFW's protocols.	*4.3, Biological Resources*
		• Recommends floristic, alliance- and/or association-based mapping and vegetation impact assessments conducted at a Project site and within the neighboring vicinity. Adjoining habitat areas should be included in this assessment as the Project could lead to direct or indirect impacts off site.	*4.3, Biological Resources*
		• Recommends a complete, recent, assessment of the biological resources associated with each habitat type on site and within adjacent areas that could also be affected by a Project. California Natural Diversity Database (CNDDB) should be contacted to obtain current information on any previously reported sensitive species and habitat.	*4.3, Biological Resources*
		• Recommends a complete, recent, assessment of rare, threatened, and endangered, and other sensitive species on site and within the area of potential effect, including California Species of Special Concern and California Fully Protected Species.	*4.3, Biological Resources*
		• Requests a recent wildlife and rare plant survey.	*4.3, Biological Resources*
		• States that qualified biologist(s) must obtain appropriate handling permits to capture, temporarily possess, and relocated wildlife to avoid harm or mortality in connection with Project-related activities.	*4.3, Biological Resources*
		• States that CDFW generally does not support the use of translocation or transplantation as the primary mitigation strategy for unavoidable impacts to endangered, rare, or threatened plants and animals.	*4.3, Biological Resources*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		• States that the EIR should provide a stream delineation and analysis of impacts.	*4.3, Biological Resources*
		• States that CDFW has authority over activities in streams and/or lakes that will divert or obstruct the natural flow, or change the bed, channel, or bank (including vegetation associated with the stream or lake) of a river or stream or use material from a streambed. For any such activities, the project applicant must notify CDFW. CDFW's issuance of a Lake and Streambed Alteration (LSA) Agreement for a project that is subject to CEQA will require CEQA compliance actions. The environmental document should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring, and reporting commitments for issuance of the LSA Agreement.	*4.3, Biological Resources*
		• States that as part of the LSA Notification process, CDFW requests a hydrological evaluation of the 100-year storm event. The hydrological evaluation should assess the 100, 50, 25, 10, 5, and 2-year frequency flood events. Recommends the EIR discuss the results and address avoidance, minimization, and/or mitigation measures that may be necessary to reduce potential significant impacts.	*4.3, Biological Resources* *4.9 Hydrology and Water Quality*
		• Recommends that the EIR disclose the Project's likely effects on the natural environment.	*4.3, Biological Resources*
		• States that public agencies have a duty to prevent significant, avoidable damage to the environment by requiring changes in a project through the use of feasible alternatives or mitigation measures and provides suggestions for mitigation of direct and indirect impacts.	*4.3, Biological Resources* *6.0, Alternatives*
		• States that mitigation measures must be feasible, effective, implemented, and	*4.3, Biological Resources*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		fully enforceable/imposed by the Lead Agency. Recommends the City provide mitigation measures that are specific, detailed (i.e., responsible party, timing, specific actions, location), and clear in order for a measure to be fully enforceable and implemented successfully via a mitigation monitoring and/or reporting program.	*S.0. Executive Summary*
		• States that if a proposed mitigation measure would cause one or more significant effects, in addition to impacts caused by the Project as proposed, the EIR should include a discussion of the effects of proposed mitigation measures.	*4.3, Biological Resources*
		• Requests the completion and submission of California Natural Diversity Database (CNDDB) Field Survey Forms that reports any special status species and sensitive natural communities detected on the site.	*Technical Appendices C1 through C8*
		• Requests analysis of direct and indirect impacts on biological resources including impacts to resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or proposed or existing reserve lands, wildlife corridors, alterations of the ecosystem, and potential impacts related to the Project's lighting, noise, human activities, introduction of exotic species, drainage pattern changes, soil erosion, potential water extraction activities, and changes to land use designations that could change wildlife-human interactions.	*4.3, Biological Resources*
		• Requests analysis of cumulative effects from general and specific plans, as well as past, present, and anticipated future projects, relative to their impacts on similar plant and wildlife species, habitat, and vegetation communities.	*4.3, Biological Resources*
		• States that the EIR should include compensatory mitigation measures for	*4.3, Biological Resources*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		adverse direct or indirect impacts to sensitive plants, animals, and habitats.	
		• Provides criteria for the long-term management of mitigation lands to be preserved in perpetuity.	*4.3, Biological Resources*
California Public Utilities Commission (CPUC)	September 24, 2022	• States that the California Public Utilities Commission (CPUC) has jurisdiction over rail crossings and notes that the Project site is located near the highway rail crossing (CPUC No. 001B-409.10, DOT No. 750642), east of the intersection of Sierra Hwy and Columbia Way/ Avenue M.	*2.0, Environmental Setting*
		• Notes that any development adjacent to a railroad right-of-way (ROW) should be planned with the safety of the rail corridor in mind. Traffic impact studies should analyze rail crossing safety and potential mitigation measures.	*2.0, Environmental Setting* *3.0, Project Description* *4.13, Transportation*
Regional			
Antelope Valley Air Quality Management District (AVAQMD)	September 12, 2022	• States that prior to any grading or grubbing activity, AVAQMD requires submission of a Construction Excavation Fee and compliance with the prerequisites outlined in District Rule 403, Fugitive Dust.	*4.2, Air Quality*
		• Recommends that during the construction phase, all disturbed areas be stabilized so that no visible fugitive dust leaves the property line and does not impact traffic or neighboring residents.	*4.2, Air Quality*
		• Requires compliance with conditions for a stabilized surface (outlined in Rule 403) for areas of one-half acre or more of disturbed area that remains unused for seven or more days.	*4.2, Air Quality*
		• Requires that upon completion of the Project, all disturbed surface areas must meet the definition of a stabilized surface, defined in Rule 403, and verified by AVAQMD staff.	*4.2, Air Quality*
		• Requires that all construction equipment utilized on the project site comply with Air Resources Board In-	*4.2, Air Quality*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		Use Off-Road Diesel Vehicle Registration.	
Southern California Association of Governments (SCAG)	September 29, 2022	• Requests to be included on the notification list for all public notices pertaining to the Project.	*1.0, Introduction*
		• Notes that SCAG provides informational resources to facilitate the consistency of the proposed project with the adopted 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS or Connect SoCal). For the purpose of determining consistency with CEQA, lead agencies such as local jurisdictions have the sole discretion in determining a local project's consistency with Connect SoCal.	2.0, *Environmental Setting* *4.2, Air Quality* *4.5, Energy* *4.6, Greenhouse Gas Emissions* *4.13, Transportation*
Local			
Los Angeles County Sanitation District	September 23, 2022	• Notes that the project area is outside the jurisdictional boundaries of the Districts and will require annexation into District No. 14 before sewerage service can be provided to the proposed development.	*2.0, Environmental Setting* *3.0, Project Description* *4.15, Utilities and Service Systems*
		• States that individual developments associated with the proposed project may require a Districts' permit for Industrial Wastewater Discharge. Project developers should contact the Districts' Industrial Waste Section to reach a determination on this matter.	*4.15, Utilities and Service Systems*
		• Notes that the wastewater will discharge to a local sewer line, which is not maintained by the Districts, for conveyance to the Districts' Trunk "C" Trunk Sewer, located in East Avenue M, west of 30th Street East. The Districts' 15-inch diameter trunk sewer has a capacity of 2.2 million gallons per day (mgd) and conveyed a peak flow of 0.7 mgd when last measured in 2018.	*2.0, Environmental Setting* *3.0, Project Description* *4.15, Utilities and Service Systems*
		• States that wastewater generated by the Project will be treated at the Lancaster Water Reclamation Plant, which has a capacity of 18 mgd and currently	*2.0, Environmental Setting* *4.15, Utilities and Services Systems*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		processes an average recycled flow of 13.9 mgd.	
		• States that expected average wastewater flow from the Project is 1,672,769 gallons per day (gpd). States that the expected average wastewater flow from Phase I of the Project is 476,940 gpd.	*2.0, Environmental Setting* *4.15, Utilities and Service Systems*
		• States that due to the anticipated volume of wastewater to be generated by the proposed project and from other planned developments in the area, the proposed project may have significant impacts on the Districts' sewerage system. States that although there is no relief sewer scheduled for construction at this time, as additional flows are generated and the Districts' trunk sewer nears capacity, construction of a relief sewer will be scheduled, depending on the availability of relief project funding. Therefore, the availability of capacity within the Districts' sewerage system should be verified as the proposed project develops.	*2.0, Environmental Setting* *4.15, Utilities and Service Systems*
		• States that payment of a connection fee may be required before the Project is permitted to discharge to the Districts' Sewerage System.	*4.15, Utilities and Service Systems*
		• States that the comment letter does not constitute a guarantee of wastewater service but is to advise the developer that the District intends to provide service up to the levels that are legally permitted and to inform the developer of the currently existing capacity and any proposed expansion of the District's facilities.	*4.15, Utilities and Service Systems*
Interested Parties			
Coalition for Responsible Equitable Economic Development	September 29, 2022	• Requests a complete analysis of impacts in the subject areas identified in the NOP, imposition of all feasible mitigation, and study of a reasonable range of alternatives to the Project.	*4.0, Environmental Analysis* *6.0, Alternatives*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
("CREED LA")		• Suggests a Project Alternative that restricts the Project's operations to fewer hours than 24 hours a day, 7 days a week.	*6.0, Alternatives*
		• Suggests that the EIR clearly articulate and quantify all proposed future uses of the Project including the potential for cold storage and the use of transport refrigeration units (TRUs).	*3.0, Project Description*
		• States that the DEIR should study a combination of the five primary logistics-type uses at the site to ensure that truck and vehicular trips, air quality, greenhouse gas (GHG) emissions, public health risk and other environmental effects are comprehensively evaluated.	*4.2, Air Quality* *4.7, Greenhouse Gas Emissions* *4.13, Transportation*
		• States that if the Project will not include cold storage, then the City must include California Air Resources Board (CARB) recommended design measures.	*4.2, Air Quality*
		• States concerns regarding the impacts of industrial warehouses on air quality and public health. Suggests a mobile source health risk assessment be performed.	*4.2, Air Quality*
		• States that if air quality impacts are significant, the DEIR must fully mitigate impacts to ensure Project is in compliance with the air quality management plan (AQMP) in both the construction and operation phase.	*4.0, Environmental Analysis* *4.2, Air Quality*
		• States that mitigation measures must be effective and enforceable. Also states that every effort must be made to incorporate modern technology in the mitigation measures.	*4.0, Environmental Analysis* *4.2, Air Quality*
Mitchell M. Tsai	September 8, 2022	• On behalf of Southwest Regional Council of Carpenters (SWRCC), requests any and all information referring or related to the Project via the Public Records Act request.	*1.0, Introduction*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		• Requests to be included on the notification list for all public notices and hearings pertaining to the Project.	*1.0, Introduction*

In consideration of public comments made on the NOP in writing (see *Technical Appendix A*) and verbally at the Scoping Meeting, the City of Palmdale determined that the proposed Project would result in no impacts or less than significant impacts to the following environmental topics: Agriculture and Forestry Resources; Mineral Resources; Population and Housing; and Recreation. Potential effects associated with these environmental topics and an analysis of the Project's potential to be growth-inducing are summarized in Section 5.0, *Other CEQA Considerations*. Based on Appendix G to the CEQA Guidelines, and in consideration of all comments received by the City of Palmdale on the NOP and during the EIR Scoping Meeting, Section 4.0, *Environmental Analysis*, of this EIR evaluates the Project's potential to cause adverse impacts under the following environmental topics:

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

As stated in CEQA Guidelines Section 15161, a Project EIR should "…focus primarily on the changes in the environment that would result from the development project" and "…examine all phases of the project including planning, construction, and operation." Acting as Lead Agency, the City will consider the following items regarding the proposed Project and this EIR: a) evaluation of this EIR to determine if the physical environmental impacts of the Project are adequately disclosed; b) assessment of the adequacy and feasibility of identified mitigation measures; c) consideration of alternatives to the Project that could reduce or eliminate significant environmental effects of the Project; and, if necessary, d) consideration of Project benefits that override the Project's unavoidable and unmitigable significant effects on the environment.

The City will release the Draft EIR for a minimum 45-day public review period and make the Draft EIR and its supporting technical appendices available for review in electronic format on the City's website; in paper copy at the City's Department of Economic and Community Development, Planning Division, 38250 Sierra Highway, Palmdale, CA 93550, during the City's regular business hours; and in paper copy at the Palmdale City Library, 700 E. Palmdale Boulevard, Palmdale, CA 93550, during the library's regular business hours; as well as at the City's Department of Parks and Recreation at 827

East Avenue Q9, Palmdale, California 93350; and at City Hall at 38300 Sierra Highway Suite A, Palmdale, California 93550.

During the 45-day review period, comments on the content of the Draft EIR can be submitted to:

City of Palmdale
Department of Economic and Community Development
Attn: Megan Taggart, Deputy Director of Economic and Community Development
38250 Sierra Highway
Palmdale, CA 93550
Email: mtaggart@cityofpalmdale.org

Public comments should be focused "on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated" (CEQA Guidelines Section 152049(a)).

Following the Draft EIR's 45-day public review period, the City will then respond in writing to all submitted comments pertaining to an environmental effect and publish a Final EIR. Before taking action to approve the Project, the City will: 1) ensure this EIR has been completed in accordance with CEQA; 2) review and consider the information contained in this EIR as part of its decision making process; 3) make a statement that this EIR reflects the independent judgment of the City; 4) ensure that all significant effects on the environment are avoided or substantially lessened where feasible; and, if necessary 5) make written findings for each unavoidable significant environmental effect stating the reasons why mitigation measures or project alternatives identified in this EIR are infeasible, and citing the specific benefits of the proposed Project that outweigh its unavoidable adverse effects (CEQA Guidelines Sections 15090-15093).

The City's Planning Commission will hold a public hearing to consider the Final EIR, the Project's SP 22-001, GPA 22-001, ZC 22-001, and SPR 22-008 and TPM 83738. The Planning Commission will make advisory recommendations to the City Council on whether to approve, approve with changes, or deny SP 22-001, GPA 22-001, ZC 22-001, SPR 22-008 and TPM 83738 and whether to certify this EIR. A public hearing would then be held before the City Council to consider information contained in the Project's EIR and the EIR's Administrative Record in its decision-making process and the City Council will determine whether to certify this EIR and whether to approve, approve with changes, or deny proposed SP 22-001, GPA 22-001, ZC 22-001, and SPR 22-008 and TPM 83738.

During the decision-making process, the Project and its design features, objectives, merits, environmental consequences, and socioeconomic factors, among other information contained in the Project's administrative record, will be considered by the City. If the Final EIR is certified and the Project is approved by the Planning Commission, the City and other public agencies with permitting authority over all, or portions of, the Project would be able to rely on the Final EIR as part of their permitting and approval processes to evaluate the environmental effects of the Project as they pertain

to the approval or denial of applicable permits. City staff would also rely on the certified Final EIR to subsequently conduct administrative level reviews for implementing permits and approvals.

1.3.2 Content And Organization Of This EIR

CEQA requires that an EIR contain, at a minimum, certain specified content. Table 1-2, *Location of CEQA Required Topics*, provides a quick reference in locating the CEQA-required sections within this document.

Table 1-2 Location of CEQA Required Topics

CEQA Required Topic	CEQA Guidelines Reference	Location in this EIR
Table of Contents	Section 15122	Table of Contents
Summary	Section 15123	Section S.0
Project Description	Section 15124	Section 3.0
Environmental Setting	Section 15125	Section 2.0
Consideration and Discussion of Environmental Impacts	Section 15126	Section 4.0
Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented	Section 15126.2(b)	Section 4.0 & Subsection 5.1
Significant Irreversible Environmental Impacts Which Would be Involved in the Proposed Action Should it be Implemented	Section 15126.2(c)	Subsection 5.2
Growth-Inducing Impact of the Proposed Project	Section 15126.2(d)	Subsection 5.3
Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects	Section 15126.4	Section 4.0 & Table S-1
Consideration and Discussion of Alternatives to the Proposed Project	Section 15126.6	Section 6.0
Effects Not Found to be Significant	Section 15128	Subsection 5.4
Organizations and Persons Consulted	Section 15129	Section 7.0 & Technical Appendices
Discussion of Cumulative Impacts	Section 15130	Section 4.0
Energy Conservation	Appendices F and G	Subsection 4.5

This EIR contains all of the information required to be included in an EIR as specified by the CEQA Statute and Guidelines (California Public Resources Code, Section 21000 et. seq. and California Code of Regulations, Title 14, Chapter 5). This EIR is organized in the following manner:

- **Section S.0, Executive Summary**, provides an overview of the EIR document and CEQA process. The Project, including its objectives, is described, and the location and regional setting of the Project site is documented. In addition, the Executive Summary discloses potential areas of controversy related to the Project, including those issues identified by other agencies and the public, and identifies potential alternatives to the proposed Project that would reduce or avoid significant impacts, as required by CEQA. Finally, the Executive Summary provides a

summary of the Project's impacts, mitigation measures, and conclusions, in a table that forms the basis of the EIR's Mitigation Monitoring and Reporting Program (MMRP).

- **Section 1.0, Introduction**, provides introductory information about the CEQA process and the responsibilities of the City of Palmdale serving as the Lead Agency for this EIR; a brief description of the Project; the purpose of this EIR; proposed GPA 22-001, ZC 22-001, Specific Plan 22-001, TPM 83738 and SPR 22-008 that would require discretionary City approvals; permits and approvals required by other agencies; and an overview of the EIR format.

- **Section 2.0, Environmental Setting.** In compliance with CEQA Guidelines Section 15125, Section 2.0 includes a description of the physical environmental conditions in the vicinity of the Project site, including an overview of the regional and local setting, as well as descriptions of the Project site's physical conditions and surrounding context. The existing setting is defined as the condition of the Project site and surrounding area at the approximate date this EIR's NOP was released for public review on September 1, 2022. The setting discussion also addresses the relevant regional planning documents that apply to the Project site and vicinity.

- **Section 3.0, Project Description**, serves as the EIR's Project Description for purposes of CEQA Guidelines Section 15124 and contains a level of specificity commensurate with the level of detail proposed by the Project. This Section provides a detailed description of the Project, including its purpose and main objectives; design features; landscaping; site drainage; utilities; grading and construction characteristics; and operational characteristics expected over the Project's lifetime. In addition, the discretionary actions required of the City of Palmdale and other government agencies to implement the Project are discussed.

- **Section 4.0, Environmental Analysis**, provides an analysis of the potential direct, indirect, and cumulative impacts that may occur from implementing the proposed Project. The topics analyzed in this section include the topics summarized above under Section 1.3. A conclusion concerning significance is reached for each discussion; mitigation measures are presented as warranted. The environmental changes identified in Section 4.0 and throughout this EIR are referred to as "effects" or "impacts" interchangeably. The CEQA Guidelines also describe the terms "effects" and "impacts" as being synonymous (CEQA Guidelines Section 15358).

  In the environmental analysis subsections of Section 4.0, the existing conditions are disclosed that are pertinent to the subject area being analyzed, accompanied by a specific analysis of physical impacts that may be caused by implementing the proposed Project. Impacts are evaluated on a direct, indirect, and cumulative basis. Direct impacts are those that would occur directly as a result of the proposed Project. Indirect impacts represent secondary effects that would result from Project implementation. Cumulative effects are defined in CEQA Guidelines Section 15355 as "…two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."

The analyses in Section 4.0 are based in part upon technical reports that are appended to this EIR. Information also is drawn from other sources of analytical materials that directly or indirectly relate to the proposed Project and that are cited in Section 7.0, *References*. Where the analysis demonstrates that a physical adverse environmental effect may or would occur without undue speculation, feasible mitigation measures are recommended to reduce or avoid the significant effect. Mitigation measures must be fully enforceable, have an essential nexus to a legitimate governmental interest, and be "roughly proportional" to the impacts of the Project. The discussion then indicates whether the identified mitigation measures would reduce impacts to below a level of significance. In most cases, implementation of the mitigation measures would reduce the adverse environmental impacts to below a level of significance. If mitigation measures are not available or feasible to reduce an identified impact to below a level of significance, the environmental effect is identified as a significant and unavoidable adverse impact, for which a Statement of Overriding Considerations (SOC) would need to be adopted by the City pursuant to CEQA Guidelines Section 15093.

- **Section 5.0, Other CEQA Considerations**, includes specific topics that are required by CEQA. These include a summary of the Project's significant and unavoidable environmental effects, a discussion of the significant and irreversible environmental changes that would occur should the Project be implemented, potential growth-inducing impacts of the proposed Project, and a summary of effects determined to be less than significant as part of the Project's NOP process.

- **Section 6.0, Project Alternatives**, describes and evaluates alternatives to the proposed Project that could reduce or avoid the Project's adverse environmental effects. CEQA does not require an EIR to consider every conceivable alternative to the Project but rather to consider a reasonable range of alternatives that will foster informed decision making and public participation. A range of three (3) alternatives is presented in Section 6.0.

- **Section 7.0, References**, cites all reference sources used in preparing this EIR and lists the agencies and persons that were consulted during preparation of this EIR. Section 7.0 also lists the persons who authored or participated in preparing this EIR.

1.3.3 Incorporation By Reference

CEQA Guidelines Section 15147 states that the "information contained in an EIR shall include summarized… information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public," and that the "placement of highly technical and specialized analysis and data in the body of an EIR shall be avoided." CEQA Guidelines Section 15150 allows for the incorporation "by reference all or portions of another document… [and is] most appropriate for including long, descriptive, or technical materials that provide general background but do not contribute directly to the analysis of a problem at hand." The purpose of incorporation by reference is to assist the Lead Agency in limiting the length of this EIR. Where this EIR incorporates a document by reference, the document is identified in the body of the EIR, citing the appropriate

section(s) of the incorporated document and describing the relationship between the incorporated part of the referenced document and this EIR.

The detailed technical studies, reports, and supporting documentation that were used in preparing this EIR are bound separately as Technical Appendices. The Technical Appendices are available for review at the City of Palmdale, 38300 Sierra Highway, Palmdale, CA 93550, during the City's regular business hours or can be requested in electronic form by contacting the City's Planning Division. The technical studies, reports, and supporting documentation that comprise the Technical Appendices are as follows:

A. Notice of Preparation (NOP) and Written Comments on the NOP
B1. Air Quality Impact Analysis
B2. Mobile Source Health Risk Assessment
C1. Biological Resources Technical Report
C2. Results of the Focused Special Status Plant/Desert Native Plant Survey
C3. Results of a Focused Survey for Burrowing Owl
C4. Results of the Swainson's Hawk Survey
C5. Jurisdictional Delineation Report
C6. Mohave Ground Squirrel Survey
C7. Results of the Joshua Tree Survey
C8. Results of a Focused Desert Tortoise Survey
C9. Biological Technical Report Supplemental Letter
D. Cultural Resource Investigation
E. Energy Analysis
F1. Geotechnical Investigation
F2. Results of Infiltration Testing
G. Paleontological Resource Technical Memorandum
H. Greenhouse Gas Emissions
I. Phase I Environmental Site Assessment
J. Preliminary Drainage Report
K. Noise and Vibration Analysis
L1. Traffic Analysis
L2. Vehicle Miles Traveled Analysis
M. Sanitary Sewer Analysis
N. Water Supply Assessment
O. FAA Determination of No Hazard Letters

Other reference sources that are incorporated into this EIR by reference are listed in Section 7.0, *References*, of this EIR. In most cases, documents or websites not included in the EIR's Technical Appendices are cited by a link to the online location where the document/website can be viewed by the public for convenience. All references relied upon by this EIR are included as part of the City's Administrative Record pertaining to the proposed Project.

1.4 RESPONSIBLE AND TRUSTEE AGENCIES

The California Public Resource Code (Section 21104) requires that all EIRs be reviewed by responsible and trustee agencies (see also CEQA Guidelines Section 15082 and Section 15086(a)). As defined by CEQA Guidelines Section 15381, "the term 'Responsible Agency' includes all public agencies other than the Lead Agency which have discretionary approval power over the project." A Trustee Agency is defined in CEQA Guidelines Section 15386 as "a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California." The known Responsible and Trustee Agencies for the Project are listed below. Regardless, this EIR can be used by any Trustee Agency or Responsible Agency, whether identified in this EIR or not, as part of their decision-making processes in relation to the proposed Project.

- **California Department of Fish and Wildlife (CDFW)** is a Trustee Agency responsible for issuance of an Incidental Take Permit (ITP).

- **Lahontan Regional Water Quality Control Board (LRWQCB)** is a Responsible Agency and would be responsible for issuing a Construction Activity General Construction Permit, ensuring compliance with the National Pollutant Discharge Elimination System (NPDES) Permit, and issuing a Waste Discharge Requirements (WDR) permit.

- **Los Angeles County Waterworks District (LACWD) No. 40** is a Responsible Agency in charge of reviewing and approving the Project's proposed water connections and improvements.

- **Los Angeles County Sanitation District (LACSD)** is a Responsible Agency in charge of approving the Project's wastewater infrastructure and connections.

- **Antelope Valley Air Quality Management District (AVAQMD)** is a potential Responsible Agency should the proposed users of the Project's buildings use equipment that requires an AVAQMD permit.

1.5 AREAS OF CONTROVERSY

Substantive issues raised in response to the NOP were previously summarized in Table 1-1. The purpose of this table is to present the primary environmental issues of concern raised by public agencies and the general public during the NOP review period. The table is not intended to list every comment received by the City during the NOP review period. Regardless of whether or not a comment is listed in the table, all applicable comments received in responses to the NOP are addressed in this EIR. Based on comments received during the NOP review period, concerns were raised regarding potential impacts to air quality, biological resources, wastewater conveyance, and transportation. No areas of controversy were identified as part of the NOP process, beyond comments regarding the Project's potential environmental effects.

1.6 ISSUES TO BE RESOLVED BY THE DECISION-MAKING BODY

The primary issues to be resolved by the decision-making body for the proposed Project involves the Project's significant and unavoidable impacts to the environmental topic areas of greenhouse gas emissions and transportation (vehicle miles traveled for truck). The City of Palmdale will evaluate whether the mitigation measures presented in this EIR to reduce the Project's unavoidable greenhouse gas emission impact to adequately reduce the Project's impacts to the maximum feasible extent. The City Council also will consider the conclusion made in the EIR that it is not feasible to mitigate the Project's vehicle miles traveled or trucks. The City also will make a determination as to whether the Project's benefits outweigh the adverse environmental effects in support of adopting a Statement of Overriding Considerations pursuant to CEQA Guidelines Section 15093. Finally, the City will decide whether to approve one of the Project alternatives in lieu of the proposed Project, if it is determined that one of the alternatives is feasible, meets the Project's objectives, and its approval will serve to substantially reduce or avoid the significant environmental effects.

2.0 ENVIRONMENTAL SETTING

This Section was prepared pursuant to CEQA Guidelines Section 15125(a) and includes a description of the proposed Project's environmental setting as it existed at the approximate time the Notice of Preparation (NOP) was published for this EIR (September 1, 2022). Additional detail regarding existing conditions for individual environmental issue topics (e.g., biology, geology, etc.) is provided within the appropriate subsection headings within Section 4.0, *Environmental Analysis*, of this EIR.

2.1 REGIONAL SETTING AND LOCATION

The Project site is comprised of approximately 432.9 acres of vacant land and is located within the City of Palmdale, California, which is located within the Antelope Valley portion of Los Angeles County. Figure 2-1, *Regional Map*, depicts the Project site's location within the regional vicinity. As shown on Figure 2-1, Los Angeles County abuts Ventura County to the west, Kern County to the north, San Bernardino County to the east, and Orange County to the south. The Antelope Valley is located in the northern portion of Los Angeles County and is disconnected from the Southern California coastal and Central California valley regions by the Tehachapi Mountains to the northwest and by the San Gabriel Mountains to the south.

2.2 LOCAL SETTING AND LOCATION

As depicted on Figure 2-2, *Vicinity Map*, the vacant 432.9-acre Project site is located within the central portion of the City of Palmdale. Communities surrounding the City include the City of Lancaster and the unincorporated community of Quartz Hill to the north, as well as other unincorporated communities such as Lake Los Angeles to the east; Sun Village, Littlerock, and Pearblossom to the southeast; Acton to the south; Agua Dulce to the southwest; and Leona Valley to the west. The Project site is located approximately 0.03-mile east of Sierra Highway and approximately 1.45 miles east of State Route 14 (SR-14). The Project site is located approximately 0.25 mile (1,305 feet) north of Runway 7 of USAF Plant 42.

The Project site encompasses Assessor Parcel Numbers (APNs) 3126-022-926, 3126-022-927, 3126-022-928 and 3126-022-929 and is located in Sections 1 and 2, Township 6 North, Range 12 West, San Bernardino Baseline and Meridian. The Project site is located directly south of Columbia Way / East Avenue M; approximately 0.02-mile east of the active Union Pacific Railroad (UPRR) mainline tracks located adjacent to Sierra Highway; and directly north of Avenue M-12. Challenger Way runs north to south through the eastern portion of the Project site.

As background on existing pollution burden, the California Environmental Protection Agency (CalEPA) reports census tract demographic and socioeconomic data across the State of California and correlates that data with community health indicators. Even though the data is several years old and air quality has improved since the data was reported, for informational reporting purposes, the census tract containing the Project site (Census Tract 6037980004) is reported by CalEPA's Office of Environmental Health Hazard Assessment (OEHHA) using the OEHHA's California Communities

Environmental Health Screening Tool (CalEnviroScreen 4.0), and ranks in the 52nd percentile of communities that are disproportionately burdened by multiple sources of pollution (OEHHA, 2023).

The Project site is not located in an SB 535 Disadvantaged Community identified by the CalEPA. The State provides California Climate Investment funding appropriated by the State Legislature from the proceeds of the State's Cap-and-Trade Program for investment in disadvantaged communities. The funding is used for programs that reduce emissions of greenhouse gases with at least 25 percent of the funding going to projects that provide a benefit to disadvantaged communities and at least 5 percent of the funding going to projects located within those communities (CalEPA, 2023).

2.3 SURROUNDING LAND USE AND DEVELOPMENT

Land uses in the immediate vicinity of the Project site are illustrated on Figure 2-3, *Surrounding Land Uses and Development*, and described below.

- North: Columbia Way / East Avenue M forms the northern boundary of the Project site. To the immediate south of Columbia Way / East Avenue M and north of the central portion of the Project site is a parcel containing four water storage tanks and groundwater wells operated by the Antelope Valley – East Kern Water Agency. Columbia Way/ East Avenue M is the jurisdictional boundary between the City of Palmdale and the City of Lancaster. To the north of Columbia Way / East Avenue M are lands located within the City of Lancaster that include a restaurant (Ruben's Bar and Grill), a storage facility (Small Town Storage), an automobile salvage yard, Lancaster Adult Day Healthcare facility, an auto repair center (Affordable Transmission and Auto Repair Center), a construction yard and vacant land.

- East: An unpaved portion of Challenger Way runs north to south through the eastern portion of the Project site. Offsite and to the east of Challenger Way is vacant land, beyond which is 15th Street East, beyond which is the United States Air Force (USAF) Plant 42 facility and the inactive Palmdale Regional Airport.

- South: Avenue M-12 forms the southern boundary of the Project site. Beyond Avenue M-12 is vacant land, and runways associated with the USAF Plant 42 and the inactive Palmdale Regional Airport.

- West: To the west of the Project site is the Union Pacific Railroad (UPRR) mainline tracks and easement, west of which is the Sierra Highway Bike Trail, which is adjacent to Sierra Highway. West of Sierra Highway is an ARCO gas station, Northrop Grumman Federal Credit Union, a commercial plaza (Sierra Highway Plaza) and vacant land.

2.4 LOCAL PLANNING CONTEXT

CEQA Guidelines Section 15125(d) requires that EIRs identify the general plans and regional plans that are applicable to the project under evaluation and recognize potential inconsistencies. All plans that are applicable to the Project and evaluated in this EIR are summarized below, with additional information provided in the applicable environmental issue topics in Section 4.0, *Environmental Analysis*.

2.4.1 CITY OF PALMDALE GENERAL PLAN (PALMDALE 2045)

The City of Palmdale adopted an update to its General Plan (Palmdale 2045) on October 22, 2022; amended on March 23, 2023. As shown on Figure 2-4, *Existing General Plan Land Use Designations*, under existing conditions, the General Plan designates the Project site for Employment Flex (EMPFX) land uses. The Employment Flex (EMPFX) land use designation is a transition zone intended to permit mixed development of lighter industrial uses and more intensive service, retail, and commercial uses, with a floor area ratio (FAR) of up to 1.0. (City of Palmdale, 2023, Table 5.4 and Figure 5.5). The Project Applicant filed an application with the City for a General Plan Amendment (GPA 22-001) to amend the site's General Plan land use designation to Specific Plan (SP). The proposed GPA 22-001 would require future development on the Project site to comply with the applicable development standards and design guidelines of the Antelope Valley Commerce Center Specific Plan (SP 22-001) and, where applicable, the Palmdale Municipal Code (PMC).

As also shown on Figure 2-4, where not bounded by roadway, surrounding the Project site is land on the east that is designated EMPFX and land on the south that is designated Aerospace Industrial (AI).

2.4.2 ZONING

Title 17 of the Palmdale Municipal Code (PMC) establishes zoning classifications within the City. The City recently updated its Zoning Ordinance and zoning map to be consistent with the City's newly adopted General Plan (Palmdale 2045). Pursuant to the PMC, as shown previously on Figure 2-5, under existing conditions, the Project site is zoned Office Flex (OFX). The Office Flex (OFX) zone is intended to allow mixed-use development of office/flex uses and supportive service, retail, and commercial uses. It allows a mix of businesses that provide a wide variety of employment-generating activities, including office, medical, research and development (R&D), and flex/makerspaces. Office uses may be standalone, or part of a large business/office park development. These areas are typically situated close to regional roadways or freeways. This zone implements the Industrial and Employment Flex General Plan land use designations. (City of Palmdale, 2023) (PMC, 2023). The Project Applicant filed an application with the City for a Zone Change (ZC 22-001) to change the zoning classification to Specific Plan (SP). The proposed ZC 22-001 would require future development on the Project site to comply with the applicable development standards and design guidelines of the SP 22-001 and, where applicable, the PMC.

As also shown on Figure 2-5, where not bounded by roadway, surrounding the Project site is land on the east that is designated OFX and Aerospace Industrial (AI) and land on the south that is designated Light Industrial (LI).

2.4.3 SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

The Southern California Association of Governments (SCAG), founded in 1965 is the nation's largest metropolitan planning organization and council of governments, encompassing six counties and 191 cities. In addition to conducting research and developing long-range transportation plans, SCAG convenes local governments and agencies to address regional transportation, land use and other issues of mutual concern. (SCAG, 2024a, n.p.) The Project site is within SCAG's regional authority.

SCAGs Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is required by federal and State regulations. The most recent RTP/SCS was approved by SCAGs Regional Council in April 2024. According to the most recent RTP/SCS,

> *"As the Metropolitan Planning Organization (MPO) for the region, SCAG is required by federal law (23 U.S.C. Section 134 et seq.) to prepare and update a long-range Regional Transportation Plan (RTP) every four years. The Plan must provide for the development, integrated management and operation of transportation systems and facilities that will function as an intermodal transportation network for the SCAG metropolitan planning area. The process for development of the Plan takes into account all modes of transportation, federal planning factors and goals and objectives of the California Transportation Plan (CTP 2050)—and is accomplished by a "continuing, cooperative and comprehensive" planning approach, which is also performance-driven and outcome-based. In addition, because most areas within the SCAG region have been designated as nonattainment or maintenance areas for one or more transportation-related criteria pollutants under the federal Clean Air Act (42 U.S.C. Section 7401 et seq.), the Plan must conform to the applicable State Implementation Plan (SIP). The passage of California Senate Bill 375 (SB 375) in 2008 requires that SCAG prepare and adopt a Sustainable Communities Strategy (SCS) that sets forth a forecasted regional development pattern which, when integrated with the transportation network, measures and policies, will reduce greenhouse gas (GHG) emissions from automobiles and light-duty trucks and achieve the GHG emissions reduction target for the region set by the California Air Resources Board (Govt. Code Section 65080(b)(2)(B)). In addition, the focus on equity in this Plan supports compliance with Title VI of the Civil Rights Act of 1964 and Environmental Justice guidance at the state and federal levels".* (SCAG, 2024a, p. 7)

According to the RTP/SCS, the goals for Connect SoCal fall into the following four core categories: 1) Mobility: Build and maintain an integrated multimodal transportation network; 2) Communities: Develop, connect, and sustain communities that are livable and thriving; 3) Environment: Create a healthy region for the people of today and tomorrow; 4) Economy: Support a sustainable, efficient, and productive regional economic environment that provides opportunities for all residents. (SCAG, 2024a, p. 12)

As the region's MPO, SCAG seeks to optimize the goods movement network (FreightWorks) through increases in economic efficiency, congestion mitigation, safety and air quality improvements, and enhancements to system security. There are numerous SCAG studies related to the goods movement in Southern California that provided input to the RTP/SCS. A few include the Industrial Warehousing Study, the Comprehensive Regional Goods Movement Plan and Implementation Strategy, and the Regional Warehousing Needs Assessment. (SCAG, 2024b)

2.4.4 Antelope Valley Air Quality Management District Rules and Plans

The Project site is located within the Mojave Desert Air Basin (MDAB) and is under the jurisdiction of the Antelope Valley Air Quality Management District (AVAQMD). Currently, the National Ambient Air Quality Standards (NAAQS) within the MDAB are exceeded for ozone (O_3) (8-hour standard) and the California Ambient Air Quality Standards (CAAQS) are exceeded in the MDAB for O_3 (1-hour and 8-hour standards) and particulate matter smaller than 10 microns (PM_{10}). Pursuant to the Federal Clean Air Act, the AVAQMD has adopted a series of rules and plans for O_3 and PM_{10} demonstrating how the AVAQMD intends to ensure compliance with the NAAQS and CAAQS for these pollutants. A complete list of the rules and plans is available from the AVAQMD located at 2551 W Avenue H, Lancaster, CA 93536, or on their website at: https://avaqmd.ca.gov/rules-plans.

Refer to EIR Section 4.2, *Air Quality* for an analysis of the Project's potential impacts and consistency with the AVAQMD.

2.4.5 Los Angeles County Airport Land Use Plan

According to the City's General Plan EIR, the Airport Land Use Commission (ALUC) provides for orderly growth of an airport and the area surrounding the airport within the jurisdiction of the ALUC, excluding existing land uses. Its primary function is to safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general. Cities and/or counties have a responsibility to ensure the orderly development of the airports within their local jurisdiction and make sure all applicable planning documents and building regulations are consistent with the Airport Land Use Compatibility Plan (ALUCP). (City of Palmdale, 2022a, p. 4.9-12)

The Los Angeles County ALUC is responsible for establishing land use policy to mitigate potential noise and safety hazards regarding the fifteen airports in its jurisdiction (Los Angeles ALUC, 2004, p. 15). According to the Los Angeles County ALUC's Airport Land Use Plan's (ALUP) Palmdale Airport/USAF Plant 42 Airport Influence Area map, the Project site occurs within the Planning Boundary/AIA of the Palmdale Airport/USAF. An AIA is an airport planning area boundary that consists of all areas in which current or future airport-related noise, over flight, safety, and/or airspace protection factors may significantly affect land uses or necessitate restrictions on those areas. According to the ALUP AIA map, the Project site is not located within a runway protection zone (RPZ). (Los Angeles County ALUC, 2004, Palmdale Airport/USAF Plant 42 Airport Influence Area map)

The Palmdale Regional Airport is a 9,000-square foot commercial airport within the City limits owned by the City of Los Angeles Department of Airports and operated under a joint agreement with USAF Plant 42. USAF Plant 42 employs thousands of military personnel and aerospace workers and hosts manufacturing and flight test facilities for Northrop Grumman, Boeing, and Lockheed Martin. Under the City's General Plan, there is potential that residential, commercial, and industrial uses could be constructed in proximity to the Palmdale Regional Airport and future development of the airport. However, the General Plan does not change the height limits that currently apply to both existing and new uses in these areas. According to the Federal Code of Regulations (CFR), 14 CFR 77 would require the proponent of any planned development to file notice with the Federal Aviation Administration (FAA) for any construction or alteration that exceeds an imaginary surface extending outward and upward at a slope of 25 to one (25:1) for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of a heliport described in 14 CFR 77.9(d). However, if future development in the vicinity of the Palmdale Regional Airport were "shielded by existing structures of a permanent and substantial nature of equal or greater height," a notice to the FAA under 14 CFR 77 would not be required. (City of Palmdale, 2022a, p. 4.9-23) The Project site is located approximately 0.25-mile (1,305 feet) north of Runway 7 of Palmdale Regional Airport/USAF Plant 42.

All development projects located in the Palmdale Airport/USAF Plant 42 Airport Influence Area would be required to comply with existing regulations, including the CFR and ALUCP policies. Refer to EIR Section 4.8, *Hazards and Hazardous Materials* and EIR Section 4.11, *Noise*, for an analysis of the Project's potential impacts and consistency with the Los Angeles County ALUP.

2.4.6 USAF Plant 42 Air Installation Compatible Use Zone (AICUZ) Final Report

The Department of the Air Force's USAF Plant 42 Air Installation Compatible Use Zone (AICUZ) Final Report (December 2011) documents aircraft operations at USAF Plant 42 and reaffirms the Air Force's policy of assisting Federal, state, regional, and local officials in planning for the areas surrounding military installations. The AICUZ Final Report promotes compatible development within the AICUZ area of influence with the goal of protecting community health and Air Force operational capacity from the negative effects of incompatible land uses. The AICUZ Final Report provides compatible use guidelines for land use areas surrounding the installation as well as identifies noise contours. (City of Palmdale, 2023, p. 203)

According to the AICUZ Final Report, the Project site occurs within the USAF Plant 42 AICUZ area of influence. The area of influence for airfield planning is concerned with three primary aircraft operational/land use determinants: 1) accident potential to occupants on the ground; 2) aircraft noise; and 3) hazards to flight operations from land uses (height obstructions, increased potential for bird-aircraft strike hazards, operations such as factories that emit smoke, dust, or light that adversely affect flight operations) (Department of the Air Force, 2011, p.2-17).

As shown in the AICUZ Final Report's Figure 3-6, Plant 42 CZs and APZs, the Project site is not located within an Accident Potential Zone (APZ) or Clear Zone (CZ). (Department of the Air Force, 2011, pp. 3-20 to 3-23) As shown in the AICUZ's Final Report's Figure 3-3, Air Force Plant 42 –

Community Noise Equivalent Level (CNEL), the commercial land use within the northern portion of the Project site is located well outside the 60-65 dBA CNEL noise level contour boundary. The southern half of the Project site consisting of industrial land uses is located within the 65-70 dBA CNEL aircraft noise level contour boundaries with a small portion of the southeastern portion of the Project site located within the 70-75 dBA dBA CNEL noise level contour boundary. Therefore, according to the City of Palmdale General Plan Noise Element Noise Land Use Compatibility Criteria, the Project's land uses are considered *normally acceptable*. (Urban Crossroads, 2024e, pp. 16, 18)

Refer to EIR Section 4.8, *Hazards and Hazardous Materials* and EIR Section 4.11, *Noise*, for an analysis of the Project's potential impacts and consistency with the AICUZ Final Report.

2.4.7 West Mojave Coordinated Management Plan

The West Mojave Coordinated Management Plan (Conservation Plan) is a habitat conservation plan (HCP) that acts as a comprehensive strategy to conserve the desert tortoise, Mohave ground squirrel, and over 100 sensitive plants, animals, and natural communities. The Plan provides for a streamlined program for complying with the requirements of the California and federal Endangered Species Acts. It encompasses a 9,357,929-acre planning area (14,621 square miles) located to the north of the Los Angeles metropolitan area and applies to public and private land. (City of Palmdale, 2022a, p. 4.4-17) While the U.S. Fish and Wildlife Service (USFWS) issued a Biological Opinion for the federal portion of the Conservation Plan in 2006, the State portion of the plan has not been permitted. Until the State portion of the Plan is passed, it cannot be used by State or private entities. (Psomas, 2023a, p. 8)

As disclosed in EIR Section 4.3, *Biological Resources,* although the Project site is located within the geographic boundaries of the West Mojave Plan, the Project would not be processed under the West Mojave Plan because it is a private project and the West Mojave Plan can only be used for projects on federal land. Even though the Project's construction and operational activities are not required to comply with the West Mojave Plan, it is noted that the Project would not interfere with any conservation areas designed by the West Mojave Plan including Habitat Conservation Areas, Special Review Areas, critical habitat on Military Lands, existing Area of Critical Environmental Concern, or BLM Wilderness Area. (Psomas, 2023a, p. 53)

2.5 Existing Physical Site Conditions

Pursuant to CEQA Guidelines Section 15125, the physical environmental condition for purposes of establishing the setting of an EIR is the environment as it existed at the time the EIR's NOP was published. The NOP for this EIR was published on September 1, 2022. The following subsections provide a description of the Project site's physical environmental condition ("existing conditions") as of that approximate date. The site's current physical conditions and immediate surrounding areas are shown on Figure 2-6, *Aerial Photograph*. More detailed information regarding the Project's site's environmental setting as it relates to specific environmental issue topics is provided in the various subsections of EIR Section 4.0, *Environmental Analysis*.

2.5.1 LAND USE

As shown on Figure 2-6, the Project site is vacant and undeveloped. An unpaved portion of Challenger Way runs north to south through the eastern portion of the Project site. A graded dirt access road runs around the perimeter of the Project site and two graded dirt roads run east-west and north-south in the southern portion of the Project site. An unnamed sandy wash occurs in the extreme northwest corner of the Project site. Approximately 6.0-acres in the southeastern portion of the Project site is highly disturbed and shows visible evidence of recent and previous illegal squatting, including extensive off-road vehicle disturbance and higher than average trash cover. Along the edges of the easternmost perimeter access road, moderate illegal dumping has occurred, and there are a few other trash piles scattered throughout the Project site.

2.5.2 AESTHETICS AND TOPOGRAPHIC FEATURES

As shown on Figure 2-7, *USGS Topographic Map*, the Project site is mostly level, with an average elevation of approximately 2,528 feet above mean sea level (amsl). Overall site topography slopes downward to the east-northeast at a gradient less than approximately one percent. (SCG, 2023, p. 4) 2023, p. 4) (AES, 2022, p. 5)

2.5.3 AIR QUALITY AND CLIMATE

Palmdale is within the Mojave Desert Air Basin (MDAB), which is under the jurisdiction of the AVAQMD. The AVAQMD is the local air quality management agency responsible for monitoring the local air pollutant levels to ensure that state and federal air quality standards are met. The MDAB is characterized by mountain ranges and valleys, with frequent prevailing winds originating from coastal and central regions. Palmdale is in the northeast Los Angeles County portion of the AVAQMD's authority.

Temperatures in the area average lows and highs of 71 degrees Fahrenheit (°F) and 95°F, respectively, in the summer months and 36°F and 58°F, respectively, in the winter months. Average annual precipitation is eight inches. This pattern is broken only by occasional winter storms and infrequent Santa Ana winds from the mountains west of the MDAB. Usually warm, dry, and dusty, Santa Ana winds are particularly strong in passes and at the mouths of canyons. Sustained winds of 60 miles per hour with higher gusts are common for these conditions. On average, Santa Ana wind conditions occur five to 10 times per year, with each event lasting up to a few days. Palmdale is sheltered from import of inter-basin pollution by mountain barriers extending to the north and south. Air quality is generally good; however, the City receives windborne air pollutants from the greater Los Angeles area via canyons, such as the Newhall Pass and Soledad Canyon, which lie to the south of the City. (City of Palmdale, 2022a, p. 4.3-1)

2.5.4 BIOLOGICAL RESOURCES

The Project site is located within an area referred to as "the high desert." Common vegetation communities in the Mojave Desert include creosote bush scrub, shadscale scrub, alkali sink, and Joshua tree woodland. Vegetation on the Project site consists of big sagebrush – disturbed rubber rabbitbrush

scrub, rubber rabbitbrush scrub, disturbed rubber rabbitbrush – Nevada ephedra scrub, rubber rabbitbrush - Nevada joint-fir scrub/Joshua tree woodland, Nevada ephedra - cheesebush - Cooper's box thorn/Joshua tree woodland, creosote bush scrub, Joshua tree woodland, disturbed Joshua tree woodland, and bare ground. Bare ground consists of graded dirt roads with less than five percent vegetation cover. (Psomas, 2023a, pp. 19, 22)

Joshua tree woodland and disturbed Joshua tree woodland generally occurs throughout the southern two-thirds of the Project site. This vegetation type is dominated by western Joshua trees with various shrubs as the dominant understory species. Creosote bush shrubs are the dominant understory species in the southeastern portion of the site. Dominant understory shrubs that occur throughout the rest of this vegetation type include a variety of species such as Nevada ephedra, Mormon tea, rubber rabbitbrush, Cooper's box-thorn, Anderson's box-thorn, and cheesebush. Groundcover species that occur include, but are not limited to, tessellated fiddleneck, common goldfields (*Lasthenia gracilis*), white layia (*Layia glandulosa*), desert dandelion (*Malacothrix glabrata*), little stephanomeria (*Stephanomeria exigua ssp. exigua*), Arizona popcornflower, weak purple mat (*Nama demissum*), thistle sage (*Salvia carduacea*), short-flower wild buckwheat (*Eriogonum brachyanthum*), rose-and-white wild buckwheat (*Eriogonum gracillimum*), western Mojave wild buckwheat (*Eriogonum mohavense*), and two-toothed wild buckwheat (*Eriogonum viridescens*). (Psomas, 2023a, p. 22)

An unnamed sandy wash occurs in the extreme northwest corner of the Project site. This feature appears to historically be an overflow channel in the Amargosa River floodplain. Urbanization of the surrounding area has hydrologically cut off this channel from the Amargosa River, and it currently conveys stormwater runoff in a northernly direction. (Psomas, 2022e, p. 9)

Various human disturbances are visible on the Project site. Historical mechanical disturbance has occurred in the northcentral portion of the Project site as is visible from aerial photographs depicting a change in shrub and tree cover. According to Psomas, major differences in soil compaction between the historically disturbed areas and the rest of the Project site were not apparent on the ground. As observed by Psomas, an approximate six-acre area in the southeastern portion of the site is highly disturbed and evidence of recent and historical human occupancy was visible. Off-road vehicle disturbance is extensive in this area along with recent and historical trash cover. Illegal dumping was observed along the edges of the easternmost perimeter dirt road, with items such as couches, household appliances, and small miscellaneous trash items occurring. A few localized trash piles occur scattered throughout the Project site. (Psomas, 2023a, p. 19)

2.5.5 Geology and Soils

Palmdale is located in the southern part of the Mojave geomorphic province, which is a broad interior region of isolated mountain ranges separated by stretches of desert plains. Although the site is located in a seismically active region, the Project site is not located within an Alquist-Priolo Earthquake Fault Zone. Southern California Geotechnical (SCG) conducted subsurface excavation at the Project site consisting of 35 borings (identified as Boring Nos. B-1 through B-35) advanced to depths of approximately 5 to 30 feet below the existing site grades. The approximate locations of the borings are

indicated on the Boring Location Plan, included as Plate 2 in Appendix A to the Geotechnical Investigation (EIR *Technical Appendix F1*). Based on the results of the analysis, the Project site contains the following geotechnical condition: (SCG, 2023, pp. 6, 11)

- Alluvium. Native alluvium was encountered at the ground surface at all of the boring locations, extending to at least the maximum depth explored of approximately 30 feet. Most of the borings encountered loose sands, silty sands and sandy silts, extending to depths of approximately 2½ to 8½ feet. At greater depths and extending to the maximum depth explored of approximately 30 feet, the alluvium generally consists of medium dense, and occasional dense, sands, silty sands and sandy silts. Boring No. B-1 encountered a stratum consisting of medium dense to very dense gravelly sands at a depth of approximately 17 to 25 feet. Boring No. B-14 encountered a stratum consisting of very dense sandy silts at a depth of approximately 22 to 25 feet. Boring No. B-33 encountered a stratum consisting of very dense silty sands at a depth of approximately 22 to 25± feet. (SCG, 2023, p. 6)

2.5.6 HYDROLOGY

The existing hydrologic conditions of the Project site are depicted on Figure 2-8, *Existing Conditions Hydrology*. As shown in Figure 2-8, under existing conditions, runoff emanating from the Project site is divided into three areas. Area 1 is located in the central and southwestern portion of the Project site; Area 2 is located in the eastern, south-central, and southeastern portion of the Project site; and Area 3 is located in the northwest corner of the Project site. Area 1 and Area 2 both flow in a northeastern direction across the Project site on to Columbia Way / East Avenue M. Area 3 flows in a northern direction toward an existing culvert system just east of the intersection of Columbia Way / East Avenue M and Sierra Highway. The existing Columbia Way / East Avenue M terrain is very flat and has several low points where runoff accumulates. Along the northern boundary of the Project site, Columbia Way / East Avenue M, does not have any storm drain infrastructure to collect runoff that accumulates at these low points, which act as outlet points for runoff from Area 1 and Area 2. When runoff accumulation exceeds the natural storage volume of the existing low points and the capacity of the existing culvert, flows will overtop Columbia Way / E Avenue M. (JLC, 2023, p. 5)

Runoff from the 400-acres located to the southwest of the Project site, sheet flows in a northeasterly direction towards Sierra Highway and the Project site. A concrete channel, located on the east side of Sierra Highway, directs runoff to flow under the railroad bridge to an existing reinforced concrete box that crosses Columbia Way / East Avenue M to the north. This prevents any runoff from the southwest from flowing onto the Project site. (JLC, 2023, pp. 1-3)

2.5.7 NOISE AND VIBRATION

Primary sources of noise and vibration in the Project site's vicinity include traffic noise from vehicles traveling along Columbia Way / East Avenue M and Sierra Highway and railroad noise and vibration from nearby UPRR track. To assess the existing noise level environment, 24-hour noise level measurements were collected at six locations by the Project's noise consultant, Urban Crossroads, Inc. on Thursday, October 27, 2022. Measured daytime noise levels in the area ranged from 51.8 A-

weighted decibels (dBA) equivalent continuous (average) sound level (L_{eq}) to 71.8 dBA L_{eq} and nighttime noise levels from 51.8 dBA L_{eq} to 70.1 dBA L_{eq} (Urban Crossroads, 2024e, pp. 23-24 and Table 5-1)

2.5.8 TRANSPORTATION

Columbia Way / East Avenue M is located along the northern frontage of the Project site and is classified as a regional arterial roadway in the City's General Plan Circulation and Mobility Element. Access to this segment of Columbia Way /East Avenue M is provided from Sierra Highway to the west and SR-14 to the west of the site. Columbia Way / East Avenue M and Sierra Highway are designated truck routes. East of Sierra Highway is the Sierra Highway Bike Trail that runs along Sierra highway continuing north into the City of Lancaster. While the path provides a regional link, the facility is disconnected from communities outside of central Palmdale. (City of Palmdale, 2022a, p. 145)

Regional Arterials can accommodate six-to-eight travel lines. These facilities primarily serve through traffic to which access from abutting property shall be kept at a minimum. The following roadways are classified as a Regional Arterial within the study area (Urban Crossroads, 2023f, p. 31)::

- Avenue M
- Challenger Way
- 10th Street, south of Avenue M

Major Arterials can accommodate four-to-six travel lanes. These facilities serve property zoned for major industrial and commercial uses, or to serve through traffic. The following roadways are classified as a Major Arterial within the study area (Urban Crossroads, 2023f, p. 31):

- Avenue N
- Challenger Way
- Division Street

The Project is served by the Antelope Valley Transit Authority (AVTA), a public transit agency serving various jurisdictions within Los Angeles County. Based on a review of the existing transit routes within the vicinity of the Project site, AVTA routes 4, 5, 785 and 786 run along Avenue M and Sierra Highway within the vicinity of the Project site. (Urban Crossroads, 2023f, p. 37)

Regarding vehicle miles traveled (VMT), north Los Angeles County within which the Project site is located has a 2022 baseline of 17.9 VMT per employee. Los Angeles County as a whole has a baseline VMT of 16.3 per employee. (Urban Crossroads, 2023g, p. 4)

2.5.9 PUBLIC FACILITIES

The City contracts fire protection and first response emergency and medical services through Los Angeles County Fire Department (LACFD). The nearest fire station to the Project site is LACFD Station No. 129, located approximately 0.94-mile to the northwest of the Project site. The next closest fire station is LACFD Station No. 135, located approximately 2.7 miles to the northeast. LACFD maintains a response time for emergency fire protection services of four to six minutes. (City of Palmdale, 2022a, p. 4.15-1) (Google Earth, n.d.)

The City contracts with Los Angeles County for police services. The Los Angeles County Sheriff's Department (LACSD) patrols 770 square miles and a population of approximately 200,000 people in and around the City of Palmdale. The LACSD operates a Sherriff's station at 750 East Avenue Q that serves the City of Palmdale and surrounding communities, including the Project site. The sheriff's station includes a 47,000 square-foot main building, 7,800 square-foot jail, and an 8,400 square-foot motor pool and storage building. (City of Palmdale, 2022a, p. 4.15-2)

The Project site is located within the service area of the Lancaster School District (LSD) for elementary and middle school services. Jack Northrop Elementary School is located approximately 2.4 miles north of the Project site and New Vista Middle School is located approximately 2.7 miles north of the Project site. (Lancaster School District, n.d.) (Google Earth, n.d.) For high school services, the Project site is in the Antelope Valley Union High School District (AVUHSD). Eastside High School is located approximately 3.2 miles northeast of the Project site. (AVSD, n.d.) (Google Earth, n.d.). The nearest school to the Project site is the Desert Montessori Academy, a private educational institution located approximately 1.3 miles northwest of the Project site. (Google Earth, n.d.)

The Sergeant Steve Owen Memorial Park is located approximately 1.7 miles northwest of the Project site. The approximately 63-acre park includes a variety of recreational uses including the Stanley Kleiner activity center, eight lighted tennis courts, basketball and volleyball courts, a softball complex, a covered group picnic shelter and a tot lot. (Google Earth, n.d.) (City of Lancaster, n.d.). The Lancaster National Soccer Center is located approximately 2.2 miles northeast of the Project site and includes 35 premium soccer fields, two activity buildings, concession buildings, two playground areas and an overnight RV parking area. (Lancaster Soccer Center, n.d.)

The Palmdale City Library is located at 700 East Palmdale Boulevard, approximately 3.8 miles south of the Project site. The library is currently open Monday through Saturday, along with limited hours on Sunday (Google Earth, n.d.; City of Palmdale, 2022a, p. 4.15-5). The closest library to the Project site is the Lancaster Library, located at 601 West Lancaster Boulevard, approximately 3.7 miles northwest of the Project site. The library is typically open Tuesday through Saturday. (LA County Library, n.d.)

2.5.10 UTILITIES AND SERVICE SYSTEMS

A. *Water Service*

The Project site is located within the service area of the Los Angeles County Waterworks District 40 (LACWD). District 40 maintains 1,057 miles of potable and recycle water lines and 71 potable water tank reservoirs. The land use within the District has been primarily agricultural uses; however, this area is in transition from mainly agricultural to residential and industrial uses. (KEC Engineers, 2022, p. 12).

Existing LACWD water lines in the Project range from 30-inch to 48-inch in diameter and are located within the Columbia Way / East Avenue M right-of way.

B. *Sewer Service*

Public sewer systems located in the vicinity of the Project site are owned and maintained by the City of Palmdale Public Works, Sewer Maintenance Division (COPSM). The COPSM prepared a Sewer System Management Plan (SSMP) in 2014 to comply with the State Water Resources Control Board (SWRCB) Order 2006-0003: *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems* (City of Palmdale, 2014). COPSM manages a wastewater collection system of public sewer mainlines within the City's service area, which encompasses approximately 105 square miles. Most of the collected wastewater flows that are conveyed through public sewer mainlines discharge to Los Angeles County Sanitation District (LACSD) trunk mainlines, which ultimately direct flows to the Palmdale Water Reclamation Plant (WRP), which is managed in Los Angeles County Sanitation District No. 20 and can reclaim up to 12 million gallons per day (mgd). Some wastewater is sent to the Lancaster Water Reclamation Plant (LWRP). (City of Palmdale, 2022a, pp. 4.19-3 through 4.19-4)

Existing sewer facilities in the Project area include existing 8-inch and 18-inch diameter sanitary sewer lines located within the Columbia Way / East Avenue M right-of way to the north of the Project site boundary.

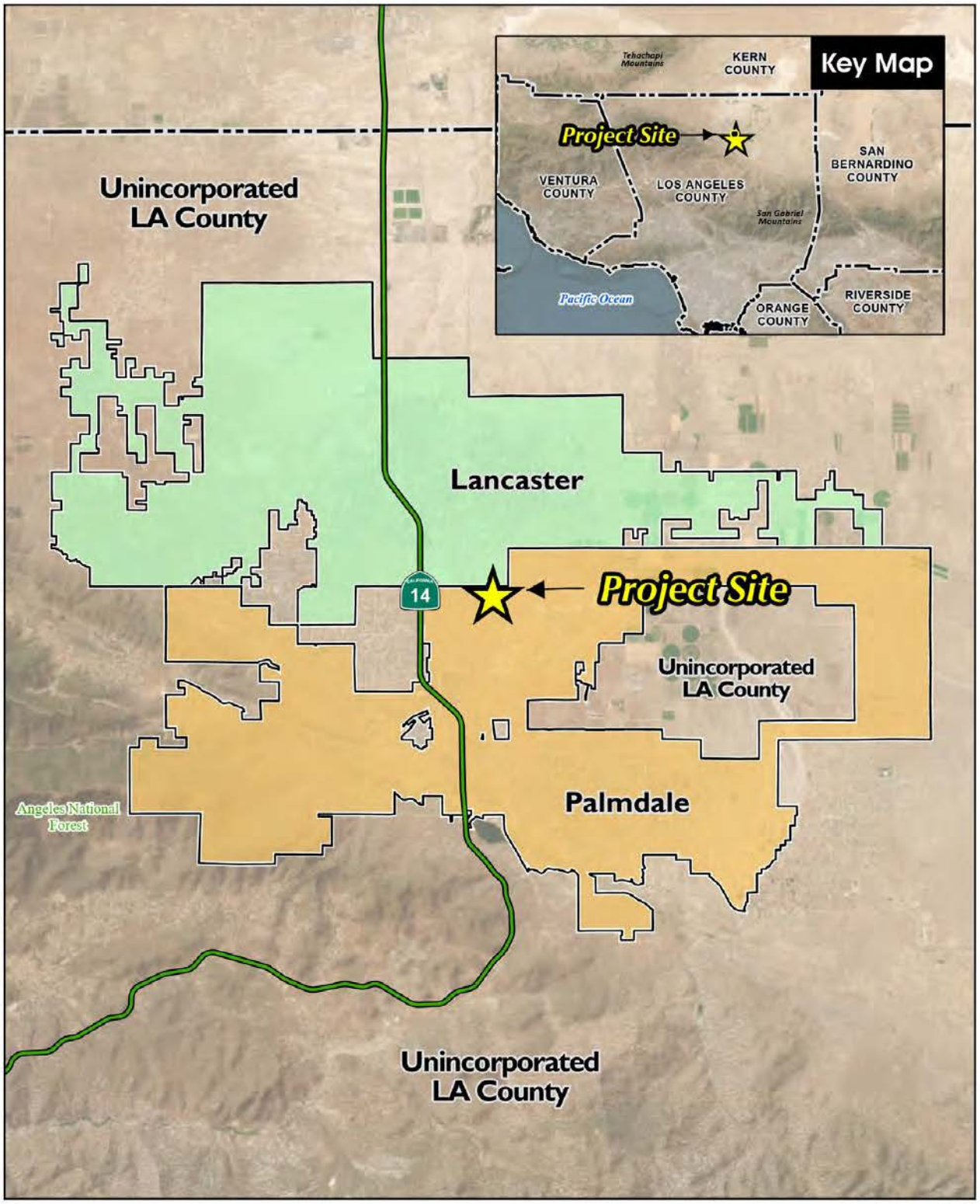
C. *Solid Waste Services*

The City contracts with Waste Management to provide residential and commercial trash, organic waste processing, and recycling services, including residential curbside trash, recycling, and yard waste collection, pick up of bulky items, and electronic waste pickup, for all single and multi-family homes, as l as bu.. ...as well as businesses. Like all municipalities, the City of Palmdale must meet the solid waste diversion mandates established by the California Integrated Waste Management Act under State Assembly Bill 939 (AB 939) in 1989. AB 939 mandates that all cities reduce annual waste per capita by 50 percent. The City of Palmdale is working toward compliance with all state recycling requirements, including legislation that imposes Mandatory Commercial Recycling on all businesses that generate at least four cubic yards of trash per week and all multi-family dwellings that have five units or more. City waste haulers send all residential and commercial solid waste to the Antelope Valley Recycling and Disposal Facility, located at 1200 West City Ranch Road, approximately one mile from State Route 14 (SR-14).

The City also complies with Assembly Bill (AB) 1826, California's Mandatory Commercial Organics Recycling law, which requires businesses and multi-family dwellings to recycle their organic waste. Organic waste includes food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled waste that is mixed with food waste. Through the City of Palmdale, Waste Management offers organic waste recycling services for both businesses and multi-family dwellings. (City of Palmdale, 2022a, P. 4.19-4)

2.5.11 Rare and Unique Resources

Pursuant to CEQA Guidelines Section 15125(c), special emphasis should be placed on environmental resources that are rare or unique to that region and would be affected by a project. Although the western Joshua Tree may not be considered rare, the area of the Project site is unique from other regions of Southern California because it is an area where western Joshua Tree are known to occur. Refer to EIR Section 4.3, *Biological Resources* for a detailed analysis of the Project's potential to impact Joshua Trees.

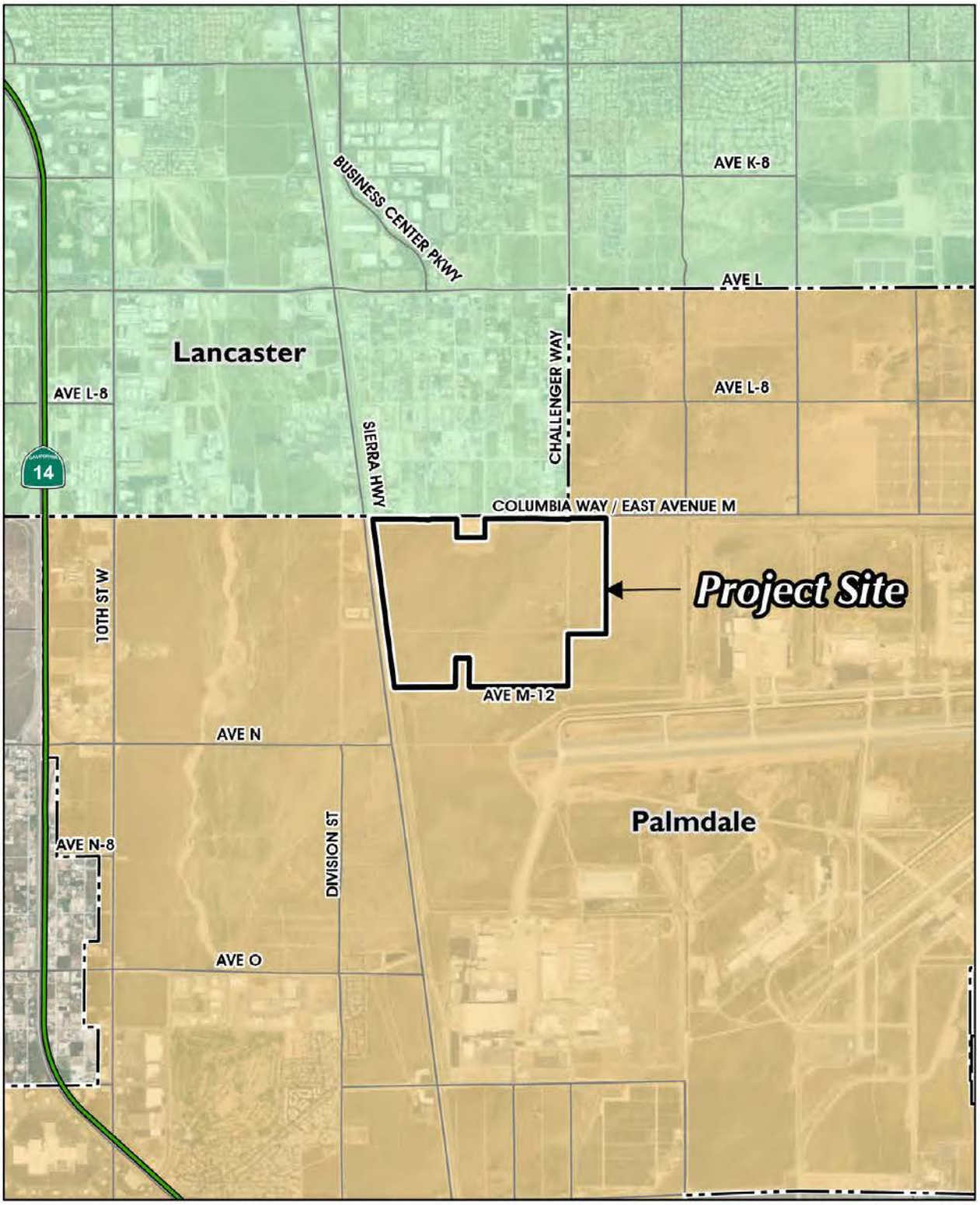


Source(s): Esri, LA County (2023)

Figure 2-1

0 1 2 4 Miles

Regional Map

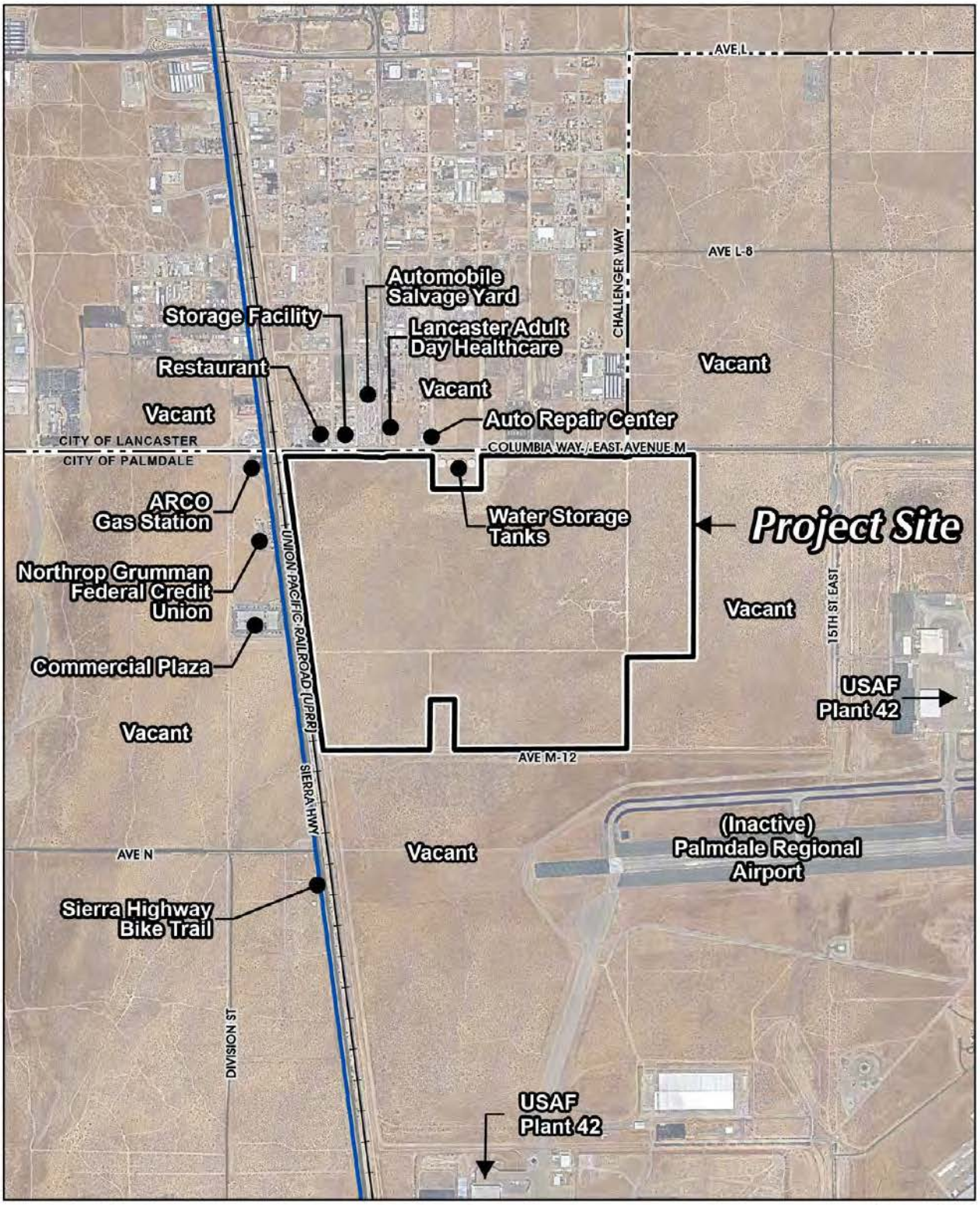


Source(s): Esri, LA County (2023)

Figure 2-2

0 875 1,750 3,500 Feet

Vicinity Map

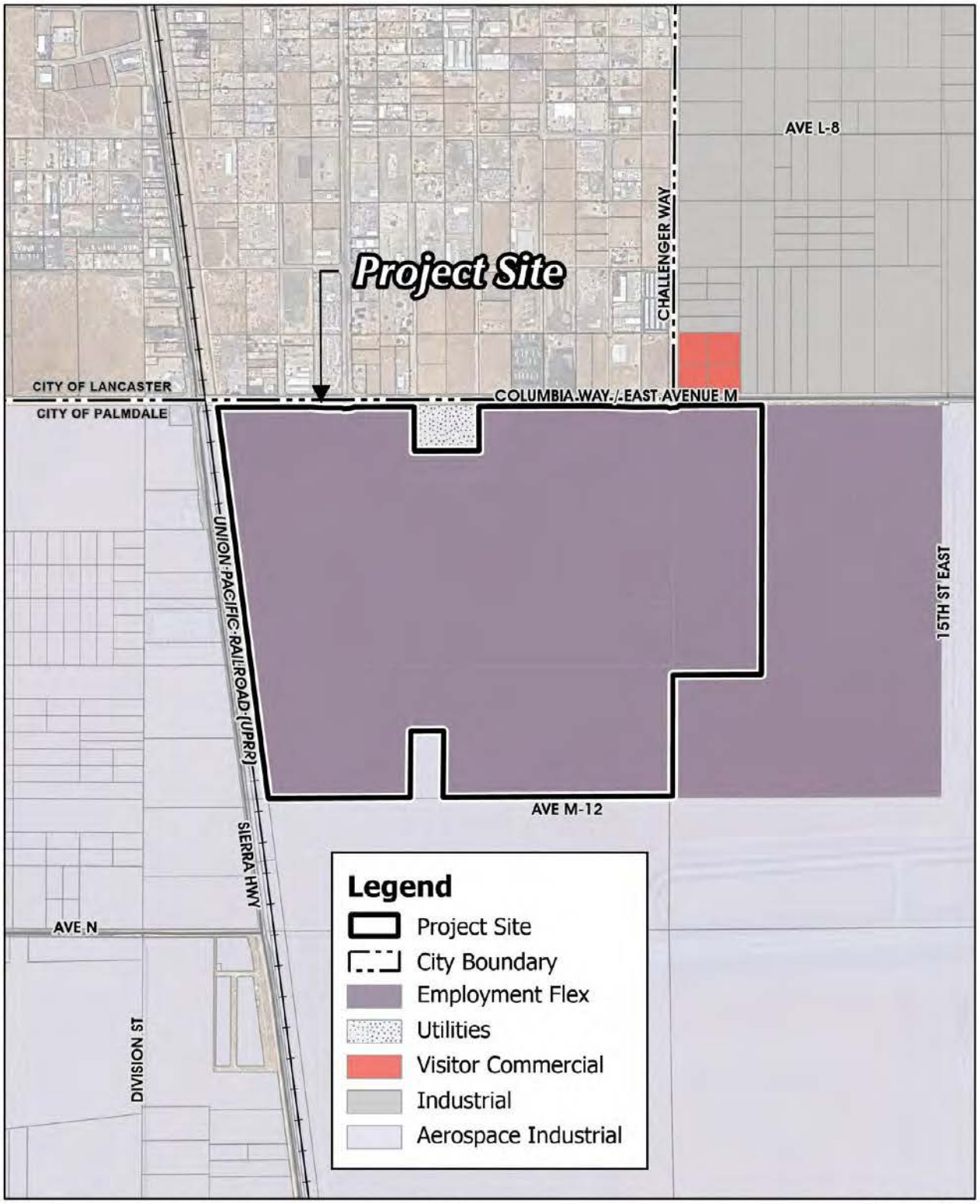


Source(s): Esri, Nearmap Imagery (July 2023), LA County (2023)

Figure 2-3

0 500 1,000 2,000 Feet

Surrounding Land Uses and Development

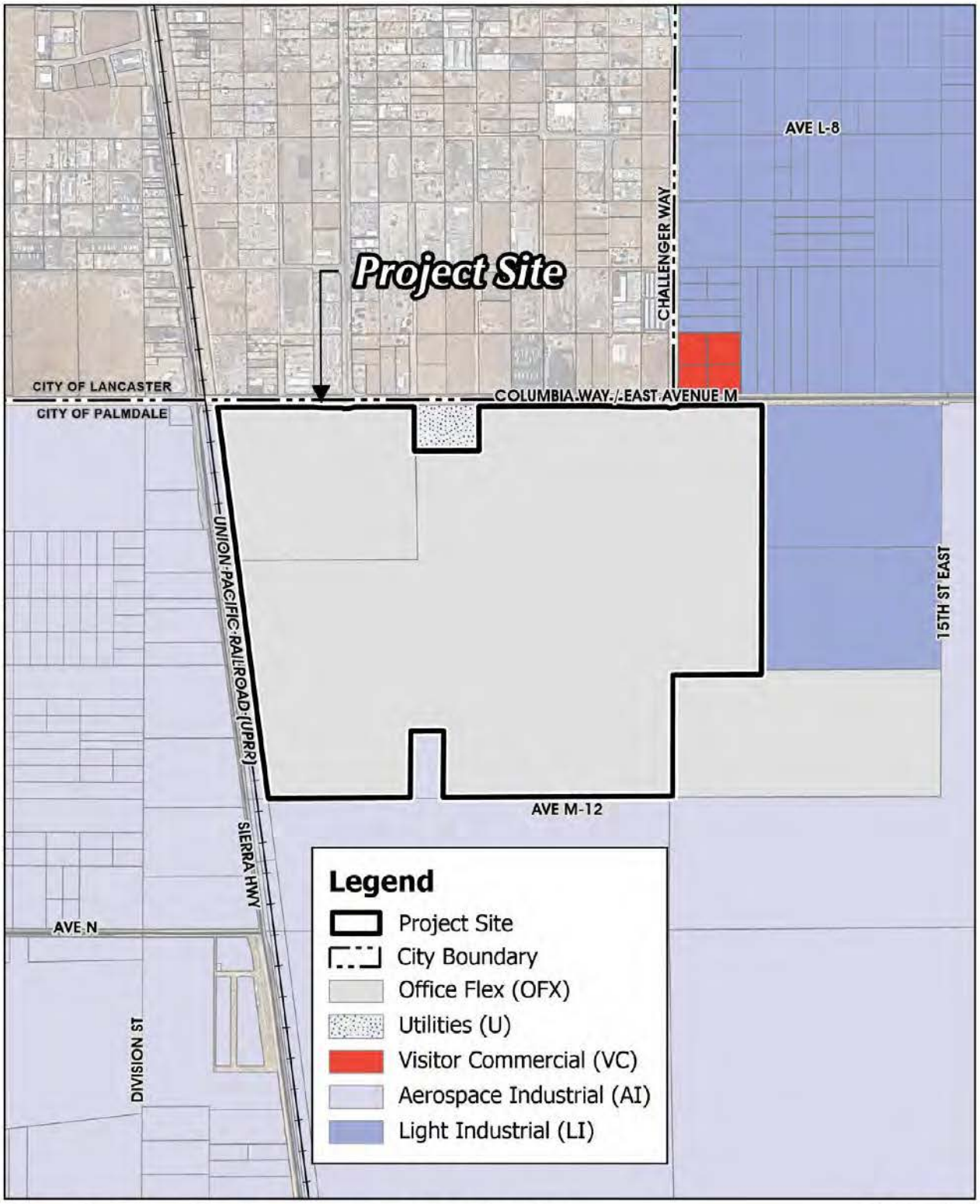


Source(s): City of Palmdale (2022), Esri, Nearmap Imagery (July 2023), LA County (2023)

Figure 2-4

0 375 750 1,500 Feet

Existing General Plan Land Use Designations

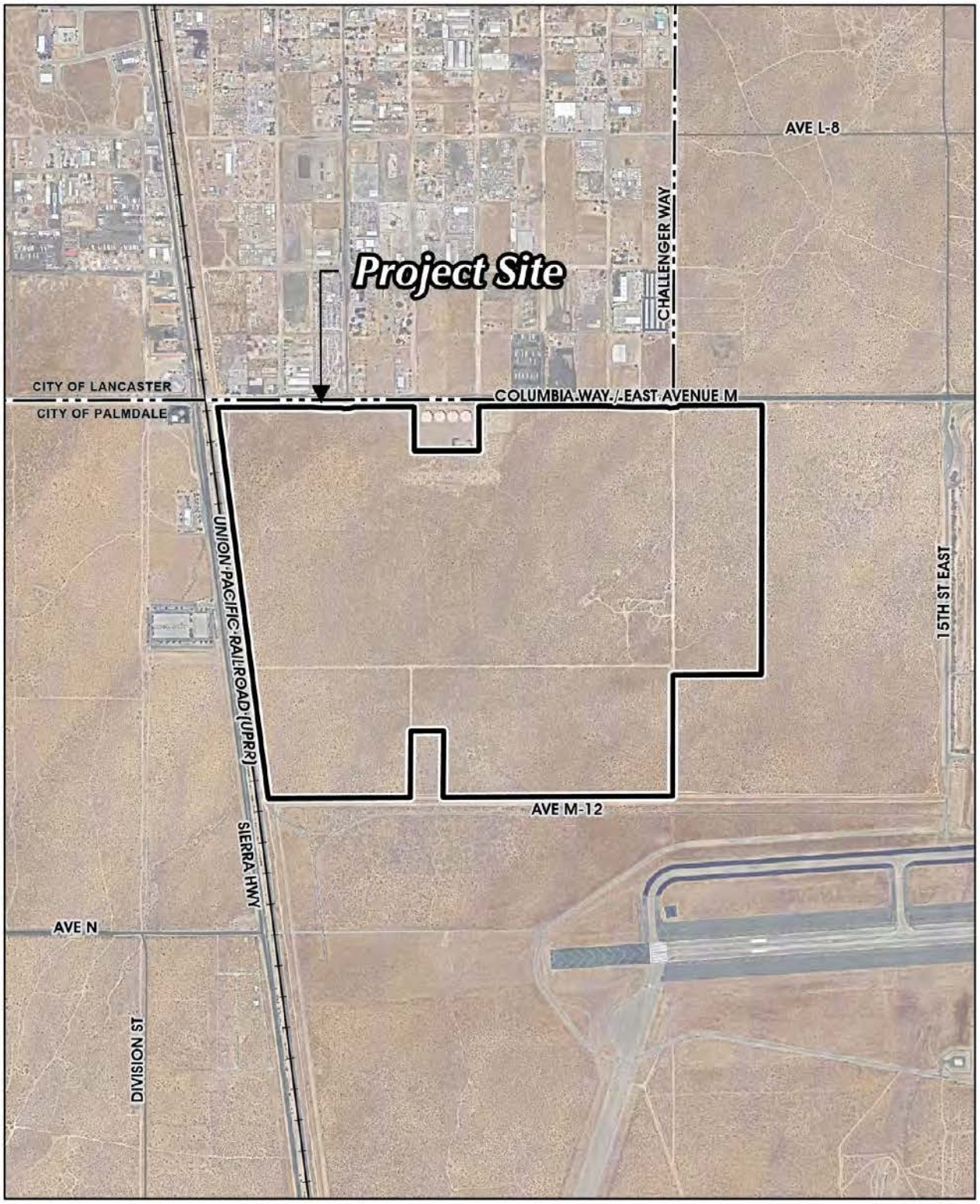


Source(s): City of Palmdale (2022), Esri, Nearmap Imagery (July 2023), LA County (2023)

Figure 2-5

0 375 750 1,500 Feet

Existing Zoning Classifications

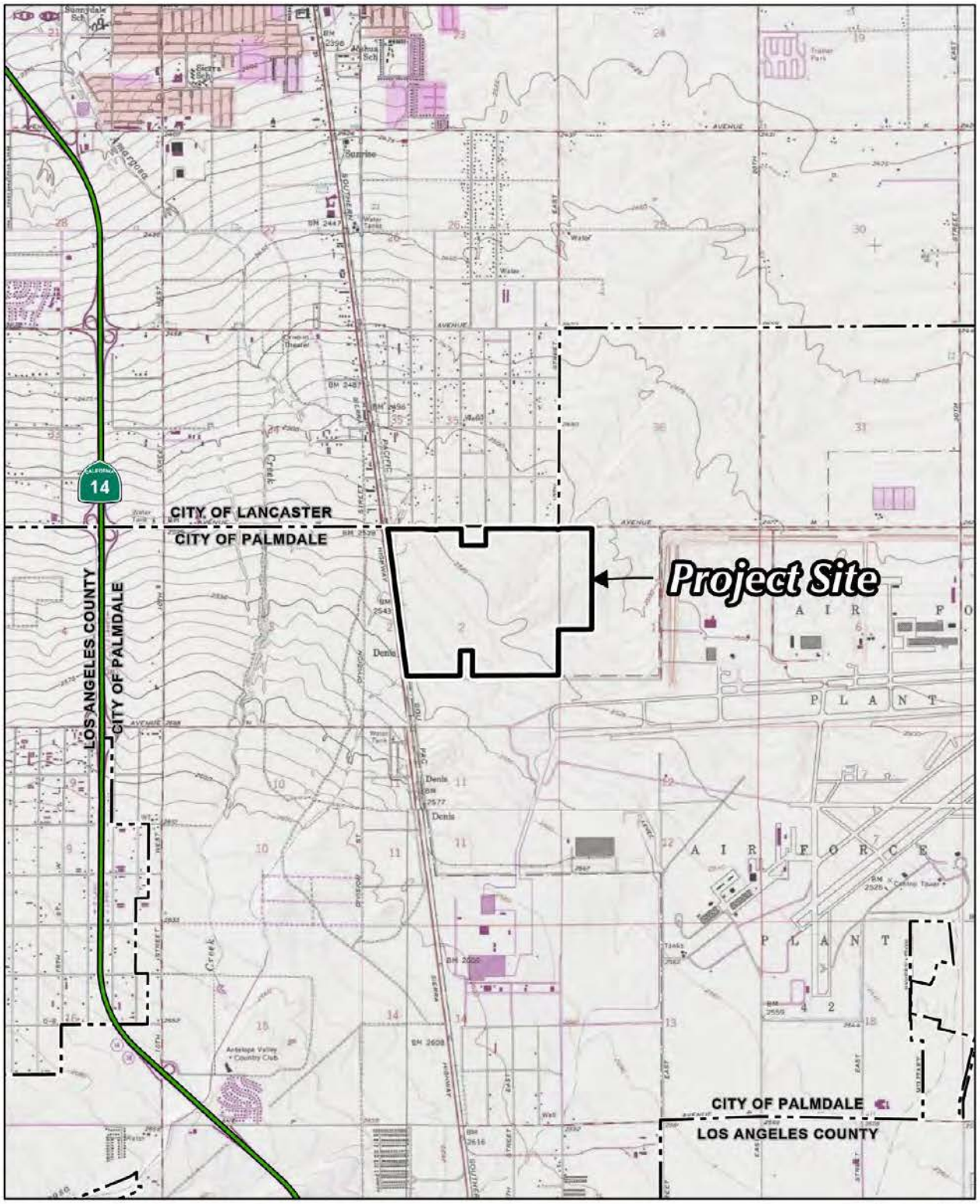


Source(s): Esri, Nearmap Imagery (July 2023), LA County (2023)

0 375 750 1,500 Feet

Figure 2-6

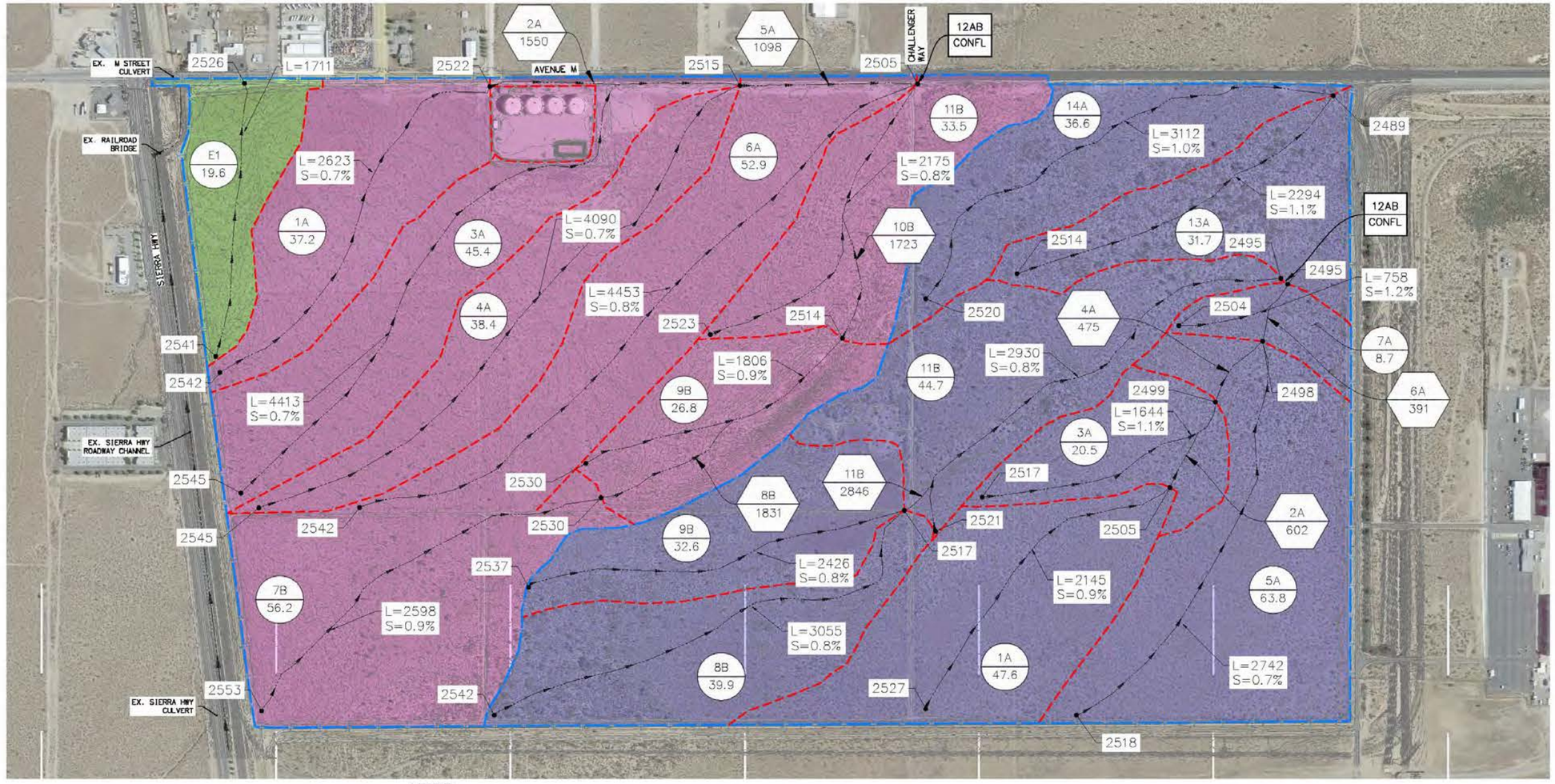
Aerial Photograph



Source(s): USGS (2013)

Figure 2-7

USGS Topographic Map



Source(s): JLC Engineering & Consulting, Inc. (10-12-2023)

Figure 2-8

Not to Scale

Existing Conditions Hydrology

3.0 PROJECT DESCRIPTION

This Section provides all of the information required of an EIR Project Description by California Environmental Quality Act (CEQA) Guidelines Section 15124, including a description of the precise location and boundaries of the Project site; a statement of the Project objectives; a description of the technical, economic, and environmental characteristics of the Project; and a description of the intended uses of this EIR, including a list of the governmental agencies that are expected to use this EIR in their decision-making processes, a list of the permits and approvals that are required to implement the Project, and a list of related environmental review and consultation requirements.

3.1 SUMMARY OF THE PROPOSED PROJECT

The Project Applicant, AVCC Master, LLC proposes to entitle and develop the Antelope Valley Commerce Center Specific Plan Project (herein, "Project") on a 432.9 gross-acre undeveloped site located in the City of Palmdale, Los Angeles County, California. As shown on Figure 3-1, *Specific Plan Land Use Plan* and *Figure 3-2*, *Phasing Plan*, the Project would allow for the phased development of a master-planned commerce center containing industrial, commercial, and open space land uses, as well as roadways. The four phases of development would allow for a maximum of 8,302,536 square feet (s.f.) of building footprint, to be comprised of approximately 8,241,552 s.f. of industrial and 60,984 s.f. of commercial uses. Associated improvements to the Project site would include, but are not limited to, paved roads, paved parking areas, drive aisles, truck courts, utility infrastructure, landscaping, water quality basins, signage, lighting, property walls, gates, and fencing, including perimeter fencing. Buildout of the Project would be phased. Six (6) buildings are proposed in the first phase and their development details are described herein. Site-specific detail for subsequent phases of development would be determined in the future, but reasonable assumptions are made herein about the future phases of development to enable a complete and comprehensive analysis of the whole of the Project.

This EIR analyzes the physical environmental effects associated with all components and all phases of the Project, including planning, grading, construction, and on-going operation. The Project includes the above-described development and all required entitlements to implement that development including the following:

- **General Plan Amendment (GPA 22-001)** to change the site's General Plan land use designation from Employment Flex (EMPFX) to Specific Plan (SP);
- **Zone Change (ZC 22-001**) to change the site's zoning classification from Office Flex (OFX) to Specific Plan (SP);
- **Antelope Valley Commerce Center Specific Plan** (herein, SP 22-001) that sets forth standards and guidance for the development and phasing of industrial, commercial, and open space uses with supporting infrastructure on the Project site;
- **Tentative Parcel Map 83738** to subdivide the Project site into lots to facilitate its development;
- **Site Plan Review 22-008** pertaining to the development of six (6) proposed buildings and supporting infrastructure in the Project's first phase of development; and,

- **Development Agreement 22-001** which contains terms and agreements between the City and the Project Applicant pertaining to implementation of the Project..

These entitlements and associated applications, as submitted to the City of Palmdale by the Project Applicant, are herein incorporated by reference pursuant to CEQA Guidelines Section 15150. Each of the required entitlements are described in detail below and the applications and associated documents are available for review at the City's Department of Economic and Community Development, Planning Division, 38250 Sierra Highway, Palmdale, CA 93550. All development on the Project site would be required to substantially conform to the proposed Specific Plan.

Development of the Antelope Valley Commerce Center is expected to occur in four (4) phases in response to market demands and according to a logical and orderly extension of roadways, public utilities, and infrastructure.

- **Phase I** includes the northern portion of the central Industrial lot, the northern portion of the western Industrial lot, and the Open Space lot in the northwest portion of the site;
- **Phase II** includes the southern portion of the central Industrial lot, and the southern portion of the western Industrial lot;
- **Phase III** includes the Commercial lot and the Industrial lot west of Public Street A; and,
- **Phase IV** includes the Industrial lot south of Public Street B.

The western Open Space lot is not specifically tied to any of the development phases. The Project's four phases may be developed as subphases and may occur either sequentially or concurrently with one another. Phasing of the Specific Plan and associated improvements may be further dictated by the Development Agreement proposed in conjunction with SP 22-001.

Access to the Project site would be from existing north-south oriented Columbia Way / East Avenue M with support from the following internal streets that would provide access to the buildings:

- **Public Street A.** North-south oriented Public Street A located in the western portion of the Project site;
- **Public Street B**. North-south oriented Public Street B located in the eastern portion of the Project site;
- **Public Street C**. East-west oriented Public Street C located in the southern portion of the Project site;
- **Public Street D.** North-south oriented Public Street D located in the southwestern portion of the Project site;
- **Private Drive D**. East-west oriented Private Drive D located in the northern portion of the Project site; and,
- **Private Drive E**. A north-south oriented Private Drive E located in the central portion of the Project site.

This EIR includes an analysis of the overall Project as well as a detailed analysis of the proposed development in Phase I, which is proposed to include the construction and operation of six (6) industrial warehouse buildings, a drainage basin positioned in the northeastern portion of the Project site and supporting roadways and utility infrastructure.

3.2 REGIONAL SETTING

The Project site encompasses approximately 432.9 gross acres of vacant land and is located within the City of Palmdale, California, which is located within the Antelope Valley portion of Los Angeles County. As previously shown on Figure 2-1, *Regional Map,* in EIR Section 2.0, Los Angeles County abuts Ventura County to the west, Kern County to the north, San Bernardino County to the east, and Orange County to the south. The Antelope Valley is located in the northern portion of Los Angeles County and is disconnected from the Southern California coastal and Central California valley regions by the Tehachapi Mountains to the northwest and by the San Gabriel Mountains to the south.

3.3 PROJECT LOCATION AND SETTING

As previously shown on Figure 2-2, *Vicinity Map,* in EIR Section 2.0, the Project site that is the subject of this EIR is located in the central northern portion of the City. Communities surrounding the City include the City of Lancaster to the north, as well as other unincorporated communities such as Lake Los Angeles to the east; Sun Village, Littlerock, and Pearblossom to the southeast; Acton to the south; Agua Dulce to the southwest; and Quartz Hill and Leona Valley to the west.

The Project site encompasses Assessor Parcel Numbers (APNs) 3126-022-926, 3126-022-927, 3126-022-928, and 3126-022-929 and is located in Sections 1 and 2, Township 6 North, Range 12 West, San Bernardino Baseline and Meridian. The Project site is located approximately 0.03-mile east of Sierra Highway and approximately 1.45 miles east of State Route (SR) 14. The Project site is located approximately 0.25-mile (1,305 feet) north of Runway 7 of USAF Plant 42.

As previously shown on Figure 2-6, *Aerial Photograph,* in EIR Section 2.0, under existing conditions, the Project site is vacant. An unpaved portion of Challenger Way runs north to south through the eastern portion of the Project site. A graded dirt access road runs around the perimeter of the Project site and two graded dirt roads run east-west and north-south in the southern portion of the Project site.

The Project site is located directly south of Columbia Way / East Avenue M; approximately 0.02-mile east of the active Union Pacific Railroad (UPRR) mainline tracks located adjacent to Sierra Highway; and directly north of Avenue M-12. Refer to EIR Section 2.0, *Environmental Setting*, for a detailed description of the local setting and surrounding land uses.

3.4 STATEMENT OF OBJECTIVES

The underlying purpose and goal of the proposed Project is to accomplish the development of vacant property with an economically viable, employment-generating use that is compatible with the surrounding area. This underlying goal aligns with various aspects of the SCAG's 2020-2045 Regional

Transportation Plan/Sustainable Communities Strategy (RTP/SCS); also referred to as "Connect SoCal"), particularly the facilitation of goods movement industries and the generation of local employment opportunities that can reduce the need for long commutes to and from work. The following objectives are intended to achieve these underlying purposes:

A. To develop a master-planned commerce center that attracts industrial and commercial users to the City of Palmdale;

B. To diversify the mix of developed land uses in the City of Palmdale to support the growing goods movement supply chain;

C. To develop supply chain uses in close proximity to designated truck routes and the State highway system to avoid or shorten vehicular trip lengths on other roadways;

D. To expand economic development, facilitate job creation, and increase the tax base for the City of Palmdale by accommodating and diversifying facilities needed to support the goods movement supply chain;

E. To develop Class A light industrial buildings in the City of Palmdale that are designed to meet contemporary industry standards and be economically competitive with similar industrial buildings in the local area and region;

F. To attract new employment-generating businesses in the City of Palmdale, thereby growing the economy and providing a more equal jobs-housing balance in the local area that will reduce the need for members of the local workforce to commute outside the area for employment;

G. To develop supply chain buildings that have architectural design and operational characteristics that are compatible with other existing and planned developments in the local area;

H. To develop a property that has access to available infrastructure, including roads and utilities; and,

I. To developed a master planned commerce center that includes commercial uses that allows for commercial retail, restaurants, and small-scale retail commercial goods and services that would benefit residents, employees, and visitors in and around the Specific Plan Area and surrounding neighborhoods.

3.5 PROJECT'S COMPONENT PARTS AND DISCRETIONARY APPROVALS

A detailed description of the proposed Project is provided below. Additional discretionary and administrative actions that would be necessary to implement the proposed Project are listed in Table 3-7, *Matrix of Project Approvals/Permits*, at the end of this section.

3.5.1 General Plan Amendment 22-001

General Plan Amendment 22-001 proposes to amend the Employment Flex (EMPFX) General Plan land use designation of the site to Specific Plan (SP) which would allow for the establishment and implementation of the proposed Project.

3.5.2 Zone Change 22-001

Zone Change No. 22-001 proposes to modify the existing zoning classification of the site from Office Flex (OFX) to Specific Plan (SP), which would allow for the establishment and implementation of the proposed Project.

3.5.3 Antelope Valley Commerce Center Specific Plan 22-001

A. General Description

The Antelope Valley Commerce Center Specific Plan No. 22-001 (herein, SP 22-001) provides guidance for the development of a contemporary, master-planned commerce center at a location near major transportation facilities. The Antelope Valley Commerce Center is envisioned to contain industrial and commercial buildings supported by public roads and utility infrastructure systems, private driveways, parking lots, truck courts, lighting, landscaping, signage, and other functional and decorative features. The commercial and industrial uses in smaller buildings are positioned along Columbia Way / East Avenue M in the northwestern segment of the site, while industrial uses in larger warehouse buildings comprise the balance of the Specific Plan Area. The Specific Plan serves as the regulatory document for land use, development standards, and design guidelines and standards within the Specific Plan Area. In topics where the Specific Plan is silent, the Palmdale Municipal Code (PMC) serves as the governing document for any decision on land use, development standards, and design guidelines and standards. Development of the proposed Project would be consistent with the requirements set forth in the Specific Plan and with all other applicable City regulations.

B. Proposed Land Uses

As shown on Figure 3-1, and identified in Table 3-1, *Specific Plan Land Use Summary*, SP 22-001 would establish three land uses; Industrial, Commercial, and Open Space. Industrial land uses would be developed on approximately 378.4 acres in the central portion of the Project site. The maximum allowable building square footage within the Industrial land use would be 8,241,552 s.f. Commercial land uses would be developed on 7.0 acres in the northern portion of the Project site adjacent to Columbia Way / East Avenue M. The maximum allowable building square footage within the Commercial land use would be 60,984 s.f. The Open Space land use would comprise 29.3 acres along the western boundary and in the northeastern corner of the Project site. The Open Space land use would be reserved for the proposed drainage basin and for western Joshua Tree conservation. The remaining 18.2 acres of the Project site would be designated for proposed roadways.

Table 3-1 Specific Plan Land Use Summary

Land Use Designation	Acres	Maximum Building Square Footage
Industrial	378.4 acres	8,241,552 s.f.
Commercial	7.0 acres	60,984 s.f.
Open Space	29.3 acres	N/A
Roadway	18.2 acres	N/A
Total	**432.9 acres**	**8,326,494 s.f.**

C. *Conceptual Vehicle Circulation and Access Plan*

SP 22-001 provides for a vehicular circulation and access plan. See Figure 3-3, *Vehicular Circulation and Access Phasing Plan*. Provided below is a description of the proposed roadway, sidewalk, and trail improvements that would be improved as part of the Project.

1. Vehicular Circulation

Figure 3-4, *Roadway Cross Sections – Sheet 1* and Figure 3-5, *Roadway Cross Sections – Sheet 2,* depict the proposed roadway configurations.

❑ Columbia Way / East Avenue M

Under existing conditions, Columbia Way / East Avenue M forms the northern boundary of the Project site and would provide direct access to the Project site. Improvements to Columbia Way / East Avenue M are proposed along the Project frontage and would occur to the portion of Columbia Way / East Avenue M south of its centerline. The primary street section design for Columbia Way / East Avenue M would provide for a 64-foot right-of-way (ROW) south of the centerline. A 12-foot-wide raised center median would be provided along this segment. Three eastbound traffic lanes would be established within the 44 feet of paved roadway, including two 12-foot-wide travel lanes and one 14-foot-wide travel lane. In addition to the travel lanes, a 20-foot-wide curb-adjacent parkway would be provided, and within the 20-foot-wide parkway – an 8-foot-wide sidewalk would be provided for pedestrian access and a 12-foot-wide Class 1 trail would be provided for bike access.

❑ Internal Public Streets

Four public streets (Public Street A, Public Street B, Public Street C, and Public Street D) would be constructed internal to the Project site. North-south oriented Public Street A would provide access to the western portion of the Project site; north-south oriented Public Street B would provide access to the eastern portion of the Project site; east-west oriented Public Street C would connect Public Street A and Public Street B and provide access to the southern portion of the Project site. North-south oriented Public Street D would connect from east-west oriented Public Street C and would provide access to the southern portion of the Project site as well as to an offsite parcel that is not a part of the proposed Project. Public Street A would provide a 76-foot ROW with a 32-foot-wide travel lane in each direction; Public Street B would provide a 76-foot ROW with a 32-foot-wide travel lane in each direction and a 6-foot-wide curb adjacent sidewalk on both sides of the roadway.

2. Non-Vehicular Circulation

The Project would encourage access and circulation within and surrounding the Project site via non-motorized means. As shown on Figure 3-6, *Conceptual Non-Vehicular Circulation and Mobility Plan*, a Class 1 Trail is proposed along the Project site's frontage with Columbia Way / East Avenue M as well as sidewalks located along both sides of Public Street A, Public Street B, and Public Street C. Pedestrian crosswalks in all directions would be identified at signalized intersections along Columbia Way / East Avenue M to ensure pedestrian safety. The Class 1 Trail proposed along Columbia Way / East Avenue M would provide connection to the existing off-site 7.1-mile-long Sierra Highway Bike Trail which is a commuter and recreational all-weather surface trail running along Sierra Highway and the UPRR, located west of the Project site.

D. Utility and Infrastructure Plan

Buildout of the proposed Project would require the installation of water, sewer, drainage, and other utility infrastructure. Utilities would be installed as roadways are constructed even if the proposed utility is not needed until a later phase. All utility infrastructure improvements would be constructed in accordance with applicable Los Angeles County Waterworks District (LACWD) and City of Palmdale design standards and specifications.

1. Potable Water Plan

As depicted on Figure 3-7, *Potable Water Infrastructure Phasing Plan,* existing LACWD water lines are located within the Columbia Way / East Avenue M ROW, which would provide service and points of connection to the Project site. In addition to the LACWD water line, an existing Antelope Valley-East Kern Water Agency (AVEK) water line is located along the Columbia Way / East Avenue M ROW at the 4th Street East intersection. As part of the Project, a water line is proposed along Columbia Way / East Avenue M. Additionally, water lines are proposed within the Public Street A and Public Street B ROWs. The water lines would be designed to connect to the existing LACWD water line at the intersection of Public Street A and Columbia Way / East Avenue M and at the intersection of Public Street B and Columbia Way / East Avenue M.

2. Sanitary Sewer Plan

Sanitary sewer service for the Project site would be provided by the City of Palmdale. As depicted on Figure 3-8, *Sanitary Sewer Infrastructure Phasing Plan*, existing sanitary sewer lines are located within the Columbia Way / East Avenue M ROW to the north of the Project site boundary. As part of the Project, approximately 1,300 linear feet of the existing sanitary sewer line within the Columbia Way / East Avenue M ROW would be upgraded. Sanitary sewer lines are proposed along Public Street A and Public Street B ROWs. The proposed sanitary sewer lines would connect to the existing sanitary sewer line at the intersection of Public Street A and Columbia Way / East Avenue M and the intersection of Public Street B and Columbia Way / East Avenue M.

3. Storm Water Management Plan

The master storm drainage system for the Project site is shown on Figure 3-9, *Storm Drain Infrastructure Phasing Plan*. Improvements include the installation of a storm drain line within a portion of Public Street A; a storm drain line within Private Drive D extending east towards the drainage basin in the northeastern portion of the Project site; and a storm drain line within a portion of Public Street B.

The storm drain system would provide two paths of travel that would ultimately convey storm water to a drainage basin located in the northeastern portion of the Project site. Storm water would generally be conveyed in either of the following paths: north via the Public Street A storm drain line then east via the Private Drive D storm drain line; or north via the Public Street B storm drain line. The proposed drainage basin would be adequately sized to serve the Project site's stormwater needs. In the event that the maximum basin capacity is reached, an emergency overflow system would direct storm water to Columbia Way / East Avenue M allowing it to follow the historical storm water flow pattern.

4. Dry Utilities Plan

Southern California Gas Company and Southern California Edison would provide natural gas and electricity to the Project site, respectively. As shown on Figure 3-10, *Dry Utilities Infrastructure Phasing Plan*, natural gas and dry utility lines would be installed to connect to the existing gas and dry utility lines at Columbia Way / East Avenue M. Gas lines would be stubbed and available for service as requested by future building users in conjunction with approval of implementing site plans for each building. Telephone/fiber/cable service in the vicinity of the Project site would be available from multiple carriers including AT&T, Frontier, Spectrum and Verizon.

E. Conceptual Grading Plan

The natural topography of the Project site is relatively flat. The Project site would be graded in a manner that is generally lower than the existing grade. Phase I is expected to have approximately 1,223,000 cubic yards (cy) of cut and 1,169,000 cy of fill with 54,000 cy of excess soil which would be utilized during other phases of construction. No import or export of soils is anticipated.

F. Development Standards

The Specific Plan document establishes development standards to guide development of the physical components of the Project. The standards provided in the Specific Plan are intended to work in concert with the architecture and landscape design guidelines. The Development Standards set forth the permitted, conditional, minor and ancillary uses within the Project site.

1. Design Guidelines

Future development accommodated by the Specific Plan would be required to comply with the Specific Plan's design guidelines which establish the quality and character of the built environment for the master-planned commerce center. While the design guidelines provide direction, they are meant to

provide a certain level of flexibility to allow creative expression during the design of implementing development projects. The guidelines provide criteria for architecture, walls and fences, truck courts and loading docks, ground or wall-mounted equipment, rooftop equipment, trash enclosures, outdoor employee amenities, lighting, signage, and landscape design. The guidelines apply to all future development regardless of land use category.

2. Industrial Architectural Standards and Guidelines

The Industrial Architectural Standards and Guidelines includes guidelines and standards related to design theme, building form, building materials, colors and texture, windows and doors, ground or wall mounted equipment, rooftop equipment, trash enclosures, outdoor lighting, truck courts and loading docks, walls and fences, and employee amenities.

3. Commercial Architectural Standards and Guidelines

The Commercial Architectural Standards and Guidelines include guidelines and standards related to site design and building architecture for future commercial development in the northwestern portion of the Project site.

4. Signage Design Standards and Guidelines

Signage within the Project site would be provided to identify the Project and its building occupants and to ensure the efficient circulation of vehicle traffic within the site by identifying vehicular entry points and directing vehicles to their on-site destinations. Also, signage will enhance the pedestrian experience through the design of wayfinding components: directories, directional signage and destination identifiers.

5. Landscape Design Guidelines

The Landscape Design Guidelines address the overall landscape theme and the design of streetscapes, entries and monuments, walls and fences, and outdoor amenity areas. Landscaping is intended to be established and maintained throughout the Project site, but most prominently provided for at street corners, along roadways, and at building entrances and in passenger car parking lots. Landscaping is not expected in truck court areas to ensure the safe maneuverability of trucks and avoid damage to landscaping by trucking activity. Entry treatments would be provided at the two main entrance corners and are intended to welcome employees and visitors to the Antelope Valley Commerce Center. Corner treatments featuring signs and landscaping are planned at the corners of Columbia Way / East Avenue M and Public Street A and Columbia Way / East Avenue M and Public Street B.

3.5.4 DEVELOPMENT AGREEMENT 22-001

Development Agreement 22-001 is a binding legal agreement between City and the Project Applicant pertaining to development for the Project site. The Development Agreement would provide the Project Applicant with a vested right to carry out the Project in exchange for providing specified public benefits

and ensure that development is carried out in accordance with the conditions listed in the Development Agreement for the developer(s) and future owner(s) of the site.

3.5.5 TENTATIVE PARCEL MAP 83738

As shown on Figure 3-11, *Tentative Parcel Map 83738,* the application for a tentative parcel map (TPM No. 83738) proposes to subdivide the Project site into 19 parcels to accommodate the development of buildings and the establishment of open space, with the remaining acreage consisting of infrastructure improvements and roadway dedications.

3.5.6 PHASE I OVERALL SITE PLAN

A. General Description

As described previously, the Project site would be developed in phases. Phase I of development would include 111.2 acres on Parcels 1, 2, 3, 4, 5, 6, and 12.5 acres on Lot D of TPM No. 83738, along with associated roadways, public utilities, and infrastructure improvements.

B. Roadway Improvements

Figure 3-4, *Roadway Cross Sections – Sheet 1* and Figure 3-5, *Roadway Cross Sections – Sheet 2* show the roadway improvements for Phase I as described below.

- Columbia Way / East Avenue M. Under existing conditions, Columbia Way / East Avenue M along the Project's frontage is a 4-lane roadway and is designated by the City's General Plan Circulation Element as a Regional Arterial with a maximum ROW of 136 feet. The Project would provide for a 64-foot ROW south of the centerline. A 12-foot-wide raised center median would be provided along this segment. Three eastbound traffic lanes would be established within the 44 feet of paved roadway, including two12-foot-wide travel lanes and one 14-foot-wide travel lane. In addition to the travel lanes, a 20-foot-wide curb-adjacent parkway would be provided. Within the 20-foot-wide parkway, an 8-foot-wide sidewalk would be provided for pedestrian access and a 12-foot-wide Class 1 trail would be provided for bike access.

- Public Street A. Public Street A is a proposed north-south oriented roadway that would provide access to the western portion of the Project site. Proposed Public Street A would provide a 76-foot ROW with a 32-foot-wide travel lane in each direction. Public Street A would be constructed at its ultimate full-section width as an Industrial Collector from Columbia Way / East Avenue M to its southern terminus. Phase I of the Project would only provide improvements to the northern half of Public Street A. At the terminus of Public Street A, a cul-de-sac would be provided to facilitate traffic circulation until Phase II of the Project is implemented.

- Public Street B. Public Street B is a proposed north-south oriented roadway that would provide access to the eastern portion of the Project site. Proposed Public Street B would

provide a 76-foot ROW with a 32-foot-wide travel lane in each direction and a 6-foot-wide curb adjacent sidewalk on both sides of the roadway. Public Street B would be constructed at its ultimate full-section width as an Industrial Collector from Columbia Way / East Avenue M to its southern terminus. Phase 1 of the Project would only provide improvements to the northern half of Public Street B. At the terminus of Public Street B, a cul-de-sac would be provided to facilitate traffic circulation until Phase II of the Project is implemented.

C. *Phase I Site Plan and Building Configuration*

Phase I includes the construction of six industrial warehouse buildings. Figure 3-12, *Overall Site Plan – Building 1*, Figure 3-13, *Overall Site Plan – Building 2,* Figure 3-14, *Overall Site Plan – Building 3*, Figure 3-15, *Overall Site Plan – Building 4,* Figure 3-16, *Overall Site Plan – Building 5* and Figure 3-17*, Overall Site Plan – Building 6,* depict the overall site plans for Buildings 1, 2, 3, 4, 5, and 6, respectively

Figure 3-18, *Fire Access Plan*, shows the fire access plan for Phase I and Figure 3-19, *Fence and Wall Exhibit*, shows the conceptual fence and wall plan for Phase I.

1. Building 1

Building 1 would be developed in the north central portion of the Project site (on Parcel 1 of TPM 83738) and would include 126,670 s.f. of warehouse space and 10,000 s.f. of office space for a total of 136,670 s.f. of building area. Office space is proposed at the northeastern and northwestern corners of the building. A 28-foot-wide fire lane is designed around the perimeter of the building. Building 1 would have a total of 22 docking doors for trucks along the southern side of the building. A total of 114 parking stalls for passenger vehicles, electric vehicles, and accessible parking would be provided on all sides of the building. Access to the Building 1 site would be accommodated two driveways (Driveway 5 and Driveway 6) along Columbia Way / East Avenue M and both driveways would accommodate access for both passenger vehicles and trucks. Proposed Driveways 5 and 6 located along Columbia Way / East Avenue M would be restricted access (right-in/right-out only) because a median restricting left turns would be installed as part of the Project along Columbia Way / East Avenue M.

2. Building 2

Building 2 would be developed in the northcentral portion of the Project site (on proposed Parcel 2 of TPM 83738) and would include 134,306 s.f. of warehouse space and 10,000 s.f. of office space for a total of 144,306 s.f. of building area. Office space is proposed at the northeastern and northwestern corners of the building. A 28-foot-wide fire lane is designed around the perimeter of the building. Building 2 would have a total of 25 docking doors for trucks along the southern side of the building. A total of 119 parking stalls for passenger vehicles, electric vehicles, and accessible parking would be provided on all sides of the building. Access to the Building 2 site would be accommodated via two driveways (Driveway 6 and Driveway 7) along Columbia Way / East Avenue M and would accommodate access for both passenger vehicles and trucks. Driveways 6 and 7 located along

Columbia Way / East Avenue M would be restricted access (right-in/right-out only) because a median restricting left turns would be installed as part of the Project along Columbia Way / East Avenue M.

3. Building 3

Building 3 would be developed in the northeastern portion of the Project site (on proposed Parcel 3 of TPM 83738) and would include 122,695 s.f. of warehouse space and 10,000 s.f. of office space for a total of 132,695 s.f. of building area. Office space is proposed at the northeastern and northwestern corners of the building. A 28-foot-wide fire lane would be provided around the perimeter of the building. Building 3 would have a total of 18 docking doors for trucks along the southern side of the building. A total of 119 parking stalls for passenger vehicles, electric vehicles, and accessible parking would be provided on all sides of the building. Access to the Building 3 site would be accommodated via one driveway along Columbia Way / East Avenue M, and one driveway along Public Street B. The driveway (Driveway 7) along Columbia Way / East Avenue M would accommodate access for both passenger vehicles and trucks and be restricted access (right-in/right-out only) because a median restricting left turns would be installed as part of the Project along Columbia Way / East Avenue M. Driveway 8 along Public Street B would accommodate passenger vehicles only.

4. Building 4

Building 4 would be developed in the central portion of the Project site (on proposed Parcel 4 of TPM 83738) and would include 660,469 s.f. of warehouse space and 20,000 s.f. of office space for a total of 680,469 s.f. of building area. Office space is proposed at all four corners of the building. A 28-foot-wide fire lane is designed around the perimeter of the building. Building 4 would have a total of 107 docking doors for trucks along the northern and southern sides of the building, with 53 docking doors on the northern side and 54 docking doors in the southern side of the building. A total of 441 parking stalls for passenger vehicles, electric vehicles, and accessible parking would be provided on all sides of the building, and a total of 243 trailer parking stalls would be provided on the northern and southern sides of the building. Access to the Building 4 site would be accommodated via four driveways along Public Street A. The northernmost and southernmost driveways (Driveway 1 and Driveway 4) along Public Street A would accommodate access for both passenger vehicles and trucks and the two central driveways (Driveway 2 and Driveway 3) along Public Street A would accommodate passenger vehicles only.

5. Building 5

Building 5 would be developed in the central portion of the Project site (on proposed Parcel 5 of TPM 83738) and would include 984,228 s.f. of warehouse space and 20,000 s.f. of office space for a total of 1,004,228 s.f. of building area. Office space is proposed at all four corners of the building. A 28-foot-wide fire lane is designed around the perimeter of the building. Building 5 would have a total of 184 docking doors for trucks along the northern and southern sides of the building, with 92 docking doors on each side of the building. A total of 582 parking stalls for passenger vehicles, electric vehicles, and accessible parking would be provided on all sides of the building, and a total of 411 trailer parking stalls would be provided on the northern and southern sides of the building. Access to the Building 5

site would be accommodated via four driveways along Public Street B. The northernmost and southernmost driveways (Driveway 9 and Driveway 12) along both Public Street B would accommodate access for both passenger vehicles and trucks, while the central driveways (Driveway 10 and Driveway 11) along Public Street B would accommodate passenger vehicles only.

6. Building 6

Building 6 would be developed in the eastern portion of the Project site (on proposed Parcel 6 of TPM 83738) and would include 259,858 s.f. of warehouse space and 15,000 s.f. of office space for a total of 274,858 s.f. of building area. Office space is proposed at the northeastern and northwestern corners of the building. A 28-foot-wide fire lane is designed around the perimeter of the building. Building 6 would have a total of 38 docking doors for trucks along the southern side of the building. A total of 249 parking stalls for passenger vehicles, electric vehicles, and accessible parking would be provided on the northern, western, and southern side of the building, and a total of 61 trailer parking stalls would be provided on the southern side of the building. Access to the Building 6 site would be accommodated via three proposed driveways along Public Street B. The northernmost and southernmost driveways (Driveway 9 and Driveway 11) along Public Street B would accommodate access for both passenger vehicles and trucks, while the central driveway (Driveway 10) along Public Street B would accommodate passenger vehicles only.

D. Grading and Site Work

Figure 3-20, *Conceptual Grading Plan – Buildings 1, 2, and 3*, Figure 3-21, *Conceptual Grading Plan – Building 4*, Figure 3-22, *Conceptual Grading Plan – Building 5*, Figure 3-23, *Conceptual Grading Plan – Building 6*, Figure 3-24, *Site Cross Sections – Sheet 1*, Figure 3-25, *Site Cross Sections – Sheet 2*, Figure 3-26, *Site Cross Sections – Sheet 3*, Figure 3-27, *Site Cross Sections – Sheet 4,* Figure 3-28, *Site Cross Sections – Sheet 5*, the site would be graded in a manner that is generally lower than the existing grade. Grading associated with Phase I of the Project is expected to require approximately 1,223,000 cubic yards (cy) of cut and 1,169,000 cy of fill with 54,000 cy of excess soil which would be utilized during other phases of construction.

E. Architectural Design

The architectural elevations for the proposed buildings are depicted on Figure 3-29, *Conceptual Building Elevation – Building 1*, Figure 3-30, *Conceptual Building Elevation – Building 2*, Figure 3-31, *Conceptual Building Elevation – Building 3*, Figure 3-32, *Conceptual Building Elevation – Building 4*, Figure 3-33, *Conceptual Building Elevation – Building 5*, Figure 3-34, *Conceptual Building Elevation – Building 6*.

Buildings 1, 2, and 3 would have a variable roofline with a maximum height of approximately 37.6 feet and Buildings 4, 5, and 6 would have a variable roofline with a maximum height of approximately 49.6 feet. The roofs would be solar-ready and the Project Applicant is proposing to cover the roofs with solar panels to a maximum 2,000 amps in compliance with applicable Building Code

requirements, clearance requirements around roof-mounted equipment, utility company interconnection regulations, transformer capacity, and other code compliance constraints.
The walls of the buildings would be constructed of concrete tilt-up panels. The buildings would be painted a mixture of white, blue, and grey colors, with the office locations being treated with tempered glass with clear anodized mullions and white canopies. Several metal doors would be provided along the truck dock doors to provide employee access into the building. The visitor entrances would occur at the office areas.

F. Landscaping

Figure 3-35, *Conceptual Landscape Plan*, depicts the conceptual landscape plan for Phase I of the Project site. Landscaping would consist of a variety of trees, shrubs, groundcover, and desert accent plants with landscaping concentrated at the site perimeter, within the passenger parking areas, and around the buildings. Tree species would include 36-inch box desert museum Blue Palo Verde, 24-inch box Raywood Ash, 24-inch box Honey Locust, 24-inch box Skyrocket Juniper, 24-inch box Afghan Pine, 15-gallon Chinese Pistache, 15-gallon Purple-leaf Plum, and 15-gallon Holly Oak. Shrub species would include 15-gallon Toyon and 5-gallon Allen Chickering Sage, Strawberry Tree, Fortnight Lily, Armstrong Juniper, Texas Ranger, Texas Pivet, Dwarf Myrtle, Pink Muhly, Deer Grass, Holly Berry and Autumn Sage, and 1-gallon Guara. Groundcover would include Dwarf Coyote Bush, Cotoneaster, Yellow Day Lily, Hall's Honeysuckle, Prostrate Rosemary, Star Jasmine and Society Garlic. Desert accents incorporated into the landscape plan include Century Plant, Blue Glow Agave, Parry's Agave, Desert Spoon and Red Yucca.

G. Lighting, Screening and Walls

Lighting would be provided at the Project site in compliance with PMC Section 17.86.030, Outdoor Lighting Requirements. Ancillary lighting would include light fixtures in the parking and loading dock areas and downward-directed lighting affixed to the exterior of the buildings. Decorative lighting, appropriate for the architecture of the buildings, is proposed. Submittal of a photometric plan for City approval that depicts light coverage in compliance with PMC Section 17.86.030 is required and would be a condition of the Project's approval.

Eight-foot-tall tubular steel fences would be provided along the western, southern, and eastern sides of the truck courts of Buildings 1, 2, 3 and 6. Eight-foot-tall tubular steel fences would be provided along the western, southern, and eastern sides of the southern truck court and the western, northern, and eastern side of the northern truck court of Buildings 4 and 5. Vehicular access into the loading dock area truck courts would be controlled by 8-foot-high manually-operated sliding metal gates.

H. Water, Sewer, and Drainage

The utility plans for Buildings 1, 2, 3, 4, 5, and 6 are shown on Figure 3-36, *Conceptual Utility Plan – West* and Figure 3-37, *Conceptual Utility Plan – East*. A description of the Project's proposed water, sewer, and drainage facilities is provided below.

1. Water Service

Water service to the Project site would be provided by the LACWD District 40. Water service for all buildings would be provided by an existing water main within the Columbia Way / East Avenue M ROW. In addition to the LACWD water line, an AVEK water line is located along the Columbia Way / East Avenue M ROW, at the 4th Street East intersection. As part of the Project, a water line is proposed along Columbia Way / East Avenue M. Additionally, water lines would be constructed within Public Street A and Public Street B ROWs. The proposed water lines would connect to the proposed water line at the intersection of Public Street A and Columbia Way / East Avenue M and at the intersection of Public Street B and Columbia Way / East Avenue M.

Water service to Buildings 1, 2, and 3 would be accommodated by a proposed water line extending from the proposed water line within Columbia Way / East Avenue M, which would extend to the northeast corner of each individual building. Water service to Building 4 would be accommodated by a proposed water line extending from the proposed water line within Public Street A, which would extend to the northwest corner of Building 4. Water service to Buildings 5 and 6 would be accommodated by a proposed water line extending from the proposed water line within Public Street B, which would extend to the northeast corner and northwest corner of Buildings 5 and 6, respectively.

In addition, fire hydrants and fire service water lines also would be constructed around all buildings. The fire service water lines for the Buildings 1 and 2 sites would connect to the existing water main within Columbia Way / East Avenue M near the northeast and northwest corners of Buildings 1 and 2. The fire service water lines for the Building 3 site would connect to the existing water main within Columbia Way / East Avenue M near the northwest corner of the Building 3. The fire service water lines for the Building 4 site would connect to the proposed water line within Public Street A at the northwestern and southwestern corner of Building 4. The fire service water lines for the Building 5 site would connect to the proposed water line within Public Street B at the northeastern and southeastern corner of Building 5. The fire service water lines for the Building 6 site would connect to the proposed water line within Public Street B at the northwestern and southwestern corner of Building 6.

2. Sewer Service

Sewer service would be provided by the City of Palmdale. Sewer service for Buildings 1 and 2 would be accommodated by an existing sewer main located within Columbia Way / East Avenue M along the northern boundary of the Buildings 1 and 2 sites and would extend southerly to the northeastern corner Buildings 1 and 2. Sewer service for Buildings 3, 5, and 6 would be accommodated by the proposed sewer line along Public Street B which would extend south from Columbia Way / East Avenue M to the midpoint of Public Street B. The sewer line would extend from Public Street B and connect to northeastern corner of Buildings 3 and 5 and connect to the northwestern corner of Building 6. Sewer service for Building 4 would be accommodated by the proposed sewer line along Public Street A which would extend south from Columbia Way / East Avenue M to the midpoint of Public Street A. The sewer line would extend from Public Street A and connect to the northwestern corner of Building 4. The new sewer lines would convey the sewer discharge from the proposed buildings to the existing sanitary sewer within Columbia Way / East Avenue M. As discussed previously, as part of the Project,

the existing sanitary sewer line within Columbia Way / East Avenue M would be upgraded. The sewer discharge would then be conveyed to the Lancaster Water Reclamation Plant (LWRP) for treatment, located approximately 9.5 miles north of the Project site.

3. Drainage

The City of Palmdale Department of Public Works maintains the City's public stormwater system. Improvements include the construction of the following: a proposed storm drain line within a portion of Public Street A; a storm drain line within Private Drive D extending east towards the water quality drainage basin in the northeastern portion of the Project site; and a storm drain line in a portion of Public Street B. As shown on Figure 3-36 and Figure 3-37, on-site stormwater would be captured through a proposed storm drain system that would ultimately flow to the proposed aboveground drainage basin located at the northeast corner of the Project site.

I. Public Art

To promote the goals established in the City of Palmdale's Public Art Master Plan, the Project would incorporate public art elements within the Project site and/or contribute to the City's Public Arts Fund. Any public art proposed would be placed at the entrances of the Project site to provide maximum visibility for public viewing. Public art would be provided in compliance with PMC Chapter 15.01, Public Art Commission and Public Art in Private and Municipal Development.

3.6 SCOPE OF ENVIRONMENTAL ANALYSIS

3.6.1 OVERALL CONSTRUCTION CHARACTERISTICS

A. Proposed Physical Disturbances

As shown on Figure 3-38, *Phase I Physical Limits of Disturbance*, Phase I would be graded and/or disturbed to accommodate the proposed first phase of development, including the offsite roadway improvements and the installation of water and sewer lines.

Regarding development in future phases, Figure 3-39, *Overall Physical Limits of Disturbance,* shows the entire physical limits of disturbance for the entire Project.

B. Construction Activities Schedule and Equipment Fleet

Construction of the Project is anticipated to begin in June 2024 and end in December 2031, as shown in Table 3-2, *Expected Construction Schedule - Phase I*, Table 3-3, *Expected Construction Schedule - Phase II*, Table 3-4, *Expected Construction Schedule - Phase III*, and Table 3-5, *Expected Construction Schedule - Phase IV*.

The typical construction sequence entails site preparation followed by grading, followed by construction of the building shells, installation of infrastructure and utilities, paving, landscaping, and then painting and other architectural coatings. Tenant improvements inside the buildings and the installation of rooftop solar panels and exterior signage would typically occur after users/tenants are

identified and enter into a lease agreement. Construction is assumed to occur Monday through Friday with occasional work on weekends, with the exception of federal holidays. To control noise associated with construction activities, PMC Section 8.28.030 establishes limits to the hours that construction activities can occur in any residential zone or within 500 feet of any residence, hotel, motel or recreational vehicle park. Because the Project site is not located in a residential zone or within 500 feet of noise-sensitive uses, construction could occur during any time periods; however, most construction crews typically work eight hours per day from approximately 6:30 AM to 3:30 PM with a lunch break included within that time frame. During limited periods when concrete is poured, construction activity may occur at night when cooler air temperatures are most conducive to curing (hardening) concrete.

As identified in Table 3-6, *Construction Equipment Assumptions,* the types of construction equipment expected on the site during all phases of development would be identical and would include rubber-tired bulldozers, crawler tractors, excavators, graders, scrapers, cranes, forklifts, generator sets, welders, pavers, paving equipment, rollers, air compressors, hand tools and other miscellaneous equipment. The construction equipment is not usually in continuous use and some pieces of equipment are utilized only periodically throughout a typical day of construction. Thus, eight hours of daily use per piece of equipment is an overly conservative and reasonable assumption for purposes of analysis in this EIR. The Project specific construction fleet may vary due to specific Project needs at the time of construction. The duration of construction represents a reasonable approximation of the expected construction fleet as required by the CEQA Guidelines.

Table 3-2 Expected Construction Schedule - Phase I

Construction Phase	Start Date	End Date	Work Days
Site Preparation	6/3/2024	7/12/2024	30
Grading	7/15/2024	11/1/2024	80
Building Construction	11/4/2024	10/31/2025	260
Paving	7/1/2025	7/28/2025	20
Architectural Coating	7/1/2025	8/25/2025	40

Source: Project Applicant

Table 3-3 Expected Construction Schedule - Phase II

Construction Phase	Start Date	End Date	Work Days
Site Preparation	6/1/2026	7/10/2026	30
Grading	7/13/2026	9/11/2026	45
Building Construction	9/14/2026	9/10/2027	260
Paving	7/1/2027	7/28/2027	20
Architectural Coating	7/1/2027	8/25/2027	40

Source: Project Applicant

Table 3-4 Expected Construction Schedule - Phase III

Construction Phase	Start Date	End Date	Work Days
Site Preparation	6/1/2028	7/12/2028	30
Grading	7/13/2028	9/13/2028	45
Building Construction	9/14/2028	9/12/2029	260
Paving	7/2/2029	7/27/2029	20
Architectural Coating	7/2/2029	8/24/2029	40

Source: Project Applicant

Table 3-5 Expected Construction Schedule - Phase IV

Construction Phase	Start Date	End Date	Work Days
Site Preparation	10/1/2030	11/11/2030	30
Grading	11/12/2030	1/13/2031	45
Building Construction	1/14/2031	1/12/2032	260
Paving	11/3/2031	11/28/2031	20
Architectural Coating	11/3/2031	12/26/2031	40

Source: Project Applicant

Table 3-6 Construction Equipment Assumptions

Phase Name	Equipment[1]	Number	Hours Per Day
Site Preparation	Rubber Tired Dozers	5	8
	Crawler Tractors	7	8
Grading	Excavators	1	8
	Graders	3	8
	Rubber Tired Dozers	2	8
	Scrapers	6	8
	Crawler Tractors	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	3	8
	Welders	2	8
	Crawler Tractors	3	8
Paving	Pavers	2	8
	Paving Equipment	4	8
	Rollers	4	8
Architectural Coating	Air Compressors	2	8

Source: Project Applicant

3.6.2 Operational Characteristics

At the time this EIR was prepared, the future user(s)/occupant(s) of the proposed buildings were unknown. Based on the design of the buildings in Phase I, the building users are expected to operate as follows:

- Building 1 is 136,670 s.f. and is expected to operate as 102,502 s.f. of general warehousing use (75 percent of the total square footage) and 34,168 s.f. of general light industrial use (25 percent of the total square footage).
- Building 2 is 144,306 s.f. and is expected to operate as 108,229 s.f. of general warehousing use (75 percent of the total square footage) and 36,077 s.f. of general light industrial use (25 percent of the total square footage).
- Building 3 is 132,695 s.f. and is expected to operate as a 99,521 s.f. of general warehousing use (75 percent of the total square footage) and 33,174 s.f. of general light industrial use (25 percent of the total square footage).

- Building 4 is expected to operate as 680,469 s.f. of high-cube fulfillment center (sort) warehouse use (100 percent of the total square footage).
- Building 5 is 1,004,228 s.f. and is expected to operate as 753,171 s.f. of high-cube fulfillment center (non-sort) warehouse use (75 percent of the total square footage) and 251,057 s.f. of high-cube cold storage warehouse use (25 percent of the total square footage).
- Building 6 is 274,858 square feet and is expected to operate as 206,143 s.f. of general warehousing use (75 percent of the total square footage) and 68,715 s.f. of manufacturing use (25 percent of the total square footage).

For future development in Phases II, III, and IV, reasonable assumptions have been made regarding the types of building users and their operational characteristics, as listed below.

- Phase II is anticipated to be built out with 1,630,362 s.f. of high-cube parcel hub warehousing use, 137,448 s.f. of manufacturing use, and 412,477 s.f. of generational warehousing use.
- Phase III is anticipated to be built out with 289,144 s.f. of high-cube cold storage warehouse use and 867,432 s.f. of non-sort warehousing use. In addition, the commercial uses are expected to be built out in Phase III. For purposes of analysis in this EIR, the commercial uses are assumed to consist of 2,500 s.f. of fast-food restaurant without drive-through window use, 2,500 s.f. of fast-food restaurant with drive-through window use, 2,000 s.f. of coffee shop with drive-through window use, and 53,984 s.f. of commercial retail use (for a total of 60,984 s.f.).
- Phase IV is anticipated to be built out with 638,889 s.f. of high-cube cold storage warehouse use and 1,916,667 s.f. of non-sort warehousing use.

For the purposes of analysis in this EIR, the industrial warehouses are assumed to be operational 24 hours per day, seven days per week, with exterior loading and parking areas illuminated at night. The commercial uses also are assumed to be operational 24 hours per day, seven days per week but are more reasonably expected to be closed between midnight and 5:00 a.m., depending on the normal operating hours of the tenants. For example, coffee shops tend to open early in the morning and fast-food restaurants tend to stay open later into the night. Using an employment generation rate for industrial buildings of 1.18 employees per 1,000 s.f. of building space[1], the 2,373,226 s.f. of total building space in Phase I is anticipated to generate approximately 2,800 new, recurring jobs (2,373,226 s.f. x 1.18 employees = 2,800,406.68 /1,000 s.f. = 2,800.40 employees). The industrial building space in Phases II, III, and IV is anticipated to generate approximately 6,953.05 new, recurring jobs (5,892,419 s.f. x 1.18 employees = 6,953,054.42 /1,000 s.f. = 6,953.05 employees). Using an employment generation rate for commercial uses of 2.22 employees per 1,000 s.f. of building space,

[1] According to Table 2-4 of the City of Palmdale 2045 General Plan Update Final EIR (SCH No. 2021060494), the City projects that between 2016 and 2045 there would be approximately 11,820 new jobs associated with 10,046,865 s.f. of industrial space, which results in a ratio of approximately 1.18 employees per 1,000 s.f. of building area.

the commercial space[2] in Phase III is expected to generate 135.38 new, recurring jobs (60,984 s.f. x 2.22 employees = 135,384.48/1,000=135.38). Thus, in total, the Project is expected to generate approximately 9,888.83 (2,800.40 + 6,953.05 + 135.38) jobs.

With the exception of the one building proposed for commercial uses to be developed during Phase III, the proposed buildings are designed such that business operations would be conducted within the enclosed buildings, with the exception of traffic movement, parking, and the loading and unloading of tractor trailers at designated loading bays. As a practical matter, dock doors on warehouse buildings are not occupied by a truck or trailer at all times of the day. There are typically many more dock door positions on warehouse buildings than are needed for receiving and shipping volumes. The dock doors that are in use at any given time are usually selected based on interior building operation efficiencies. In other words, trucks ideally dock in the position closest to where the goods carried by its trailer are stored inside the building. As a result, a number of dock door positions are frequently inactive throughout the day.

During operational activities, employees, visitors, and vehicles hauling goods would travel to and from the Project site on a daily basis. The proposed Project is anticipated to generate 26,214 two-way vehicle trip-ends per day with 2,958 AM peak hour trips and 3,124 PM peak hour trips (Urban Crossroads, 2022f, p. 4). Pursuant to State law, on-road diesel-fueled trucks are required to comply with various air quality and greenhouse gas emission standards, including, but not limited to, the type of fuel used, engine model year stipulations, aerodynamic features, and idling time restrictions. Compliance with State law is mandatory and inspections of on-road diesel trucks subject to applicable State laws are conducted by the California Air Resources Board (CARB).

3.7 SUMMARY OF REQUESTED ACTIONS

The City of Palmdale has primary approval responsibility for the proposed Project. As such, the City serves as the Lead Agency for this EIR pursuant to CEQA Guidelines Section 15050. The role of the Lead Agency was previously described in EIR Section 1.0, *Introduction*. The City's Planning Commission will hold a public hearing to consider the Final EIR, the Project's SP 22-001, GPA 22-001, ZC 22-001, and SPR 22-008 and TPM 83738. The Planning Commission will make advisory recommendations to the City Council on whether to approve, approve with changes, or deny SP 22-001, GPA 22-001, ZC 22-001, SPR 22-008 and TPM 83738 and whether to certify this EIR. A public hearing would then be held before the City Council to consider information contained in the Project's EIR and the EIR's Administrative Record in its decision-making process and the City Council will determine whether to certify this EIR and whether to approve, approve with changes, or deny proposed SP 22-001, GPA 22-001, ZC 22-001, and SPR 22-008 and TPM 83738.

[2] According to Table 2-4 of the City of Palmdale 2045 General Plan Update Final EIR (SCH No. 2021060494), the City projects that between 2016 and 2045 there would be approximately 3,050 new jobs associated with 1,372,465 s.f. of retail + restaurant space, which results in a ratio of approximately 2.22 employees per 1,000 s.f. of building area.

3.8 RELATED ENVIRONMENTAL REVIEW AND CONSULTATION REQUIREMENTS

Following approval of implementing discretionary actions, ministerial actions would be necessary to implement the proposed Project. These include, but are not limited to, grading permits, building permits, encroachment permits/road improvements, drainage infrastructure improvements, water and sewer infrastructure improvements, stormwater permit(s) (NPDES), and State and federal resource agency permits. Table 3-7, *Matrix of Project Approvals/Permits,* lists the agencies that are expected to use this EIR as part of their decision-making processes and provides a summary of the subsequent actions that will or may be associated with the Project. This EIR covers all federal, State, and local government and quasi-governmental approvals which may be needed to construct and implement the Project, whether or not they are explicitly listed in Table 3-7 or elsewhere in this EIR (CEQA Guidelines § 15124(d)).

Table 3-7 Matrix of Project Approvals/Permits

Public Agency	Approvals and Decisions
City of Palmdale Discretionary Approvals (Proposed Project)	
Planning Commission	• Provide recommendations to the City Council on whether to approve Specific Plan 22-001. • Provide recommendations to the City Council whether to approve General Plan Amendment 22-001 and Zone Change 22-001. • Provide recommendations to the City Council whether to approve SPR 22-008 and TPM 83738. • Provide recommendations to the City Council regarding certification of EIR 22-001. • Provide recommendations to the City Council regarding approval of Development Agreement 22-001.
City Council	• Approve, conditionally approve, or deny Specific Plan 22-001. • Approve, conditionally approve, or deny General Plan Amendment 22-001 and Zone Change 22-001. • Approve, conditionally approve, or not approve SPR 22-008 and TPM 83738. • Certify or reject Final EIR 22-001 along with appropriate CEQA Findings. • Approve or conditionally approve Development Agreement 22-001.
Subsequent City of Palmdale Approvals	
City of Palmdale Subsequent Implementing Approvals:	• Approve Site Plan Reviews for Phases II, III, and IV • Issue Grading Permits. • Issue Building Permits. • Approve Road Improvement Plans. • Issue Encroachment Permits. • Accept public right-of-way dedications. • Authorize nighttime construction activities, if proposed.
Other Agencies – Subsequent Approvals and Permits	
California Department of Fish and Wildlife (CDFW)	• Issuance of a California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration (LSA) Agreement and western Joshua Tree Incidental Take Permits ITP.
Lahontan Regional Water Quality Control Board (LRWQCB)	• Issuance of a Construction Activity General Construction Permit. • Compliance with National Pollutant Discharge Elimination System (NPDES) Permit. • Issuance of a Waste Discharge Requirements (WDR) permit.
Los Angeles County Waterworks District (LACWD)	• Approval of proposed water connections and improvements.
Los Angeles County Sanitation District (LACSD)	• Approval of proposed wastewater connections and improvements.
Antelope Valley Air Quality Management District (AVAQMD)	• Potential issuance of permits for equipment that is not exempted by Rule 219, the California Health and Safety Code or by Antelope Valley Air Quality Management District (AVAQMD) policy/precedent.

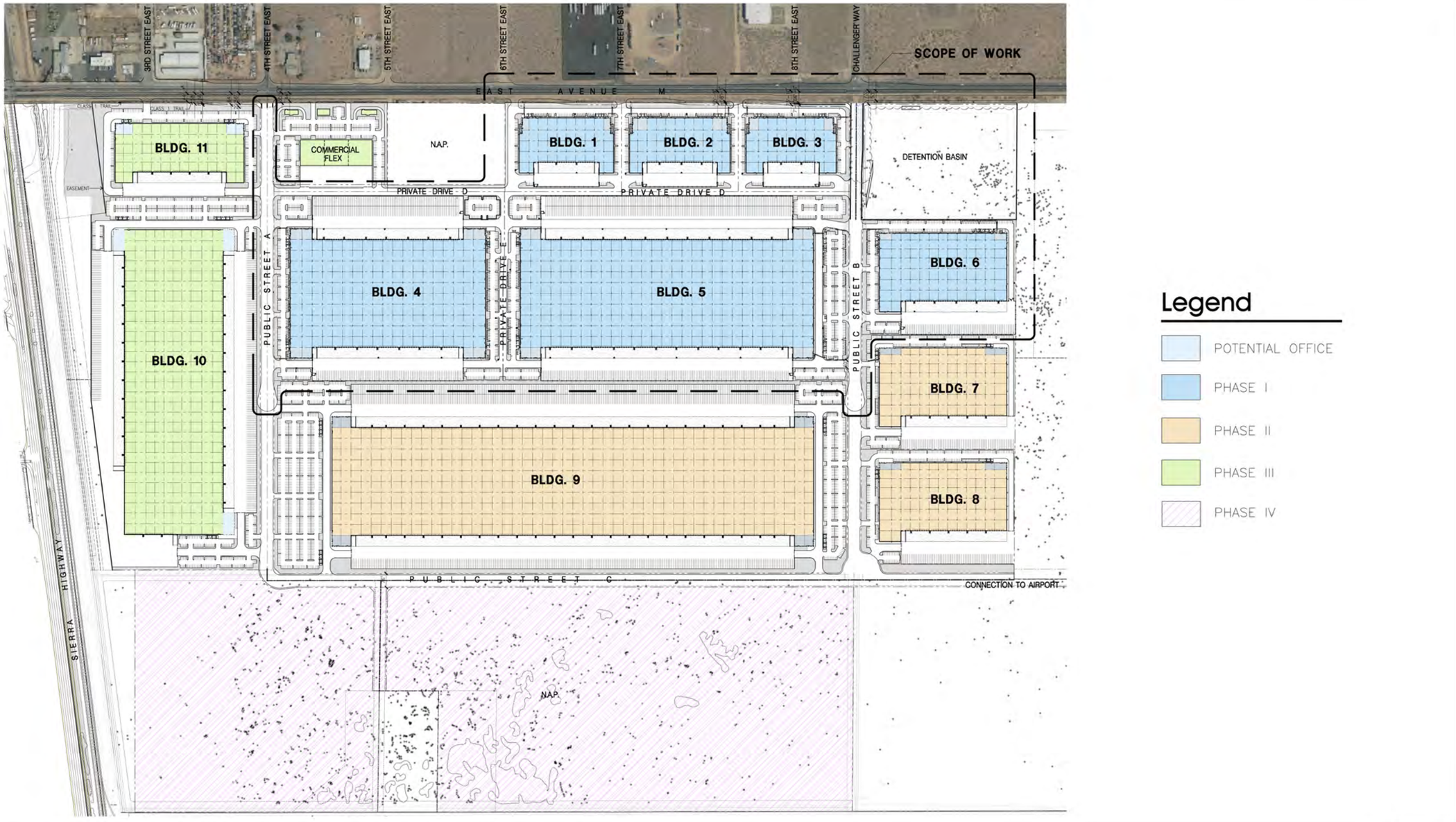


Source(s): Esri, Nearmap Imagery (July 2023), WestLAND Group, Inc. (08-24-2023)

Figure 3-1

0 250 500 1,000 Feet

Specific Plan Land Use Plan

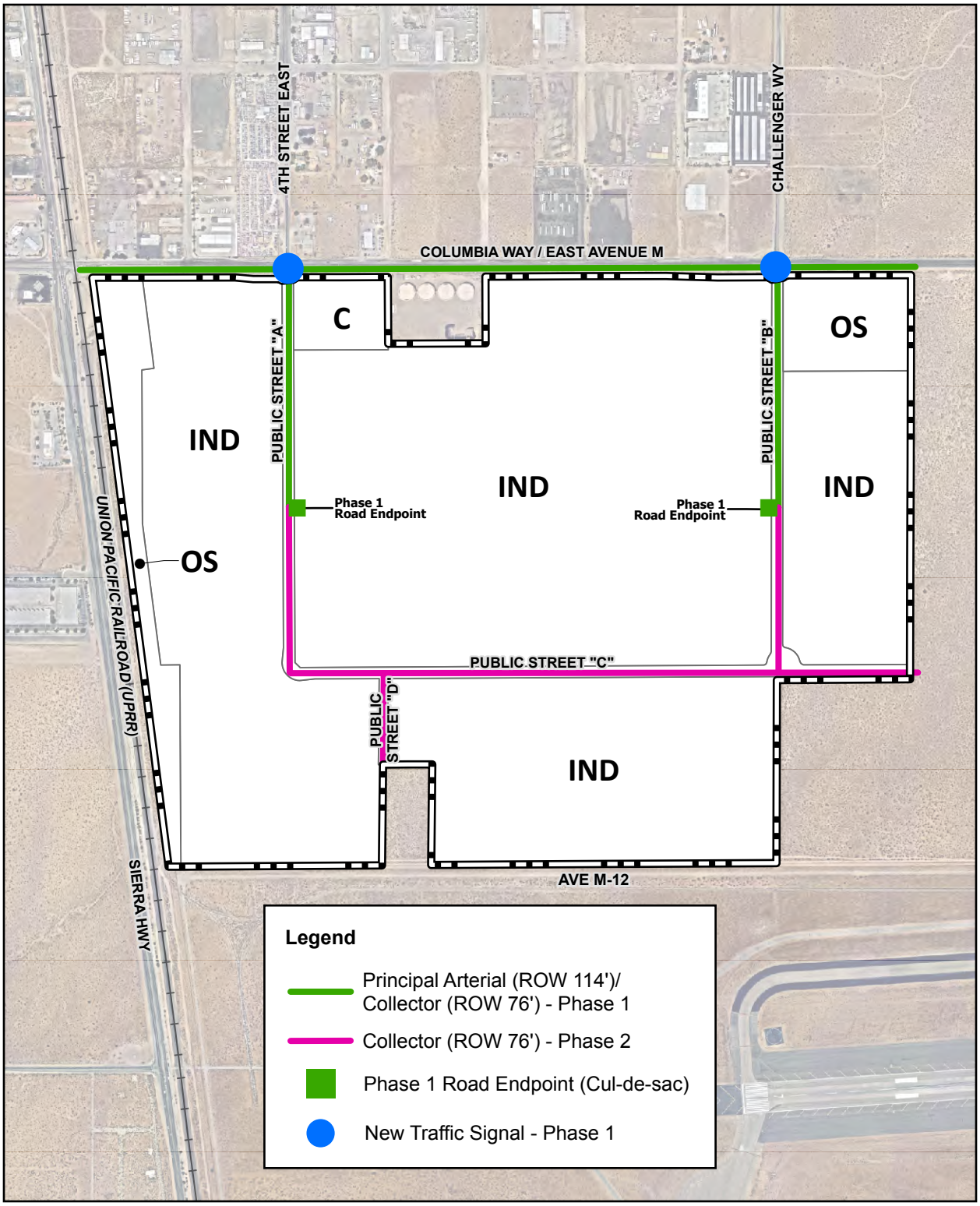


Source(s): HPA (05-12-2023)

Figure 3-2

Not to Scale

Phasing Plan

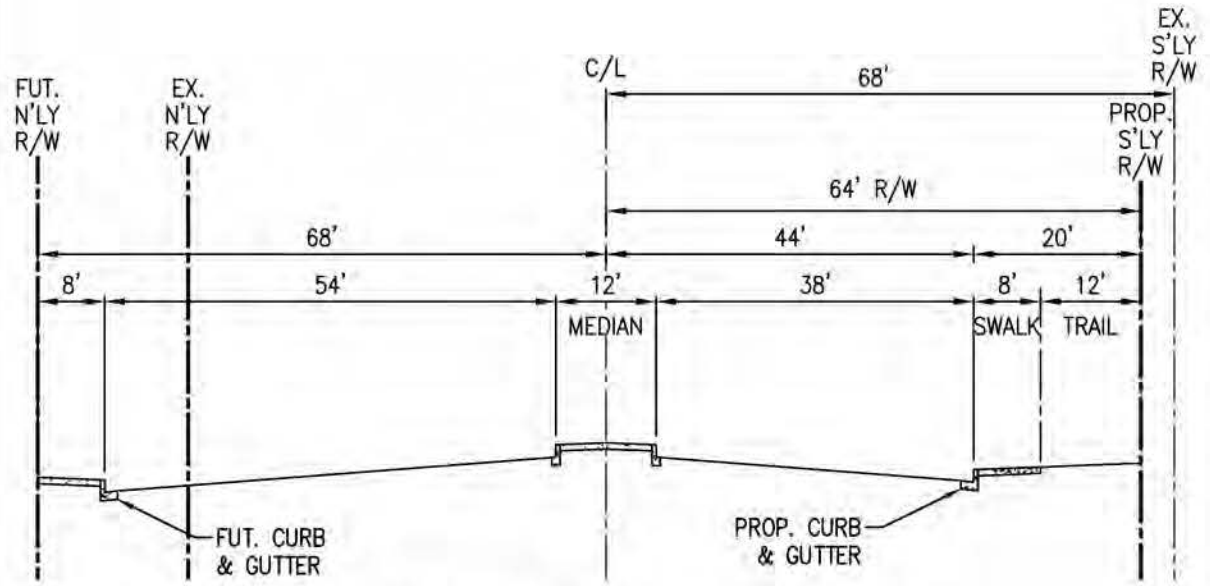


Source(s): Esri, Nearmap Imagery (July 2023), WestLAND Group, Inc. (08-24-2023)

Figure 3-3

0 250 500 1,000 Feet

Vehicular Circulation and Access Phasing Plan



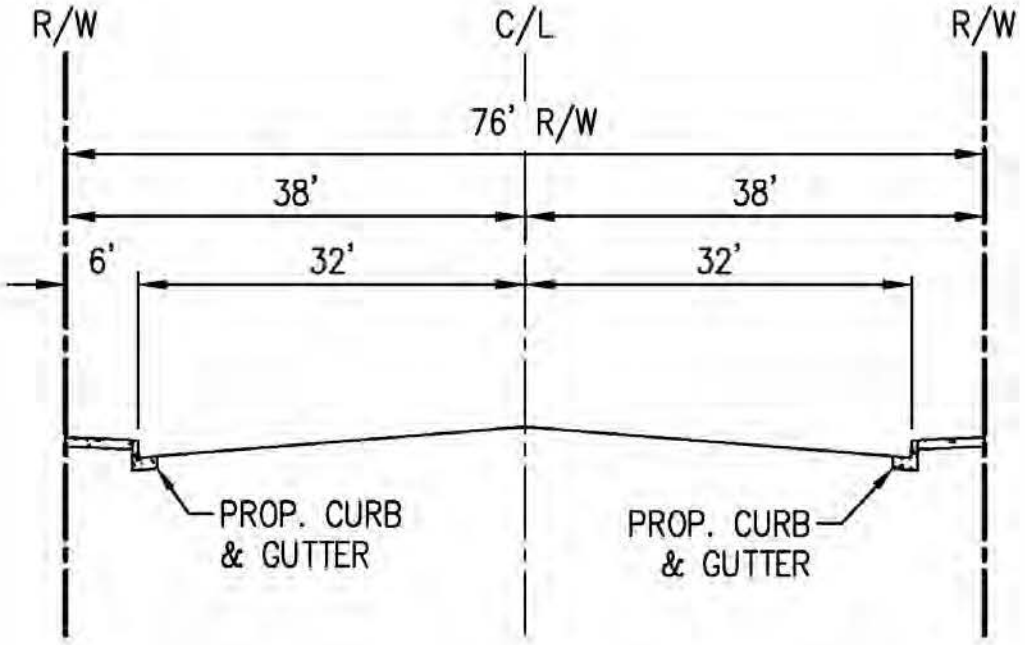
TYPICAL PROPOSED SECTION - E AVENUE M

Source(s): WestLAND Group, Inc. (March 2024)

Figure 3-4

Not to Scale

Roadway Cross Sections – Sheet 1



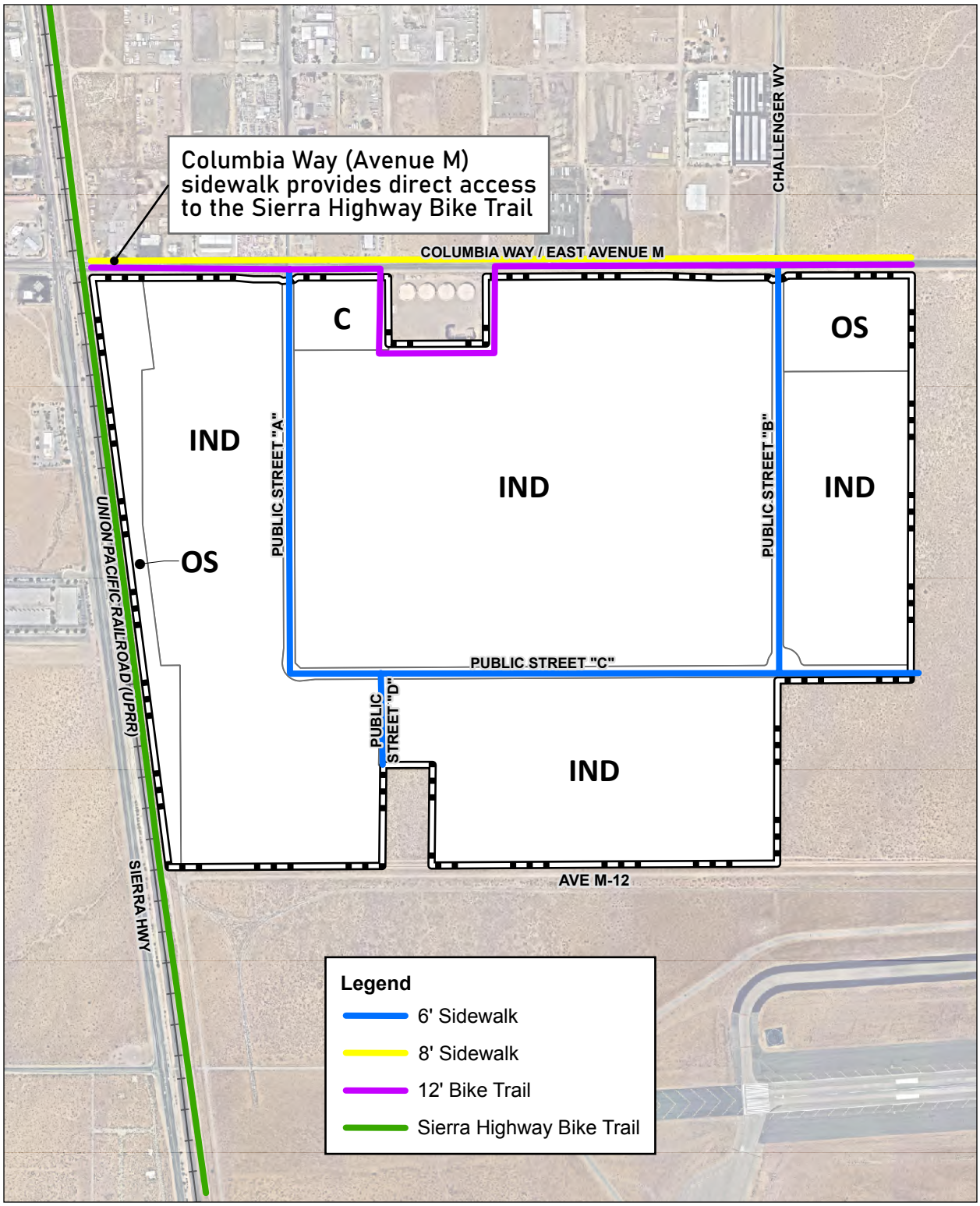
TYPICAL PROPOSED SECTION - PUBLIC STREET "A", "B", "C", AND "D"

Source(s): WestLAND Group, Inc. (March 2024)

Figure 3-5

Not to Scale

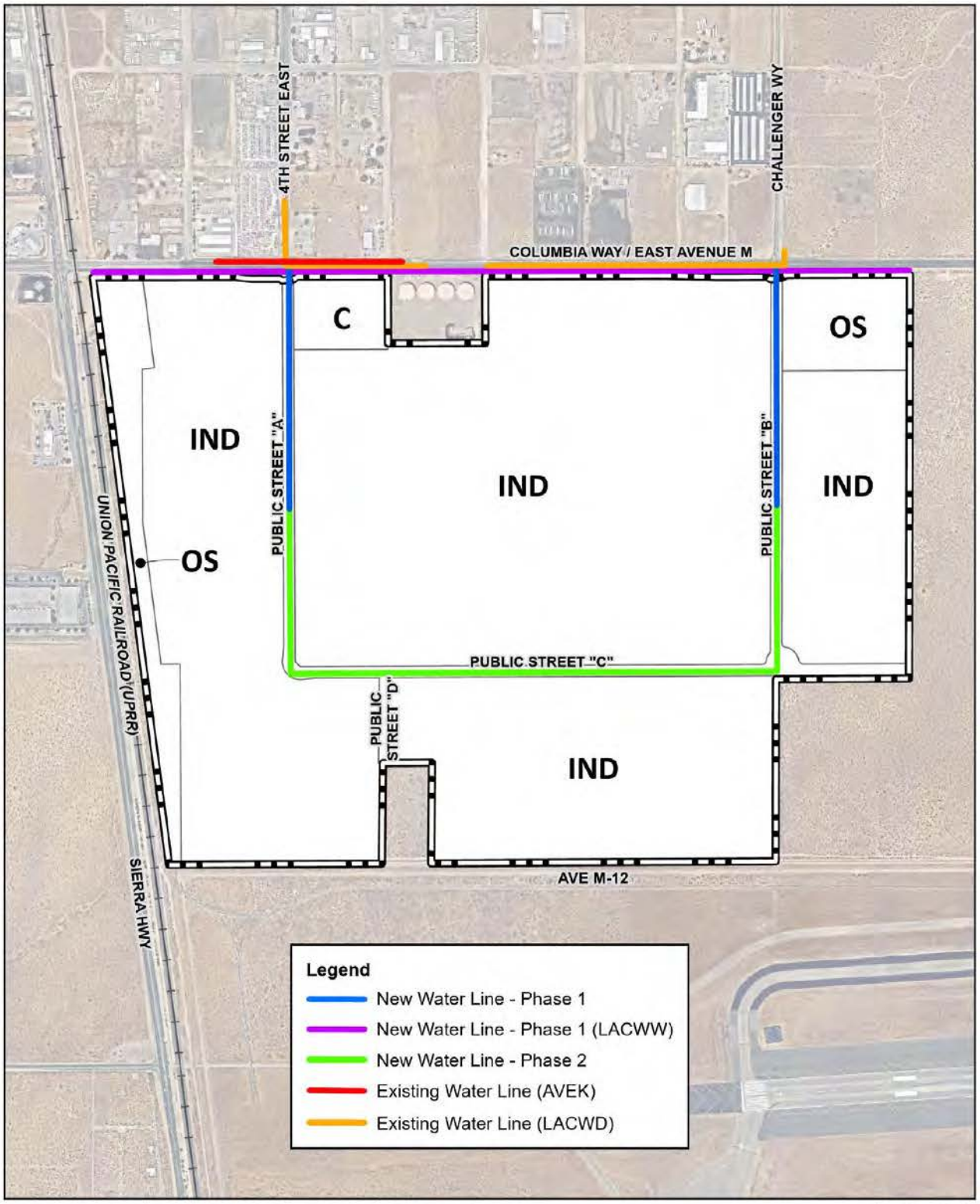
Roadway Cross Sections – Sheet 2



Source(s): Esri, Nearmap Imagery (July 2023), WestLAND Group, Inc. (08-24-2023)

0 250 500 1,000 Feet

Figure 3-6
Conceptual Non-Vehicular Circulation and Mobility Plan

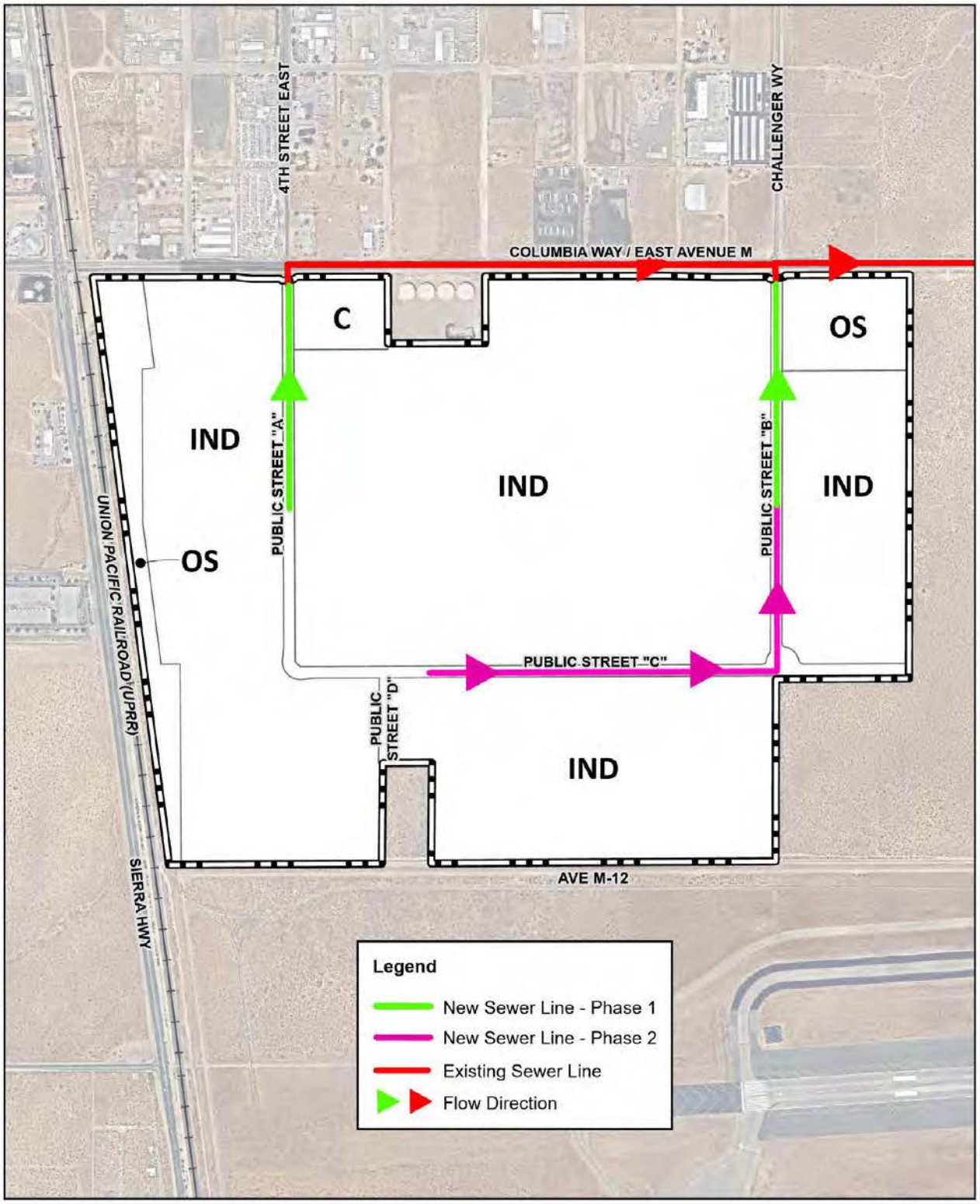


Source(s): Esri, Nearmap Imagery (July 2023), WestLAND Group, Inc. (08-24-2023)

Figure 3-7

0 250 500 1,000 Feet

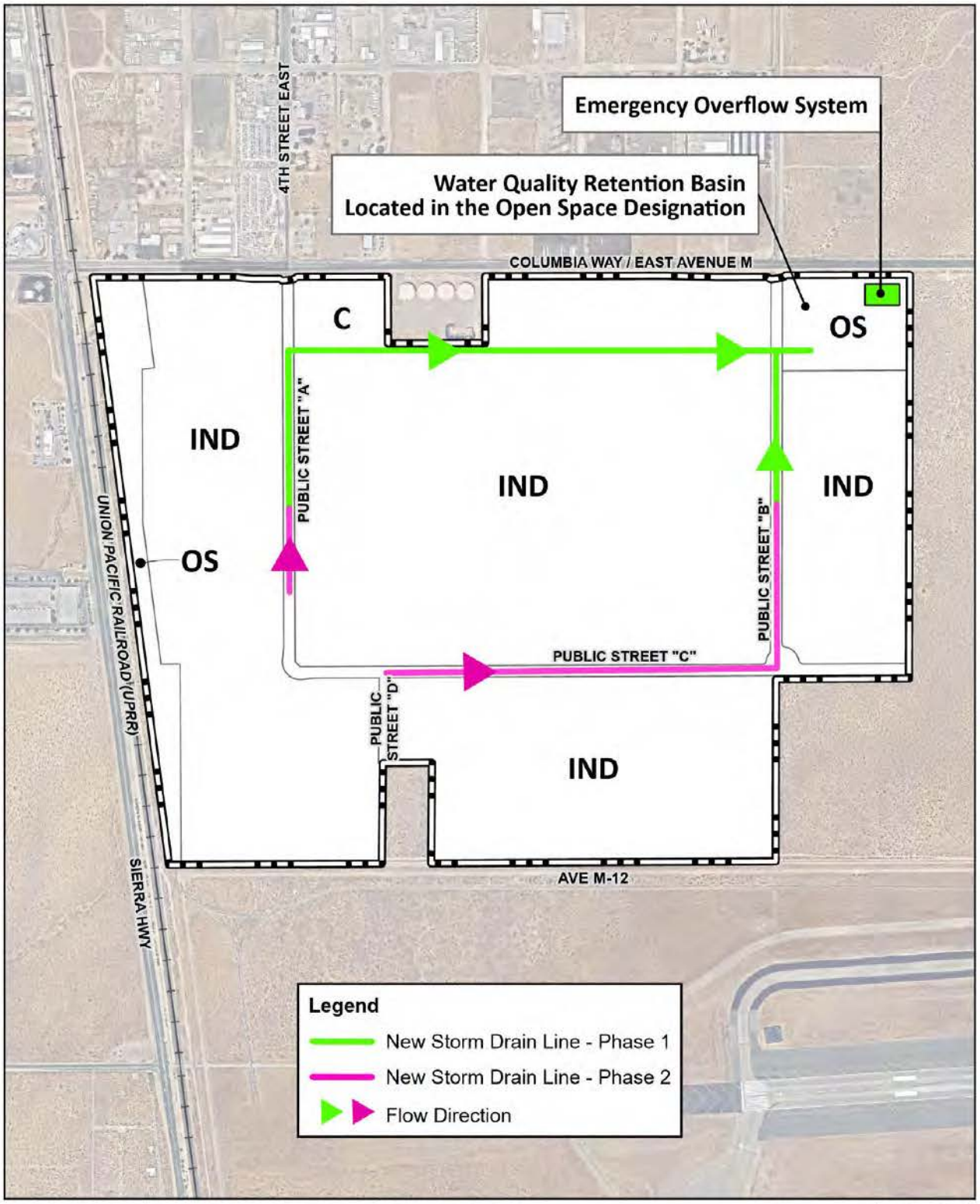
Potable Water Infrastructure Phasing Plan



Source(s): Esri, Nearmap Imagery (July 2023), WestLAND Group, Inc. (08-24-2023)

Figure 3-8

Sanitary Sewer Infrastructure Phasing Plan

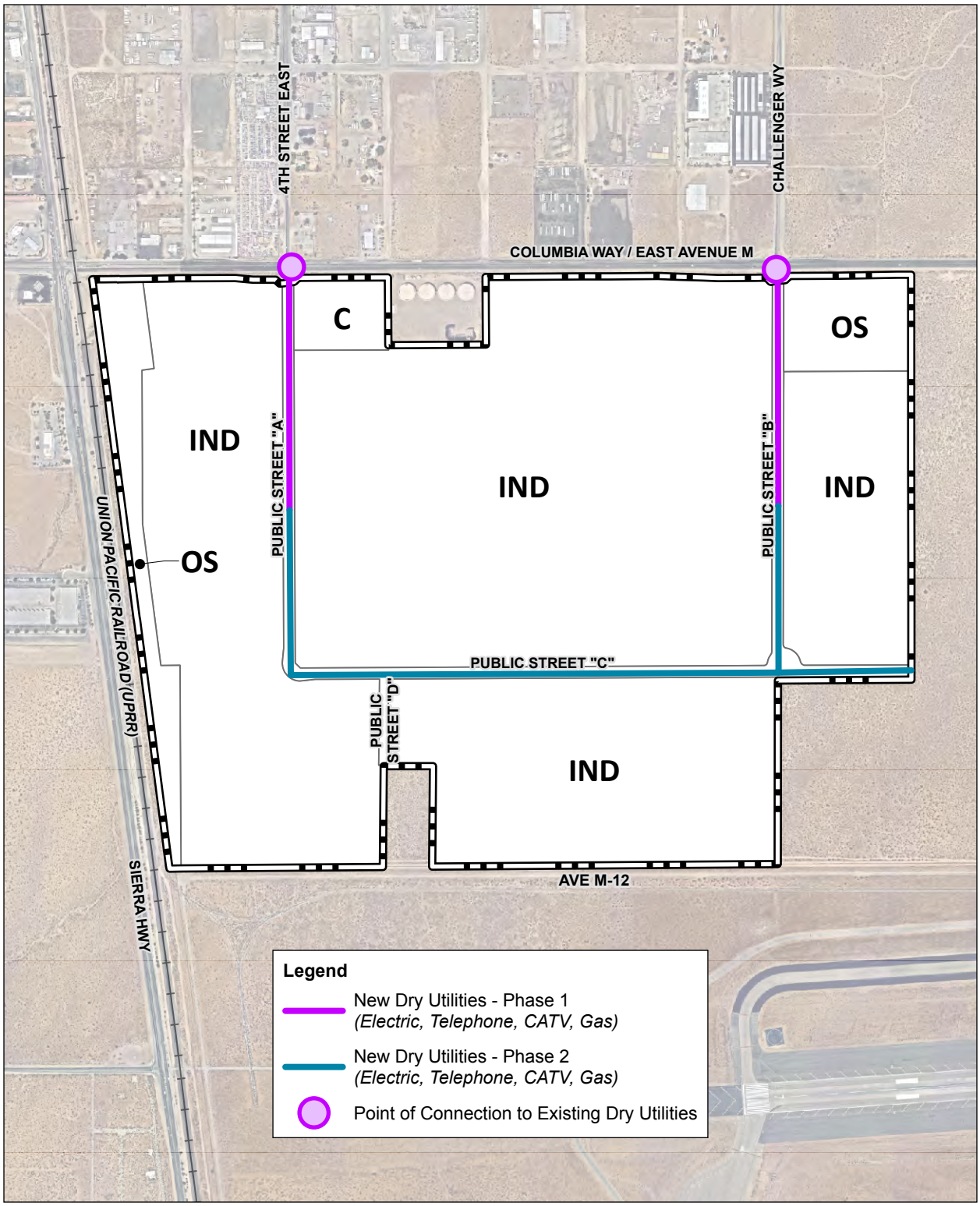


Source(s): Esri, Nearmap Imagery (July 2023), WestLAND Group, Inc. (08-24-2023)

Figure 3-9

0 250 500 1,000 Feet

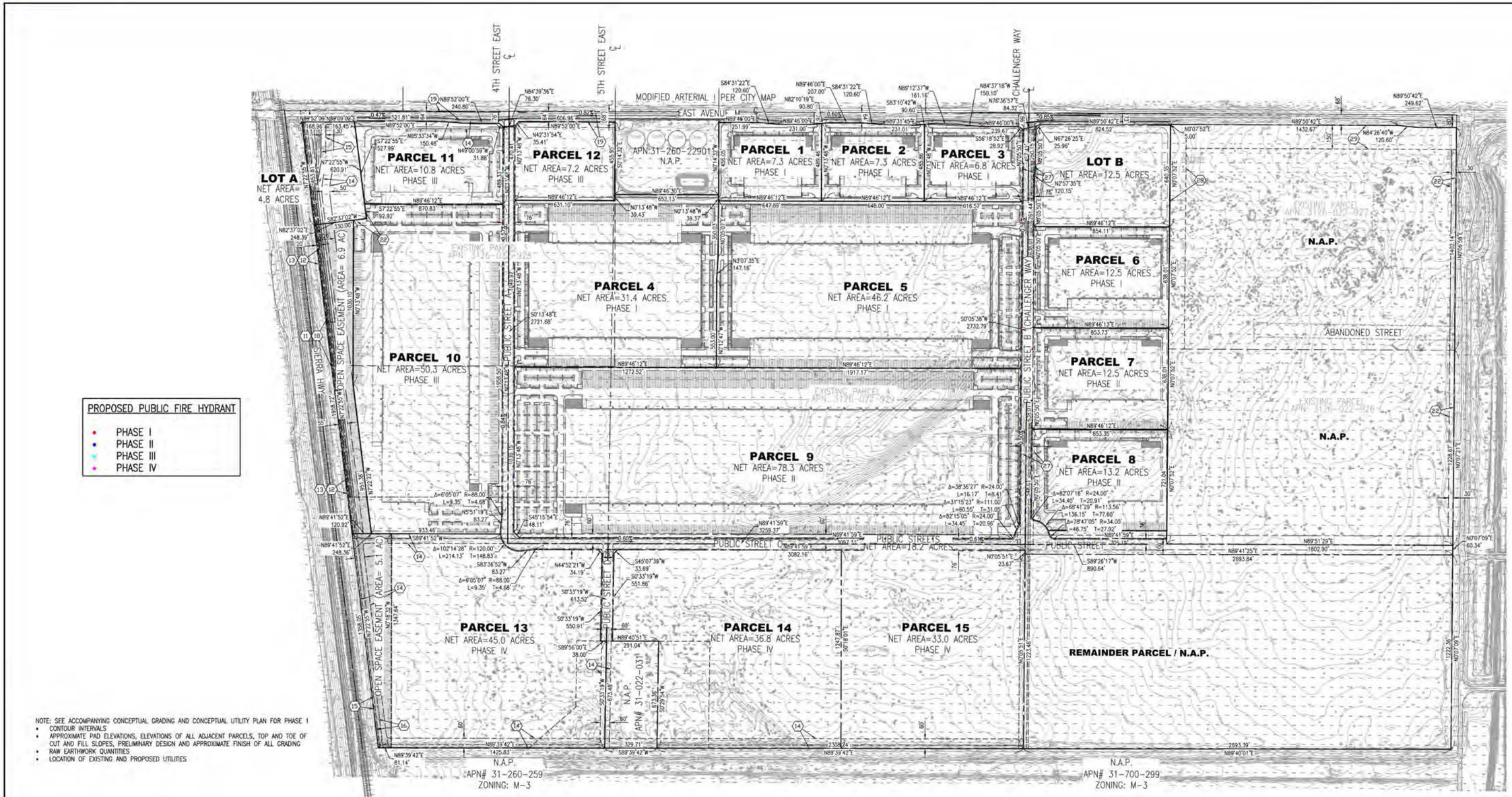
Storm Drain Infrastructure Phasing Plan



Source(s): Esri, Nearmap Imagery (July 2023), WestLAND Group, Inc. (08-24-2023)

Figure 3-10

Dry Utilities Infrastructure Phasing Plan

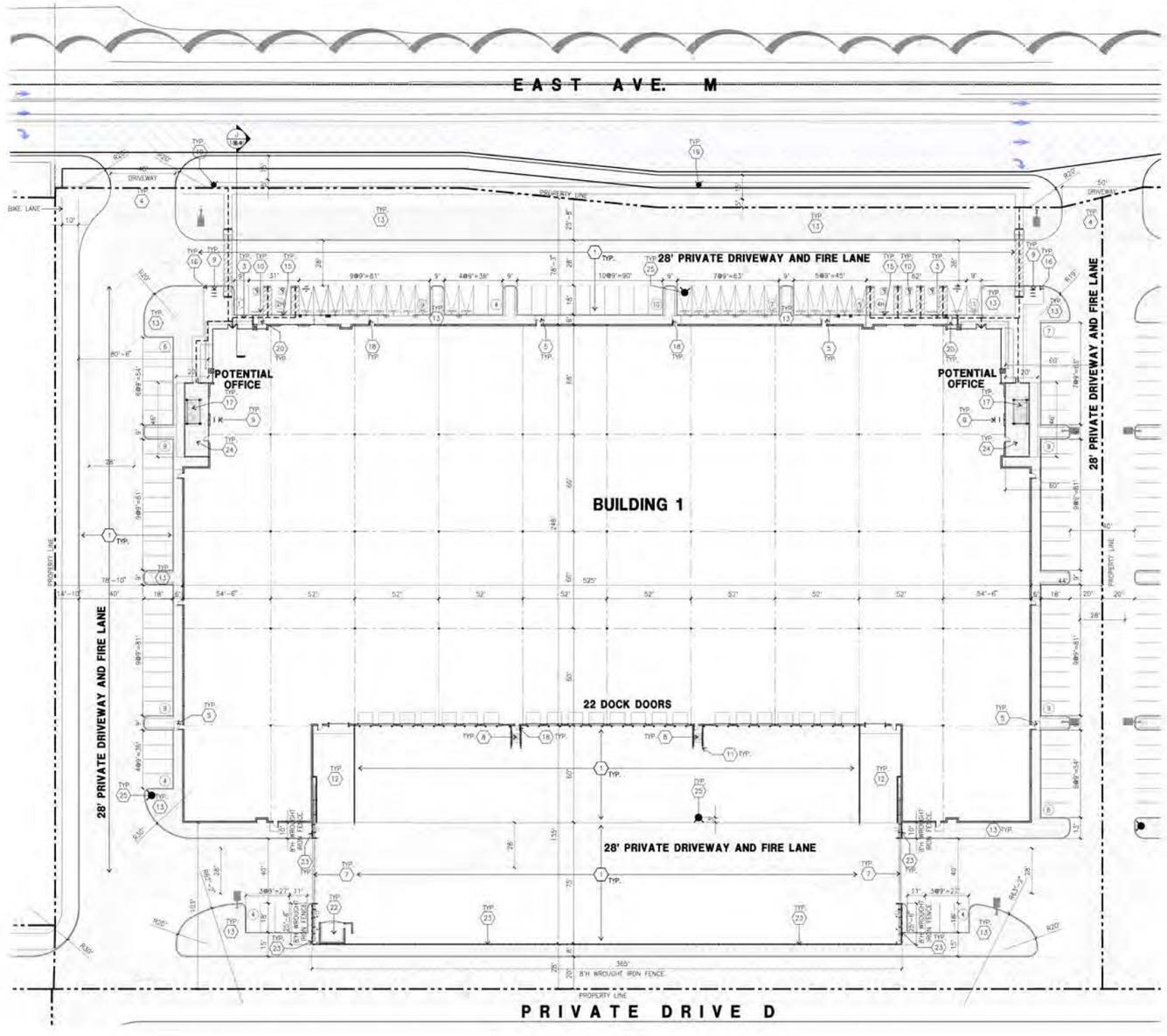


Source(s): WestLAND Group, Inc. (March 2024)

Not to Scale

Figure 3-11

Tentative Parcel Map 83738



SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT.
2. FUTURE MONUMENT SIGN.
3. CONCRETE WALKWAY. SEE CIVIL PLAN.
4. DRIVEWAY APRONS.
5. 5'-6"X5'-6"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" - 12" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1:20 MAX. AS REQ. BY CITY INSPECTOR.
6. NOT USED.
7. MANUAL OPERATED GATES W/ KNOX. PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
8. EXTERIOR CONC. STAIR.
9. BIKE RACK. SEE DETAIL 7/DAB-A4.2
10. PRE-CAST CONC. WHEEL STOP.
11. CONC. FILLED GUARD POST "6 DIA. U.N.O. 42" H.
12. CONCRETE RAMP.
13. LANDSCAPE. LANDSCAPE AREAS INDICATED BY SHADED PATTERN.
14. ACCESSIBLE ENTRY SIGN.
15. ACCESSIBLE PARKING STALL SIGN.
16. SMOKING AREA
17. PATIO AREA
18. HOLLOW METAL DOOR, MAN DOOR.
19. PUBLIC FIRE HYDRANT
20. TRUNCATED DOME.
21. DESIGNATED SMOKING AREA.
22. TRASH ENCLOSURE.
23. 8'H WROUGHT IRON FENCE.
24. OPEN SPACE PER PMC SECTION 17.66.010-1
25. PRIVATE FIRE HYDRANT

SITE PLAN GENERAL NOTES

1. THE SOILS REPORT PREPARED BY SOCAL GEOTECHNICAL DATED TBD PROJECT NUMBER TBD SHOULD BE A PART OF THESE CONTRACT DOCUMENTS.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. DETAILS ON SHEET A0.1 ARE MINIMUM STANDARDS.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM. PRIOR TO INSTALLATION & AT LEAST 60 DAYS BEFORE BLDG. COMPLETION.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY W/ 1:20 MAX. SLOPE. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4" SEE "L" DRAWINGS FOR FINISH.
11. ALL PARKING AREA SHALL PROVIDE A LANDSCAPED PLANTER OF A MINIMUM WIDTH OF SEVEN FEET WIDE AT THE ENDS OF ALL PARKING AISLES. ALL PLANTING AREAS SHALL HAVE ROUND CORNERS INSTEAD OF 90 DEGREE CORNERS AND BE SHAPED TO PERMIT VEHICLE TURN MOVEMENTS. TWO FEET OF CURB IS REQUIRED. SEE DETAIL "D"
12. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
13. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
14. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
15. NOT USED
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED
18. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB
19. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT

SITE LEGEND

- ACCESSIBLE PARKING STALL 9'X18'+5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE PARKING STALL 12'X18'+5' W/ ACCESSIBLE AISLE
- STANDARD ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 9'X18' +5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 12'X18'+5' W/ ACCESSIBLE AISLE
- AMBULATORY EVCS MARKING "EV CHARGING ONLY", 10'X18'
- STANDARD EVCS SIZE, 9'X18'
- EV CAPABLE SPACE WITHOUT EVSE SIZE 9'X18'
- LIGHT STANDARD
- EXISTING PUBLIC FIRE HYDRANT
- PRIVATE FIRE HYDRANT- APPROXIMATE LOCATION
- CATCH BASIN APPROX. LOCATION
- 6" CURB +12" LANDING AREA ADJACENT TO PLANTER AT PARKING SPACES PER LOCAL JURISDICTION STANDARD
- EV CHARGERS INSTALLED
- EV CHARGER FOR FUTURE

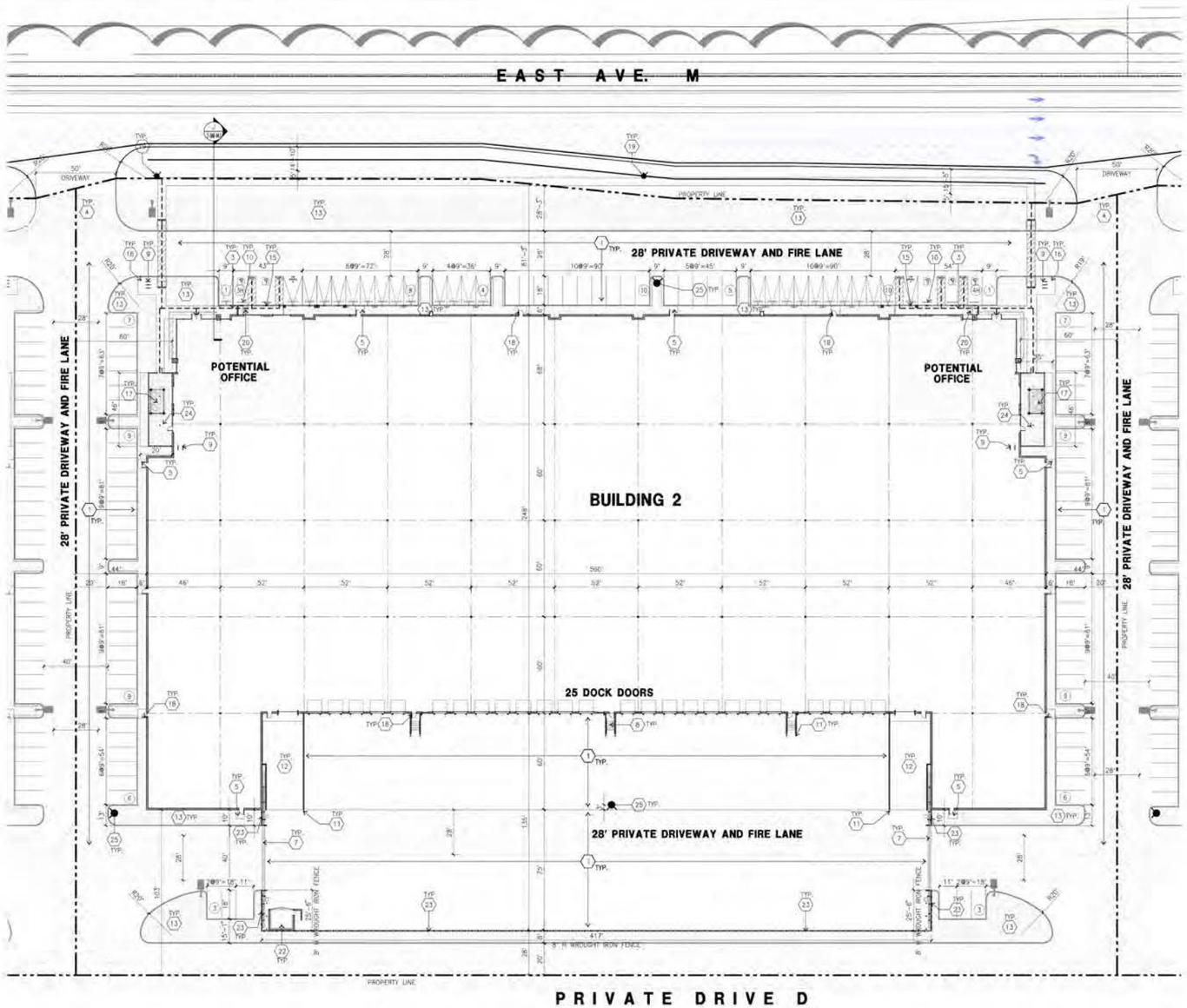
NOTE:
EVCS STALLS TO BE IDENTIFIED BY SIGNAGE AND MARKING PER LOCAL REGULATIONS

Source(s): HPA (05-12-2023)

Figure 3-12

Not to Scale

Overall Site Plan – Building 1



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2. FUTURE MONUMENT SIGN.
3. CONCRETE WALKWAY. SEE CIVIL PLAN.
4. DRIVEWAY APRONS.
5. 5'-6"X5'-6"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" = 12" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1:20 MAX. AS REQ. BY CITY INSPECTOR.
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7. MANUAL OPERATED GATES W/ KNOX. PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
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9. BIKE RACK. SEE DETAIL 7/DAB=A4.2
10. PRE-CAST CONC. WHEEL STOP.
11. CONC. FILLED GUARD POST "6 DIA. U.N.O. 42" H.
12. CONCRETE RAMP.
13. LANDSCAPE. LANDSCAPE AREAS INDICATED BY SHADED PATTERN.
14. ACCESSIBLE ENTRY SIGN.
15. ACCESSIBLE PARKING STALL SIGN.
16. SMOKING AREA
17. PATIO AREA
18. HOLLOW METAL DOOR, MAN DOOR.
19. PUBLIC FIRE HYDRANT
20. TRUNCATED DOME.
21. DESIGNATED SMOKING AREA.
22. TRASH ENCLOSURE.
23. 8'H WROUGHT IRON FENCE.
24. OPEN SPACE PER PMC SECTION 17.66.010-1
25. PRIVATE FIRE HYDRANT

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6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY W/ 1:20 MAX. SLOPE. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". SEE "L" DRAWINGS FOR FINISH.
11. ALL PARKING AREA SHALL PROVIDE A LANDSCAPED PLANTER OF A MINIMUM WIDTH OF SEVEN FEET WIDE AT THE ENDS OF ALL PARKING AISLES. ALL PLANTING AREAS SHALL HAVE ROUND CORNERS INSTEAD OF 90 DEGREE CORNERS AND BE SHAPED TO PERMIT VEHICLE TURN MOVEMENTS. TWO FEET OF CURB IS REQUIRED. SEE DETAIL "D"
12. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
13. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
14. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
15. NOT USED
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED.
18. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB
19. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT

SITE LEGEND

- ACCESSIBLE PARKING STALL 9'X18'+5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE PARKING STALL 12'X18'+5' W/ ACCESSIBLE AISLE
- STANDARD ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 9'X18' +5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 12'X18'+5' W/ ACCESSIBLE AISLE
- AMBULATORY EVCS MARKING "EV CHARGING ONLY", 10'X18'
- STANDARD EVCS SIZE, 9'X18'
- EV CAPABLE SPACE WITHOUT EVSE SIZE 9'X18'

NOTE:
EVCS STALLS TO BE IDENTIFIED BY SIGNAGE AND MARKING PER LOCAL REGULATIONS

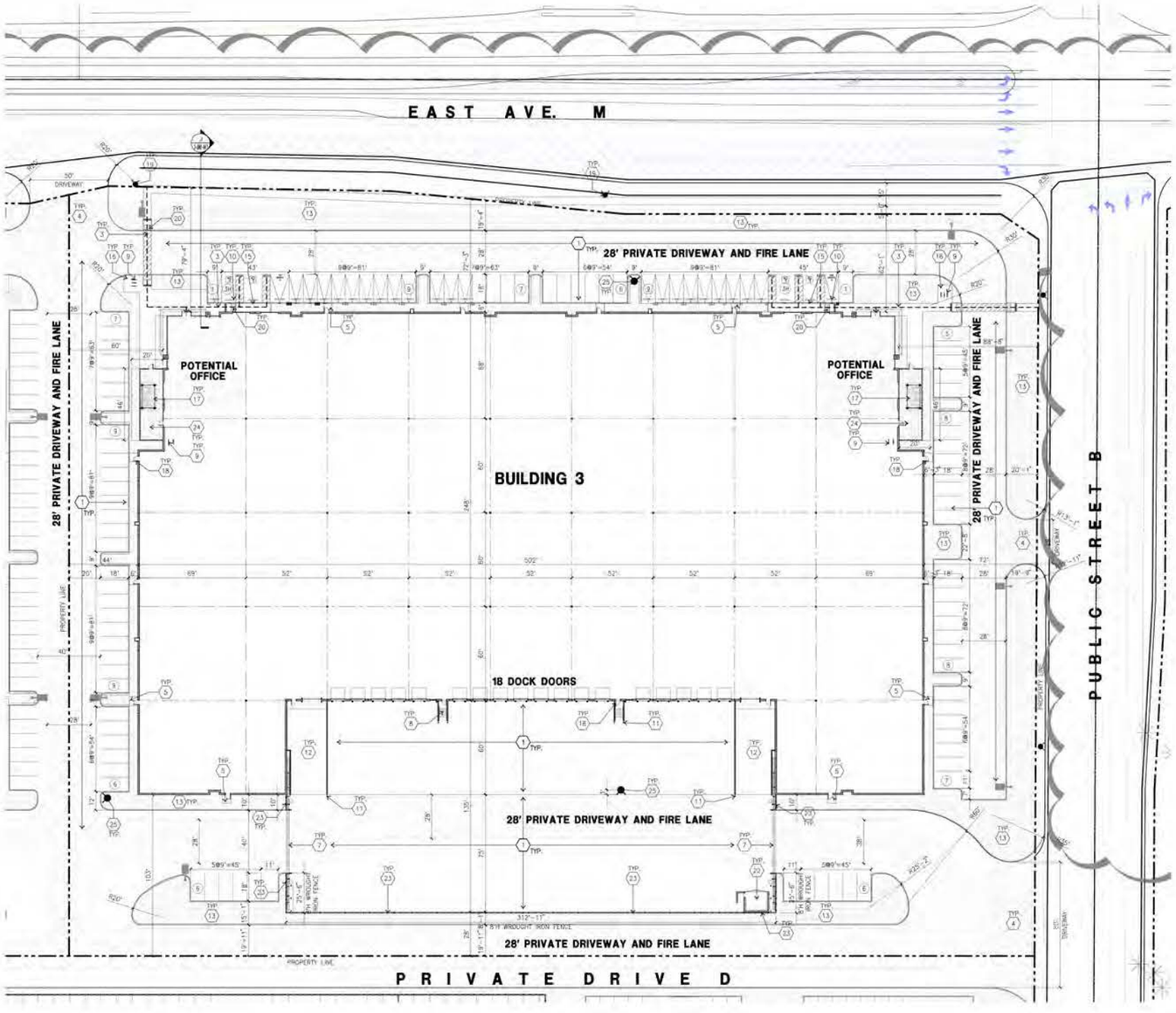
- LIGHT STANDARD
- EXISTING PUBLIC FIRE HYDRANT
- PRIVATE FIRE HYDRANT- APPROXIMATE LOCATION
- CATCH BASIN APPROX. LOCATION
- 6" CURB +12" LANDING AREA ADJACENT TO PLANTER AT PARKING SPACES PER LOCAL JURISDICTION STANDARD
- EV CHARGERS INSTALLED
- EV CHARGER FOR FUTURE

Source(s): HPA (05-12-2023)

Figure 3-13

Not to Scale

Overall Site Plan – Building 2



SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT.
2. FUTURE MONUMENT SIGN.
3. CONCRETE WALKWAY. SEE CIVIL PLAN.
4. DRIVEWAY APRONS.
5. 5'-6"X5'-6"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" : 12" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1:20 MAX. AS REQ. BY CITY INSPECTOR.
6. NOT USED.
7. MANUAL OPERATED GATES W/ KNOX.
8. PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
9. EXTERIOR CONC. STAIR.
10. BIKE RACK. SEE DETAIL 7/DAB-A4.2
11. PRE-CAST CONC. WHEEL STOP.
12. CONC. FILLED GUARD POST "6 DIA. U.N.O. 42" H.
13. CONCRETE RAMP.
14. LANDSCAPE. LANDSCAPE AREAS INDICATED BY SHADED PATTERN.
15. ACCESSIBLE ENTRY SIGN.
16. ACCESSIBLE PARKING STALL SIGN.
17. SMOKING AREA
18. PATIO AREA
19. HOLLOW METAL DOOR, MAN DOOR.
20. PUBLIC FIRE HYDRANT
21. TRUNCATED DOME.
22. DESIGNATED SMOKING AREA.
23. TRASH ENCLOSURE.
24. 8'H WROUGHT IRON FENCE.
25. OPEN SPACE PER PMC SECTION 17.66.010-1
26. PRIVATE FIRE HYDRANT

SITE PLAN GENERAL NOTES

1. THE SOILS REPORT PREPARED BY SOCAL GEOTECHNICAL DATED TBD PROJECT NUMBER TBD SHOULD BE A PART OF THESE CONTRACT DOCUMENTS.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. DETAILS ON SHEET AD.1 ARE MINIMUM STANDARDS.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM, PRIOR TO INSTALLATION & AT LEAST 60 DAYS BEFORE BLDG. COMPLETION.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY W/ 1:20 MAX. SLOPE. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4", SEE "L" DRAWINGS FOR FINISH.
11. ALL PARKING AREA SHALL PROVIDE A LANDSCAPED PLANTER OF A MINIMUM WIDTH OF SEVEN FEET WIDE AT THE ENDS OF ALL PARKING AISLES. ALL PLANTING AREAS SHALL HAVE ROUND CORNERS INSTEAD OF 90 DEGREE CORNERS AND BE SHAPED TO PERMIT VEHICLE TURN MOVEMENTS. TWO FEET OF CURB IS REQUIRED. SEE DETAIL "D"
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13. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
14. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
15. NOT USED
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED.
18. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB
19. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT

SITE LEGEND

- ACCESSIBLE PARKING STALL 9'X18'+5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE PARKING STALL 12'X18'+5' W/ ACCESSIBLE AISLE
- STANDARD ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 9'X18' +5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 12'X18'+5' W/ ACCESSIBLE AISLE
- AMBULATORY EVCS MARKING "EV CHARGING ONLY", 10'X18'
- STANDARD EVCS SIZE, 9'X18'
- EV CAPABLE SPACE WITHOUT EVSE SIZE 9'X18'
- LIGHT STANDARD
- EXISTING PUBLIC FIRE HYDRANT
- PRIVATE FIRE HYDRANT-- APPROXIMATE LOCATION
- CATCH BASIN APPROX. LOCATION
- 6" CURB +12" LANDING AREA ADJACENT TO PLANTER AT PARKING SPACES PER LOCAL JURISDICTION STANDARD
- EV CHARGERS INSTALLED
- EV CHARGER FOR FUTURE

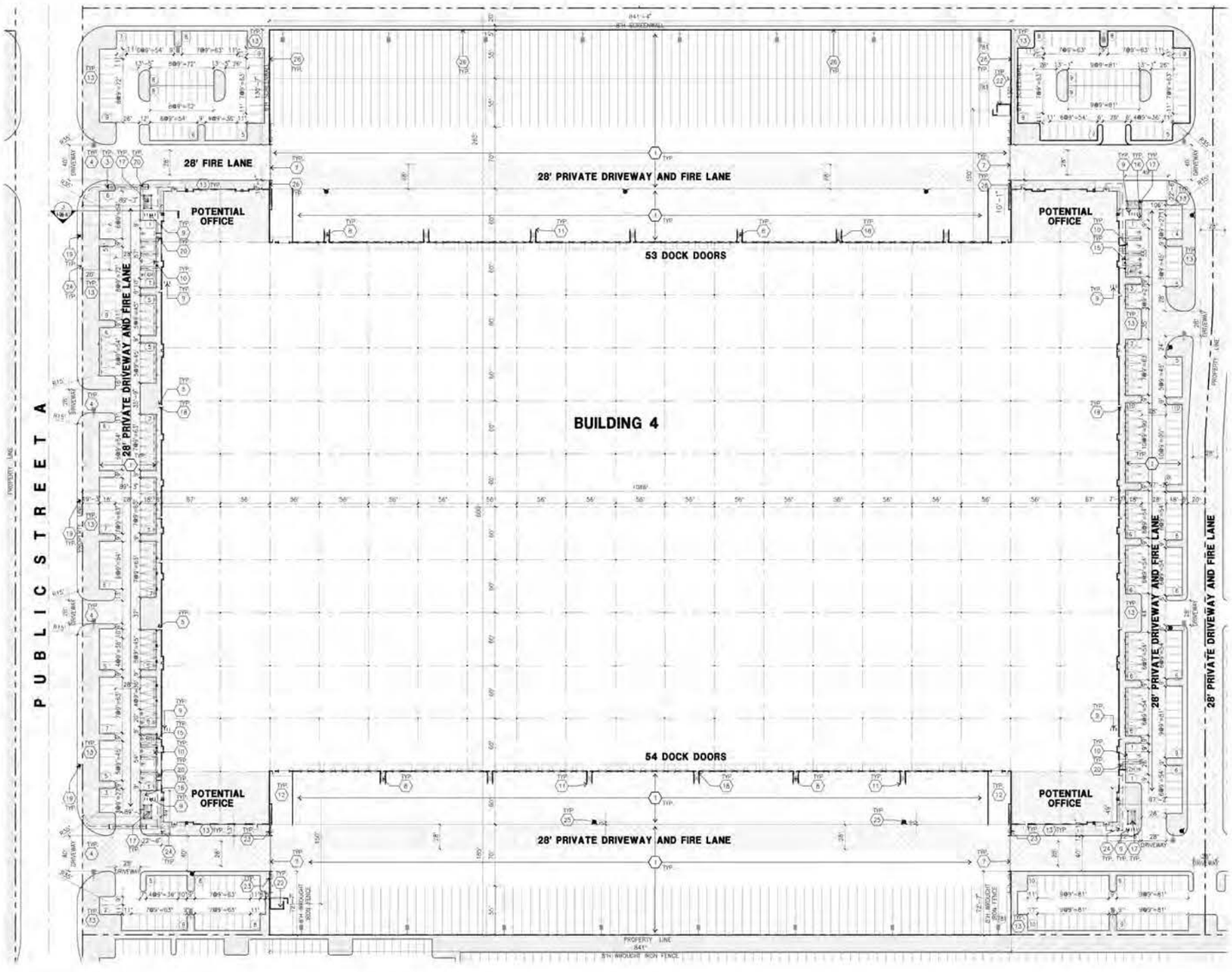
NOTE:
EVCS STALLS TO BE IDENTIFIED BY SIGNAGE AND MARKING PER LOCAL REGULATIONS

Source(s): HPA (05-12-2023)

Figure 3-14

Not to Scale

Overall Site Plan – Building 3



SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT.
2. FUTURE MONUMENT SIGN.
3. CONCRETE WALKWAY. SEE CIVIL PLAN.
4. DRIVEWAY APRONS.
5. 5'-6"X5'-6"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" : 12" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1:20 MAX. AS REQ. BY CITY INSPECTOR.
6. NOT USED.
7. MANUAL OPERATED GATES W/ KNOX. PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
8. EXTERIOR CONC. STAIR.
9. BIKE RACK. SEE DETAIL 7/DAB-A4.2
10. PRE-CAST CONC. WHEEL STOP.
11. CONC. FILLED GUARD POST "6 DIA. U.N.O. 42" H.
12. CONCRETE RAMP.
13. LANDSCAPE. LANDSCAPE AREAS INDICATED BY SHADED PATTERN.
14. ACCESSIBLE ENTRY SIGN.
15. ACCESSIBLE PARKING STALL SIGN.
16. SMOKING AREA
17. PATIO AREA
18. HOLLOW METAL DOOR, MAN DOOR.
19. PUBLIC FIRE HYDRANT
20. TRUNCATED DOME.
21. DESIGNATED SMOKING AREA.
22. TRASH ENCLOSURE.
23. 8'H WROUGHT IRON FENCE.
24. OPEN SPACE PER PMC SECTION 17.66.010-1
25. PRIVATE FIRE HYDRANT
26. 8'H SCREEN WALL

SITE PLAN GENERAL NOTES

1. THE SOILS REPORT PREPARED BY SOCAL GEOTECHNICAL DATED TBD PROJECT NUMBER TBD SHOULD BE A PART OF THESE CONTRACT DOCUMENTS.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. DETAILS ON SHEET AD.1 ARE MINIMUM STANDARDS.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM, PRIOR TO INSTALLATION & AT LEAST 60 DAYS BEFORE BLDG. COMPLETION.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY W/ 1:20 MAX. SLOPE. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". SEE "L" DRAWINGS FOR FINISH.
11. ALL PARKING AREA SHALL PROVIDE A LANDSCAPED PLANTER OF A MINIMUM WIDTH OF SEVEN FEET WIDE AT THE ENDS OF ALL PARKING AISLES. ALL PLANTING AREAS SHALL HAVE ROUND CORNERS INSTEAD OF 90 DEGREE CORNERS AND BE SHAPED TO PERMIT VEHICLE TURN MOVEMENTS. TWO FEET OF CURB IS REQUIRED. SEE DETAIL "D"
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13. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
14. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
15. NOT USED
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED.
18. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB
19. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT

SITE LEGEND

- ACCESSIBLE PARKING STALL: 9'X18'+5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE PARKING STALL: 12'X18'+5' W/ ACCESSIBLE AISLE
- STANDARD ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 9'X18' +5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 12'X18'+5' W/ ACCESSIBLE AISLE
- AMBULATORY EVCS MARKING "EV CHARGING ONLY", 10'X18'
- STANDARD EVCS SIZE, 9'X18'
- EV CAPABLE SPACE WITHOUT EVSE SIZE, 9'X18'

NOTE:
EVCS STALLS TO BE IDENTIFIED BY SIGNAGE AND MARKING PER LOCAL REGULATIONS

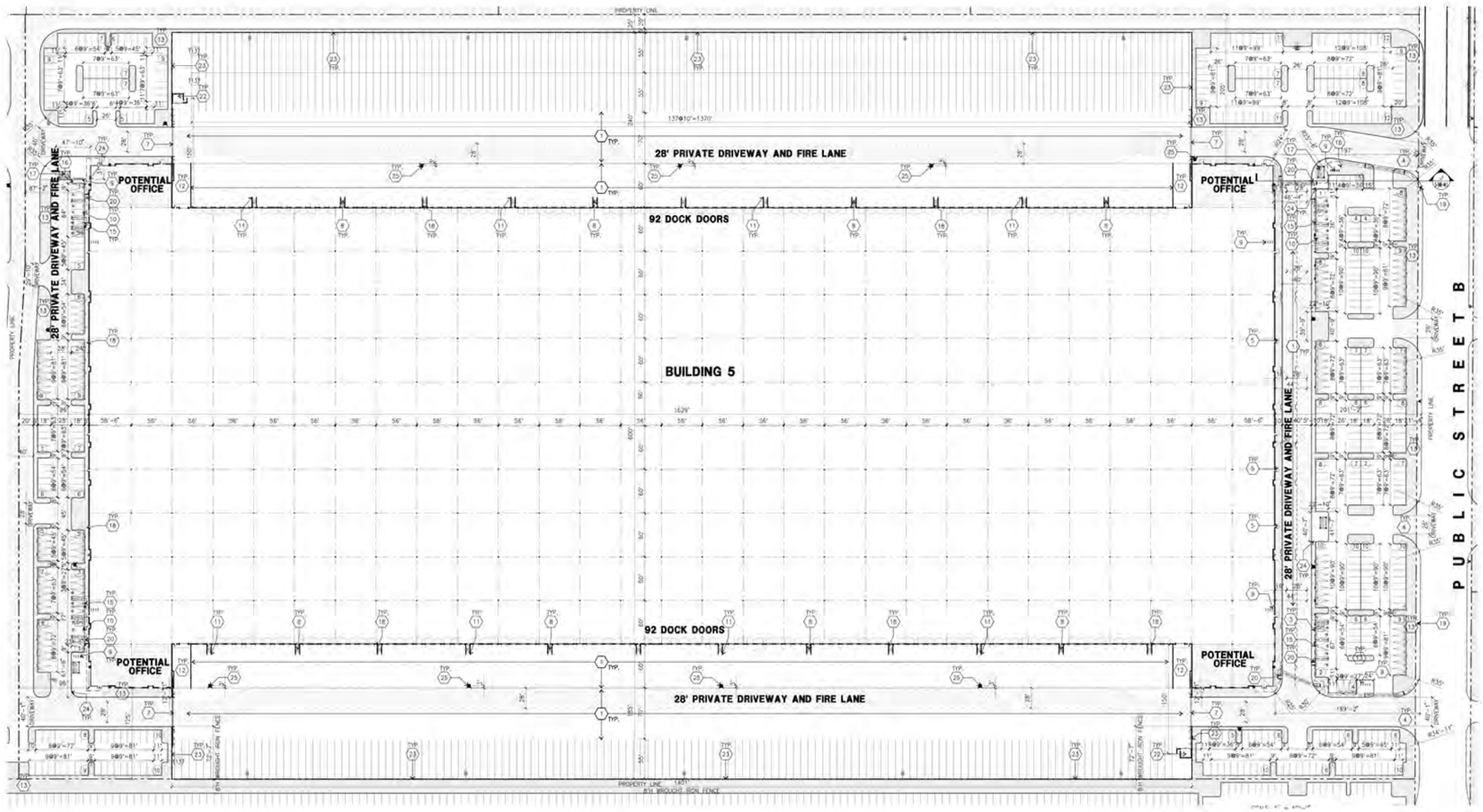
- LIGHT STANDARD
- EXISTING PUBLIC FIRE HYDRANT
- PRIVATE FIRE HYDRANT— APPROXIMATE LOCATION
- CATCH BASIN APPROX. LOCATION
- 6" CURB +12" LANDING AREA ADJACENT TO PLANTER AT PARKING SPACES PER LOCAL JURISDICTION STANDARD
- EV CHARGERS INSTALLED
- EV CHARGER FOR FUTURE

Source(s): HPA (05-12-2023)

Figure 3-15

Not to Scale

Overall Site Plan – Building 4



SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT.
2. FUTURE MONUMENT SIGN.
3. CONCRETE WALKWAY. SEE CIVIL PLAN.
4. DRIVEWAY APRONS.
5. 5'-0"X5'-0"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" - 1'2" MAX PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1:20 MAX. AS REQ. BY CITY INSPECTOR.
6. NOT USED.
7. MANUAL OPERATED GATES W/ KNOX PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
8. EXTERIOR CONC. STAIR.
9. BIKE RACK. SEE DETAIL T/DAB-A4.2
10. PRE-CAST CONC. WHEEL STOP.
11. CONC. FILLED GUARD POST "6 DIA. U.N.O. 42" H.
12. CONCRETE RAMP.
13. LANDSCAPE. LANDSCAPE AREAS INDICATED BY SHADED PATTERN.
14. ACCESSIBLE ENTRY SIGN.
15. ACCESSIBLE PARKING STALL SIGN.
16. SMOKING AREA
17. PATIO AREA
18. HOLLOW METAL DOOR. MAN DOOR.
19. PUBLIC FIRE HYDRANT
20. TRUNCATED DOME.
21. DESIGNATED SMOKING AREA.
22. TRASH ENCLOSURE.
23. 8'H WROUGHT IRON FENCE.
24. OPEN SPACE PER PMC SECTION 17.66.010-I.
25. PRIVATE FIRE HYDRANT
26. 8'H SCREEN WALL.

SITE PLAN GENERAL NOTES

1. THE SOILS REPORT PREPARED BY SOCAL GEOTECHNICAL DATED TBD PROJECT NUMBER TBD SHOULD BE A PART OF THESE CONTRACT DOCUMENTS.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. DETAILS ON SHEET AD.1 ARE MINIMUM STANDARDS.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM, PRIOR TO INSTALLATION & AT LEAST 60 DAYS BEFORE BLDG. COMPLETION.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY W/ 1:20 MAX. SLOPE. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". SEE "L" DRAWINGS FOR FINISH.
11. ALL PARKING AREA SHALL PROVIDE A LANDSCAPED PLANTER OF A MINIMUM WIDTH OF SEVEN FEET WIDE AT THE ENDS OF ALL PARKING ASILES. ALL PLANTING AREAS SHALL HAVE ROUND CORNERS INSTEAD OF 90 DEGREE CORNERS AND BE SHAPED TO PERMIT VEHICLE TURN MOVEMENTS. TWO FEET OF CURB IS REQUIRED. SEE DETAIL "D"
12. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
13. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
14. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
15. NOT USED
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED.
18. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB.
19. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT.

SITE LEGEND

- ACCESSIBLE PARKING STALL, 9'X18'+5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE PARKING STALL 12'X18'+5' W/ ACCESSIBLE AISLE
- STANDARD ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 9'X18' +5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 12'X18'+5' W/ ACCESSIBLE AISLE
- AMBULATORY EVCS MARKING "EV CHARGING ONLY", 10'X18'
- STANDARD EVCS SIZE. 9'X18'
- EV CAPABLE SPACE WITHOUT EVSE SIZE 9'X18'
- LIGHT STANDARD
- EXISTING PUBLIC FIRE HYDRANT
- PRIVATE FIRE HYDRANT- APPROXIMATE LOCATION
- CATCH BASIN APPROX. LOCATION
- 6" CURB +12" LANDING AREA ADJACENT TO PLANTER AT PARKING SPACES PER LOCAL JURISDICTION STANDARD
- EV CHARGERS INSTALLED
- EV CHARGER FOR FUTURE

NOTE:
EVCS STALLS TO BE IDENTIFIED BY SIGNAGE AND MARKING PER LOCAL REGULATIONS

----- LINES INDICATED BUILDING FOOTPRINT 18 FEET FROM FACE OF THE BUILDING TO THE FIRE LANE

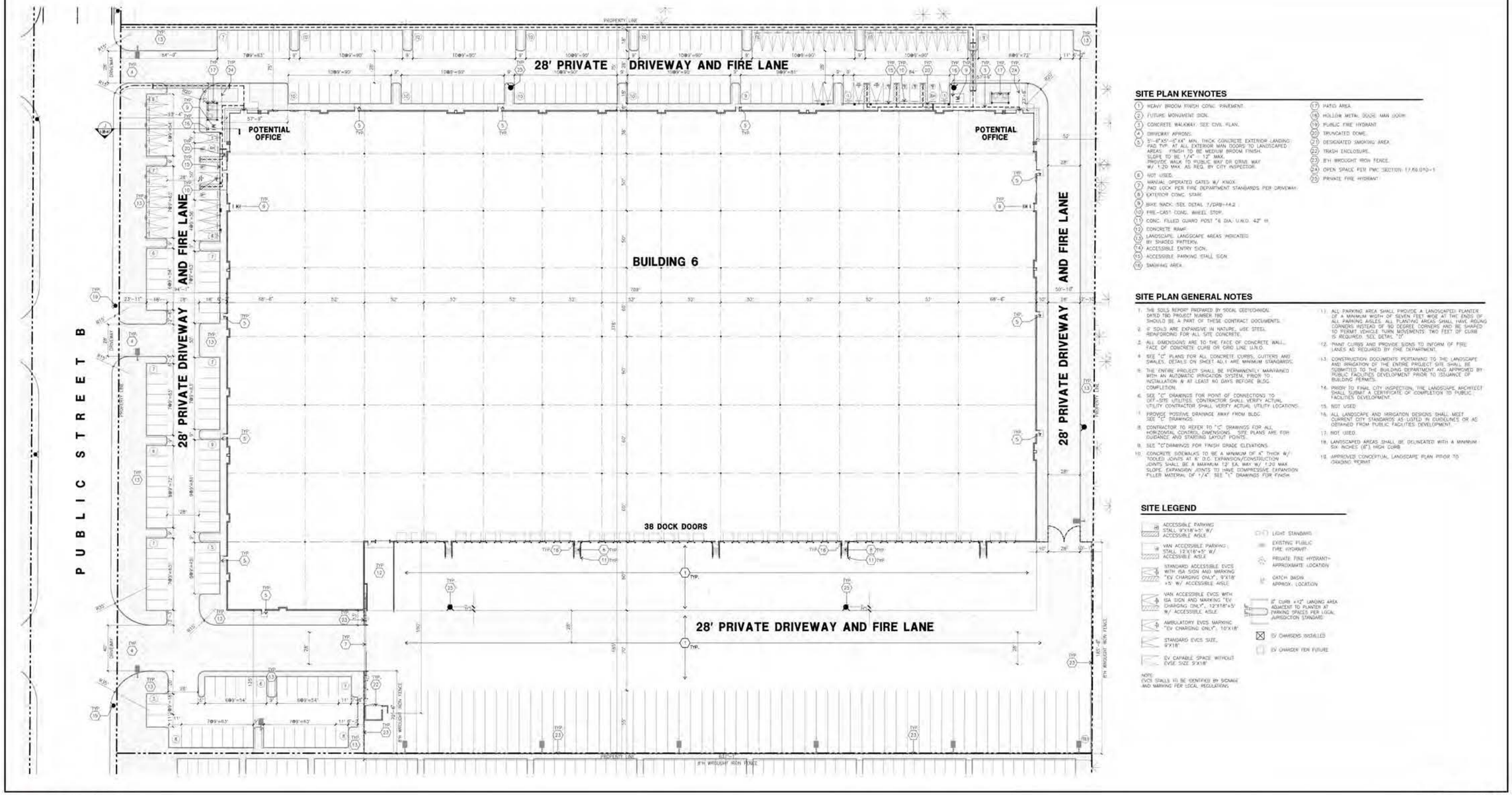
----- LINES INDICATED BUILDING FOOTPRINT 28 FEET FROM FACE OF THE BUILDING TO THE FIRE LANE

Source(s): HPA (05-12-2023)

Figure 3-16

Not to Scale

Overall Site Plan – Building 5



SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT.
2. FUTURE MONUMENT SIGN.
3. CONCRETE WALKWAY. SEE CIVIL PLAN.
4. DRIVEWAY APRONS.
5. 5'-0"X5'-0"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" - 1/2" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1:20 MAX. AS REQ. BY CITY INSPECTOR.
6. NOT USED.
7. MANUAL OPERATED GATES W/ KNOX PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
8. EXTERIOR CONC. STAIR.
9. BIKE RACK. SEE DETAIL 7/DAB=44.2
10. PRE-CAST CONC. WHEEL STOP.
11. CONC. FILLED GUARD POST 6" DIA. U.N.O. 42" H.
12. CONCRETE RAMP.
13. LANDSCAPE. LANDSCAPE AREAS INDICATED BY SHADED PATTERN.
14. ACCESSIBLE ENTRY SIGN.
15. ACCESSIBLE PARKING STALL SIGN.
16. SMOKING AREA.
17. PATIO AREA.
18. HOLLOW METAL DOOR. MAN DOOR.
19. PUBLIC FIRE HYDRANT.
20. TRUNCATED DOME.
21. DESIGNATED SMOKING AREA.
22. TRASH ENCLOSURE.
23. 8'H WROUGHT IRON FENCE.
24. OPEN SPACE PER PMC SECTION: 17.68.010-1
25. PRIVATE FIRE HYDRANT.

SITE PLAN GENERAL NOTES

1. THE SOILS REPORT PREPARED BY SOCAL GEOTECHNICAL DATED TBD PROJECT NUMBER TBD SHOULD BE A PART OF THESE CONTRACT DOCUMENTS.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. DETAILS ON SHEET A0.1 ARE MINIMUM STANDARDS.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM. PRIOR TO INSTALLATION A AT LEAST 90 DAYS BEFORE BLDG. COMPLETION.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
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15. NOT USED
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED.
18. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB.
19. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT

SITE LEGEND

- ACCESSIBLE PARKING STALL 9'X18'+5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE PARKING STALL 12'X18'+5' W/ ACCESSIBLE AISLE
- STANDARD ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 9'X18' +5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 12'X18'+5' W/ ACCESSIBLE AISLE
- AMBULATORY EVCS MARKING "EV CHARGING ONLY", 10'X18'
- STANDARD EVCS SIZE, 9'X18'
- EV CAPABLE SPACE WITHOUT EVSE SIZE 9'X18'

NOTE:
EVCS STALLS TO BE IDENTIFIED BY SIGNAGE AND MARKING PER LOCAL REGULATIONS

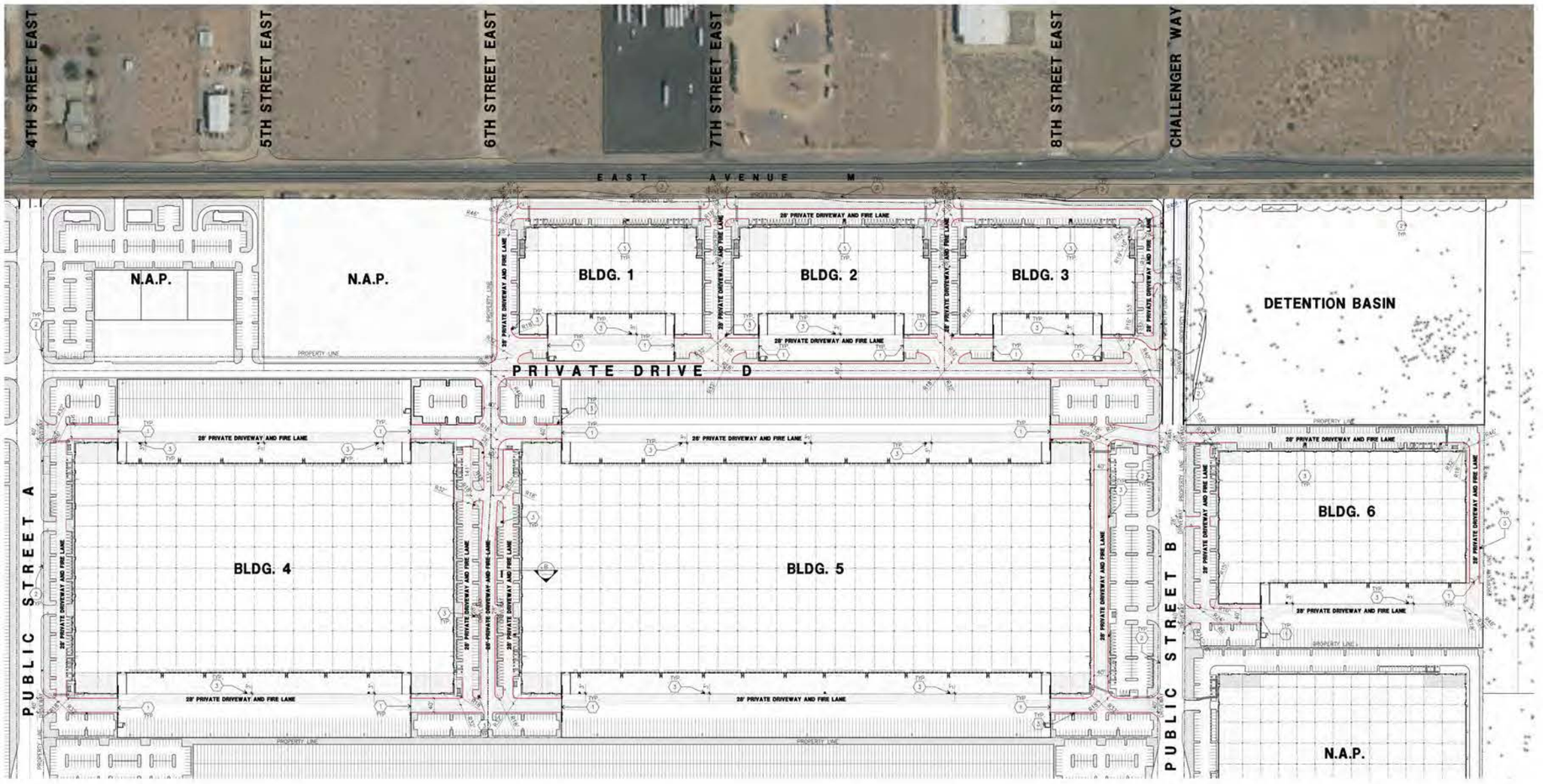
- LIGHT STANDARD
- EXISTING PUBLIC FIRE HYDRANT
- PRIVATE FIRE HYDRANT- APPROXIMATE LOCATION
- CATCH BASIN APPROX. LOCATION
- 6" CURB +12" LANDING AREA ADJACENT TO PLANTER AT PARKING SPACES PER LOCAL JURISDICTION STANDARD
- EV CHARGERS INSTALLED
- EV CHARGER FOR FUTURE

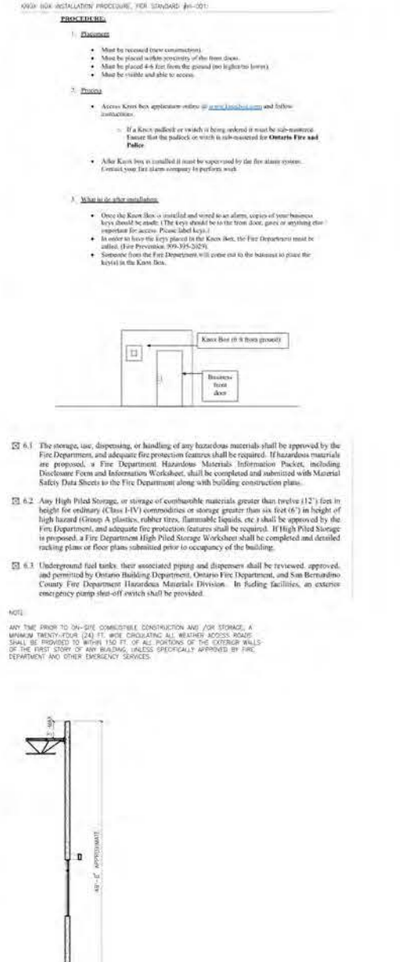
Source(s): HPA (05-12-2023)

Figure 3-17

Not to Scale

Overall Site Plan – Building 6





FIRE KEYNOTES

1. MANUAL GATE WITH KNOX PADLOCK PER FIRE DEPARTMENT STANDARDS. GATES USED TO CONTROL VEHICULAR ACCESS SHALL BE IN COMPLIANCE SET FORTH IN FIRE CODE SECTION'S 503.5 & 503.6 SEE DETAIL ON DAB-A4.2
2. PROPOSED PUBLIC FIRE HYDRANT APPROXIMATE LOCATION. REFER TO FIRE PLANS.
3. PROPOSED PRIVATE FIRE HYDRANT APPROXIMATE LOCATION. REFER TO FIRE PLANS.

SITE LEGEND

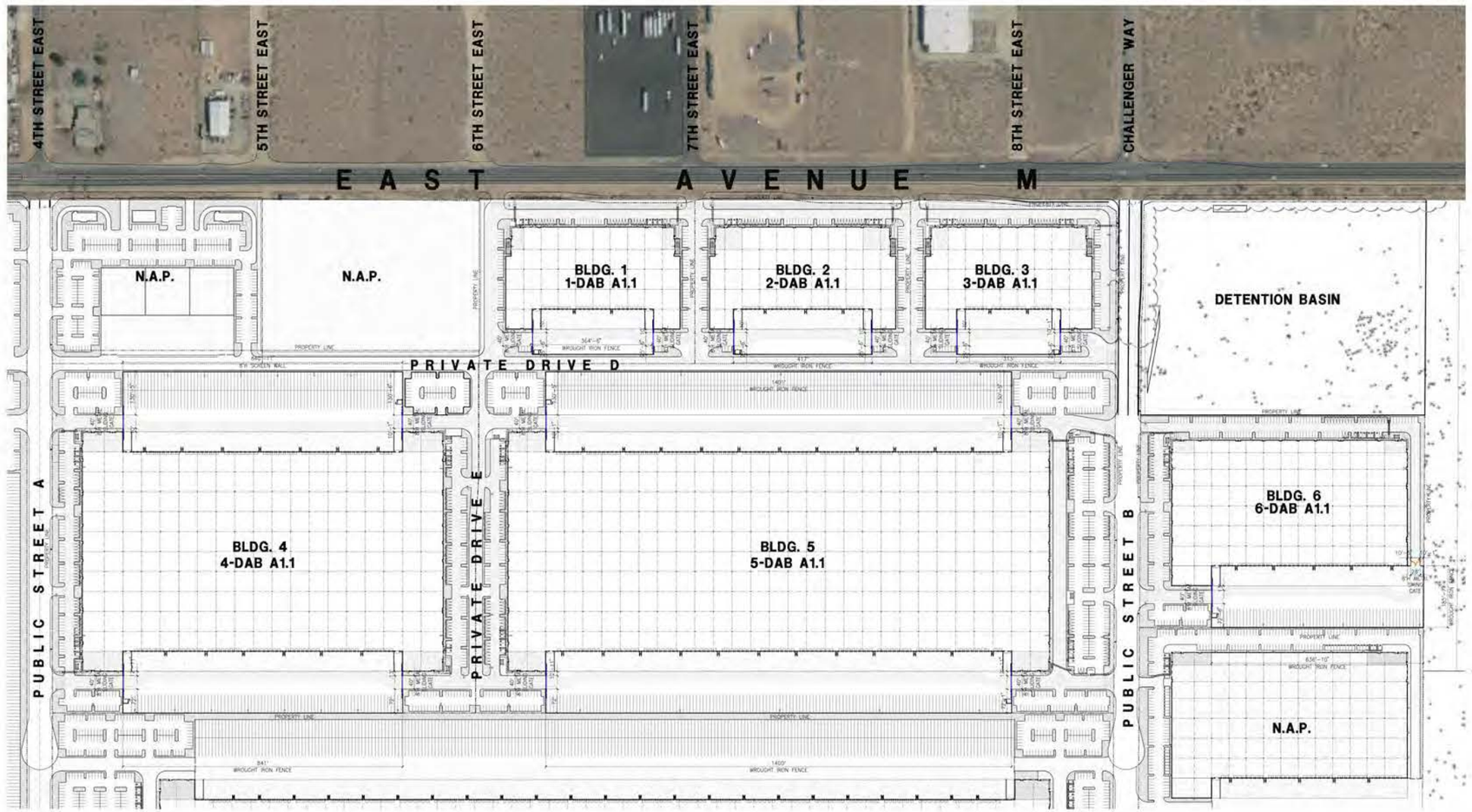
- 28' FIRE LANE
- RED CURB "NO PARKING FIRE LANE"

Source(s): HPA (05-12-2023)

Figure 3-18

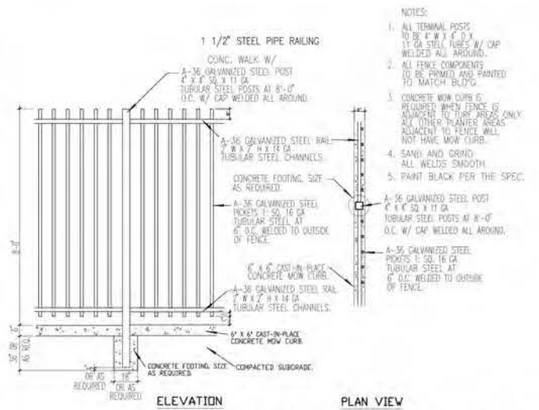
Not to Scale

Fire Access Plan



SITE PLAN KEYNOTES

1. PROVIDE 8' HIGH SLIDING METAL GATES W/ KNOK-BOX PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
2. PROVIDE 8' HIGH SWING METAL GATES W/ KNOK-BOX PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
3. 8'H TUBULAR STEEL FENCE.
4. 8'H SCREEN WALL



NOTES:
1. ALL TERMINAL POSTS TO BE 4" W X 4" D X 11 GA STEEL TUBES W/ CAP WELDED ALL AROUND.
2. ALL FENCE COMPONENTS TO BE PRIMED AND PAINTED TO MATCH BLDG'S.
3. CONCRETE MOW CURB IS REQUIRED WHEN FENCE IS ADJACENT TO TURF AREAS ONLY. ALL OTHER PLANTER AREAS ADJACENT TO FENCE WILL NOT HAVE MOW CURB.
4. SAND AND GRIND ALL WELDS SMOOTH.
5. PAINT BLACK PER THE SPEC.

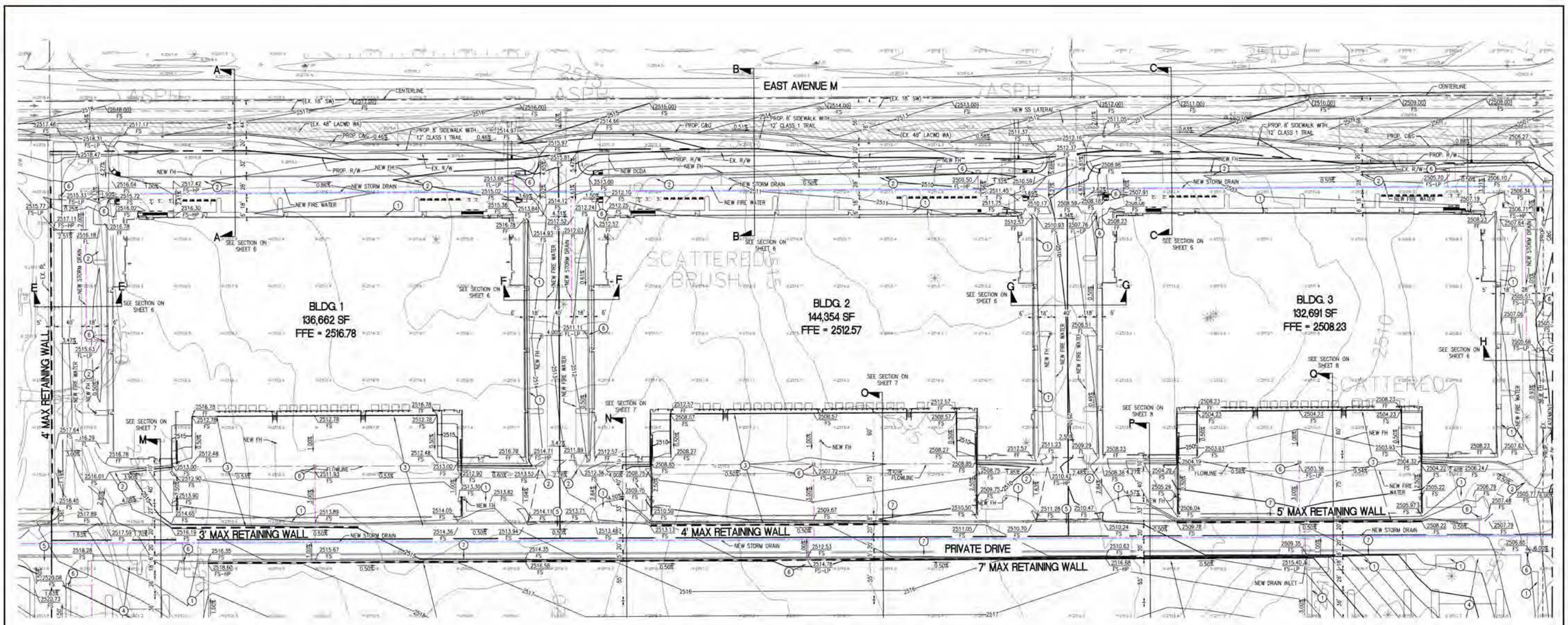
8' H METAL FENCE - DETAIL B
scale: N.T.S.

Source(s): HPA (05-12-2023)

Figure 3-19

Not to Scale

Fence and Wall Exhibit



CONSTRUCTION NOTES

1. NEW 6" CURB
2. NEW 6" CURB AND GUTTER
3. NEW HEAVY DUTY CONCRETE PAVEMENT
4. NEW A.C. PAVEMENT
5. NEW RIBBON GUTTER
6. NEW STORM DRAIN CATCH BASIN/DROP INLET
7. NEW RETAINING WALL, HEIGHT VARIES
8. NEW LANDSCAPE AREA

LEGEND

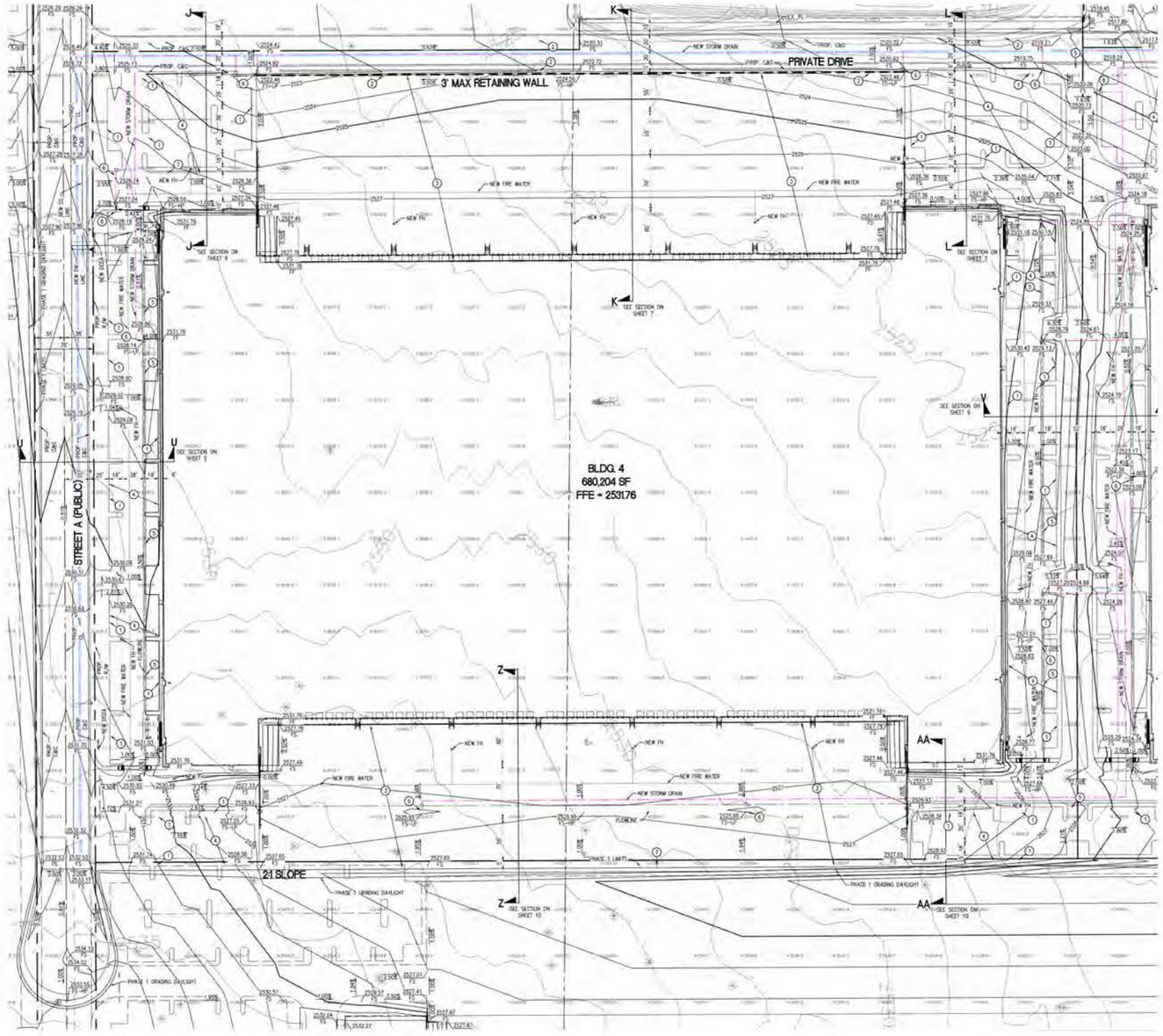
- NEW ABOVEGROUND RETENTION/ INFILTRATION BASIN
- NEW PORTLAND CEMENT CONCRETE LOADING AREA

Source(s): WestLAND Group, Inc. (03-20-2024)

Figure 3-20

Not to Scale

Conceptual Grading Plan – Buildings 1, 2, and 3



CONSTRUCTION NOTES

1. NEW 6" CURB
2. NEW 6" CURB AND GUTTER
3. NEW HEAVY DUTY CONCRETE PAVEMENT
4. NEW A.C. PAVEMENT
5. NEW RIBBON GUTTER
6. NEW STORM DRAIN CATCH BASIN/DROP INLET
7. NEW RETAINING WALL, HEIGHT VARIES
8. NEW LANDSCAPE AREA

LEGEND

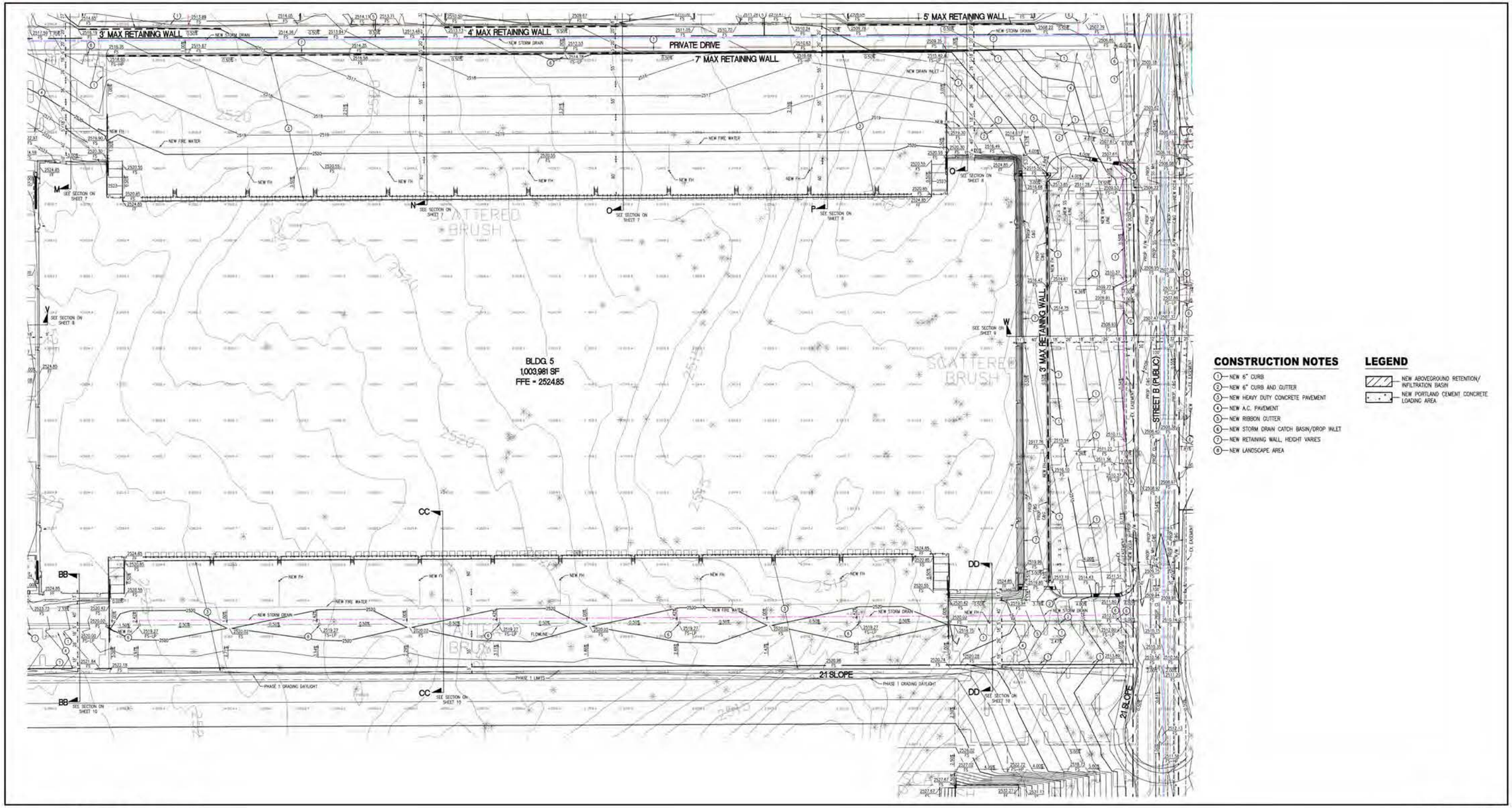
- NEW ABOVEGROUND RETENTION/ INFILTRATION BASIN
- NEW PORTLAND CEMENT CONCRETE LOADING AREA

Source(s): WestLAND Group, Inc. (03-20-2024)

Figure 3-21

Not to Scale

Conceptual Grading Plan – Building 4

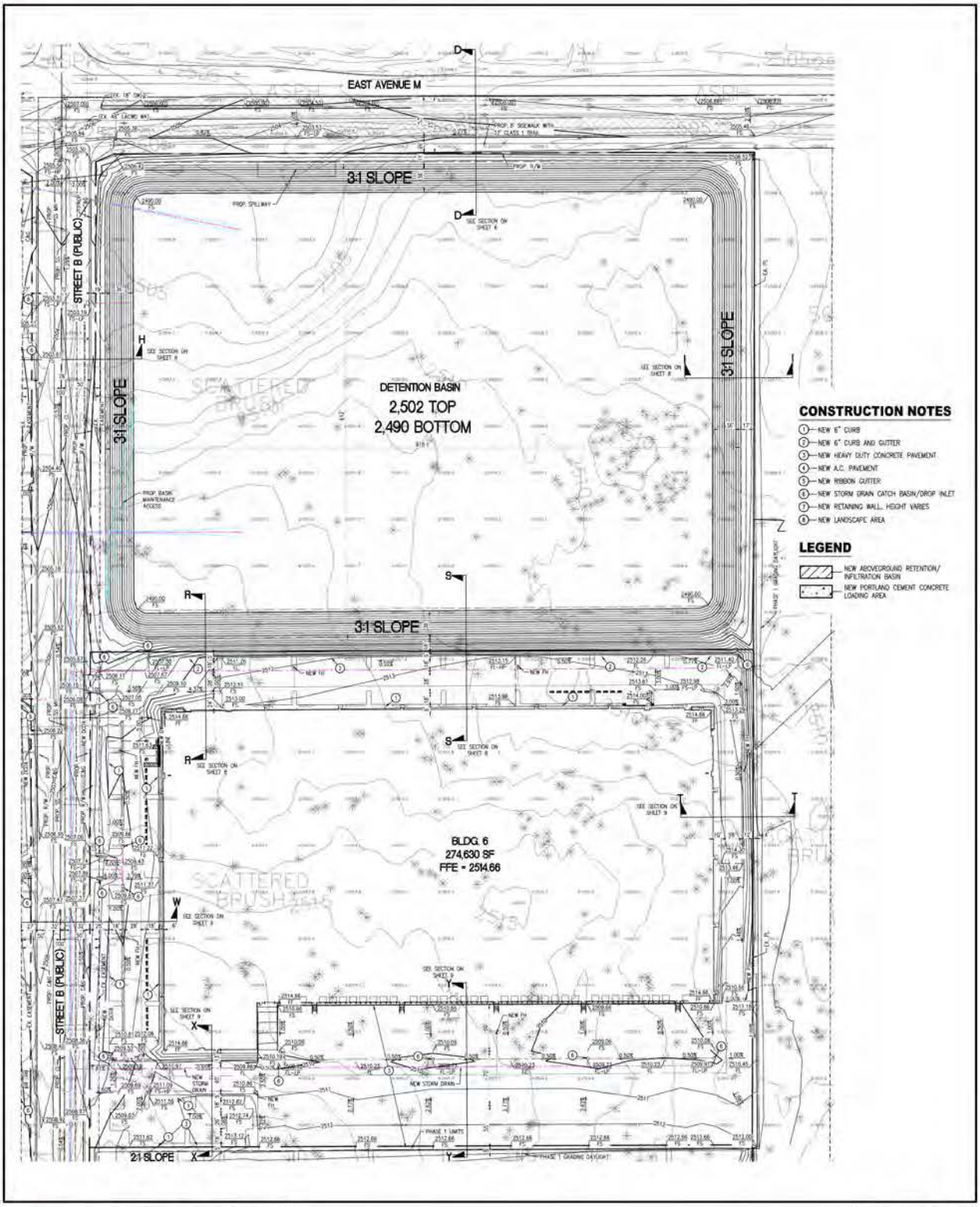


Source(s): WestLAND Group, Inc. (03-20-2024)

Figure 3-22

Not to Scale

Conceptual Grading Plan – Building 5

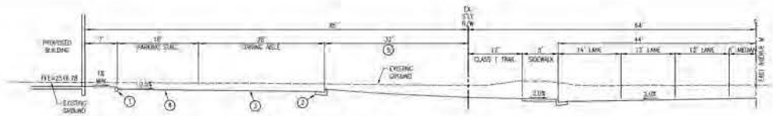


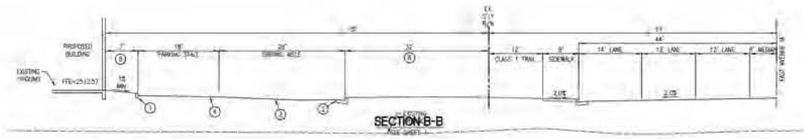
Source(s): WestLAND Group, Inc. (03-20-2024)

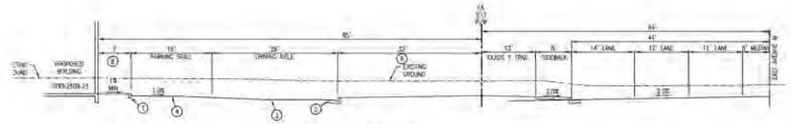
Figure 3-23

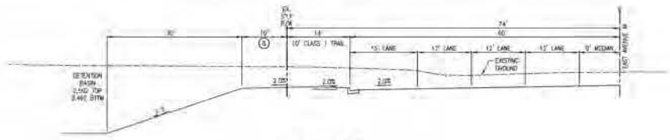
Not to Scale

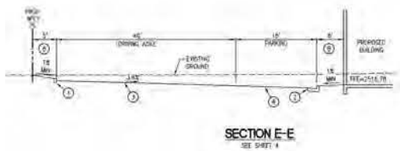
Conceptual Grading Plan – Building 6

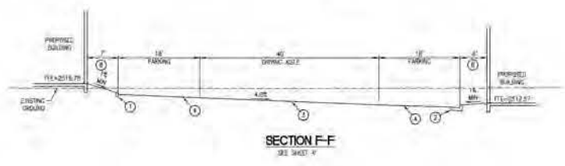


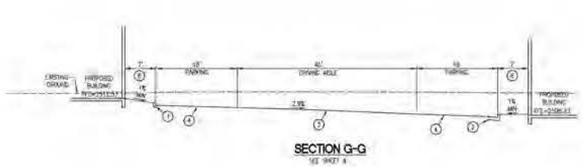


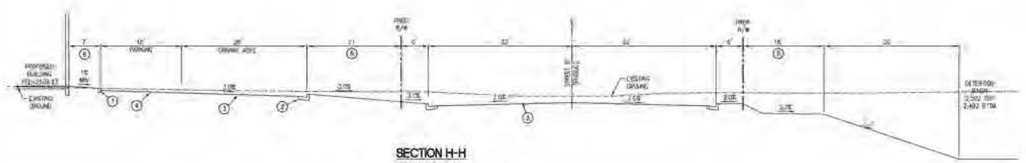




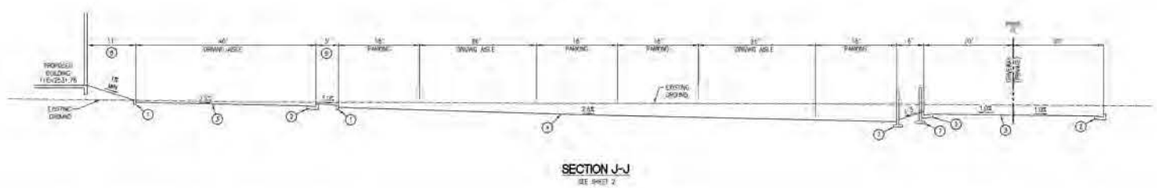












CONSTRUCTION NOTES

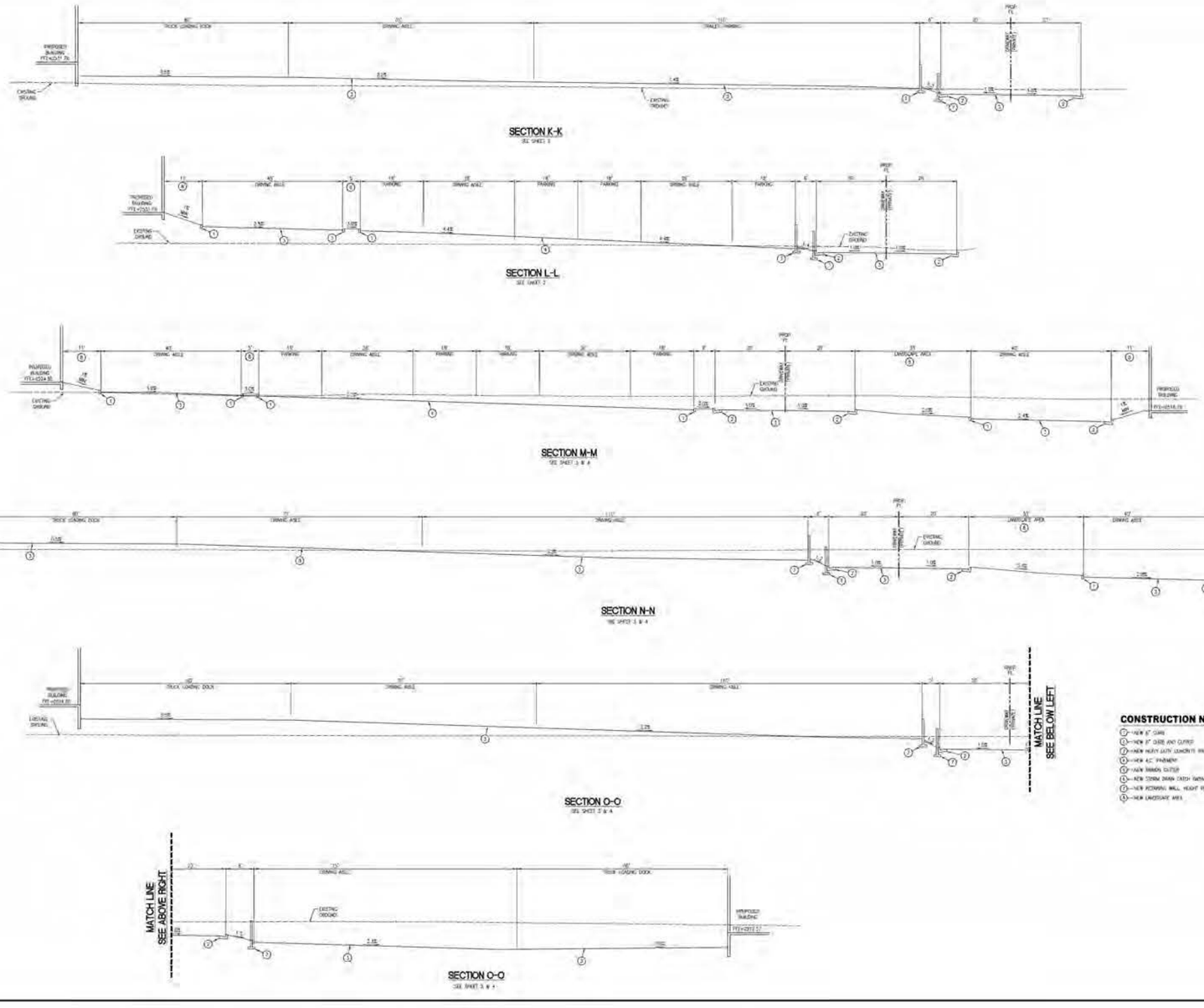
1. NEW 6" CURB
2. NEW 6" CURB AND GUTTER
3. NEW HEAVY DUTY CONCRETE PAVEMENT
4. NEW A.C. PAVEMENT
5. NEW RIBBON GUTTER
6. NEW STORM DRAIN CATCH BASIN/INLET
7. NEW RETAINING WALL HEIGHT VARIES
8. NEW LANDSCAPE AREA

Source(s): WestLAND Group, Inc. (06-12-2023)

Figure 3-24

Not to Scale

Site Cross Sections – Sheet 1

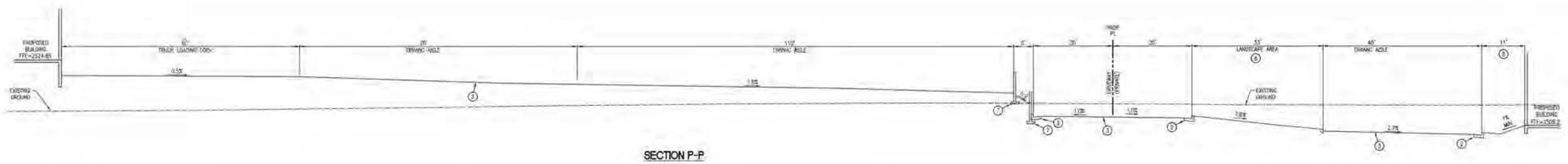


Source(s): WestLAND Group, Inc. (06-12-2023)

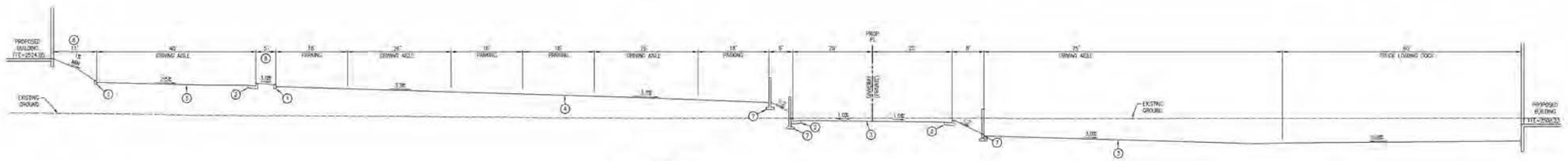
Figure 3-25

Not to Scale

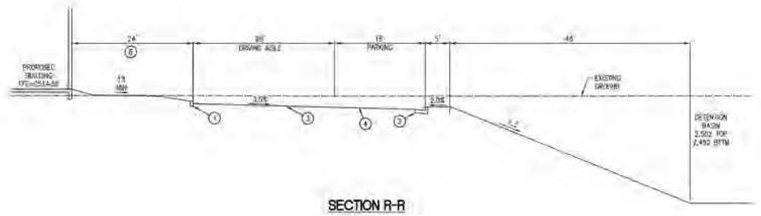
Site Cross Sections – Sheet 2



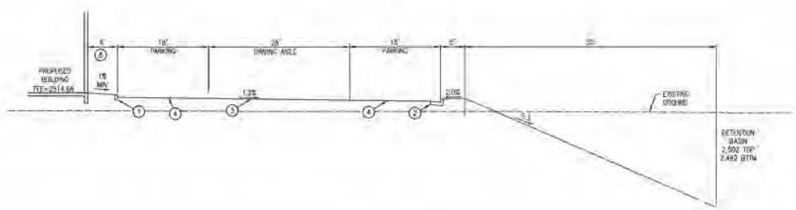
SECTION P-P
SEE SHEET 4



SECTION Q-Q
SEE SHEET 3



SECTION R-R
SEE SHEET 4



SECTION S-S
SEE SHEET 5

CONSTRUCTION NOTES

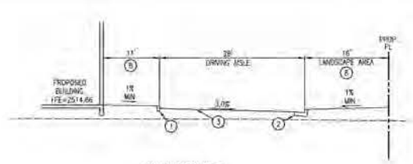
1. NEW 6" CURB
2. NEW 6" CURB AND GUTTER
3. NEW HEAVY DUTY CONCRETE PAVEMENT
4. NEW A.C. PAVEMENT
5. NEW RIBBON GUTTER
6. NEW STORM DRAIN CATCH BASIN/TYPE "A" INLET
7. NEW RETAINING WALL, HEIGHT VARIES
8. NEW LANDSCAPE AREA

Source(s): WestLAND Group, Inc. (06-12-2023)

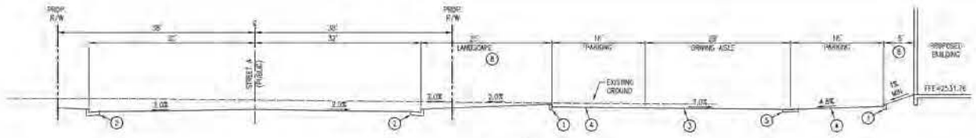
Figure 3-26

Not to Scale

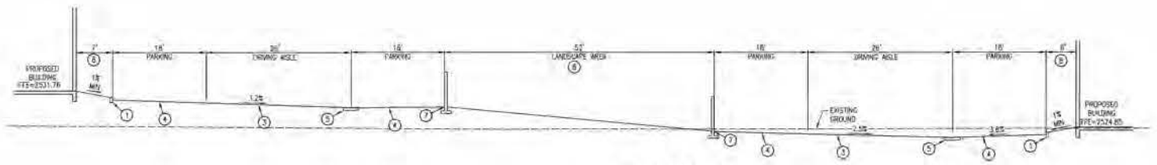
Site Cross Sections – Sheet 3



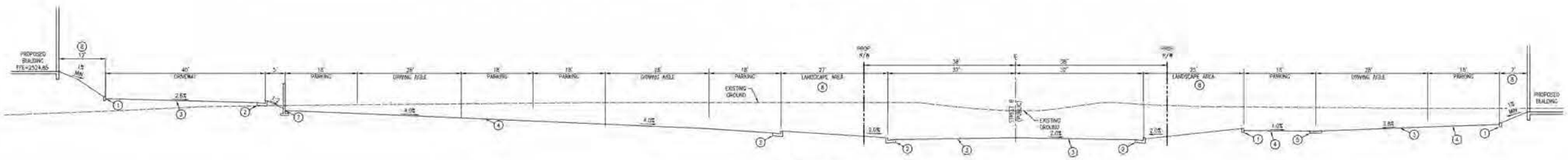
SECTION T-T
SEE SHEET 5



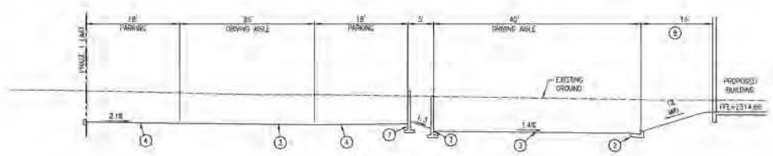
SECTION U-U
SEE SHEET 2



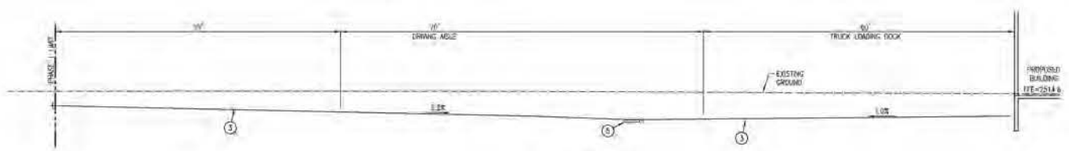
SECTION V-V
SEE SHEET 3 & 3



SECTION W-W
SEE SHEET 5



SECTION X-X
SEE SHEET 5



SECTION Y-Y
SEE SHEET 5

CONSTRUCTION NOTES

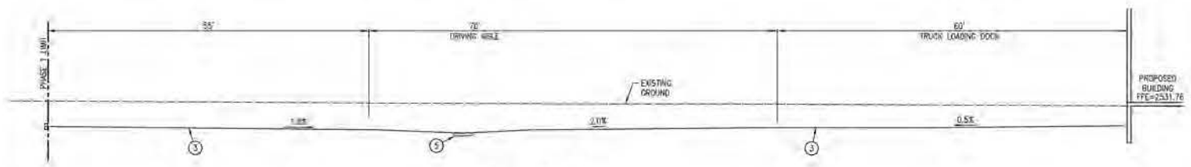
1. NEW 6" CURB
2. NEW 6" CURB AND GUTTER
3. NEW HEAVY DUTY CONCRETE PAVEMENT
4. NEW A.C. PAVEMENT
5. NEW RIBBON GUTTER
6. NEW STORM DRAIN CATCH BASIN/DROP INLET
7. NEW RETAINING WALL, HEIGHT VARIES
8. NEW LANDSCAPE AREA

Source(s): WestLAND Group, Inc. (06-12-2023)

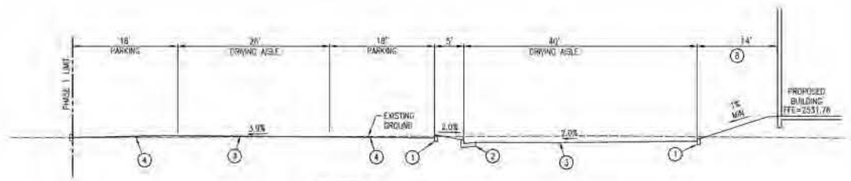
Figure 3-27

Not to Scale

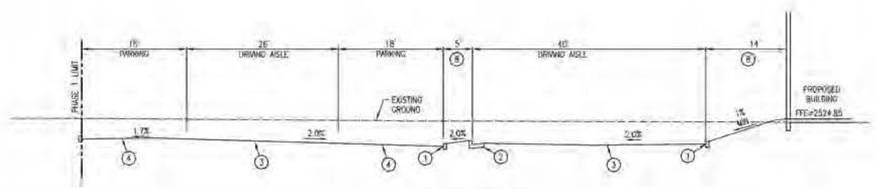
Site Cross Sections – Sheet 4



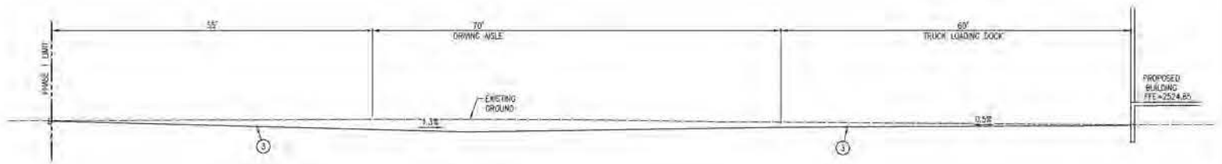
SECTION Z-Z
SEE SHEET 2



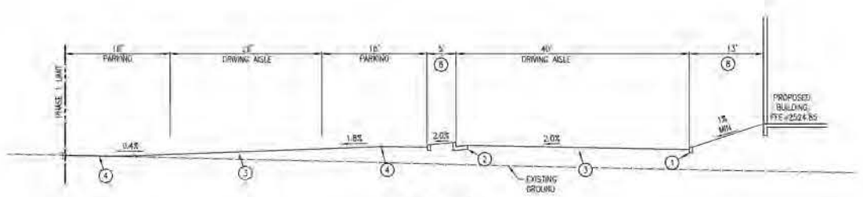
SECTION AA-AA
SEE SHEET 2



SECTION BB-BB
SEE SHEET 3



SECTION CC-CC
SEE SHEET 3



SECTION DD-DD
SEE SHEET 3

CONSTRUCTION NOTES

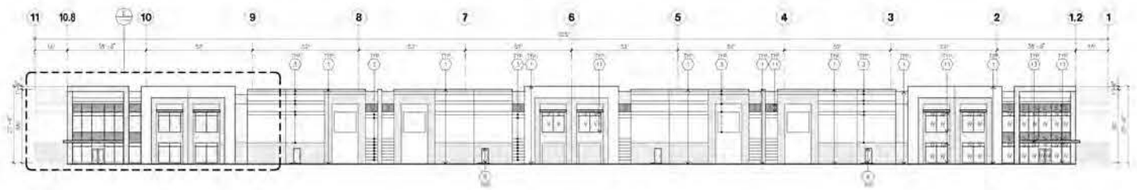
1. NEW 8" CURB
2. NEW 8" CURB AND GUTTER
3. NEW HEAVY DUTY CONCRETE PAVEMENT
4. NEW A.C. PAVEMENT
5. NEW RIBBON GUTTER
6. NEW STORM DRAIN CATCH BASIN/DROP INLET
7. NEW RETAINING WALL, HEIGHT VARIES
8. NEW LANDSCAPE AREA

Source(s): WestLAND Group, Inc. (06-12-2023)

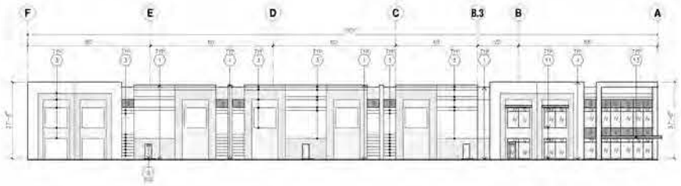
Figure 3-28

Not to Scale

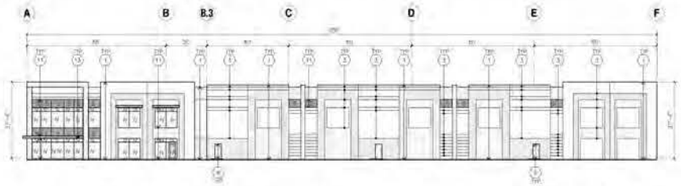
Site Cross Sections – Sheet 5



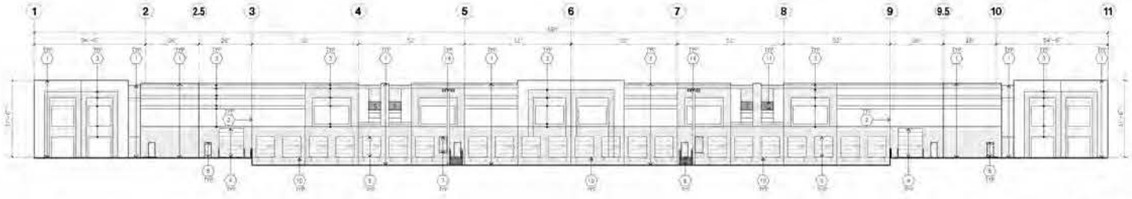
NORTH ELEVATION (A)



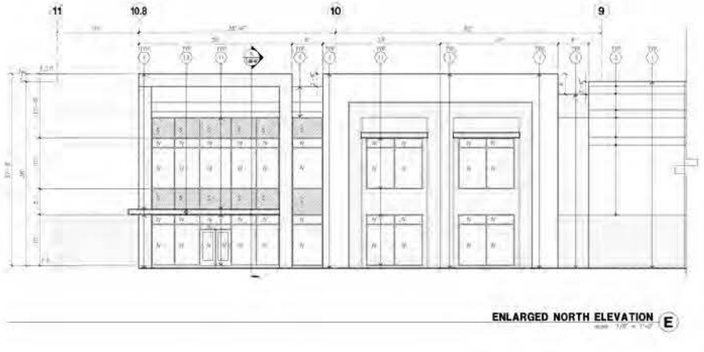
EAST ELEVATION (C)



WEST ELEVATION (B)



SOUTH ELEVATION (D)



ENLARGED NORTH ELEVATION (E)

KEYNOTES - ELEVATIONS

COLOR SCHED. - ELEVATIONS

GLAZING LEGEND

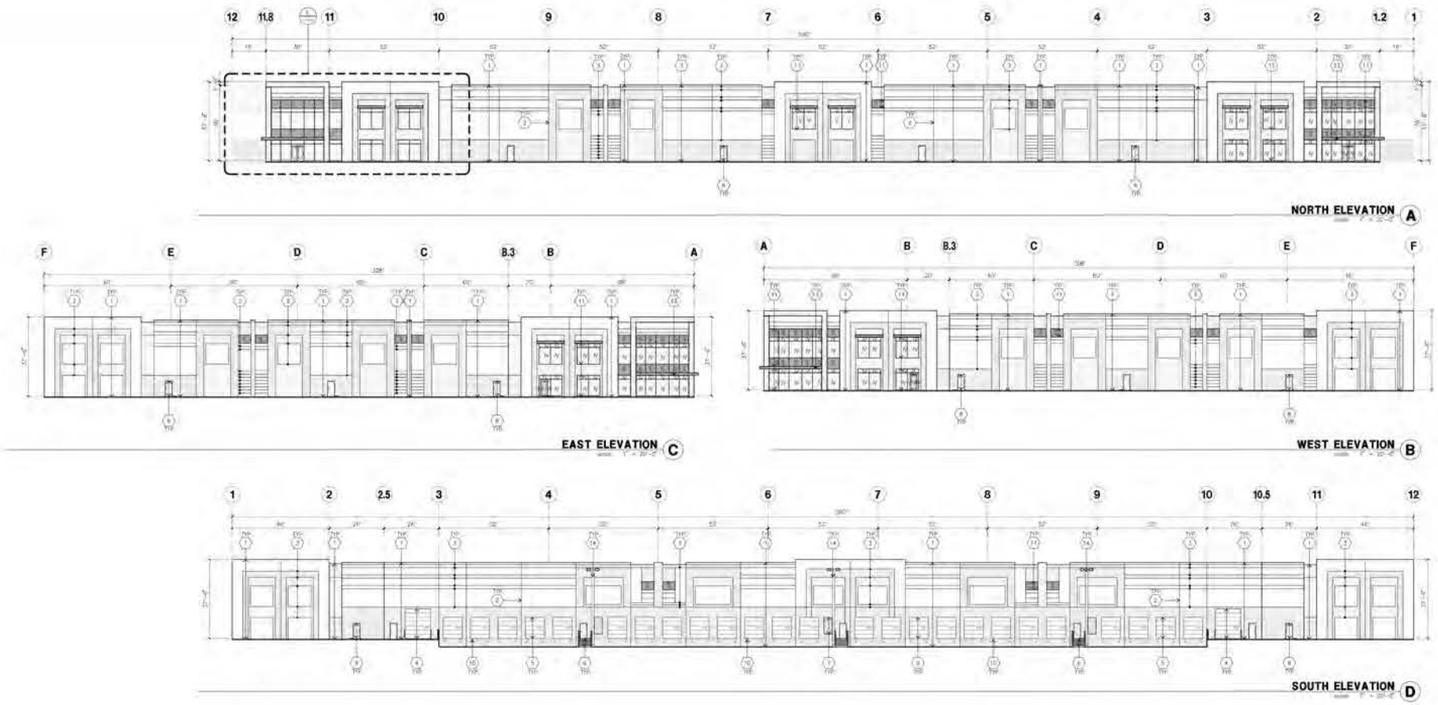
GENERAL NOTES - ELEVATIONS

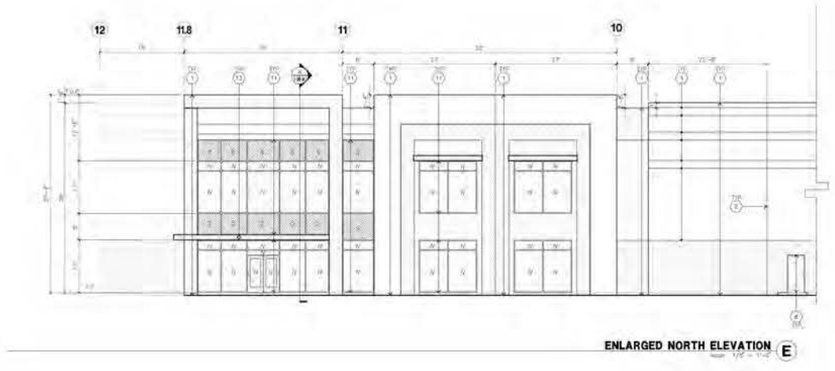
Source(s): WestLAND Group, Inc. (05-12-2023)

Figure 3-29

Not to Scale

Conceptual Building Elevation – Building 1





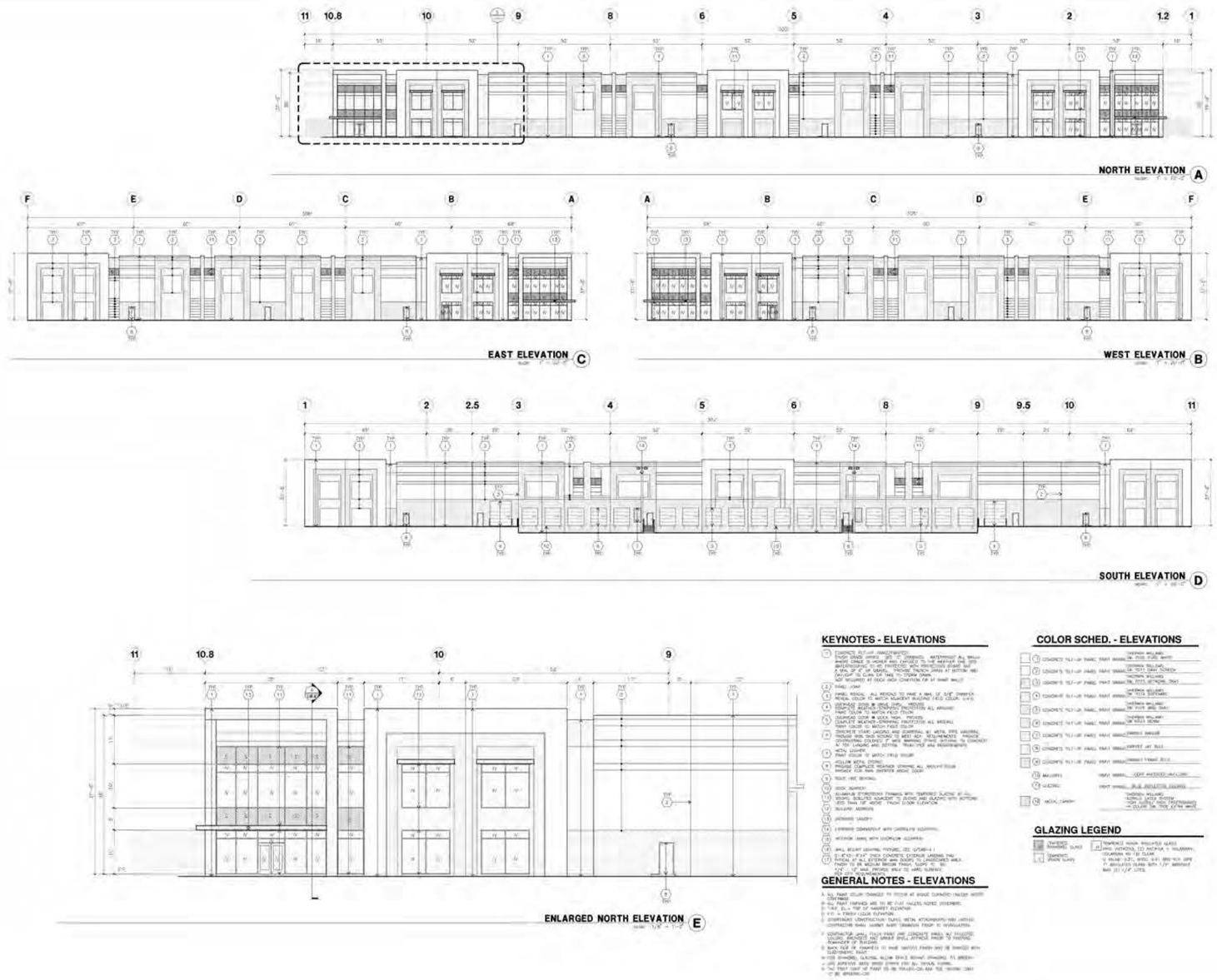


Source(s): WestLAND Group, Inc. (05-12-2023)

Figure 3-30

Not to Scale

Conceptual Building Elevation – Building 2

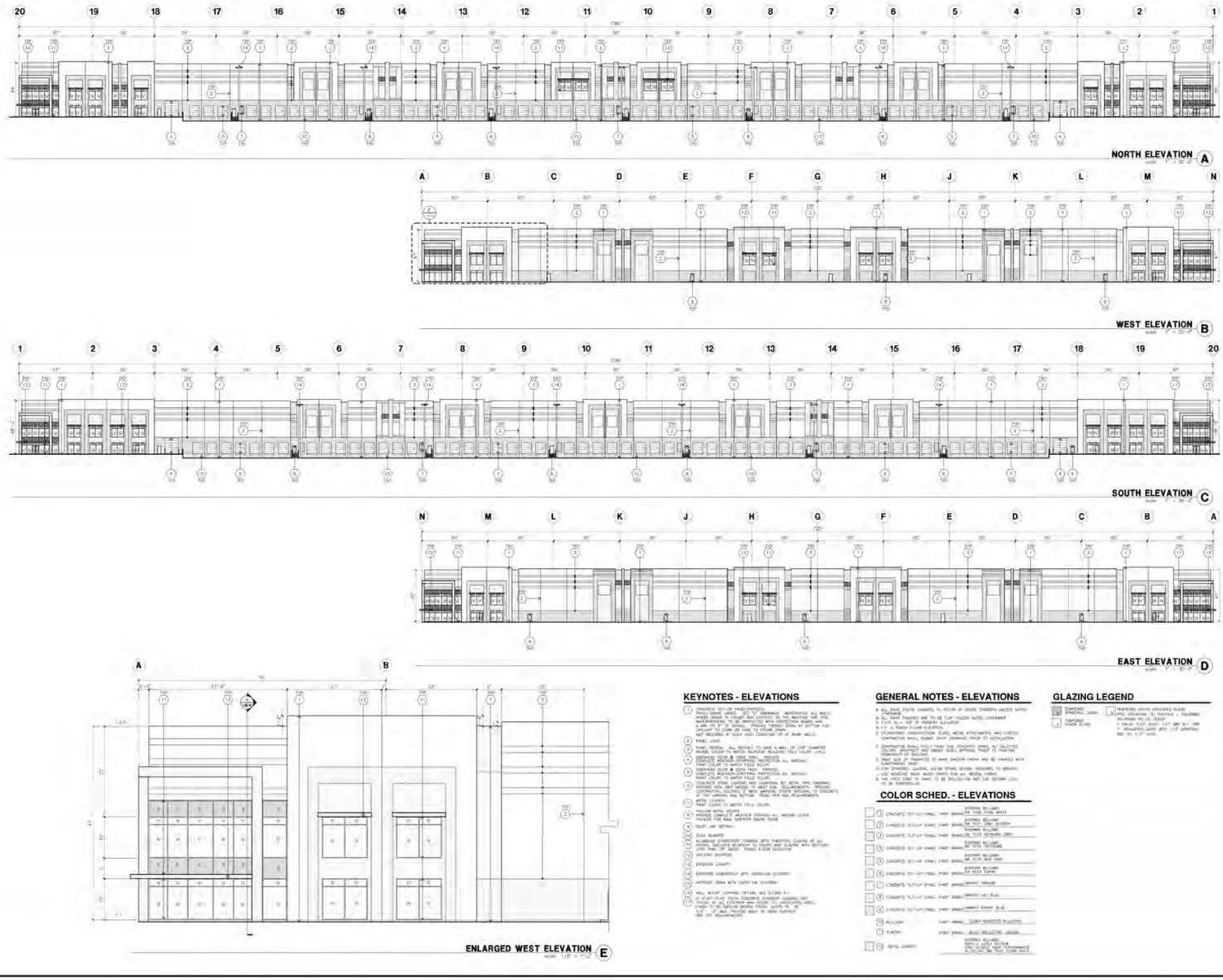


Source(s): WestLAND Group, Inc. (05-12-2023)

Figure 3-31

Not to Scale

Conceptual Building Elevation – Building 3

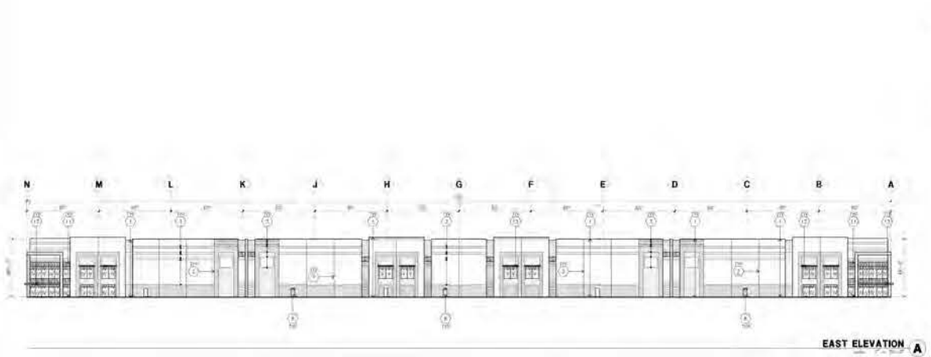


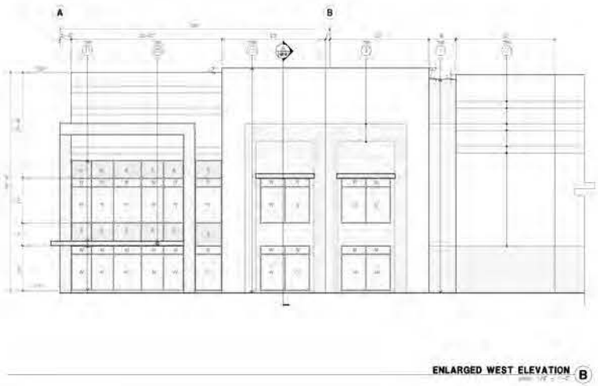
Source(s): WestLAND Group, Inc. (05-12-2023)

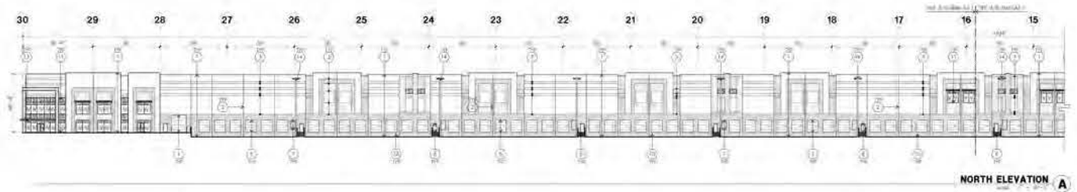
Figure 3-32

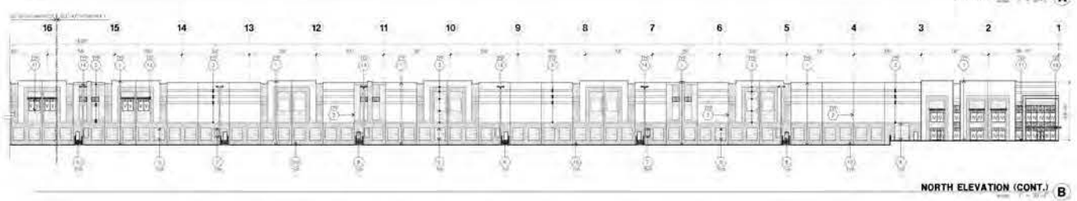
Not to Scale

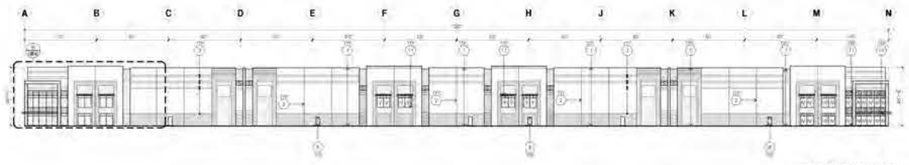
Conceptual Building Elevation – Building 4

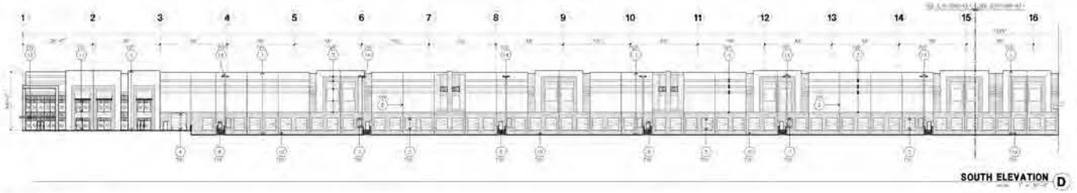


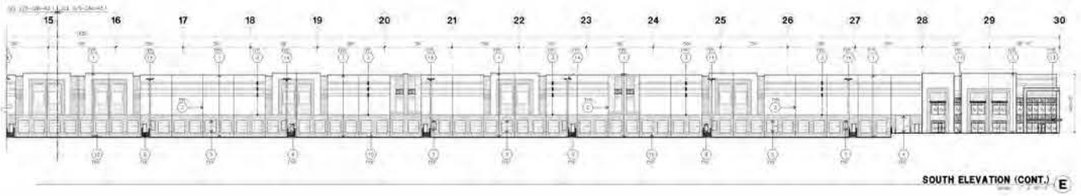












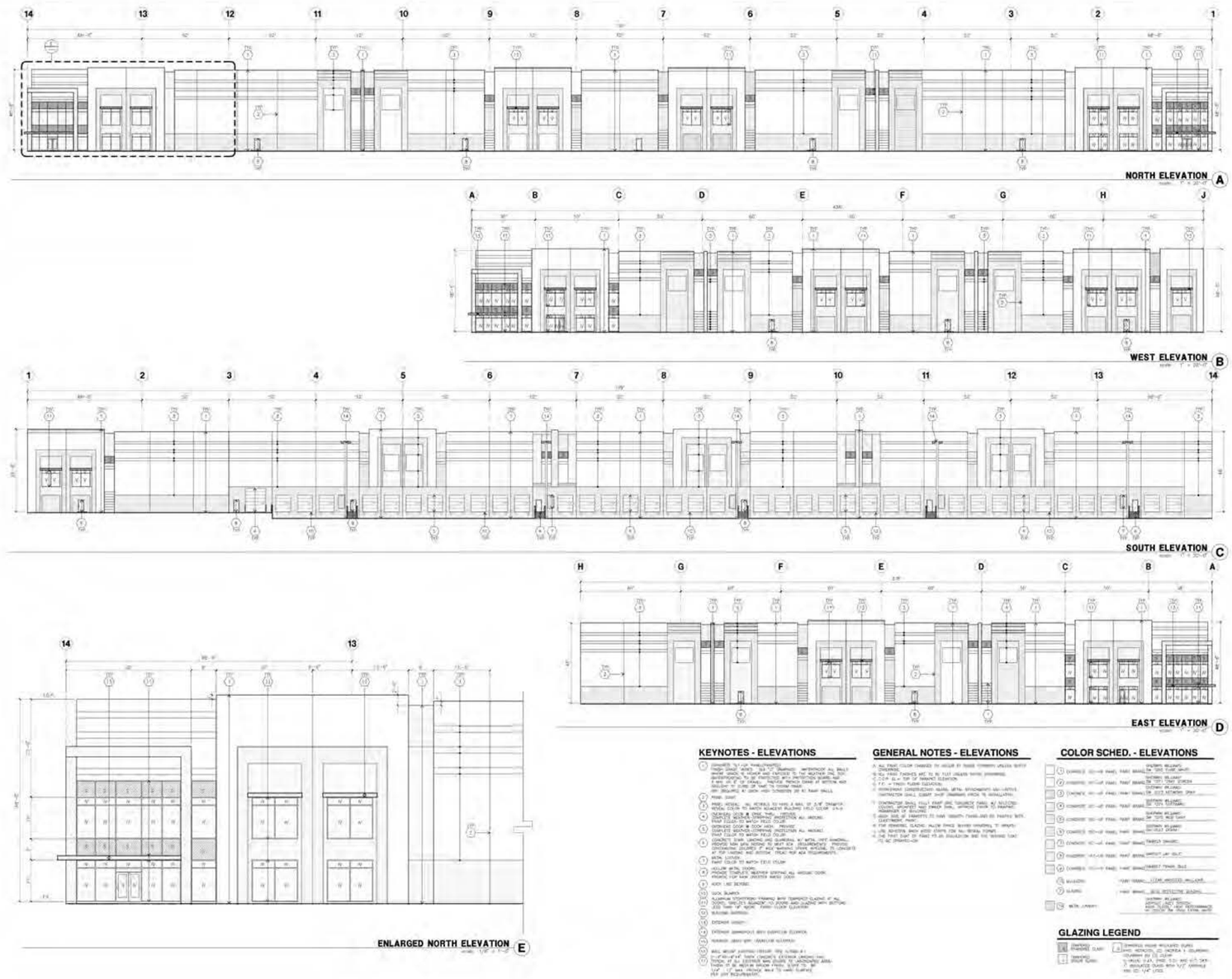


Source(s): WestLAND Group, Inc. (05-12-2023)

Figure 3-33

Not to Scale

Conceptual Building Elevation – Building 5

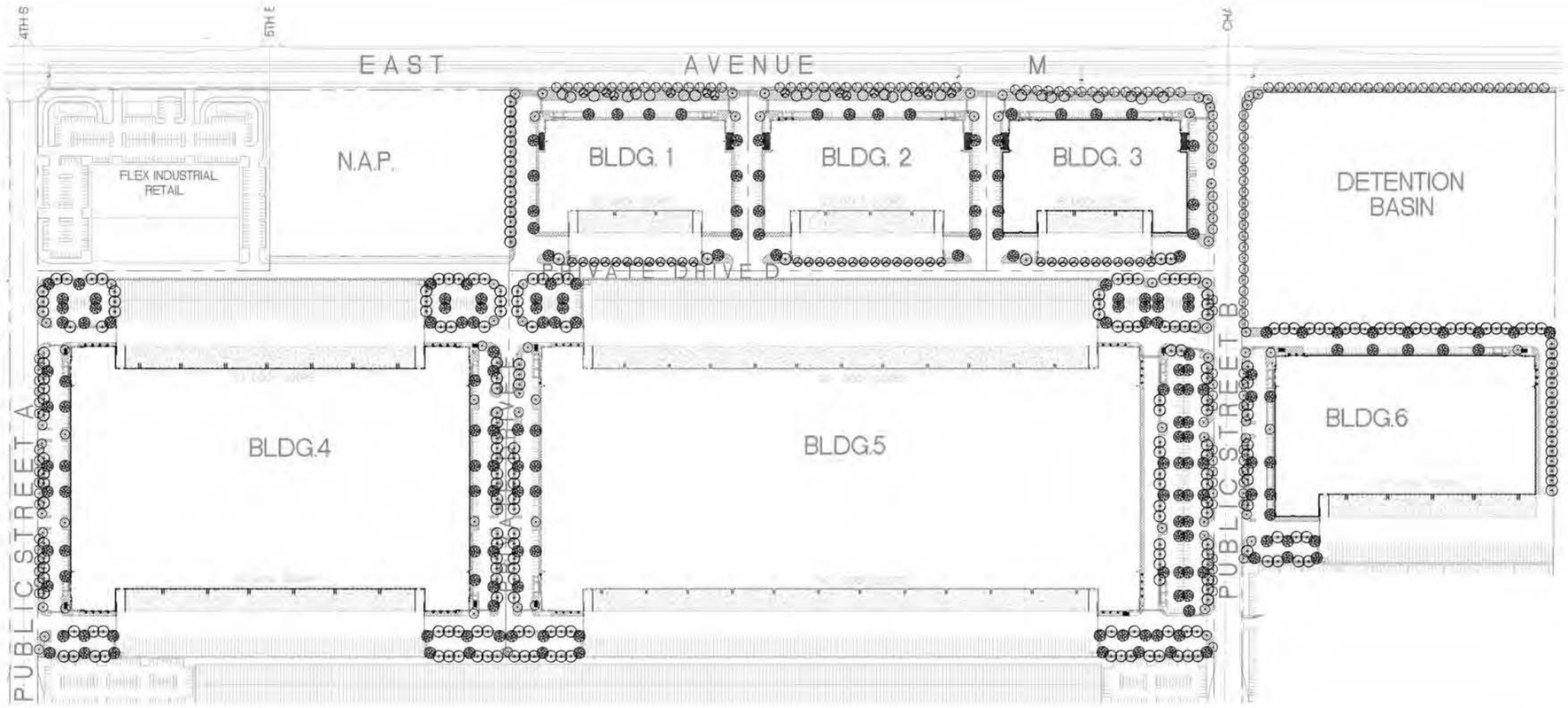


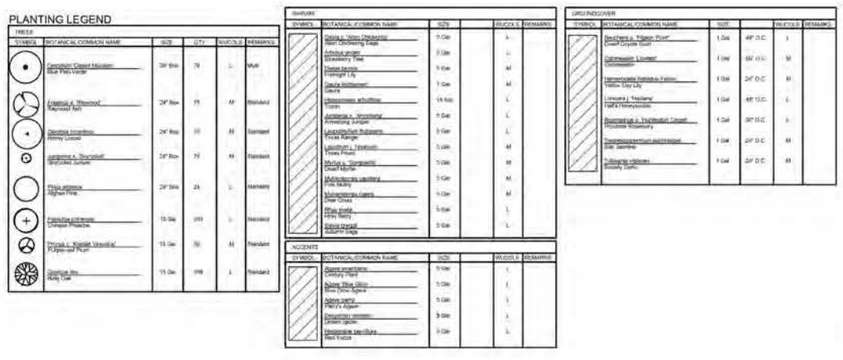
Source(s): WestLAND Group, Inc. (05-12-2023)

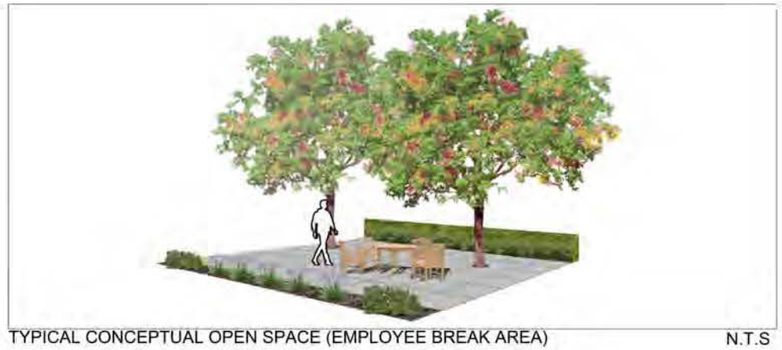
Figure 3-34

Not to Scale

Conceptual Building Elevation – Building 6







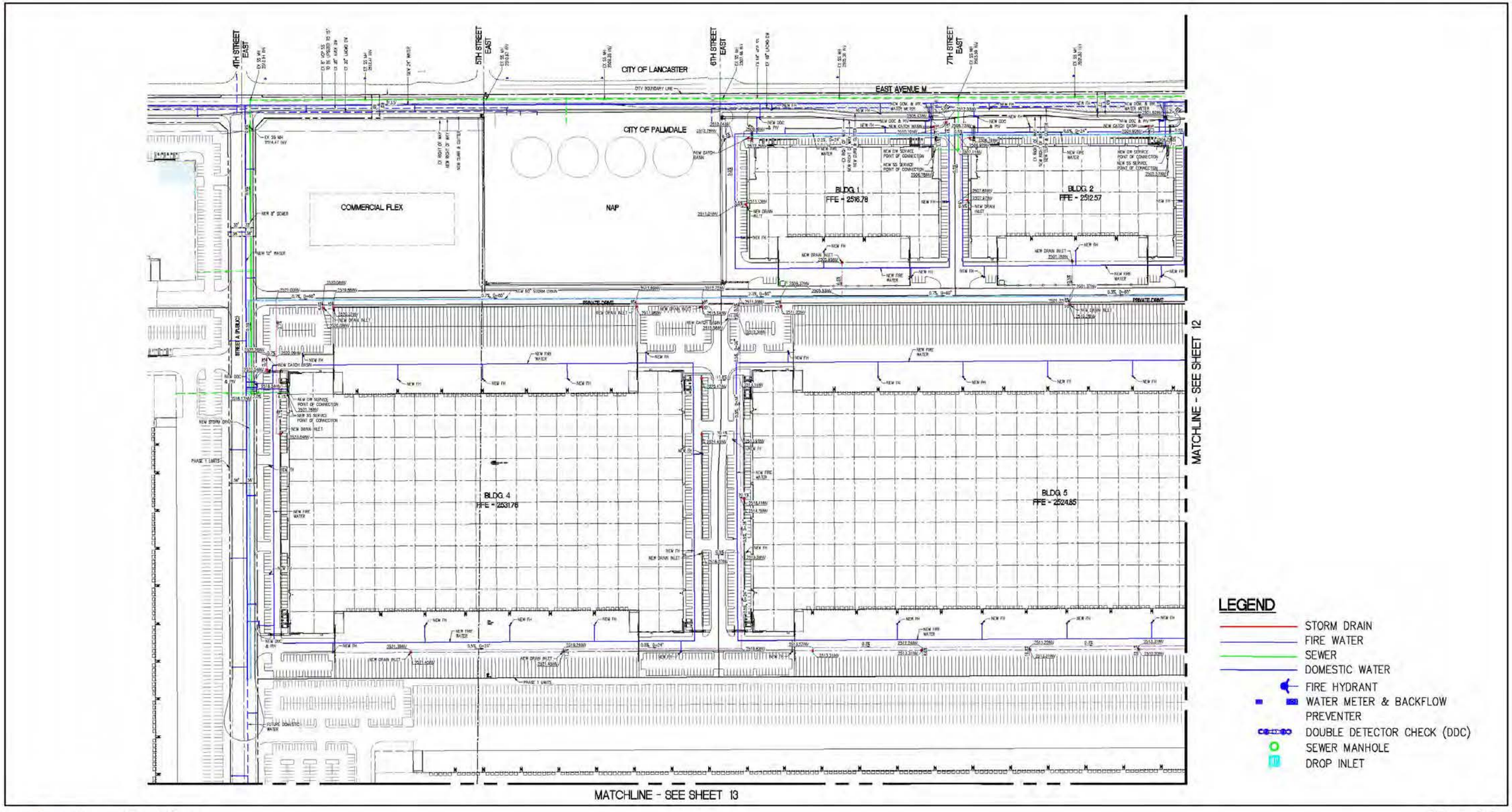
TYPICAL CONCEPTUAL OPEN SPACE (EMPLOYEE BREAK AREA) N.T.S

Source(s): Hunter Landscape (09-20-2023)

Figure 3-35

Not to Scale

Conceptual Landscape Plan

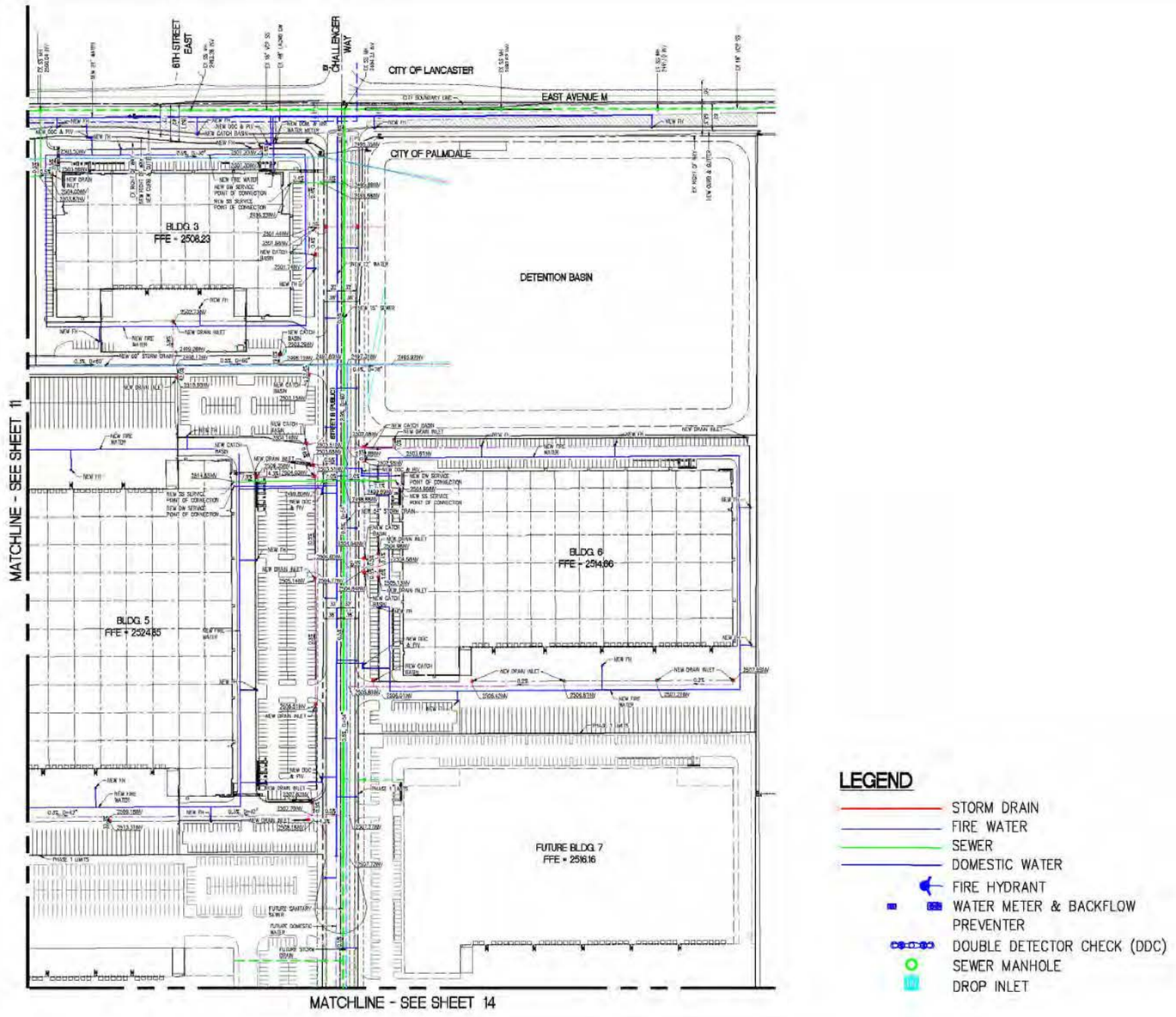


Source(s): WestLAND Group, Inc. (05-09-2024)

Figure 3-36

Not to Scale

Conceptual Utility Plan – West

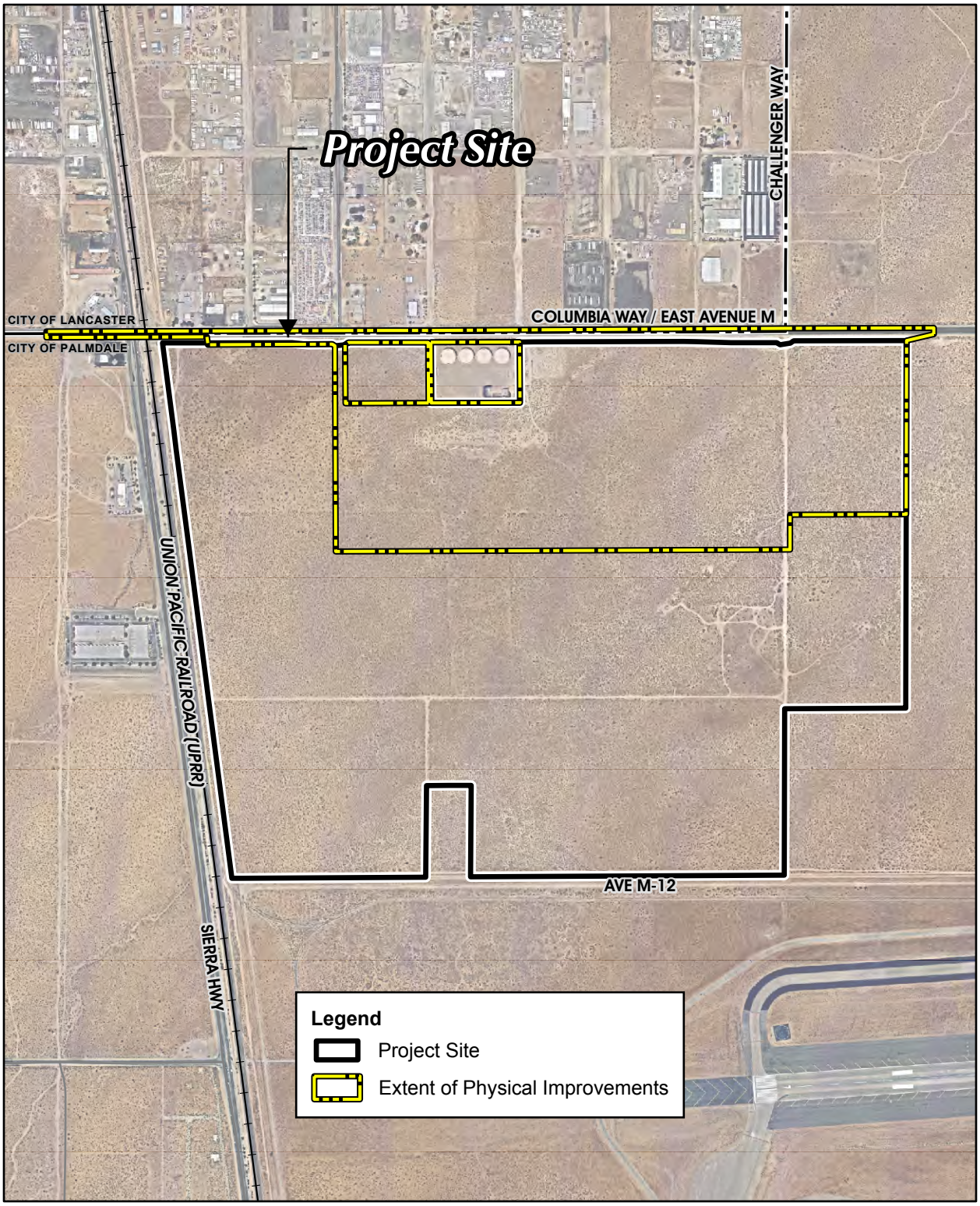


Source(s): WestLAND Group, Inc. (05-09-2024)

Figure 3-37

Not to Scale

Conceptual Utility Plan – East

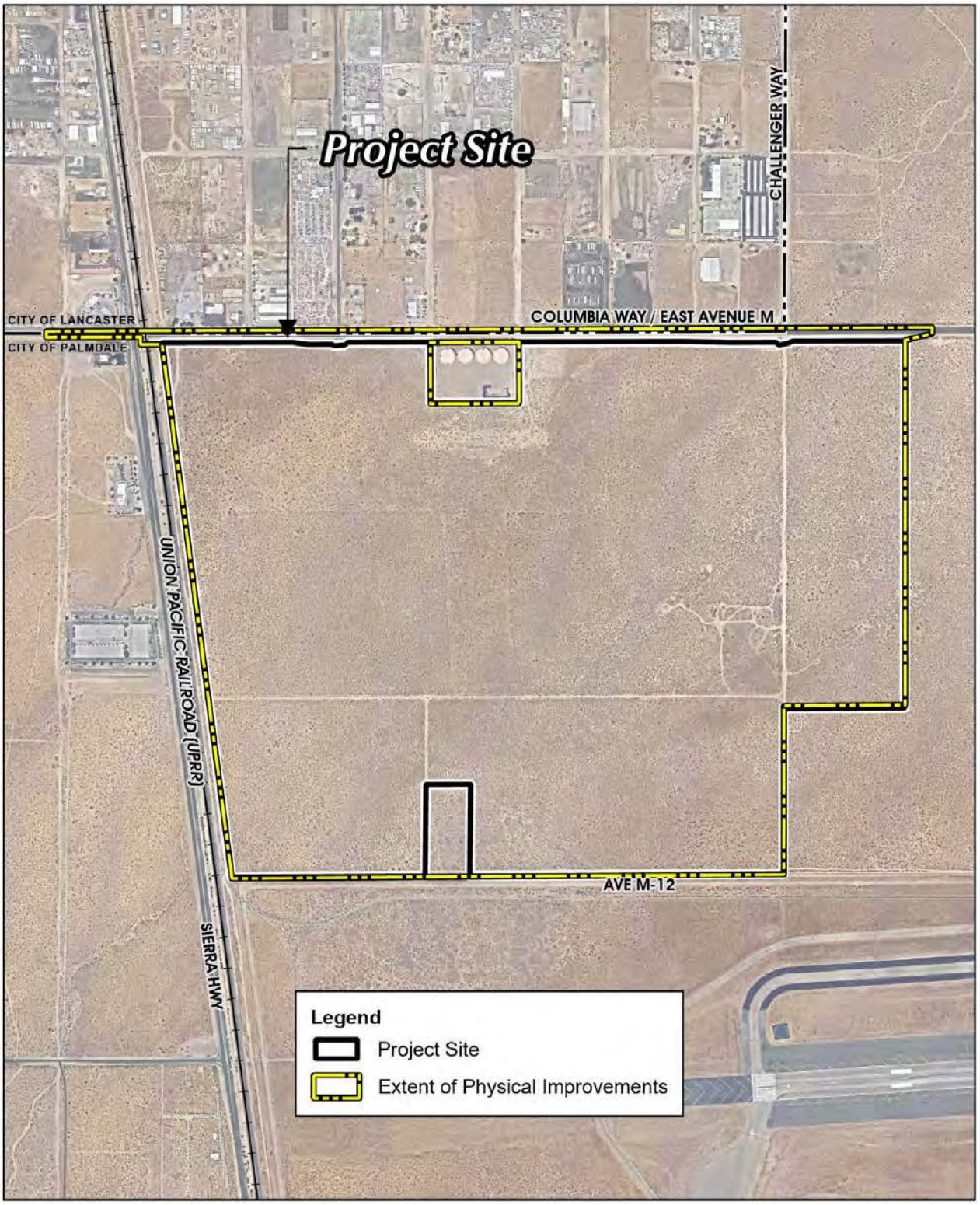


Source(s): Esri, Nearmap Imagery (July 2023), LA County (2023), WestLAND Group, Inc. (09-26-2023)

Figure 3-38

0 275 550 1,100 Feet

Phase I Physical Limits of Disturbance



Source(s): Esri, Nearmap Imagery (July 2023), LA County (2023), WestLAND Group, Inc. (08-15-2022)

Figure 3-39

0 275 550 1,100 Feet

Overall Physical Limits of Disturbance

4.0 ENVIRONMENTAL ANALYSIS

4.0.1 SUMMARY OF EIR SCOPE

In accordance with California Environmental Quality Act (CEQA) Guidelines Sections 15126-15126.4, this EIR Section 4.0, *Environmental Analysis*, provides analyses of potential direct, indirect, and cumulatively-considerable impacts that could occur from planning, constructing, and operating the proposed Project.

An Initial Study was not prepared for the proposed Project because the City determined that an EIR was required, although the Project's NOP did scope out certain issue areas from detailed environmental review. The City of Palmdale distributed a Notice of Preparation (NOP) to public agencies and interested individuals and posted the NOP on its website to solicit input on the scope of study for the EIR. The City of Palmdale also held one EIR Scoping Meeting to solicit input from the general public on the scope of study for this EIR. Taking all known information and public comments into consideration, 16 primary environmental factors are evaluated in detail in this Section 4.0, as listed below. Each subsection evaluates several specific topics related to the primary environmental subject. The title of each subsection is not limiting; therefore, refer to each subsection for a full account of the subject matters addressed therein.

4.1	Aesthetics	4.9	Hydrology & Water Quality
4.2	Air Quality	4.10	Land Use and Planning
4.3	Biological Resources	4.11	Noise
4.4	Cultural Resources	4.12	Public Services
4.5	Energy	4.13	Transportation
4.6	Geology / Soils	4.14	Tribal Cultural Resources
4.7	Greenhouse Gas Emissions	4.15	Utilities / Service Systems
4.8	Hazards and Hazardous Materials	4.16	Wildfire

4.0.2 SCOPE OF CUMULATIVE EFFECTS ANALYSIS

CEQA requires that an EIR contain an assessment of the cumulative impacts that may be associated with a proposed project. As noted in CEQA Guidelines § 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "[A] cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects creating related impacts" (CEQA Guidelines §15130(a)(1)). As defined in CEQA Guidelines § 15355:

> *'Cumulative Impacts' refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.*
>
> *(a) The individual effects may be changes resulting from a single project or a number of separate projects.*

(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

CEQA Guidelines § 15130(b) describes two acceptable methods for identifying a study area for purposes of conducting a cumulative impact analysis. These two approaches include: 1) a list of past, present, and probable future projects producing related or cumulative impacts, including if necessary, those projects outside the control of the agency (the list of projects approach), or 2) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact (the summary of projections approach).

Given the recent adoption of the City of Palmdale General Plan (Palmdale 2045) in October 2022, and the Project site's location in the center of the City, the summary of projections approach is used in this EIR. This methodology was determined to be appropriate because Palmdale 2045 is the City's long-range planning document which in combination with its Final EIR contain a sufficient amount of information to enable a comprehensive analysis of cumulative effects for all subject areas. Under this approach, the cumulative analyses contained in most subsections of this EIR Section 4.0 consider impacts to each issue area based on the presumed buildout of Palmdale 2045, which along with its Final EIR having SCH No. 2021060494, are hereby incorporated by reference and available for public review at the City of Palmdale Department of Economic and Community Development located at 38250 Sierra Highway, Palmdale, California 93550 (City of Palmdale, 2023). This EIR also considers the California High Speed Rail Authority's planned High Speed Rail (HSR) Palmdale to Bakersfield project for the topics of cumulative noise and vibration. The HSR project is a separate and independent project from the Palmdale 2045 General Plan but that is acknowledged in Palmdale 2045 as a cumulative project. While the HSR project may not be constructed or operational in Palmdale by 2045, the Bakersfield to Palmdale Project Section Final EIR/EIS (EIR/EIS) having SCH No. 2009082062 is considered herein as a reasonable foreseeable future cumulative project (CA High Speed Rail Authority, 2021).

Other plans used in the summary of projections approach that apply to specific environmental topic areas are refenced when used in the cumulative effects analyses in the various subsections of this EIR Section 4.0.

As an example of the summary of projections methodology used for geographic scope, for the issue area of aesthetics, the cumulative study area is defined by the Project's ground-level viewshed in the immediate vicinity of the Project site and horizon viewshed, which extends to the mountain ranges on all sides. For the issue of hydrology and water quality, by contrast, the cumulative study area is defined as the Antelope Valley Watershed. For the issue of air quality, the cumulative study area comprises the Mojave Desert Air Basin (MDAB). For the issue of biology, the cumulative study area corresponds

generally to the boundaries of the West Mojave Plan. The West Mojave Plan establishes a regional biological strategy to conserve plant and animal species and their habitats and provides for an efficient, equitable, and cost-effective process for complying with threatened and endangered species law. It is noted that until the State portion of the plan is permitted, it cannot be used by State or private entities; however, it is generally considered as a cumulative study area for biological resources. Refer to the individual subsections within this EIR Section 4.0 for a description of the specific cumulative study area used for each subject area evaluated in this EIR.

4.0.3 IDENTIFICATION OF IMPACTS

Subsections 4.1 through 4.16 of this EIR evaluate the 16 environmental subjects warranting analysis pursuant to CEQA. The format of discussion is standardized as much as possible in each subsection for ease of review. The environmental setting is discussed first, followed by a discussion of the potential environmental impacts of the Project based on specified thresholds of significance used as criteria to determine whether potential environmental effects are significant.

The thresholds of significance used in this EIR are based on the thresholds presented in CEQA Guidelines Appendix G and as applied by the City of Palmdale. The thresholds are intended to assist the reader of this EIR in understanding how and why this EIR reaches a conclusion that an impact would or would not occur, is significant, or is less than significant (with or without the incorporation of mitigation).

Serving as the CEQA Lead Agency for this EIR, the City is responsible for determining whether an adverse environmental effect identified in this EIR should be classified as significant or less than significant. While the City has generally elected to use the thresholds presented in CEQA Guidelines Appendix G, it should be noted that CEQA affords the City discretion to formulate standards of significance, and recognizes that the significance of a particular impact may vary with the setting (14 Cal. Code Regs., § 15064(b).) The standards of significance used in this EIR are based on the independent judgment of the City, taking into consideration the current CEQA Guidelines Appendix G, the City's Municipal Code (PMC), and adopted City policies and ordinances; the judgment of the technical experts that prepared this EIR's Technical Appendices; performance standards adopted, implemented, and monitored by regulatory agencies; significance standards recommended by regulatory agencies; and the standards in CEQA that trigger the preparation of an EIR. As required by CEQA Guidelines Section 15126.2(a), impacts are identified in this EIR as direct, indirect, cumulative, short-term, long-term, on-site, and/or off-site impacts of the proposed Project. A summarized "impact statement" is provided in each section following the analysis.

The following terms are used to describe the level of significance related to the physical conditions within the area affected by the proposed Project:

- No Impact: An adverse change in the physical environment would not occur.

- Less Than Significant Impact: An adverse change in the physical environment would occur but the change would not be substantial or potentially substantial and would not exceed the threshold(s) of significance presented in this EIR.

- Significant Impact: A substantial or potentially substantial adverse change in the physical environment would occur and would exceed the threshold(s) of significance presented in this EIR, requiring the consideration of mitigation measures.

Each subsection also includes a discussion or listing of the applicable regulatory criteria (laws, policies, regulations, etc.) that the Project is required to comply with (if any). If impacts are identified as significant after mandatory compliance with regulatory criteria, feasible mitigation measures are presented that would either avoid the impact or reduce the magnitude of the impact. The following terms are used to describe the level of significance following the application of recommended mitigation measures:

- Less Than Significant Impact with Mitigation: A substantial or potentially substantial adverse change in the physical environment would occur that would exceed the threshold(s) of significance presented in this EIR; however, the impact can be avoided or reduced to a less than significant level through the application of feasible mitigation measure(s).

- Significant and Unavoidable Impact: A substantial or potentially substantial adverse change in the physical environment would occur that would exceed the threshold(s) of significance presented in this EIR. Feasible and enforceable mitigation measure(s) that have a proportional nexus to the Project's impact are either not available or would not be fully effective in avoiding or reducing the impact to below a level of significance.

For any impact identified as significant and unavoidable, the City would be required to adopt a Statement of Overriding Considerations pursuant to CEQA Guidelines Section 15093 in order to approve the Project despite its significant impact(s) to the environment. The Statement of Overriding Considerations would list the specific economic, legal, social, technological, and other benefits of the Project, supported by substantial evidence in the administrative record for the Project, that outweigh the unavoidable impacts.

4.1 AESTHETICS

This Subsection describes the aesthetic qualities and visual resources present on the Project site and within the vicinity of the site and evaluates the potential effects that the Project may have on these resources. Descriptions of existing visual characteristics on the site and in the immediate vicinity of the Project site and the analysis of the Project's potential aesthetic impacts are based in part on a visual field survey and site photographs collected by T&B Planning, Inc. on August 4, 2022. In addition, aerial photography (Google Earth, n.d.) and the Project's application materials were used for this analysis. This subsection also is based in part on information and policies contained in the City of Palmdale General Plan (Palmdale 2045) (City of Palmdale, 2023) and the City of Palmdale Municipal Code (PMC). (PMC, 2023) All references used in this subsection are included in EIR Section 7.0, *References*.

4.1.1 EXISTING CONDITIONS

A. Project Site and Surrounding Areas

The Project site comprises approximately 432.9 acres of vacant land within the City of Palmdale, which is located within the Antelope Valley portion of Los Angeles County. The Project site is located directly south of Columbia Way / East Avenue M; approximately 0.03-mile east of Sierra Highway and approximately 0.02-mile east of the active Union Pacific Railroad (UPRR) mainline tracks located adjacent to Sierra Highway; and directly north of Avenue M-12. The Project site is located approximately 0.25 mile (1,305 feet) north of Runway 7 of USAF Plant 42.

As previously shown on Figure 2-6, the Project site is vacant and undeveloped. An unpaved portion of Challenger Way runs north to south through the eastern portion of the Project site. A graded dirt access road runs around the perimeter of the Project site and two graded dirt roads run east-west and north-south in the southern portion of the Project site. An unnamed sandy wash occurs in the extreme northwest corner of the Project site.

As previously disclosed in Section 2.0, *Environmental Setting*, land uses in the immediate vicinity of the Project site are illustrated on Figure 2-3, *Surrounding Land Uses and Development*, and described below.

- North: Columbia Way / East Avenue M forms the northern boundary of the Project site. To the immediate south of Columbia Way / East Avenue M and north of the central portion of the Project site is a parcel containing four water storage tanks and groundwater wells operated by the Antelope Valley – East Kern Water Agency. Columbia Way/ East Avenue M is the jurisdictional boundary between the City of Palmdale and the City of Lancaster. To the north of Columbia Way / East Avenue M are lands located within the City of Lancaster that include a restaurant (Ruben's Bar and Grill), a storage facility (Small Town Storage), an automobile salvage yard, Lancaster Adult Day Healthcare facility, an auto repair center (Affordable Transmission and Auto Repair Center), a construction yard and vacant land.

- East: An unpaved portion of Challenger Way runs north to south through the eastern portion of the Project site. Offsite and to the east of Challenger Way is vacant land, beyond which is 15th Street East, beyond which is the United States Air Force (USAF) Plant 42 facility and the inactive Palmdale Regional Airport.

- South: Avenue M-12 forms the southern boundary of the Project site. Beyond Avenue M-12 is vacant land, and runways associated with the USAF Plant 42 and the inactive Palmdale Regional Airport.

- West: To the west of the Project site is the Union Pacific Railroad (UPRR) mainline tracks and easement, west of which is the Sierra Highway Bike Trail, which is adjacent to Sierra Highway. West of Sierra Highway is an ARCO gas station, Northrop Grumman Federal Credit Union, a commercial plaza (Sierra Highway Plaza) and vacant land.

There are no rock outcroppings or other unique topographic or aesthetic features present on the property. As previously shown on Figure 2-7, the Project site is mostly level, with an average elevation of approximately 2,528 feet above mean sea level (amsl). Overall site topography slopes downward to the east-northeast at a gradient less than approximately one percent. (SCG, 2023, p. 4) (AES, 2022, p. 5)

The Project site is located within an area referred to as "the high desert." Vegetation on the Project site consists of big sagebrush – disturbed rubber rabbitbrush scrub, rubber rabbitbrush scrub, disturbed rubber rabbitbrush – Nevada ephedra scrub, rubber rabbitbrush - Nevada joint-fir scrub/Joshua tree woodland, Nevada ephedra - cheesebush - Cooper's box thorn/Joshua tree woodland, creosote bush scrub, Joshua tree woodland, disturbed Joshua tree woodland, and bare ground. Bare ground consists of graded dirt roads with less than five percent vegetation cover. Joshua tree woodland and disturbed Joshua tree woodland generally occurs throughout the southern two-thirds of the Project site. This vegetation type is dominated by western Joshua trees with various shrubs as the dominant understory species. Creosote bush shrubs are the dominant understory species in the southeastern portion of the site. (Psomas, 2022a, p. 22)

Pursuant to CEQA Guidelines Section 15125 and explained in Section 2.0 of this EIR, the physical environmental condition for purposes of establishing the setting of this EIR is the environment as it existed at the approximate time that the EIR's NOP was released for public review. The NOP for this EIR was released on September 1, 2022. As of that date, the Project site was vacant and undeveloped. To demonstrate the existing condition, T&B Planning, Inc. collected photographs of the Project site on August 4, 2022. Figure 4.1-1, *Public Viewpoint Key Map*, illustrates the locations of the photographs taken from seven public vantage points that are relied upon herein to describe the Project site's existing aesthetic condition and character. These photographs provide a representative visual depiction of the Project site's visual characteristics as seen from surrounding public viewing areas, which consist of public roads.

Due to the flat topography of the surrounding area and intervening development that blocks views, the Project site is not visible from any schools or prominent public places. The Project site would be visible from the UPRR mainline tracks, which are located approximately 0.02-mile west of the Project site, from the Sierra Highway Bike Trail, which is located approximately 0.03-mile west of the Project site, and from the adjacent to Sierra Highway. The site would also be visible from Columbia Way / East Avenue M which is directly adjacent to the site on the north. The photographs presented herein were all taken during the same session and reflect a field of view approximately five feet above the ground.

As shown in Figure 4.1-1, *Public Viewpoint Key Map*, the locations of the viewpoints are listed below as follows:

- Viewpoint 1 is from Sierra Court and Sierra Highway, located west of the Project site, looking east toward the Project site. The Project site is relatively flat and is undeveloped with a mix of vegetation types including shrubs, groundcover, and Joshua tree woodland, along with areas of bare ground. Sierra Highway is visible in the foreground of the photograph. The Sierra Highway Bike Trail is visible running through the center of the photograph. Beyond the bike trail, a wooden fence is visible, beyond which is the UPRR mainline tracks. Trees and ruderal vegetation are visible throughout the Project site. Municipal water towers are visible in the distant left portion of the photograph. The Sierra Pelona mountains are visible in the far distance along the horizon in the right portion of the photograph.

- Viewpoint 2 is from the Northrop Grumman Federal Credit Union located west of the Project site and west of Sierra Highway, looking east toward the Project site. Sierra Highway is visible in the foreground of the photograph. The Sierra Highway Bike Trail is visible running through the center of the photograph. Beyond the bike trail, a wooden fence is visible, beyond which is the UPRR mainline tracks. Trees and ruderal vegetation are visible throughout the Project site. The Sierra Pelona mountains are visible in the far distance along the horizon in the center and right portions of the photograph.

- Viewpoint 3 is from the intersection of Columbia Way / East Avenue M and the UPRR mainline tracks, looking southeast toward the Project site. The foreground of the photograph shows bare ground, ruderal vegetation, pieces of waste/trash material, and ballast from the railroad tracks. The left portion of the photograph shows Columbia Way / East Avenue M, and the right portion of the photograph shows the UPRR mainline tracks. Mountain views associated with the San Gabriel mountains are visible in the far distance along the horizon in the center and right portions of the photograph.

- Viewpoint 4 is from the intersection of Columbia Way / East Avenue M and 4th Street East, looking south toward the Project site. Columbia Way / Avenue M is visible in the foreground. Ruderal vegetation and western Joshua trees are visible across the Project site. Mountain views associated with the San Gabriel Mountains are visible along the horizon.

- Viewpoint 5 is from the intersection of Columbia Way / East Avenue M and 5th Street East, looking south toward the Project site. A chain link fence and a structure associated with the municipal water towers are visible in the left portion of the photograph. Ruderal vegetation and bare ground are visible throughout the photograph. Mountain views associated with the San Gabriel Mountains are visible along the horizon.

- Viewpoint 6 is from the intersection of Columbia Way / East Avenue M and Challenger Way, looking south toward the Project site. Ruderal vegetation and western Joshua trees are visible throughout the photograph. The unpaved, dirt portion of Challenger Way located south of Columbia Way / East Avenue M is visible running through the center of the photograph. A section of chain link fence is visible in the right portion of the photograph. Mountain views associated with the San Gabriel Mountains are visible along the horizon in the far distance.

- Viewpoint 7 is from Columbia Way / East Avenue M near its intersection with 15th Street East, looking southwest toward the Project site. 15th Street East is visible in the distance in the left portion of the photograph. Streetlights are visible running along 15th Street East in the left portion of the photograph. A dirt trail/road is visible running parallel to 15th Street East. Bare ground, ruderal vegetation and western Joshua trees are visible throughout the photograph. A catch basin/drainage grate is visible in the right portion of the photograph. Mountain views associated with the San Gabriel Mountains are visible along the horizon in the far distance.

B. Scenic Vistas and Scenic Resources

According to the City's General Plan EIR, a scenic vista is a viewpoint that provides expansive views of a highly valued landscape for the benefit of the public. Scenic vistas encompass long-range views and often emphasize large-scale natural features. Scenic views of the desert and local mountains are the predominant scenic vistas in Palmdale. Desert views are primarily available along the edges of the City, particularly in the undeveloped northern portions. Leona Valley, located approximately 4 miles to the west of the City is a scenic area. Distant views of the San Gabriel Mountains, located approximately 34 miles to the southeast of the City; the Sierra Pelona Mountains, located approximately 11 miles to the west of the City; and Tehachapi Mountains, located approximately 36 miles to the northwest of the City are available, but the best views of these mountains are from large areas of unobstructed open space. In other areas, views of the mountains are fully to partially obstructed by existing trees and buildings. Ritter Ridge and the San Gabriel Mountains provide views from their heights down into the rest of the Antelope Valley. Similarly, the hills behind Foothill Ranch offer scenic vistas. Most of the principal north-south avenues, especially 30th Street West, 20th Street West, Division Street, 10th Street East, 25th Street East, 30th Street East, 40th Street East, and 47th Street East) provide views southward of the mountains themselves. (City of Palmdale, 2022a, pp. 4.1-1 to 4.1-2)

The Project site is located within a relatively flat valley floor surrounded by rugged hills and mountains. In the far distance on clear days, views are possible from the Project site and from the roads surrounding the Project site, of the Tehachapi Mountains ridgelines to the northwest, the San Gabriel Mountains to the south and southeast and the Sierra Pelona Mountains to the west (Google Earth, n.d.).

Daylight, dusk, or nighttime views of the Project site and its visual setting are not distinctive and visual quality is low because the viewshed lacks vivid or highly noticeable features and is characterized by uninteresting and unvaried natural landscapes. Distant views of mountain ridgelines are the principal visual resource in this setting. Such views are easily acquired under existing conditions due to the open setting, although atmospheric haze in the region sometimes obscures or completely blocks the distant views of the mountains.

As identified in PMC Section 14.04.20, scenic tree resources include Joshua trees or those designated as 'desert vegetation' such as the California juniper (City of Palmdale, 2023, page 4.1-7). Joshua tree woodland and disturbed Joshua tree woodland generally occurs throughout the southern two-thirds of the Project site. This vegetation type is dominated by western Joshua trees with various shrubs as the dominant understory species. Creosote bush (*Larrea tridentata*) shrubs are the dominant understory species in the southeastern portion of the site. Dominant understory shrubs occur throughout the rest of this vegetation type include various species such as Nevada ephedra, Mormon tea, rubber rabbitbrush, Cooper's box-thorn, Anderson's box-thorn, and cheesbush. Additionally, one California juniper tree was documented in the survey area, located in the southwest portion of the Project site. (Psomas, 2022a, pp. 22, 32, 33)

C. *Light and Glare*

The Project site contains no sources of artificial exterior lighting under existing conditions. However, artificial, exterior lighting sources occur in the vicinity of the Project site, emanating from streetlights along Columbia Way / East Avenue M, Sierra Highway, USAF Plant 42 and associated runways, as well as the ARCO gas station, Northrop Grumman Federal Credit Union and the Sierra Highway Plaza located west of Sierra Highway.

4.1.2 Regulatory Setting

A. *City of Palmdale General Plan*

The Land Use and Community Design Element of the City's General Plan (Palmdale 2045) includes goals and policies that define and guide the desired visual character and quality of specific districts, village centers, and corridors in the City. Specific goals applicable to the Project evaluated in this EIR include but are not limited to high quality architecture and site design (Goal LUD-4), well-landscaped streets and civic spaces (Goal LUD-6), safe and welcoming neighborhoods and streets (Goal LUD-7), encouraging art and culture (Goal LUD-8), increasing job opportunities through expanded flex, light industrial, production/distribution/repair, and creative/flex land uses (Goal LUD-16), and facilitating industrial areas that support and buffer USAF Plant 42 while maintaining compatibility with adjacent non-industrial uses (Goal LUD-17). (City of Palmdale, 2023)

Development standards are included for industrially designated areas to ensure compatibility and aesthetically pleasing views, and to limit building heights in specific geographic areas to minimize viewshed impacts. Palmdale 2045 states that the General Plan's industrial land use designations allow for the same character (look and feel) for the public realm, building character, connectivity, and

parking. Palmdale 2045 recognizes that industrial areas are often characterized by larger blocks defined by public streets to accommodate large buildings and truck loading and outdoor storage functions. Employee parking lots are directed to be located beside or behind buildings rather than in front with loading areas screened from view from public rights-of-way. (City of Palmdale, 2023, p. 130)

Under existing conditions, the Project site is designated Employment Flex (EMPFX) which is a transition zone intended to permit mixed-use development of lighter industrial uses and more intensive service, retail, and commercial uses. (City of Palmdale, 2023, p. 133) The Project involves General Plan Amendment 22-001 (GPA 22-001) to change the site's General Plan land use designation from EMPFX to Specific Plan (SP).

B. Zoning

Pursuant to the PMC, as shown previously on Figure 2-5, under existing conditions, the Project site is zoned Office Flex (OFX). The Office Flex (OFX) zone is intended to allow mixed-use development of office/flex uses and supportive service, retail, and commercial uses. It allows a mix of businesses that provide a wide variety of employment-generating activities, including office, medical, research and development (R&D), and flex/makerspaces. Office uses may be standalone, or part of a large business/office park development. These areas are typically situated close to regional roadways or freeways. This zone implements the Industrial and Employment Flex General Plan land use designations. (City of Palmdale, 2023) (PMC, 2023). The Project Applicant filed an application with the City for a Zone Change (ZC 22-001) to change the zoning classification to Specific Plan (SP). The proposed ZC 22-001 would require future development on the Project site to comply with the applicable development standards and design guidelines of the SP 22-001 and, where applicable, the PMC.

C. City of Palmdale Municipal Code

1. Lighting Standards

PMC Chapter 17.86.030, Outdoor Lighting, addresses lighting standards and glare for all development areas. The PMC places restrictions on lighting fixture height not to exceed 35 feet when such fixtures are visible from public rights-of-way and less intensive, non-industrial use districts. The PMC establishes standards for glare from exterior lighting to adjacent properties or streets and restricts the use of flood-lighting fixtures and placement of security lighting fixtures. The PMC restricts lighting intensity to a minimum of 0.5-foot candle (at the darkest spot on the parking area) maintained. There shall be no more than a four to one (4:1) average illumination ratio (average to minimum) level of illumination shown between lighting standards. The maximum average illumination across the parking lot shall be no more than 2.4 foot candles.

For new development in Palmdale, an exterior lighting (photometric) plan consisting of a point-by-point foot candle layout (based on a 10-foot grid center) extending a minimum of 20 feet outside the property lines, prepared by an electrical engineer registered in the State of California, is required. (PMC, 2023, pp. 8-25 to 8-28)

2. Hillside Management

Chapter 17.100 of the PMC, Hillside Management, includes provisions that allow for development in hillside areas in conjunction with the preservation of natural open space on steeper terrain. The City's skyline backdrop provides views of significant natural ridgelines and prominent landforms. Natural landforms and features forming this backdrop include Ritter Ridge, Portal Ridge, Verde Ridge, the Ana Verde Hills, the Sierra Pelona mountains, and secondary ridges associated with the San Andreas Rift Zone and the lower foothills of the San Gabriel mountains. The City considers hillsides as a scenic skyline backdrop, which is visible from the Antelope Valley floor, or adjacent valleys. (City of Palmdale, 2022b, p.4.1-5) The Project site is relatively flat and is not within a hillside area

D. Specific Plan 22-001

As discussed in Section 2.0, *Environmental Setting*, SP 22-001 provides guidance for the development of a contemporary, master-planned commerce center at a location near major transportation facilities. The Antelope Valley Commerce Center is envisioned to contain industrial and commercial buildings supported by public roads and utility infrastructure systems, private driveways, parking lots, truck courts, lighting, landscaping, signage, and other functional and decorative features. The commercial and industrial uses in smaller buildings are positioned along Columbia Way / East Avenue M in the northwestern portion of the site, while industrial uses in larger warehouse buildings comprise the balance of the Specific Plan Area. The Specific Plan serves as the regulatory document for land use, development standards, and design guidelines and standards within the Specific Plan Area. In topics where the Specific Plan is silent, the PMC serves as the governing document for any decision on land use, development standards, and design guidelines and standards. Development of the proposed Project would occur consistent with the requirements set forth in the SP 22-001 document and with all other applicable City regulations.

E. Palmdale Public Art Master Plan

The Public Art Master Plan (2020) finalized in 2020, sets forth a vision and key goals to expand artwork on City property and within the public realm throughout Palmdale. The Plan includes a summary of key recommendations and a strategic approach to funding, managing, and reviewing local public art projects that will celebrate Palmdale's identity, expand economic opportunities, and encourage multidisciplinary collaboration. (City of Palmdale, 2020)

4.1.3 Basis for Determining Significance

According to Section I of Appendix G to the CEQA Guidelines, the proposed Project would result in a significant impact to aesthetics if the Project or any Project-related component would:

a) Have a substantial adverse effect on a scenic vista;
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

c) 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;

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

Regarding the determination of significance under Threshold (a), the scenic vistas available in the vicinity of the Project site are views of the mountains in the far distance on clear days; as such, if views of the mountains would be blocked, obscured, or substantially and adversely affected as seen from a public viewing area, leaving no opportunity for the public to experience the scenic view, the impact would be regarded as significant.

Regarding the determination of significance under Threshold (b), if the Project were to block, obscure, or substantially and adversely affect scenic resources such as trees, rock outcroppings, and/or historic buildings within a state scenic highway, leaving no opportunity for the public to experience the scenic resource, the impact would be regarded as significant.

Regarding the determination of significance under Threshold (c), because the Project site is located in an urbanized area, the Project would result in a significant impact if it were to conflict with applicable goals, policies, zoning, or other regulations governing scenic quality as specified in the City's General Plan (Palmdale 2045) or the PMC.

Regarding the determination of significance under Threshold (d), if the Project would create a new source of substantial light and glare that may adversely affect daytime and nighttime views, the impact would be regarded as significant. In this context, "substantial" is defined as light that produces more than 2.4-foot candle of light spillover beyond the property line, per PMC Section 17.86, Outdoor Lighting. (PMC, 2023)

4.1.4 IMPACT ANALYSIS

Threshold a: Would the Project have a substantial adverse effect on a scenic vista?

The Project site is not located in an area designated as scenic in the City's General Plan and is not within the City's Hillside Area (PMC Chapter 17.100, Hillside Management). On clear days, distant views of the Tehachapi Mountains ridgelines to the northwest, the San Gabriel Mountains to the south and southeast, and the Sierra Pelona Mountains to the west, are possible from the Project site and the roads surrounding the Project site (Google Earth, n.d.).

The Project would allow for the phased development of a master-planned commerce center containing industrial, commercial, and open space land uses, as well as roadways. Associated improvements to the Project site would include, but are not limited to, paved roads, paved parking areas, drive aisles,

truck courts, utility infrastructure, landscaping, water quality basins, signage, lighting, property walls, gates, and fencing, including perimeter fencing.

The Project site is relatively flat, was previously disturbed, and does not contain scenic vistas. Because views to the mountains beyond the Project site are at considerable distances between approximately 11 to 36 miles away, the temporary construction activities associated with the Project, which would entail excavation and earth-moving activities and the temporary introduction of construction vehicles and equipment to the area, have no potential to obscure a scenic vista. There are no pieces of construction equipment so large that scenic vistas could be blocked, obscured, or substantially and adversely affected as seen from public roads and viewing points surrounding the Project site; therefore, the Project's temporary short-term construction activities would not have a substantial adverse effect on a scenic vista.

The development standards contained in the SP 22-001 document provide for a maximum permissible building height of 75 feet for industrial buildings and 35 feet for commercial buildings that could be constructed within the Specific Plan Area. However, the proposed buildings to be constructed in Phase I would have variable rooflines with a maximum height of 49.6 feet. Implementation of the Project would introduce other vertical features to the Project site (walls, fences, landscaping, etc.) that would be shorter and would have substantially less physical mass than the buildings. In some instances, the proposed buildings may intermittently obstruct mountain views in the distance as drivers travel immediately adjacent to the Project site along existing Columbia Way / East Avenue M. Single views toward the mountains in the distance across the Project site from these roads typically are of short duration due to travel speeds, and viewer sensitivity is considered low-to-moderate because as the passing landscape becomes familiar, vehicle occupants, pedestrians, and bicyclists using roadway corridors typically focus their attention on the roadway, roadway signs, and surrounding traffic. The only potential for the Project to intermittently obscure a long-distance view of the mountains would be if a viewer were to look across the Project site while traveling adjacent to the Project site along Columbia Way / East Avenue M and Public Street C. Intermittent view obstruction is not considered a significant impact. Therefore, the Project would not have a substantial adverse effect on scenic vistas.

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

There are no designated or eligible State scenic highways within the immediate vicinity of the Project site. The nearest officially designated State scenic highway is the Angeles Crest Highway (Route 2) extension from Interstate 210 (near La Cañada Flintridge) to the boundary of Los Angeles and San Bernardino County (near Wrightwood), which is approximately 21.9 miles southeast of the Project site. (CalTrans, 2019). The view from the Project site to the eligible State scenic highway is obscured by the San Gabriel Mountains. Due to the distance of Angeles Crest Highway (Route 2) to the Project site and the presence of intervening development and topography, the Project site does not offer views of scenic resources from this road segment. Because the Project site is not located within a State scenic highway, the Project would not substantially damage scenic resources, including, but not limited to,

trees, rock outcroppings, and historic buildings within a state scenic highway; therefore, no impact would occur.

Threshold c: In non-urbanized areas, would the Project 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?

The Project site is located within the boundaries of the Census-defined Lancaster-Palmdale urbanized area (USCB, 2010). The U.S. Census Bureau (UCSB) defines an "urbanized area" as a densely settled core of census tracts and/or census blocks that have 50,000 or more residents and meet minimum requirements while also being adjacent to areas containing non-residential urban land uses. Because the Project site is in an area that meets the USCB's definition of an "urbanized area" and is planned for urban uses by the City's General Plan (Palmdale 2045), the evaluation herein focuses on the compatibility of the Project with, or potential conflict with, applicable zoning and other regulations governing scenic quality found in SP 22-001, the General Plan (Palmdale 2045) and the PMC. For reference and associated with the below evaluation, the Project's design, including site layout, architecture, and landscaping are discussed in more detail EIR Section 3.0, *Project Description*.

The proposed ZC 22-001 would require future development in the Specific Plan Area to comply with the applicable design standards and guidelines of SP 22-001, and the PMC where applicable when SP 22-001 is silent. Whenever the design standards and guidelines contained within SP 22-001 differ from those contained in the PMC, the provisions of SP 22-001 would take precedence. Any development standard, condition, or situation not specifically addressed within SP 22-001 would be subject to the applicable requirements of the PMC.

Development on the Project site would be required to comply with the development standards and design guidelines included as part of proposed SP 22-001, which have been designed to ensure that the property is developed in a manner that is not aesthetically offensive. Design guidelines included as part of SP 22-001 include guidance related to site design, architecture, and landscaping, compliance with which would be assured by the City's future review of implementing applications (e.g., plot plans, building permits, etc.). Mandatory compliance with the design guidelines and development standards of proposed SP 22-001 would ensure the Project site is developed in a manner that is not aesthetically offensive. All future development on the Project site would be required to comply with the SP 22-001 zoning ordinance and all other applicable requirements of the PMC.

Although the proposed Project would be developed in a manner that is not aesthetically offensive; that would not adversely affect scenic resources on site, such as hill forms, rock outcroppings, and trees; and that would not obstruct any prominent scenic vistas or views open to the public, under existing conditions the Project site consists of vacant land while lands in the immediate vicinity include USAF Plant 42 and associated runways as well as Sierra Highway. Development of the Project site with industrial, commercial, and open space land uses would represent a change to the existing visual character of the site as vacant and undeveloped to that of a master-planned commerce center, However

the use would be consistent with the surrounding and planned development in the General Plan and development would be required to comply with the applicable design standards and guidelines of SP 22-001, and the PMC where applicable when SP 22-001 is silent. Therefore, impacts would be less than significant and no mitigation is required.

To further promote the goals established in the City's Public Art Master Plan, the Project site would incorporate a public art element and/or contribute to the City's Public Arts Fund. As discussed in SP 22-001, any public art proposed would be placed at the entrances of the Antelope Valley Commerce Center to provide for maximum visibility for public viewing. Chapter 5, Development Standards, and Chapter 6, Design Standards and Guidelines, of SP 22-001 provide guidelines for public art within the Specific Plan Area.

Threshold d: Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed Project would convert the Project site from a vacant undeveloped property to a developed property containing high-cube fulfillment use, general light industrial use, public and quasi-public use, and general retail services. Phase 1 of the Project proposes the construction and operation of six industrial warehouse buildings, which would be illuminated by artificial lighting, have small elements of reflective building material such as window glass, and contain rooftop solar panels that may have reflective qualities. SP 22-001 Chapter 6 – Design Standards and Guidelines includes lighting standards and guidelines. The analysis below discusses the potential of the Project to result in a new source of substantial artificial light and glare.

A. Artificial Light

The Project site contains no sources of artificial lighting under existing conditions. However, artificial, exterior lighting sources occur in the vicinity of the Project site, emanating from streetlights along Columbia Way / East Avenue M bordering the Project site to the north; and the ARCO gas station, Northrop Grumman Federal Credit Union and the Sierra Highway Plaza) located along Sierra Highway to the west. New sources of artificial lighting would be introduced to the site as a result of implementation of the proposed Project. Lighting fixtures on the Project site would primarily be used to illuminate the driveway entrances, parking areas, truck docking areas, and building entrances. All new light sources associated with development in the Specific Plan Area would be required to comply with SP 22-001 Chapter 6, Section 6.3.7 Outdoor Lighting, which provides standards and guidelines related to outdoor lighting with the intent of minimizing glare and spillover onto public streets and adjacent properties. As included in SP 22-001, outdoor lighting fixtures utilized in the Project area would be complementary to other buildings in the area with respect to design, materials, and color. Neon lighting, low-pressure fixture sodium lighting, and flashing lights would be prohibited in the Specific Plan Area. Additionally, lighting that could be mistaken for airport lighting would be prohibited. Development in the Specific Plan Area would also be required to comply with PMC Chapter 17.86.030, Outdoor Lighting, which prevents light spillover, glare, nuisance, inconvenience, or hazardous interference of any kind on adjacent properties and streets. Mandatory compliance with

SP 22-001 design standards and guidelines along with the PMC lighting requirements would ensure that any pole-mounted and building-mounted lighting fixtures associated with the Project would not introduce any design features that would create a new source of light to the extent that would adversely affect day or nighttime views in the area. In addition, a photometric plan depicting light coverage in compliance with PMC Section 17.86.030, Outdoor Lighting, would be required as a condition of the Project's approval.

Because implementation of the Project would comply with the design standards and guidelines proposed by SP 22-001 and the PMC where applicable when SP 22-001 is silent, the Project would not create a new source of substantial light which would adversely affect day or nighttime views in the area; therefore, impacts would be less than significant and not mitigation is required.

B. Glare

With respect to glare, a majority of the building materials in the Antelope Valley Commerce Center would consist of painted tilt-up concrete panels. The paint colors proposed for the Project have a flat finish and would not produce glare, although the buildings would incorporate some minor glass elements. While window glazing has a potential to result in minor glare effects, such effects would not adversely affect daytime views experienced from surrounding properties, including motorists along nearby roadways. As described in SP 22-001, window and door glass would be clear or colored with subtle reflectiveness. Silver, bronze, or reflective glass is prohibited. Additionally, lighting that would create glare in the eyes of pilots of aircrafts using USAF Plant 42 would be prohibited Building setbacks would comply with the setbacks established in SP 22-001 and the PMC. The minimum building setbacks of 20 feet from Columbia Way / East Avenue M and 10 feet from local and collector streets as provided in SP 22-001 would minimize the potential for any vehicle headlights along Columbia Way / East Avenue M to shine into the buildings' glass elements. Also, the Project's conceptual landscaping plan calls for the Project site's frontages with Columbia Way / East Avenue M, Public Street A and Public Street B to be landscaped, inclusive of perimeter trees that would filter light from the nearby street system and limit the ability for vehicle headlights on public streets to directly shine onto any glass building elements. The glass elements in the buildings' designs also would be softened by landscaping proposed near the buildings' entrances, thereby precluding any substantial sun glare. Furthermore, the passenger vehicle parking areas would be substantially shaded by tree canopies, as shown on the Project's conceptual landscaping plan. Thus, glare impacts from proposed building elements and parking surfaces would be less than significant.

According to SP 22-001, the roofs of the buildings would be solar-ready. Solar panels would be installed over a minimum of 50 percent of the roof coverage per building as part of future occupant improvement plans. Some noticeable glare may occur but the panels are expected to absorb and not reflect sunlight. The design of the photovoltaic panels is not available at this time and cannot be available until the buildings' construction documents become available and the structural roof designs are determined and the panel manufacturer selected. Rooftop mounted solar panels would be required to be reviewed and approved by the City prior to installation. As such, glare impacts would be less than significant and would not adversely affect day or nighttime views in the area. Additionally,

consideration would be given to ensure glare or reflectivity from the panels would not interfere with adjacent airport operations. Of greatest concern to views are reflection or glare observed by drivers. Because the solar panels would be placed on the buildings' roofs and sit flat on the roofs, no reflected glare is expected to affect nearby roadways or adjacent sensitive land uses and therefore this potential impact is considered less than significant.

The Project would be required to comply with the development standards proposed by SP 22-001 and the PMC where applicable when SP 22-001 is silent; therefore, the Project would not create a new source of substantial glare which would adversely affect day or nighttime views in the area. Impacts would be less than significant and no mitigation is required.

4.1.5 Cumulative Impact Analysis

This cumulative impact analysis considers development of the proposed Project in conjunction with other planned development in the area within the same viewsheds. The ground-level viewshed of the Project site extends to the immediate site vicinity, as the Project site is a vacant property directly surrounded on all sides by roads, vacant land, and some developments. To the north, the ground-level viewshed extends beyond Columbia Way / East Avenue M, across properties that are a mix of vacant and developed land. To the east, the ground-level viewshed extends beyond Challenger Way, across vacant and developed land associated with the USAF Plant 42 facility and the inactive Palmdale Regional Airport. To the south, the ground-level viewshed extends beyond Avenue M-12, across vacant and developed land associated with the USAF Plant 42 facility and the inactive Palmdale Regional Airport. To the west, the ground-level viewshed extends beyond the UPRR mainline tracks and Sierra Highway, across 10th Street West, across properties that are a mix of vacant and developed land.

The Project site and its surroundings are located within a relatively flat valley floor flanked by rugged hills and mountains on the horizon at distances of between 11 and 36 miles. Although views to the mountains are sometimes obscured due to atmospheric haze, the horizon viewshed on a clear day extends to the Tehachapi Mountains to the northwest, the San Gabriel Mountains to the south and southeast, and the Sierra Pelona Mountains to the west.

Cumulative Effects to Scenic Vistas

The Project site is relatively flat and does not contribute to any prominent scenic vistas. Although views of the surrounding mountains at distances of between 11 and 36 miles are available in the Project area, such views are readily available throughout the cumulative study area including in the ground-level viewshed and horizon viewshed and are not unique to the Project site or the vicinity of the Project site. Future development in the Specific Plan Area would be required to comply with the design standards and guidelines provided in SP 22-001 and the PMC where applicable when SP 22-001 is silent. Furthermore, other existing and reasonably foreseeable planned development in the cumulative study area with the potential to intermittently obstruct horizon views in visual foregrounds would also be required to comply with the applicable policies of the PMC, which limit building heights and other physical features to heights that would not impede on a scenic vista. Because of the low-profile nature

of urban development compared to the heights of the mountains, there is no cumulative development in the valley floor that would block, obscure, or substantially and adversely affect mountain views as seen from public streets around the Project site and other public streets and public viewing areas across the valley. Because opportunities would remain for scenic mountain views after development of the Project and after the development of cumulative projects in the ground-level and horizon viewsheds, the Project would not result in a cumulatively considerable effect on scenic vistas. Views of the mountains would remain available to the public traveling on public roads adjacent to and near the Project site. Because the public would have opportunities to experience mountain views on the horizon, regardless of development in the ground-level foreground, the cumulative impact to scenic vistas would be less than significant and the Project's contribution would be less than cumulatively considerable.

Cumulative Effects to Views from a State Scenic Highway

There are no designated or eligible State scenic highways within the immediate vicinity of the Project site (CalTrans, 2019). The nearest officially designated State scenic highway is Angeles Crest Highway (Route 2), approximately 21.9 miles southeast of the Project. Therefore, the proposed Project has no potential to contribute to a cumulatively significant impact to damage scenic resources within a State scenic highway. Thus, no impact would occur on a direct or cumulatively considerable basis.

Cumulative Effects Associated with Inconsistencies with Policies and Regulations Governing Scenic Quality

The surrounding area of the Project site contains a variety of undeveloped vacant land and developed land with a mixture of uses such as commercial, light industrial, retail buildings, airport, and healthcare. Future development in the Specific Plan Area would be required to comply with the design standards and guidelines provided in SP 22-001 and the PMC where applicable when SP 22-001 is silent. Any other development in the immediately surrounding area would be subject to applicable development regulations and design standards, including, but not limited to, PMC Title 17. Compliance with applicable development regulations and design standards would ensure that cumulative development projects incorporate high quality building materials, site design principles, and landscaping to preclude potential conflicts with applicable zoning and other regulations governing visual quality. Thus, a less than significant impact would occur on a cumulatively considerable basis.

Cumulative Light or Glare Effects

With respect to potential cumulative light and glare impacts, the Project would be required to comply with the development standards proposed by SP 22-001 and the PMC where applicable when SP 22-001 is silent. In turn, other development projects in the City would be required to comply with the applicable provisions of the PMC. Mandatory compliance with regulatory requirements combined with the Project's proposed design features that reduce light and glare would assure that impacts are less than cumulatively significant and that the contribution of the Project to light and glare effects would be less than cumulatively considerable.

4.1.6 Significance of Impacts Before Mitigation

Threshold a: No Impact. The Project site does not comprise a scenic vista and no unique views to scenic vistas are visible from the property that are not also visible from other areas surrounding the site. The Project would not substantially change a scenic vista or substantially block or obscure a scenic vista; therefore, because the Project would not have a substantial adverse effect on a scenic vista, no impact would occur.

Threshold b: No Impact. Because the Project site is not located within a State scenic highway, the Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; therefore, no impact would occur.

Threshold c: Less than Significant Impact. The Project site is located within an urbanized area. Because the Project would not conflict with applicable zoning and other regulations governing scenic quality either during short-term construction or long-term operation of the Project, impacts would be less than significant, and no mitigation is required.

Threshold d: Less than Significant Impact. Project-related development would not create substantial light or glare. Compliance with the design standards and guidelines proposed by SP 22-001 and the PMC where applicable when SP 22-001 is silent would ensure that implementation of the Project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Impacts would be less than significant and no mitigation is required.

4.1.7 Mitigation

Impacts would be less than significant; therefore, no mitigation is required.

4.1.8 Design Features and Regulatory Requirements

SP 22-001 establishes design standards and guidelines for building forms and the built environment for development in the Specific Plan Area, including criteria addressing architecture, lighting, signage, and landscape design. Chapter 5, Development Standards, and Chapter 6, Design Standards and Guidelines, of SP 22-001 provide design standards and guidelines to ensure that the Project's industrial and commercial buildings would be aesthetically pleasing.



Viewpoint 1: From Sierra Hwy. & Sierra Ct. looking east towards the Project site.



Viewpoint 2: From Northrop Grumman Federal Credit Union along Sierra Hwy. looking east towards the Project site.



Viewpoint 3: From Columbia Way / East Avenue M & the Union Pacific Railroad looking southeast towards the Project site.



Viewpoint 4: From Columbia Way / East Avenue M & 4th St. E. looking south towards the Project site.



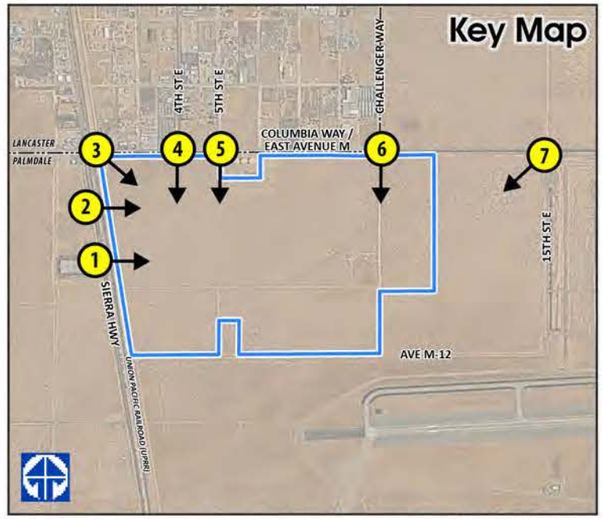
Viewpoint 5: From Columbia Way / East Avenue M & 5th St. E. looking south towards the Project site.



Viewpoint 6: From Columbia Way / East Avenue M & Challenger Way looking south towards the Project site.



Viewpoint 7: From Columbia Way / East Avenue M & Challenger Way looking southwest towards the Project site.



Source(s): Nearmap Imagery (2022), T&B Planning, Inc.

Figure 4.1-1

Not to Scale

Public Viewpoint Key Map



Viewpoint 1: From Sierra Hwy. & Sierra Ct. looking east towards the Project site.



Source(s): Nearmap Imagery (2022), T&B Planning, Inc.



Viewpoint 2: From Northrop Grumman Federal Credit Union along Sierra Hwy. looking east towards the Project site.

Figure 4.1-2

Not to Scale

Viewpoints 1 & 2



Viewpoint 3: From Columbia Way / East Avenue M & the Union Pacific Railroad looking southeast towards the Project site.



Source(s): Nearmap Imagery (2022), T&B Planning, Inc.



Viewpoint 4: From Columbia Way / East Avenue M & 4th St. E. looking south towards the Project site.

Figure 4.1-3

Not to Scale

Viewpoints 3 & 4



Viewpoint 5: From Columbia Way / East Avenue M & 5th St. E. looking south towards the Project site.



Source(s): Nearmap Imagery (2022), T&B Planning, Inc.



Viewpoint 6: From Columbia Way / East Avenue M & Challenger Way looking south towards the Project site.

Figure 4.1-4

Not to Scale

Viewpoints 5 & 6



Source(s): Nearmap Imagery (2022), T&B Planning, Inc.



Viewpoint 7: From Columbia Way / East Avenue M & Challenger Way looking southwest towards the Project site.

Figure 4.1-5

Not to Scale

Viewpoint 7

4.2 AIR QUALITY

The analysis in this Subsection is based on two technical studies prepared by Urban Crossroads, Inc. The first report addresses the Project's potential to produce air pollutant emissions, and is titled, "Antelope Valley Commerce Center Air Quality Impact Analysis" (herein, "AQIA"), dated November 14, 2023, and is included as *Technical Appendix B1* to this EIR (Urban Crossroads, 2023a). The second report evaluates potential air pollutant-related health risk effects from the proposed Project, and is titled, "Antelope Valley Commerce Center Mobile Source Health Risk Assessment" (herein, "HRA"), dated November 14, 2023, and is included as *Technical Appendix B2* to this EIR (Urban Crossroads, 2023b). All references used in this subsection are included in EIR Section 7.0, *References*.

4.2.1 EXISTING CONDITIONS

A. *Mojave Desert Air Basin (MDAB)*

The Project site is located in the Mojave Desert Air Basin (MDAB) which is under the jurisdiction of the Antelope Valley Air Quality Management District (AVAQMD). The AVAQMD boundaries start to the south of the City of Palmdale, just outside of Acton, north to the Kern County line, east to the San Bernardino County line, and west to the Quail Lake area. The AVAQMD was established in 1997 by the State Legislature pursuant to California Health and Safety Code, Division 26, Part 3, Chapter 14, which separated the Antelope Valley and northern Los Angeles County from the South Coast Air Quality Management District (SCAQMD). The AVAQMD is the local agency with the primary responsibility for the control of non-vehicular sources of air pollution throughout the Antelope Valley. (AVAQMD, n.d.) (Urban Crossroads, 2023a, p. 11)

B. *Regional Climate*

The MDAB is comprised of mountain ranges with long broad valleys with many of the lower mountains within the vast terrain rising from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. The prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north; air masses pushed onshore in Southern California by differential heating are channeled through the MDAB. The MDAB is separated from the Southern California coastal and Central California valley regions by mountains (highest elevation is approximately 10,000 feet), whose passes form the main channels for these air masses. The Mojave Desert is bordered on the southwest by the San Bernardino Mountains, separated from the San Gabriel Mountains by the Cajon Pass (4,200 feet). A lesser pass lies between the San Bernardino Mountains and the Little San Bernardino Mountains in the Morongo Valley. The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley), whose primary channel is the San Gorgonio Pass (2,300 feet) between the San Bernardino and San Jacinto Mountains. (Urban Crossroads, 2023a, p. 11)

During the summer, the MDAB is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak

and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The MDAB averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation). The MDAB is classified as a dry-hot desert climate, with portions classified as dry-very hot desert, to indicate that at least three months have maximum average temperatures over 100.4 degrees Fahrenheit (100.4°). Snow is common above 5,000 feet in elevation, resulting in moderate snowpack and limited spring runoff. Below 5,000 feet, any precipitation normally occurs as rainfall. Pacific storm fronts normally move into the area from the west, driven by prevailing winds from the west and southwest. During late summer, moist high-pressure systems from the Pacific collide with rising heated air from desert areas, resulting in brief, high-intensity thunderstorms. (Urban Crossroads, 2023a, pp. 11-12)

C. *Criteria Air Pollutants and Associated Human Health Effects*

Air quality in the Antelope Valley is affected by various emissions sources (mobile, industry, etc.) and atmospheric conditions such as wind speed, wind direction, temperature, and rainfall. Criteria air pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are discussed below.

1. Carbon Monoxide

Carbon Monoxide (CO) is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O_3), motor vehicles operating at slow speeds are the primary source of CO in the MDAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections. CO is generated by any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment, and residential heating. (Urban Crossroads, 2023a, Table 2-1)

❑ Human Health Effects

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes. (Urban Crossroads, 2023a, Table 2-1)

2. *Sulfur Dioxide*

Sulfur Dioxide (SO_2) is a colorless gas or liquid that enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfates (SO_4). Collectively, these pollutants are referred to as sulfur oxides (SO_X). SO_X is generated by coal or oil burning power plants and industries, refineries, and diesel engines. (Urban Crossroads, 2023a, Table 2-1)

❑ Human Health Effects

A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or whether one pollutant alone is the predominant factor. (Urban Crossroads, 2023a, Table 2-1)

3. *Nitrogen Oxides*

Nitrogen oxides (NO_X) consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with oxygen (O_2). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitoring stations. NO_X is generated by any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating. (Urban Crossroads, 2023a, Table 2-1)

❑ Human Health Effects

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves, which can result in concentrations that are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in

individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. In animals, exposure to levels of NO_2 considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O_3 exposure increases when animals are exposed to a combination of O_3 and NO_2. (Urban Crossroads, 2023a, Table 2-1)

4. Ozone

Ozone (O_3) is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and NO_X, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant. O_3 is formed when reactive organic gases (ROG) and nitrogen oxides react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, or oil) as well as the use of solvents, petroleum processing and storage and pesticides. (Urban Crossroads, 2023a, Table 2-1)

❑ Human Health Effects

Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O_3 effects. Short-term exposure (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. Elevated O_3 levels are associated with increased school absences. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and live in communities with high O_3 levels. O_3 exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O_3 may be more toxic than exposure to O_3 alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes. (Urban Crossroads, 2023a, Table 2-1)

5. Particulate Matter

Particulate matter less than 10 microns (PM_{10}) is a major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduced visibility (haze) which is caused by the scattering of light and consequently, the significant reduction of air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM_{10} is considered a criteria air pollutant. Sources of PM_{10} include road dust, windblown dust and

construction. PM_{10} also is formed from other pollutants (acid rain, NO_X, SO_X, organics), and from the incomplete combustion of any fuel (Urban Crossroads, 2023a, Table 2-1).

Particulate matter less than 2.5 microns ($PM_{2.5}$) is a criterial air pollutant and a similar air pollutant to PM_{10} consisting of tiny solid or liquid particles which are 2.5 microns or smaller, often referred to as fine particles. These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO_2 released from power plants and industrial facilities, and nitrates that are formed from NO_X released from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ comes from fuel combustion in motor vehicles, equipment and industrial sources, and residential and agricultural burning. $PM_{2.5}$ also is formed from reaction of other pollutants (acid rain, NO_X, SO_X, organics). (Urban Crossroads, 2023a, Table 2-1)

❑ **Human Health Effects**

A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in lifespan, and an increased mortality from lung cancer. Daily fluctuations in $PM_{2.5}$ concentration levels also have been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in healthy children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter. The elderly, people with pre-existing respiratory or cardiovascular disease, and children, appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$. (Urban Crossroads, 2023a, Table 2-1)

6. Volatile Organic Compounds (VOCs) and Reactive Organic Gases (ROGs)

VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air and contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor; examples of VOC include gasoline, alcohol, and the solvents used in paints. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms VOC and Reactive Organic Gases ROGs (see below) are interchangeable. (Urban Crossroads, 2023a, Table 2-1)

Organic chemicals are widely used as ingredients in household products. Paints, varnishes and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products. These products can release organic compounds while being used and to some degree, when being stored. (Urban Crossroads, 2023a, Table 2-1)

❑ **Human Health Effects**

Breathing VOCs can irritate the eyes, nose and throat, can cause difficulty breathing, nausea, and can damage the central nervous system as well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several. Health effects for ROGs are similar to those for VOCs (Urban Crossroads, 2023a, Table 2-1)

7. Lead

Lead (Pb) is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. The major sources of lead emissions are ore and metals processing, particularly lead smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. Lead is produced from metal smelters, resource recovery, leaded gasoline, and the deterioration of lead paint. (Urban Crossroads, 2023a, Table 2-1)

❑ **Human Health Effects**

Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can cause anemia, lethargy, seizures, and death, although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb due to previous environmental Pb exposure of their mothers. (Urban Crossroads, 2023a, Table 2-1)

8. Odor

Odor is referred to as the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves. Odors can come from many sources including animals, human activities, industry, nature, and vehicles. Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress. (Urban Crossroads, 2023a, Table 2-1)

D. Existing Air Quality

Existing air quality is measured at established AVAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 4.2-1, *Ambient Air Quality Standards*. The determination of whether the quality of a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. (Urban Crossroads, 2023a, p. 19)

At the time this EIR was prepared, the most recently published State and federal standards applicable in California, which were updated by the California Air Resources Board (CARB) on May 4, 2016, are presented in Table 4.2-1. The air quality in a region is considered to be in attainment by the State if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, PM_{10}, and $PM_{2.5}$ do not exceed the standards shown in Table 4.2-1, and if the measured levels for other pollutants either meet or do not exceed the standards shown in Table 4.2-1. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the associated Air District meets the standards set by the U.S. Environmental Protection Agency (EPA) or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is prepared by CARB that outlines the measures that the State will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will then designate the area as a maintenance area. (Urban Crossroads, 2023a, p. 19)

Table 4.2-1 Ambient Air Quality Standards

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flouresence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page ...

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Table footnotes continued -

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon 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.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

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

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

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

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

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (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.

11. 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 1-hour national 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 one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' 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.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one 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.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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(Urban Crossroads, 2023a, Table 2-2)

2. Regional Air Quality

Air pollution contributes to a wide variety of adverse human health effects. The EPA has established NAAQS for six of the most common air pollutants: O_3, PM_{10}, $PM_{2.5}$, CO, NO_2, SO_2, and Pb, which are known as criteria pollutants. The AVAQMD monitors levels of various criteria pollutants at an air monitoring station in Lancaster, California. On January 25, 2024, CARB adopted the 2023 amendments to the State and national area attainment designations. Table 4.2-2, *Attainment Status of Criteria Pollutants in the MDAB*, provides a summary of the attainment designations for the MDAB. Appendix 2.1 to the AQIA (*Technical Appendix B1*) prepared for the Project, provides geographic representation of the State and federal attainment status for applicable criteria pollutants within the MDAB. (Urban Crossroads, 2023a, p. 22)

Table 4.2-2 Attainment Status of Criteria Pollutants in the MDAB

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	No 1-hour standard
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Unclassified/Attainment
$PM_{2.5}$	Attainment	Unclassified/Attainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment
Pb	Attainment	Unclassified/Attainment

Note: See Appendix 2.1 to the Project's AQIA (*Technical Appendix B1*) for a detailed map of State/National Area Designations within the MDAB.
Source date: Adopted January 25, 2024.
(Urban Crossroads, 2023a, Table 2-3)

3. Local Air Quality

Relative to the Project site, the nearest long-term air quality monitoring site for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ is available from the AVAQMD Lancaster-43301 Division Street monitoring station, located approximately 1.7 miles northeast of the Project site. For information disclosure purposes, the most recent three years of data available is shown on Table 4.2-3, *Project Area Air Quality Monitoring Summary (2020-2022)*, which identifies the number of days ambient air quality standards were exceeded for the study area and is considered to be representative of the local air quality at the Project site. Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ was obtained using the CARB iADAM: Air Quality and Data Statistics and the Air Quality and Meteorological Information System (AQMIS). Data for SO_2 is omitted because attainment is regularly met and few monitoring stations measure SO_2 concentrations. (Urban Crossroads, 2023a, p. 22)

Table 4.2-3 Project Area Air Quality Monitoring Summary (2020-2022)

Pollutant	Standard	Year		
		2020	2021	2022
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.099	0.086	0.098
Maximum Federal 8-Hour Concentration (ppm)		0.083	0.079	0.082
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	4	0	3
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	8	3	33
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	1.62	1.42	-
Maximum Federal 8-Hour Concentration	> 20 ppm	0.71	0.75	-
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.052	0.046	0.044
Annual Federal Standard Design Value		0.008	0.008	0.008
PM_{10}				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 150 $\mu g/m^3$	192.3	411.2	76.2
Annual Federal Arithmetic Mean ($\mu g/m^3$)		30.6	29.6	26.0
Number of Days Exceeding Federal 24-Hour Standard	> 150 $\mu g/m^3$	1	1	1
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 35 $\mu g/m^3$	74.7	35.7	15.1
Annual Federal Arithmetic Mean ($\mu g/m^3$)	> 12 $\mu g/m^3$	9.3	8.1	-
Number of Days Exceeding Federal 24-Hour Standard	> 35 $\mu g/m^3$	9	1	0

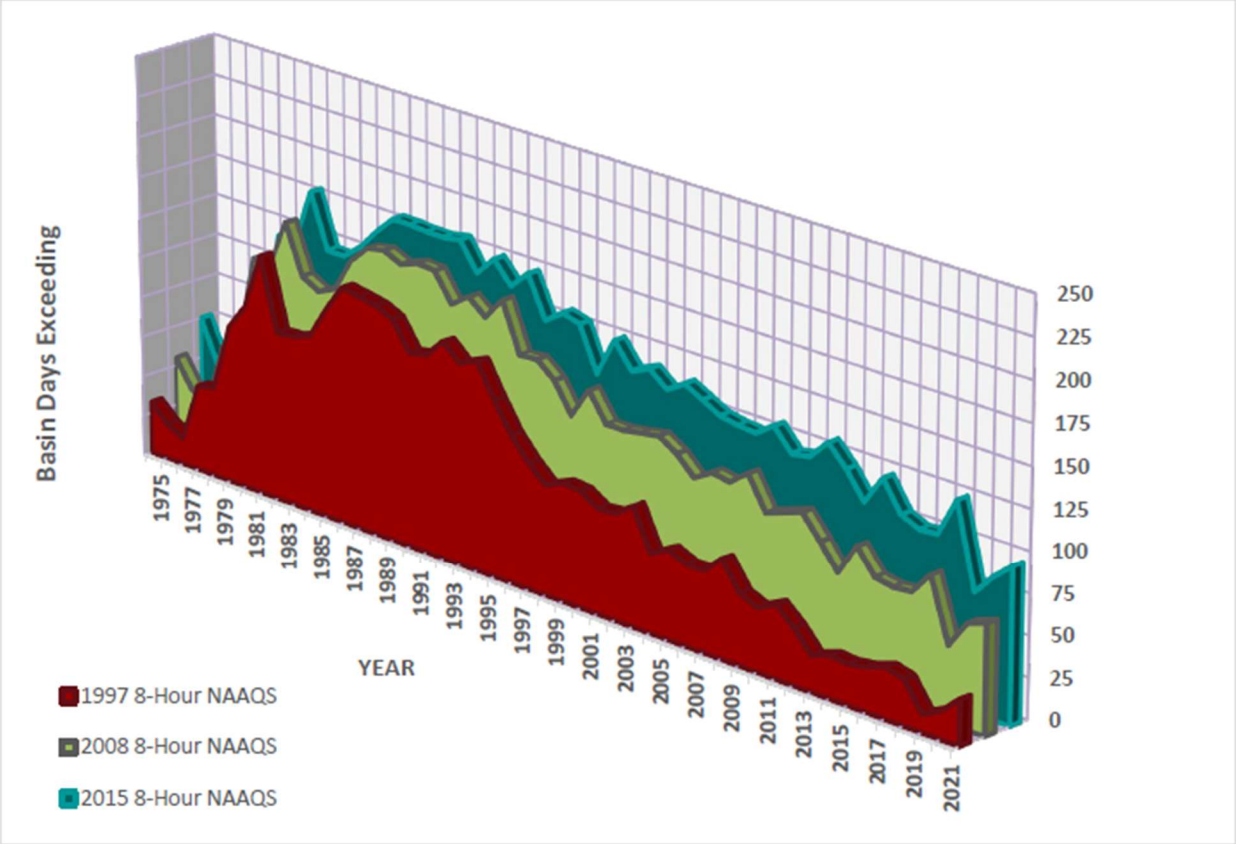
Source: California Air Resource Board iADAM: Air Quality Data Statistics and AQMIS
ppm = Parts Per Million
$\mu g/m^3$ – microgram per cubic meter
-- = data not available
(Urban Crossroads, 2023a, Table 2-4)

E. Regional Air Quality Improvement

The Project is within the jurisdiction of the AVAQMD and is located in the MDAB. AVAQMD rule development has resulted in improvement in air quality for the MDAB. Nearly all control programs developed through the early 2000s relied on 1) the development and application of cleaner technology; 2) add-on emission controls; and 3) uniform CEQA review throughout the MDAB. Industrial emission sources have been substantially reduced by this approach and vehicular emissions have been reduced by technologies implemented at the State level by CARB. The single threshold of significance used to assess Project direct and cumulative impacts has in fact "worked" as evidenced by the track record of the air quality in the MDAB improving over the course of the past decades. (Urban Crossroads, 2023a, p. 27)

Emissions of O_3, NO_X, and VOCs have been decreasing in the MDAB since 1975. These decreases result primarily from motor vehicle controls and reductions in evaporative emissions. Although total vehicle miles traveled (VMT) in the MDAB continue to increase, NO_X and VOC levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_X emissions from electric utilities have also decreased due to the use of cleaner fuels and renewable energy. O_3 contour maps show that the number of days exceeding the 8-hour NAAQS has generally decreased between 1975 and 2021. For 2021, there was an overall increase in exceedance days compared with the 1973 period. However, as shown on Table 4.2-4, *MDAB O3 Trend*, O_3 levels have increased in the past two years due to higher temperatures and stagnant weather conditions. Notwithstanding, O_3 levels in the MDAB have generally decreased over the last 30 years. (Urban Crossroads, 2023a, p. 27)

Table 4.2-4 MDAB O_3 Trend



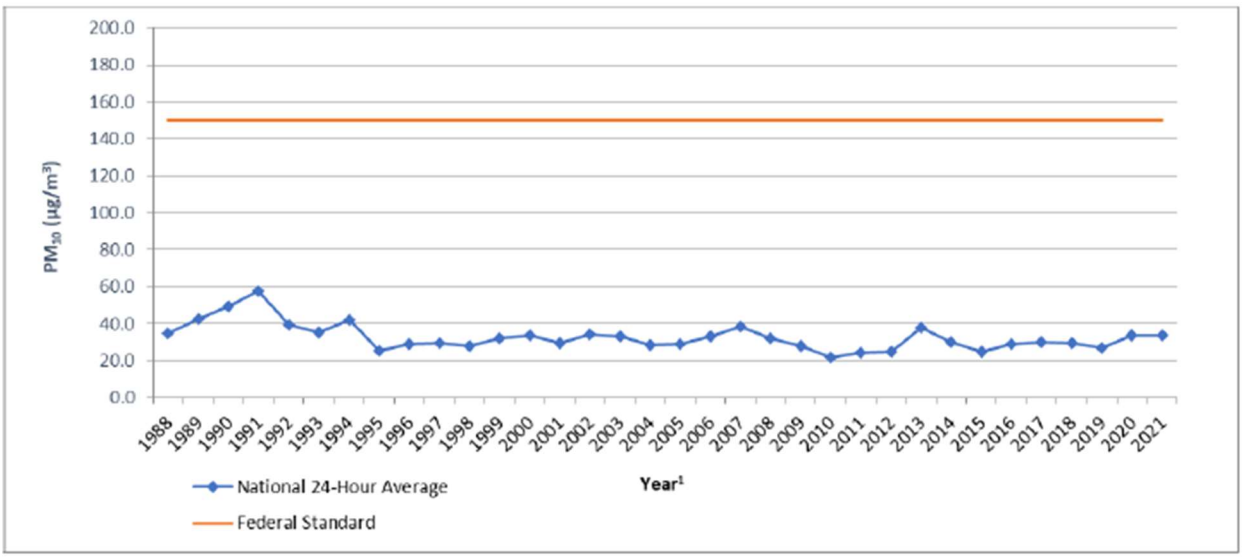
Source: 2020 CARB, iADAM: Top Four Summary: PM_{10} 24-Hour Averages (1973-2021)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.
(Urban Crossroads, 2023a,Table 2-5)

The most recent PM_{10} statistics show a slight improvement as depicted in Table 4.2-5, *MDAB 24-Hour Average Concentration PM10 Trend (Based on Federal Standard)*[1] and Table 4.2-6, *MDAB Annual Average Concentration PM10 Trend (Based on State Standard)*[1]. During the period for which data is available, the 24-hour national annual average concentration for PM_{10} decreased by approximately two percent, from 34.7 microgram per cubic meter (µg/m³) in 1988 to 33.9 µg/m³ in 2021. The 24-hour state annual average concentration for PM_{10}, has decreased by approximately 35 percent, from 42.4 µg/m³ in 1989 to 27.8 µg/m³ in 2021. (Urban Crossroads, 2023a, p. 28)

Table 4.2-7, *MDAD 24-Hour Average Concentration PM2.5 Trend (Based On Federal Standard)*[1] and Table 4.2-8, *MDAB Annual Average Concentration PM2.5 Trend (Based on State Standard)*[1] show the most recent 24-hour average $PM_{2.5}$ concentrations in the MDAB from 1999 through 2021. Overall, the national and State annual average concentrations have decreased by almost 13 percent and 8 percent respectively. (Urban Crossroads, 2023a, p. 30)

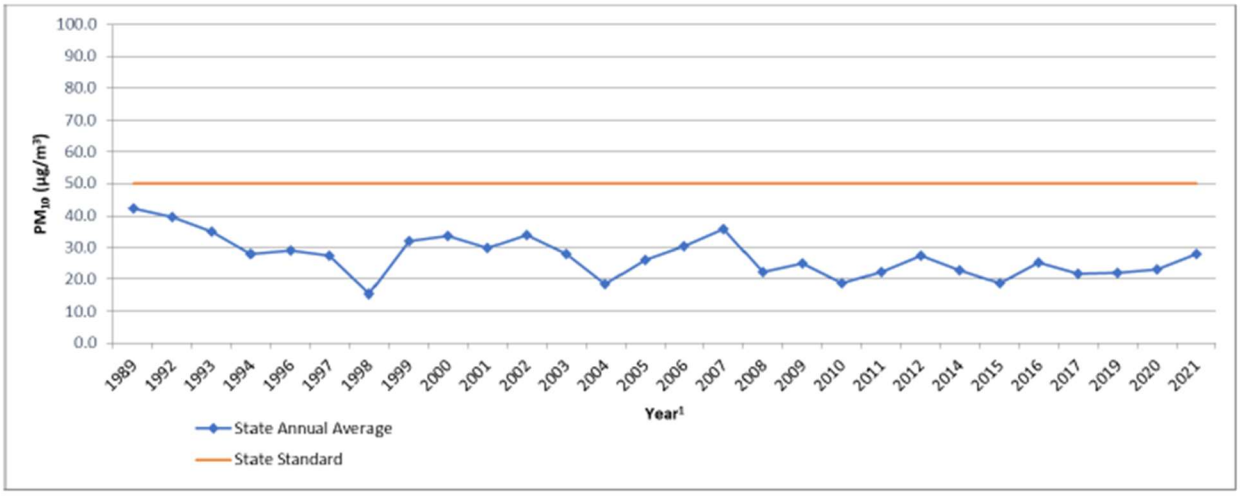
The most recent NO_2 data for the MDAB is shown in Table 4.2-9, *MDAB 1-Hour Average Concentration NO2 Trend (Based on Federal Standard)* and Table 4.2-10, *MDAB 1-Hour Average Concentration NO2 Trend (Based on State Standard)*. Over the last 50 years, NO_2 values have decreased substantially; the peak 1-hour national and State averages for 2021 is approximately 43 percent lower than what it was during 1970. NO_2 is formed from NO_X emissions, which also contribute to O_3. As a result, the majority of the future emission control measures would be implemented as part of the overall O_3 control strategy. Many of these control measures would target mobile sources, which account for more than three-quarters of California's NO_X emissions. (Urban Crossroads, 2023a, p. 31)

Table 4.2-5 MDAB 24-Hour Average Concentration PM_{10} Trend (Based on Federal Standard)[1]



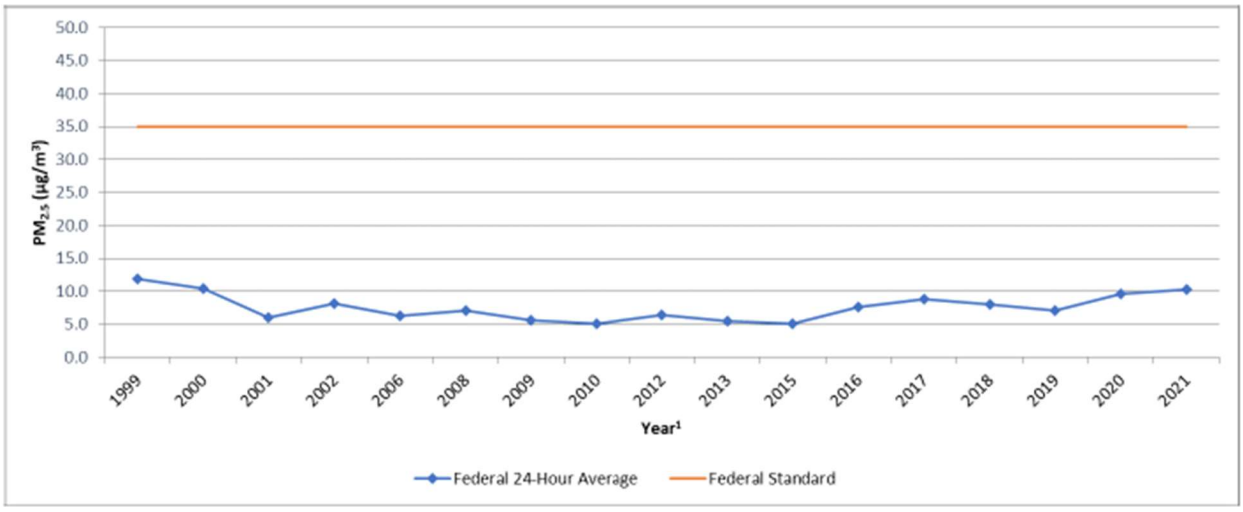
Source: 2020 CARB iADAM: Top Four Summary: PM_{10} 24-Hour Averages (1988-2021)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.
(Urban Crossroads, 2023a, Table 2-6)

Table 4.2-6 MDAB Annual Average Concentration PM_{10} Trend (Based on State Standard)[1]



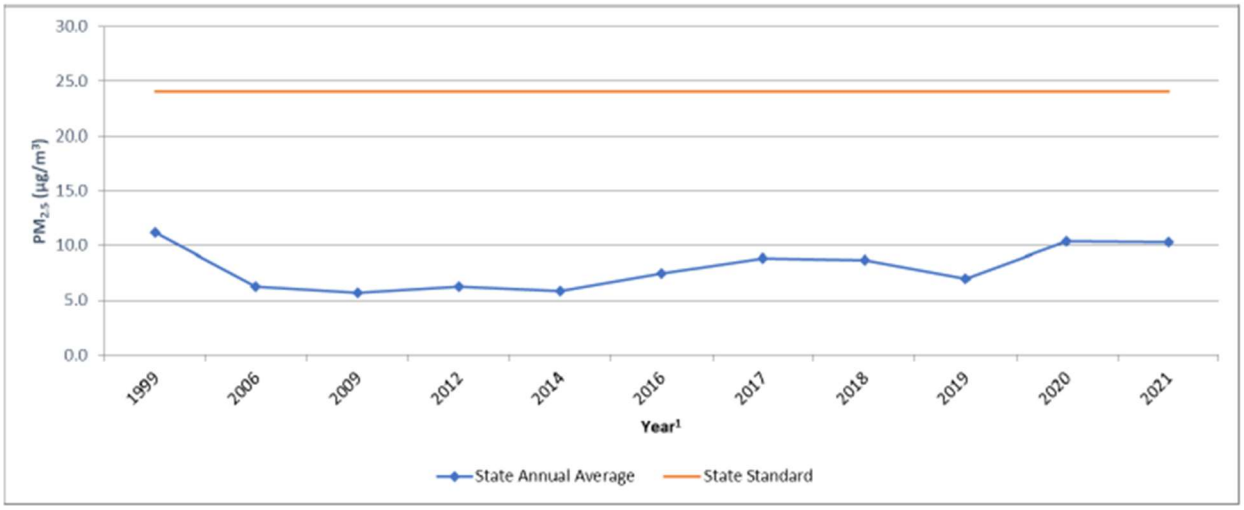
Source: 2020 CARB, iADAM: Top Four Summary: PM_{10} 24-Hour Averages (1988-2021)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.
(Urban Crossroads, 2023a, Table 2-7)

Table 4.2-7 MDAD 24-Hour Average Concentration $PM^{2.5}$ Trend (Based On Federal Standard)[1]



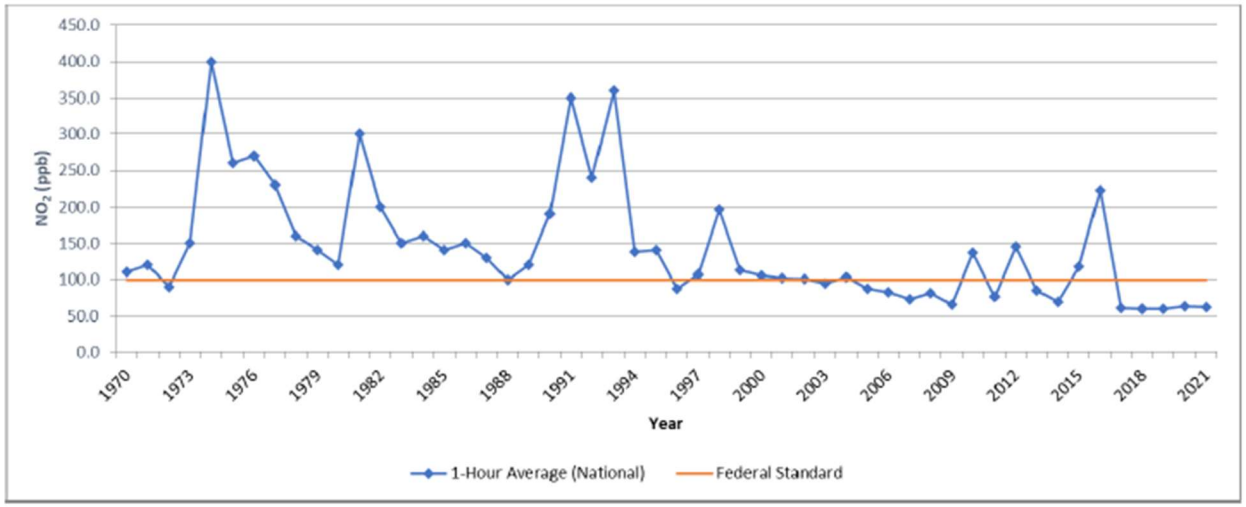
Source: 2020 CARB, iADAM: Top Four Summary: $PM_{2.5}$ 24-Hour Averages (1989-2021)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.
(Urban Crossroads, 2023a, Table 2-8)

Table 4.2-8 MDAB Annual Average Concentration $PM^{2.5}$ Trend (Based on State Standard)[1]



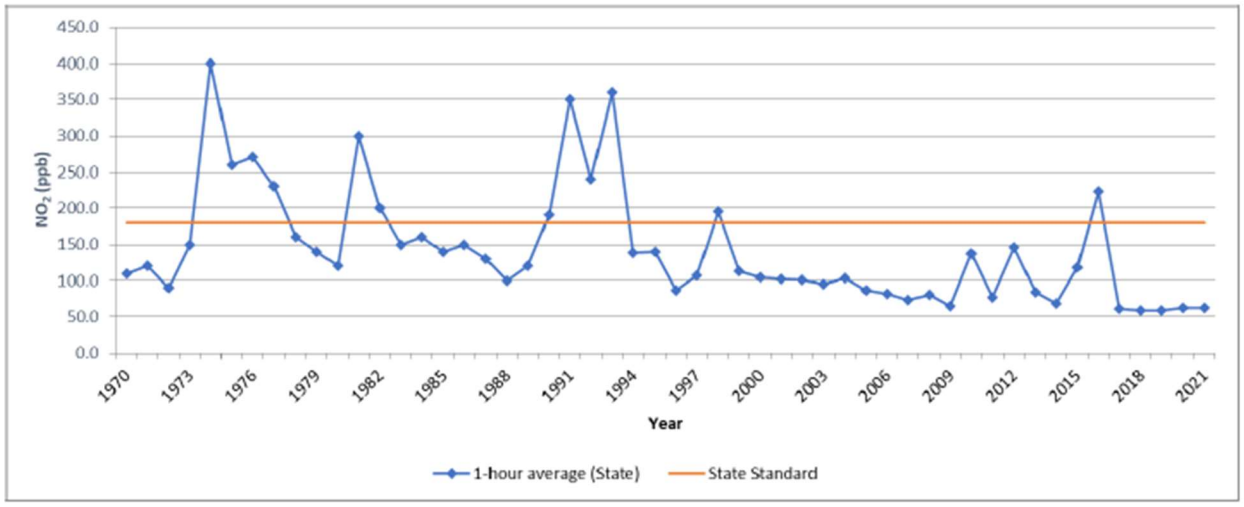
Source: 2020 CARB, iADAM: Top Four Summary: $PM_{2.5}$ 24-Hour Averages (1999-2020)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.
(Urban Crossroads, 2023a, Table 2-9)

Table 4.2-9 MDAB 1-Hour Average Concentration NO_2 Trend (Based on Federal Standard)



Source: 2020 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (1970-2020)
(Urban Crossroads, 2023a, Table 2-11)

Table 4.2-10 MDAB 1-Hour Average Concentration NO_2 Trend (Based on State Standard)



Source: 2020 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (1970-2020)
(Urban Crossroads, 2023a,Table 2-12)

2. Toxic Air Contaminant (TAC) Trends

In 1984, as a result of public concern for potential exposure to airborne carcinogens, CARB adopted regulations to reduce the amount of Toxic Air Contaminant (TAC) emissions resulting from mobile and area sources, such as cars, trucks, stationary sources, and consumer products. According to the Ambient and Emission Trends of Toxic Air Contaminants in a California journal article which was prepared for CARB, results show that between 1990-2012, ambient concentration and emission trends

for the seven TACs responsible for most of the known cancer risk associated with airborne exposure in California have declined measurably (between 1990 and 2012). The seven TACs studied include those that are derived from mobile sources: diesel particulate matter (DPM), benzene (C_6H_6), and 1,3-butadiene (C_4H_6); those that are derived from stationary sources: perchloroethylene (C_2Cl_4) and hexavalent chromium (Cr(VI)); and those derived from photochemical reactions of emitted VOCs: formaldehyde (CH_2O) and acetaldehyde (C_2H_4O)[1]. The decline in ambient concentration and emission trends of these TACs are a result of various regulations CARB has implemented to address cancer risk. (Urban Crossroads, 2023a, p. 32)

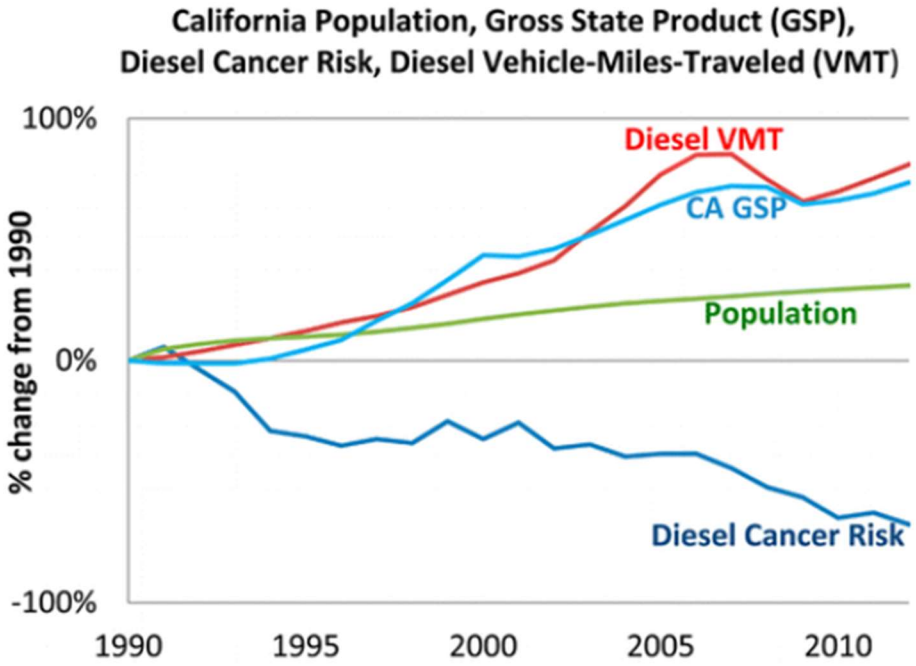
- **Mobile Source TACS**

CARB introduced two programs that were aimed at reducing mobile emissions for light and medium duty vehicles through vehicle emissions controls and cleaner fuel. In California, light-duty vehicles sold after 1996 are equipped with California's second-generation On-Board Diagnostic (OBD-II) system. The OBD-II system monitors virtually every component that can affect the emission performance of the vehicle to ensure that the vehicle remains as clean as possible over its entire life and assists repair technicians in diagnosing and fixing problems with the computerized engine controls. If a problem is detected, the OBD-II system illuminates a warning lamp on the vehicle instrument panel to alert the driver. This warning lamp typically contains the phrase "Check Engine" or "Service Engine Soon." The system would also store important information about the detected malfunction so that a repair technician can accurately find and fix the problem. CARB has recently developed similar OBD requirements for heavy-duty vehicles over 14,000 pounds (lbs). CARB's phase II Reformulated Gasoline Regulation (RFG-2), adopted in 1996, also led to a reduction of mobile source emissions. Through such regulations, benzene levels declined 88 percent from 1990-2012. In addition, 1,3-Butadiene concentrations also declined 85 percent from 1990-2012 as a result of the use of reformulated gasoline and motor vehicle regulations. (Urban Crossroads, 2023a, p. 32)

In 2000, CARB's Diesel Risk Reduction Plan (DRRP) recommended the replacement and retrofit of diesel-fueled engines and the use of ultra-low-sulfur (less than 15 parts per million (<15 ppm)) diesel fuel. As a result of these measures, DPM concentrations have declined 68 percent since 2000, even though the State's population increased 31 percent and the amount of diesel vehicles miles traveled increased 81 percent, as shown on Table 4.2-11, *DPM and Diesel Vehicle Miles Trend*. With the implementation of these diesel-related control regulations, CARB estimates a decline of approximately 71 percent between 2000-2020. (Urban Crossroads, 2023a, p. 32)

[1] Ambient DPM concentrations are not measured directly. Rather, a surrogate method using the coefficient of haze (COH) and elemental carbon (EC) is used to estimate DPM concentrations.

Table 4.2-11 DPM and Diesel Vehicle Miles Trend



Source: 2020 CARB
(Urban Crossroads, 2023a, Exhibit 2-A)

❑ **Diesel Regulations**

CARB and the Ports of Los Angeles and Long Beach (POLA and POLB) have adopted several iterations of regulations for diesel trucks that are aimed at reducing DPM. More specifically, CARB Drayage Truck Regulation, CARB statewide On-road Truck and Bus Regulation, and the Ports of Los Angeles and Long Beach Clean Truck Program (CTP) require accelerated implementation of less polluting trucks into the statewide truck fleet. In other words, older more polluting trucks would be replaced with newer, cleaner trucks as a function of these regulatory requirements. (Urban Crossroads, 2023a, p. 33)

Moreover, the average statewide DPM emissions for Heavy Duty Trucks (HDT), in terms of grams of DPM generated per mile traveled, would dramatically be reduced due to the aforementioned regulatory requirements. Diesel emissions identified in this analysis would therefore overstate future DPM emissions since not all the regulatory requirements are reflected in the modeling. (Urban Crossroads, 2023a, p. 33)

4.2.2 Regulatory Setting

The following is a brief description of the federal, State, and local environmental laws and related regulations governing air quality emissions.

A. Federal Regulations

1. Federal Clean Air Act

The Clean Air Act (CAA; 42 U.S.C. § 7401 et seq.) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes the Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants, which include O_3, CO, NO_x, SO_2, PM_{10}, $PM_{2.5}$, and Pb. One of the goals of the CAA was to set and achieve NAAQS in every state by 1975 in order to address the public health and welfare risks posed by certain widespread air pollutants. The setting of these pollutant standards was coupled with directing the states to develop state implementation plans (SIPs), applicable to appropriate industrial sources in the state, in order to achieve these standards. The CAA was amended in 1977 and 1990 primarily to set new goals (dates) for achieving attainment of NAAQS since many areas of the country had failed to meet the deadlines. (EPA, 2023a)

The sections of the federal CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions address the urban air pollution problems of O_3 (smog), CO, and PM_{10}. Specifically, it clarifies how areas are designated and re-designated "attainment." It also allows the EPA to define the boundaries of "nonattainment" areas: geographical areas whose air quality does not meet Federal air quality standards designed to protect public health. (EPA, 2022b) Mobile source emissions are regulated in accordance with the CAA Title II provisions. These standards are intended to reduce tailpipe emissions of hydrocarbons, CO, and NO_X on a phased-in basis that began in model year 1994. Automobile manufacturers are also required to reduce vehicle emissions resulting from the evaporation of gasoline during refueling. These provisions further require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. (EPA, 2023c)

Section 112 of the CAA addresses emissions of hazardous air pollutants. Prior to 1990, CAA established a risk-based program under which only a few standards were developed. The 1990 CAA Amendments revised Section 112 to first require issuance of technology-based standards for major sources and certain area sources. "Major sources" are defined as a stationary source or group of stationary sources that emit or have the potential to emit 10 tons per year or more of a hazardous air pollutant or 25 tons per year or more of a combination of hazardous air pollutants. An "area source" is any stationary source that is not a major source. (EPA, 2023a)

For major sources, Section 112 of the CAA requires that the EPA establish emission standards that require the maximum degree of reduction in emissions of hazardous air pollutants. These emission standards are commonly referred to as "maximum achievable control technology" or "MACT" standards. Eight years after the technology-based MACT standards are issued for a source category, the EPA is required to review those standards to determine whether any residual risk exists for that source category and, if necessary, revise the standards to address such risk. (EPA, 2023a)

2. National Emissions Standards for Hazardous Air Pollutants Program

National Emission Standards for Hazardous Air Pollutants (NESHAP) are stationary source standards for hazardous air pollutants. Hazardous air pollutants (HAPs) are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. The EPA develops national enforcement initiatives that focus on significant environmental risks and noncompliance patterns. For Fiscal Years 2014 to 2016, the Cutting Hazardous Air Pollutants National Initiatives Strategy focused on categories of sources that emit HAPs. (EPA, 2023d)

Sources subject to NESHAPs are required to perform an initial performance test to demonstrate compliance. To demonstrate continuous compliance, sources are generally required to monitor control device operating parameters which are established during the initial performance test. Sources may also be required to install and operate continuous emission monitors to demonstrate compliance. Consistent with EPA's Clean Air Act Stationary Source Compliance Monitoring Strategy, NESHAP sources that meet the Clean Air Act definition of "major source" generally receive a full compliance evaluation by the state or regional office at least once every two years. (EPA, 2023d)

B. State Regulations

1. California Clean Air Act

The California Clean Air Act (CCAA) establishes numerous requirements for district plans to attain State ambient air quality standards for criteria air contaminants. The CCAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the State's ambient air quality standards, the California Ambient Air Quality Standards (CAAQS), by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, established standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. Generally, the CAAQS are more stringent than the NAAQS. For districts with serious air pollution, its attainment plan should include the following: no net increase in emissions from new and modified stationary sources; and best available retrofit technology for existing sources. (SCAQMD, n.d.)

2. Air Toxic "Hot Spots" Information and Assessment Act

The Air Toxic "Hot Spots" Information and Assessment Act of 1987 (AB 2588), (Health & Safety Code §§ 44300, et seq.) requires facilities emitting specified quantities of pollutants to conduct risk assessments describing the health impacts to neighboring communities created by the emissions of numerous specified hazardous compounds. If the air district determines the health impact to be significant, neighbors must be notified. In addition, State law requires the facility to develop and implement a plan to reduce the health impacts to below significance, generally within five years. Additional control requirements for hazardous emissions from specific industries are established by the State and enforced by air districts. (SCAQMD, n.d.)

3. *Air Quality Management Planning*

The CARB and local air districts throughout the State are responsible for developing clean air plans to demonstrate how and when California will attain air quality standards established under both the CAA and the CCAA. For the areas within California that have not attained air quality standards, CARB works with local air districts to develop and implement State and local attainment plans. In general, attainment plans contain 1) a discussion of ambient air quality data and trends; 2) a baseline emissions inventory; 3) future year projections of emissions, which account for growth projections and already adopted control measures; 4) a comprehensive control strategy of additional measures needed to reach attainment; 5) an attainment demonstration, which generally involves complex modeling; and 6) contingency measures. Plans may also include interim milestones for progress toward attainment. Air quality planning activities undertaken by CARB also include the development of policies, guidance, and regulations related to State and federal ambient air quality standards; coordination with local agencies on transportation plans and strategies; and providing assistance to local districts and transportation agencies. (CARB, n.d.)

4. *Title 24 Energy Efficiency Standards and California Green Building Standards*

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The 2022 version of Title 24 was adopted by the CEC and became effective on January 1, 2023. The 2022 Building Energy Efficiency Standards focuses on four key areas in newly constructed homes and businesses: 1) encouraging electric heat pump technology for space and water heating, which consumes less energy and produces fewer emissions than gas-powered units; 2) establishing electric-ready requirements for single-family homes to position owners to use cleaner electric heating, cooking and electric vehicle (EV) charging options whenever they choose to adopt those technologies; 3) expanding solar photovoltaic (PV) system and battery storage standards to make clean energy available onsite and complement the State's progress toward a 100 percent clean electricity grid; and 4) strengthening ventilation standards to improve indoor air quality. The 2019 Building Energy Efficiency Standards already were seven percent more efficient than the previous (2016) Building Energy Efficiency Standards for residential construction and 30 percent more efficient than the previous Standards for non-residential construction. The 2016 Building Energy Efficiency Standards also already were 28 percent more efficient for residential construction and five percent more efficient for nonresidential construction than the 2013 Building Energy Efficiency Standards that they replaced. (CEC, 2023)

Part 11 of Title 24 is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: 1) Planning and design; 2) Energy efficiency; 3) Water efficiency and conservation; 4) Material conservation and resource efficiency; and 5) Environmental air quality." The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green

building program that is not established and adopted by the California Building Standards Commission (BSC). Unless otherwise noted in the regulation, all newly constructed buildings in California are subject to the requirements of the CALGreen Code.

As previously stated, the Title 24 Building Energy Efficient Standards and CALGreen Code are updated on a regular basis, with the most recent approved updates consisting of the 2022 Building Energy Efficiency Standards and 2022 CALGreen Code, which became effective as of January 1, 2023. Non-residential mandatory measures included in the 2022 CALGreen Code include the following, with citations to the applicable CalGreen Code Section: (Urban Crossroads, 2023a, pp. 24-27)

- Short-term bicycle parking. If the new project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for five percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (CalGreen Code Section 5.106.4.1.1).

- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, secure bicycle parking for five percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (CalGreen Code Section 5.106.4.1.2).

- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in CalGreen Code Table 5.106.5.3.1. Additionally, CalGreen Code Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores (CalGreen Code Section 5.106.5).

- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per CalGreen Code Table 5.106.8.

- Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with CalGreen Code Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (CalGreen Code Section 5.408.1).

- Excavated soil and land clearing debris. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (CalGreen Code Section 5.408.3).

- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (CalGreen Code Section 5.410.1).

- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (CalGreen Code Section 5.303.3.1)

    - Urinals. The effective flush volume of 1) wall-mounted urinals shall not exceed 0.125 gallons per flush (CalGreen Code Section 5.303.3.2.1) and 2) floor- mounted or other urinals shall not exceed 0.5 gallons per flush (CalGreen Code Section 5.303.3.2.2).

    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (CalGreen Code Section 5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 per square inch (psi) (CalGreen Code Section 5.303.3.3.2).

    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 pounds psi. Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute. Metering faucets shall not deliver more than 0.20 gallons per cycle . Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (CalGreen Code Sections 5.303.3.4.1 through 5.303.3.4.5).

- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (CalGreen Code Section 5.304.1).

- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 square feet or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (CalGreen Code Sections 5.303.1.1 and 5.303.1.2).

- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 s.f. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 s.f. requiring a building or landscape permit (CalGreen Code Section 5.304.3).

- Commissioning. For new buildings 10,000 s.f. and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (CalGreen Code Section 5.410.2).

5. California Air Resources Board Rules

The CARB enforces rules related to air pollutant emissions in the State of California. Rules with applicability to the Project include, but are not limited to, those listed below.

- CARB Rule 2480 (13 CCR 2480): Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools, which limits nonessential idling for commercial trucks and school buses within 100 feet of a school.
- CARB Rule 2485 (13 CCR 2485): Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling, which limits nonessential idling to five minutes or less for commercial trucks.
- CARB Rule 2449 (13 CCR 2449): In-Use Off-Road Diesel Idling Restricts, which limits nonessential idling to five minutes or less for diesel-powered off-road equipment.

6. Truck & Bus Regulation

The Truck and Bus regulation affects individuals, private companies, and Federal agencies that own diesel vehicles with a Gross Vehicle Weight Rating (GVWR) greater than 14,000 lbs. that operate in California. Heavier trucks and buses with a GVWR greater than 26,000 pounds must comply with a schedule by engine model year or owners can report to show compliance with more flexible options. Per the Regulation, all heavier vehicles with 1996 or newer model year engines should have a particulate matter (PM) filter (OEM or retrofit). Vehicles with 1995 model year and older engines should have been replaced by January 1, 2015. By January 1, 2023, all trucks and buses were required to have 2010 model year engines with few exceptions. Lighter trucks and buses with a GVWR of 14,001 to 26,000 lbs. have replacement requirements starting January 1, 2015. Starting January 1, 2015, lighter vehicles with engines that are 20 years or older were to be replaced with newer trucks (or engines). Starting January 1, 2020, all remaining vehicles needed to be replaced so that they all have 2010 model year engines or equivalent emissions by January 1, 2023. (CARB, 2023)

7. Advanced Clean Truck Regulation

In June, 2020, CARB adopted a new Rule requiring truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California will be required to be zero-emission. Manufacturers who certify Class 2b-8 chassis or

complete vehicles with combustion engines would be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales. CARB reports that as of 2020, most commercially-available models of zero-emission vans, trucks and buses operate less than 100 miles per day. Commercial availability of electric-powered long-haul trucks is very limited. However, as technology advances over the next 20 years, zero-emission trucks will become suitable for more applications, and several truck manufacturers have announced plans to introduce market ready zero-emission trucks in the future. (CARB, 2021)

8. Senate Bill 535 – Disadvantaged Communities

Senate Bill 535 (SB 535; De León, Chapter 830, 2012) recognizes the potential vulnerability of low-income and disadvantaged communities to poor air quality. Disadvantaged communities in California are specifically targeted for investment of proceeds from the State's cap-and-trade program. These investments are aimed at improving public health, quality of life, and economic opportunity in California's most burdened communities while at the same time reducing pollution that causes climate change. Authorized by the California Global Warming Solutions Act of 2006 (AB 32), the State's cap-and-trade program is one of several strategies that California uses to reduce greenhouse gas emissions that cause climate change. The funds must be used for programs that further reduce emissions of greenhouse gases. SB 535 requires that 25 percent of the proceeds from the Greenhouse Gas Reduction Fund go to projects that provide a benefit to disadvantaged communities. The CalEPA is charged with the duty to identify disadvantaged communities. CalEPA bases its identification of these communities on geographic, socioeconomic, public health, and environmental hazard criteria (Health and Safety Code, section 39711, subsection (a)). In this capacity, CalEPA currently defines a disadvantaged community, from an environmental hazard and socioeconomic standpoint, as a community that scores within the top 25 percent of the census tracts, as analyzed by the California Communities Environmental Health Screening Tool Version 3.0 (CalEnviroScreen). (OEHHA, 2022)

9. Senate Bill 1000 – Environmental Justice in Local Land Use Planning

In an effort to address the inequitable distribution of pollution and associated health effects in low-income communities and communities of color, the Legislature passed, and Governor Brown signed Senate Bill 1000 (SB 1000) in 2016, requiring local governments to identify environmental justice communities (called disadvantaged communities) and address environmental justice in their general plans. This new law has several purposes, including to facilitate transparency and public engagement in the planning and decision-making processes for local government, reduce harmful pollutants and the associated health risks in environmental justice communities, and promote equitable access to health-inducing benefits, such as healthy food options, housing, public facilities, and recreation. SB 1000 requires environmental justice elements to identify objectives and policies to reduce unique or compounded health risks in disadvantaged communities. Generally, environmental justice elements will include policies to reduce the exposure of the community to pollution through air quality improvement. SB 1000 affirms the need to integrate environmental justice principles into the planning

process to prioritize improvements and programs that address the needs of disadvantaged communities. (OAG, n.d.)

10. Assembly Bill 617

Assembly Bill 617 (AB 617) was enacted into law in 2017 and relates to criteria air pollutants and toxic air contaminants from sources other than vehicles. In response to AB 617, the CARB established the Community Air Protection Program (CAPP or Program). The Program's focus is to reduce exposure in communities most impacted by air pollution. Communities around the State are working together to develop and implement new strategies to measure air pollution and reduce health impacts. This first-of-its-kind statewide effort includes community air monitoring and community emissions reduction programs. In addition, the Legislature appropriated funding to support early actions to address localized air pollution through targeted incentive funding to deploy cleaner technologies in these communities, as well as grants to support community participation in the AB 617 process. AB 617 also includes new requirements for accelerated retrofit of pollution controls on industrial sources, increased penalty fees, and greater transparency and availability of air quality and emissions data, which will help advance air pollution control efforts throughout the State. This new effort provides an opportunity to continue to enhance air quality planning efforts and better integrate community, regional, and State level programs to provide clean air. (CARB, n.d.)

C. Regional and Local Regulations

1. Antelope Valley Air Quality Management District Rules

The AVAQMD enforces rules related to air pollutant emissions in the MDAB. Rules applicable to the Project include, but are not limited to, those listed below.

- AVAQMD Rule 201. Permit to Construct;
- AVAQMD Rule 402. Nuisance;
- AVAQMD Rule 403. Fugitive Dust;
- AVAQMD Rule 431.1. Sulfur Content of Gaseous Fuels;
- AVAQMD Rule 431.2. Sulfur Content Of Liquid Fuels;
- AVAQMD Rule 431.3. Sulfur Content of Fossil Fuels; and
- AVAQMD Rule 1113. Architectural Coatings.

2. 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment. On September 3, 2020, SCAG's Regional Council adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); also known as Connect SoCal. The 2020-2045 RTP/SCS builds upon the progress made through implementation of the 2016-2040 RTP/SCS and includes 10 goals focused on promoting economic prosperity, improving mobility, protecting the

environment, and supporting healthy/complete communities. The SCS implementation strategies include focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, and supporting implementation of sustainability policies. The SCS establishes a land use vision of center-focused placemaking, concentrating growth in and near Priority Growth Areas, transferring of development rights, urban greening, creating greenbelts and community separators, and implementing regional advance mitigation. (City of Palmdale, 2022a)

D. Local Plans

1. City of Palmdale General Plan

The Air Quality Element of the City's General Plan (Palmdale 2045) establishes goals and policies related to protecting, maintaining, and enhancing air quality within Palmdale. Specific goals applicable to the Project include minimizing local air pollution caused by motor vehicles (Goal AQ-1), minimizing particulates less than 10 microns in size (PM_{10}) and activities that generate dust (Goal AQ-2), reducing and/or eliminating unnecessary sources of air pollution (Goal AQ-3), and reducing air pollution caused by energy consumption (AQ-4). Also, the Equitable and Healthy Communities Element includes a goal focused on designing the City to improve air quality and reduce disparate health impacts (Goal EHC-12). (City of Palmdale, 2023)

4.2.3 Basis for Determining Significance

According to Section III of Appendix G to the CEQA Guidelines, the proposed Project would result in a significant impact to air quality if the Project or any Project-related component would:

a. *Conflict with or obstruct implementation of the applicable air quality plan;*
b. *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;*
c. *Expose sensitive receptors to substantial pollutant concentrations; or*
d. *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.*

A. Antelope Valle Air Quality Management District

The analysis of Threshold (a) addresses Section III.a of Appendix G to the State CEQA Guidelines, and considers whether the proposed Project would be consistent with the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Antelope Valley, which is the applicable air quality plan within the Project area.

The analysis of Threshold (b) addresses Section III.b of Appendix G to the CEQA Guidelines, and considers whether the regional air quality emissions for the Project would exceed the regional significance thresholds established by the AVAQMD for regulated pollutants, as shown in Table 4.2-12, *AVAQMD Maximum Regional Daily Emissions Thresholds*. The AVAQMD's Guidelines indicate

that any projects in the MDAB with daily regional emissions that exceed any of the indicated thresholds identified in Table 4.2-12 should be considered as having an individually and cumulatively significant air quality impact.

Table 4.2-12 AVAQMD Maximum Regional Daily Emissions Thresholds

Pollutant	Daily Threshold (lbs/day)
CO	548 lbs/day
NO_X	137 lbs/day
VOC	137 lbs/day
SO_X	137 lbs/day
PM_{10}	82 lbs/day
$PM_{2.5}$	65 lbs/day

(Urban Crossroads, 2023a, Table 3-1)

The analysis of Threshold (c) addresses Section III.c of Appendix G, and considers whether the Project would result in cancer or non-cancer health risks that exceed the AVAQMD thresholds of significance, or if the Project were to cause or contribute to any CO "hot spots."

With respect to cancer-related health risk impacts, cancer risk is expressed in terms of expected incremental incidence per million population. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulatively considerable impact. The AVAQMD has established an incidence rate of ten (10) persons per million as the maximum acceptable incremental cancer risk due to DPM exposure from a project such as the proposed Project. Carcinogenic compounds are not considered to have threshold levels (i.e., dose levels below which there are no risks). Any exposure, therefore, will have some associated risk. As a result, the State of California has established a threshold of one in one hundred thousand (1.0E-05) as a level posing no significant risk for exposures to carcinogens regulated under the Safe Drinking Water and Toxic Enforcement Act (Proposition 65). These thresholds are also consistent with the maximum incremental cancer risk established by the South Coast Air Quality Management District (SCAQMD) for projects prepared under CEQA. (Urban Crossroads, 2023b, pp. 8, 13)

The AVAQMD also has established non-carcinogenic risk parameters for use in Health Risk Assessments (HRAs). Non-carcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). A hazard index is quantified by comparing the exposure to the reference level via a ratio (i.e., the exposure divided by the appropriate chronic or acute value). Exposures below the reference level (a hazard index of 1.0) are not likely to be associated with any adverse health effects, and are considered to be less than significant. An REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. Therefore, in the HRA prepared for the Project, non-carcinogenic exposures of less than 1.0 are

considered less than significant. Both the cancer risk and non-carcinogenic risk thresholds are applied to the nearest sensitive receptors. (Urban Crossroads, 2023b, pp. 8, 13)

Threshold (d) evaluates Section III.d of Appendix G of the State CEQA Guidelines. AVAQMD Rule 402, and California Health and Safety Code, Division 26, Part 4, Chapter 3, Section 41700 prohibit the emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public, including odors. The potential to violate Rule 402 or Section 41700 is used herein as a basis to consider whether the odors or other emissions potentially generated from the proposed Project would be significant and require mitigation measures.

B. Neighboring Air Districts

During operation of the Project, it is likely that the Project's truck traffic would traverse through other neighboring air districts adjacent to the AVAQMD in which the proposed Project would be located. The neighboring air districts include Eastern Kern Air Pollution Control District (EKAPCD), San Joaquin Valley Air Pollution Control District (SJVAPCD), Mojave Desert Air Quality Management District (MDAQMD), and the South Coast Air Quality Management District (SCAQMD). Table 4.2-13, *Truck Activity by Air District*, provides a summary of the percentage breakdown of truck travel by air district based on the Streetlight™ data and weighting the average trip lengths using traffic trip percentages taken from the Project's Traffic Analysis (*Technical Appendix L1*). (Urban Crossroads, 2023a, pp. 44, 54)

Table 4.2-13 Truck Activity by Air District

Air District	Truck Activity
Eastern Kern Air Pollution Control District (EKAPCD)	13%
San Joaquin Valley Air Pollution Control District (SJVAPCD)	12%
Mojave Desert Air Quality Management District (MDAQMD)	25%
South Coast Air Quality Management District (SCAQMD)	68%

Note: The total percentage exceeds 100% since the travel between air districts include pass-through truck travel for trucks to reach their final origins/destinations.
(Urban Crossroads, 2023a, Table 3-12)

Table 4.2-14 Significance Thresholds for Neighboring Air Districts

Pollutant	Threshold			
	EKAPCD (tons per year)	SJVAPCD (tons per year)	MDAQMD (pounds per year)	SCAQMD (pounds per year)
VOC	25	10	137	55
NO_X	25	10	137	55
CO	N/A	100	548	550
SO_X	N/A	27	137	150
PM_{10}	15	15	82	150
$PM_{2.5}$	N/A	15	65	55

(Urban Crossroads, 2023a, Table 3-11)

4.2.4 IMPACT ANALYSIS

Threshold a:	***Would the Project conflict with or obstruct implementation of the applicable air quality plan?***

The Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Antelope Valley sets forth a comprehensive set of programs that will lead the MDAB into compliance with federal and State air quality standards. The control measures and related emission reduction estimates within the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with these attainment plans for development projects is determined by demonstrating compliance with the indicators discussed below.

A. Air Quality Management Plan (AQMP)

- ***Criterion No. 1: Compliance with Local Land Use Plans and/or Population Projections***

The City of Palmdale General Plan designates the Project site for Employment Flex (EMPFX) land uses. The EMPFX designation permits mixed-use development of lighter industrial uses and more intensive service, retail, and commercial uses. The Project Applicant proposes a General Plan Amendment to change the site's General Plan land use designation from Employment Flex (EMPFX) to Specific Plan (SP). Additionally, a Zone Change is proposed to change the site's zoning classification from Office Flex (OFX) to Specific Plan (SP). The Antelope Valley Commerce Center Specific Plan sets forth standards and guidance for the development and phasing of industrial, commercial, and open space uses with supporting infrastructure on the Project site. Because a General Plan Amendment is proposed, the Project would therefore not conform to local land use plans. (Urban Crossroads, 2023a, p. 63)

Air Quality Goal AQ-1 focuses on minimizing local air pollution caused by motor vehicles. The Project is consistent with this goal by introducing an employment-generating use on the site and contributing to the balance of jobs and housing in the City. The Project's design also includes electric vehicle (EV) charging stations, bicycle racks, and the addition of a sidewalks along both sides of three public streets proposed for construction as part of the Project: Public Street A, Public Street B, and Public Street C. The location of the Project site is east of the Sierra Highway Bike Trail, affording opportunities for non-vehicular travel by the Project's employees and the site is approximately 0.5- mile north of the Palmdale Metrolink Station. The Project site also is located along the City's truck routes (Sierra Highway and Columbia Way/East Avenue M), which lowers emissions by maintaining traffic flow per the General Plan's Circulation and Mobility Element.

Air Quality Goal AQ-2 is aimed at minimizing particulates less than 10 microns in size (PM_{10}) and activities that generate dust. The Project is not consistent with this goal. As discussed below under threshold (b), the Project's construction particulate matter impacts would be less than significant; however, the Project's operational particulate matter impacts would be significant and cumulatively considerable for Phases II - IV. The Project site is flat, which minimizes grading activities and

associated dust generation, and dust control measures during construction are required by AVAQMD Rule 403, Fugitive Dust.

Air Quality Goals AQ-3 and AQ-4 focus on reducing and/or eliminating unnecessary sources of air pollution and reducing air pollution caused by energy consumption. The Project is not consistent with these goals. As discussed below under Threshold (b), the Project's air pollutant emission impacts would be significant and cumulatively considerable; however, as discussed in EIR subsection 4.5, *Energy*, the Project's energy impacts would be less than significant. The Project's design includes rooftop solar panels and EV charging stations and the Project Applicant has committed to many other project design features to reduce air pollutants and increase energy efficiency as listed below in Subsection 4.2.8, *Design Features (DF) and Regulatory Requirements (RR).*

Equitable and Healthy Communities Goal EHC-12 focuses on designing the City to improve air quality and reduce disparate health impacts. The Project is consistent with this goal. As discussed below under Threshold (c), the Project would have less than significant health impacts to sensitive populations. Further, the Project's landscaping plan includes trees and other plant material that filter air pollution.

- ***Criterion No. 2: Compliance with AVAQMD Rules and Regulations***

The Project would be required to comply with all applicable AVAQMD Rules and Regulations, including, but not limited to Rule 401, Visible Emissions; Rule 402, Nuisance; Rule 403, Fugitive Dust; and Rule 1113, Architectural Coatings (refer to Subsection 4.2.8). (Urban Crossroads, 2023a, p. 57)

- ***Criterion No. 3: Demonstrating that the project will not increase the frequency or severity of a violation in the federal or State ambient air quality standards***

As indicated in the analysis of Threshold (b), prior to mitigation, Project construction emissions would not exceed the applicable AVAQMD regional thresholds. (Urban Crossroads, 2023a, p. 63) Mitigation Measures AIR MM-1 and AIR MM-2 are designed to reduce Project construction-source VOC emissions. With implementation of mitigation measures mitigation measures listed in Subsection 4.2.7, Project construction-source emissions would not exceed AVAQMD regional thresholds for VOC emissions.

However, for operational-source emissions, buildout of Phase I would exceed the numerical thresholds of significance established by the AVAQMD for emissions of NO_X, CO and PM_{10}. With buildout of Phases II through IV, the Project would exceed the numerical thresholds of significance for emissions of VOC, NO_X, CO, PM_{10} and $PM_{2.5}$. With Project Buildout of the whole of the Project, Phases I through IV, the Project would exceed the numerical thresholds of significance for emissions of VOC, NO_X, CO, PM_{10} and $PM_{2.5}$. As such, the Project operational-source emissions exceedances would have the potential to increase the frequency or severity of a violation in the federal or state ambient air quality standards for on-going project operations. (Urban Crossroads, 2023a, pp. 63-64)

On the basis of the preceding discussion, the Project is determined to be inconsistent with the third criterion. (Urban Crossroads, 2023a, p. 64)

As indicated in the analysis of Threshold (b), prior to mitigation, operational-source emissions would exceed applicable regional thresholds for emissions of VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$. As such, the Project operational-source VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions exceedances would have the potential to increase the frequency or severity of a violation in the federal or state ambient air quality standards for on-going project operations. (Urban Crossroads, 2023a, pp. 63-64) This represents a significant impact for which mitigation would be required.

As such, the Project would conflict with the AQMP according to this criterion (Urban Crossroads, 2023a, p. 64). This represents a significant impact for which mitigation would be required. Mitigation Measures AIR MM-2 through AIR MM-5 would be implemented to reduce operational-source emissions; however, a majority of NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions are derived from vehicle usage which cannot be directly regulated by the City. Neither the Project Applicant nor the Lead Agency can substantively or materially affect reductions in Project-related vehicular source emissions beyond the regulatory requirements, and mitigation measures identified herein. With implementation of the mitigation measures listed in Subsection 4.2.7, Phase I CO emissions would be reduced to less than significant; however, Phase I operational-source NO_X and PM_{10} emissions, and Phase II – IV operational-source VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions would exceed the applicable AVAQMD regional thresholds. Impacts would therefore be significant and unavoidable. As such, the Project's operational-source VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions exceedances would have the potential to increase the frequency or severity of a violation in the federal or state ambient air quality standards for on-going Project operations, and the Project is determined to be inconsistent with the third criterion. (Urban Crossroads, 2023a, pp. 63-64)

B. AQMP Consistency Conclusion

The Project would not conform to local land use plans as stated previously, and a General Plan Amendment and Zoning Change would be required. The Project would comply with all applicable AVAQMD Rules and Regulations, but would exceed the applicable regional thresholds. The Project would implement mitigation measures, acting to generally reduce the Project's construction-source and operational-source air pollutant emissions. Additionally, incorporation of contemporary energy-efficient technologies and operational programs, and compliance with AVAQMD emissions reductions and control requirements act to reduce Project air pollutant emissions generally. (Urban Crossroads, 2023a, p. 64)

In conclusion, the Project would not be consistent with the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan, resulting in a significant direct and cumulatively considerable impact for which mitigation is not available to reduce the impact to less than significant. The impact would be significant and unavoidable.

Threshold b:	***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?***

In May 2022 the California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including AVAQMD, released the latest version of CalEEMod version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and greenhouse gas (GHG) emissions from direct and indirect sources and quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod was used to determine construction and operational air quality emissions anticipated from the proposed Project. Output from the model runs for both construction and operational activity are provided in Appendices 3.1 through 3.4 of the AQIA (*Technical Appendix B1*) prepared for the Project. (Urban Crossroads, 2023a, p. 36) Provided below is an analysis of the potential for the Project to exceed the AVAQMD Regional Thresholds of Significance (refer to Table 4.2-12) during both near-term construction and long-term operational conditions.

C. *Construction Emissions*

Construction activities associated with the Project would result in emissions of VOCs, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Construction-related emissions are expected from the following construction activities: 1) site preparation; 2) grading; 3) building construction; 4) paving; and 5) architectural coating. Refer to subsection 3.4 of the AQIA (*Technical Appendix B1*) prepared for the Project for a discussion of modeling assumptions for each of these construction-related activities. (Urban Crossroads, 2023a, pp. 36-39)

The estimated maximum daily construction emissions without mitigation for both summer and winter periods is summarized in Table 4.2-15, *Emissions Summary of Construction (Without Mitigation)*. Because the same daily construction activities are assumed for Phase I and Phases II-IV of the Project, the information presented in Table 4.2-15 represents construction-related daily air pollutant emissions for all phases of the Project. Detailed construction model outputs are presented in Appendices 3.1 through 3.4 of the AQIA (*Technical Appendix B1*) prepared for the Project. As shown in Table 4.2-15, under the assumed scenarios, emissions resulting from construction of the Project would exceed the criteria pollutant thresholds established by the AVAQMD for emissions of VOCs during construction in years 2025, 2027, 2029, and 2021. Accordingly, impacts would be significant prior to mitigation. (Urban Crossroads, 2023a, pp. 39-40)

Mitigation measures are designed to reduce Project construction-source VOC emissions; therefore, with implementation of the mitigation measures listed in Subsection 4.2.7, Project construction-source emissions would not exceed AVAQMD regional thresholds for VOC emissions. (Urban Crossroads, 2023a, p. 41)

Table 4.2-15 Emissions Summary of Construction (Without Mitigation)

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
2024	9.24	89.63	75.32	0.17	13.99	8.18
2025	381.40	48.00	161.79	0.13	20.02	5.98
2026	7.91	69.41	106.69	0.16	15.36	7.41
2027	350.58	43.04	138.95	0.12	18.42	5.35
2028	7.37	60.26	66.04	0.16	12.62	7.00
2029	198.70	33.93	87.29	0.09	10.66	3.29
2031[1]	6.39	25.88	94.06	0.11	17.46	4.66
Winter						
2024	9.21	89.80	93.91	0.17	16.63	5.89
2025	7.59	33.60	88.76	0.10	16.48	4.74
2026	6.41	31.46	79.13	0.10	15.36	4.35
2027	6.17	29.72	75.69	0.10	15.19	4.25
2028	4.08	22.52	48.14	0.07	8.67	2.60
2029	3.94	21.53	46.11	0.07	8.61	2.54
2030	6.94	53.68	64.17	0.17	12.56	6.83
2031	402.85	50.86	99.91	0.17	20.93	5.71
2032	5.32	25.57	67.02	0.11	17.42	4.62
Maximum Daily Emissions	**402.85**	**89.80**	**161.79**	**0.17**	**20.93**	**8.18**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**YES**	**NO**	**NO**	**NO**	**NO**	**NO**

[1] It should be noted that the construction schedule for Phase 4 spans over only one summer season, as such there are emissions for 2030 and 2032 for the summer season.
Source: CalEEMod construction-source (unmitigated) emissions are presented in Appendices 3.1 through 3.4. (Urban Crossroads, 2023a, Table 3-5)

D. Operational Emissions

1. Operational Emissions in the AVAQMD

Operational activities associated with the proposed Project would result in emissions of VOCs, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from the following primary sources: 1) area source emissions; 2) energy source emissions; 3) mobile source emissions; 4) on-site cargo handling equipment emissions, 5) truck refrigeration unit (TRU) emissions, and 6) stationary source emissions. Refer to subsection 3.5 of the AQIA (*Technical Appendix B1*) prepared for the

Project for a discussion of modeling assumptions for each of these operational-related sources. (Urban Crossroads, 2023a, pp. 42-47)

The estimated operational-source emissions are summarized on Table 4.2-16, *Summary of Peak Operational Emissions (Without Mitigation)*. Detailed operation model outputs for the Project are presented in Appendices 3.1 through 3.4 to the AQIA (*Technical Appendix B1*) prepared for the Project.

As shown in Table 4.2-16, with the buildout of Phase I, the Project would exceed the numerical thresholds of significance established by the AVAQMD for the emissions of NO_X, CO, and PM_{10} during the summer season and for emissions of NO_X and PM_{10} during the winter season. Therefore, operational activities associated with Phase I would result in a significant and cumulatively-considerable net increase of criteria pollutants for which the Project region is non-attainment under an applicable federal or State ambient air quality standard. (Urban Crossroads, 2023a, p. 46)

As shown in Table 4.2-16, with buildout of Phases II – IV, the Project would exceed the numerical thresholds of significance for emissions of VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$ during both the summer and winter seasons. Therefore, operational activities associated with Phases II-IV would result in a significant and cumulatively-considerable net increase of criteria pollutants for which the Project region is non-attainment under an applicable federal or State ambient air quality standard. (Urban Crossroads, 2023a, pp. 46-47)

Table 4.2-16 Summary of Peak Operational Emissions (Without Mitigation)

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase I						
Summer						
Mobile	41.29	166.04	518.78	2.29	131.24	35.81
Area	71.90	0.87	103.20	0.01	0.18	0.14
Energy Source	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Source	5.91	16.51	15.06	0.03	0.87	0.87
On-Site Equipment Source	1.37	10.25	12.65	0.02	0.89	0.82
TRU Source	8.19	9.11	0.89	0.00	0.36	0.33
Total Maximum Daily Emissions (Phase I)	**128.66**	**202.79**	**650.58**	**2.34**	**133.54**	**37.96**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**YES**	**YES**	**NO**	**YES**	**NO**
Winter						
Mobile	38.32	176.40	399.58	2.20	131.25	35.81

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	54.97	0.00	0.00	0.00	0.00	0.00
Energy Source	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Source	5.91	16.51	15.06	0.03	0.87	0.87
On-Site Equipment Source	1.37	10.25	12.65	0.02	0.89	0.82
TRU Source	8.19	9.11	0.89	0.00	0.36	0.33
Total Maximum Daily Emissions (Phase I)	**108.75**	**212.27**	**428.18**	**2.25**	**133.36**	**37.82**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**YES**	**NO**
Phases II - IV						
Summer						
Mobile	84.62	403.70	1001.69	5.74	336.26	92.16
Area	180.41	2.18	258.92	0.02	0.46	0.35
Energy Source	0.02	0.30	0.25	0.00	0.02	0.02
Stationary Source	6.89	19.26	17.57	0.03	1.01	1.01
On-Site Equipment Source	3.12	22.69	28.80	0.04	1.28	1.18
TRU Source	47.72	55.10	5.19	0.00	2.27	2.09
Total Maximum Daily Emissions (Phases II - IV)	**322.78**	**503.23**	**1312.42**	**5.83**	**341.30**	**96.81**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**
Winter						
Mobile	78.55	427.48	779.99	5.56	336.26	92.16
Area	137.87	0.00	0.00	0.00	0.00	0.00
Energy Source	0.02	0.30	0.25	0.00	0.02	0.02
Stationary Source	6.89	19.26	17.57	0.03	1.01	1.01
On-Site Equipment Source	3.12	22.69	28.80	0.04	1.28	1.18
TRU Source	47.72	55.10	5.19	0.00	2.27	2.09
Total Maximum Daily Emissions (Phases II - IV)	**274.17**	**524.83**	**831.81**	**5.64**	**340.85**	**96.47**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Project Buildout (Phases I - IV)						
Summer						
Total Maximum Daily Emissions (Buildout)	**451.44**	**706.02**	**1963.01**	**8.17**	**474.84**	**134.77**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**
Winter						
Total Maximum Daily Emissions (Buildout)	**382.93**	**737.10**	**1259.99**	**7.88**	**474.20**	**134.29**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**

(Urban Crossroads, 2023a, Table 3-9)

2. Mobile Source Emissions in Neighboring Air Districts

As discussed in Subsection 4.2.3, the Project's truck and TRU trip-related emissions that may occur within neighboring air districts were evaluated by Urban Crossroads. The truck activity percentages previously shown in Table 4.2-13 were then applied to the truck and TRUs emissions that are a subset to the emissions totals presented in Table 4.2-16.

Table 4-2-17 through Table 4-2-20, summarize the emissions that could occur due to off-site truck and TRU travel within the aforementioned air districts. The emissions are presented in tons per year for the EKAPCD and SJVAPCD (as there is no seasonal variation), and pounds per day for MDAQMD and SCAQMD (for summer and winter) consistent with the applicable thresholds in each air district. (Urban Crossroads, 2023a, p. 55)

Table 4.2-17 Operational Emissions – EKAPCD

Source	Emissions (tons/year)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase I						
Mobile	0.08	2.98	0.77	0.03	1.03	0.31
TRU Source	0.08	2.98	0.77	0.03	1.03	0.31
Total Maximum Daily Emissions (Phase I)	**0.27**	**3.20**	**0.80**	**0.03**	**1.04**	**0.32**
EKAPCD Annual Threshold	10	10	100	27	15	15
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source	Emissions (tons/year)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phases II - IV						
Mobile	0.20	7.89	1.91	0.08	3.25	0.96
TRU Source	1.13	1.31	0.12	0.00	0.05	0.05
Total Maximum Daily Emissions (Phases II - IV)	**1.33**	**9.20**	**2.03**	**0.08**	**3.31**	**1.01**
EKAPCD Annual Threshold	10	10	100	27	15	15
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Project Buildout (Phases I - IV)						
Mobile	0.28	10.87	2.68	0.11	4.28	1.27
TRU Source	1.33	1.52	0.14	0.00	0.06	0.06
Total Maximum Daily Emissions (Buildout)	**1.60**	**12.40**	**2.82**	**0.11**	**4.35**	**1.33**
EKAPCD Annual Threshold	25	25	N/A	N/A	15	N/A
Threshold Exceeded?	**NO**	**NO**	**N/A**	**N/A**	**NO**	**N/A**

(Urban Crossroads, 2023a, Table 3-13)

Table 4.2-18 Operational Emissions - SJVAPCD

Source	Emissions (tons/year)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase I						
Mobile	0.07	2.75	0.71	0.03	0.95	0.28
TRU Source	0.18	0.20	0.02	0.00	0.01	0.01
Total Maximum Daily Emissions (Phase I)	**0.25**	**2.95**	**0.73**	**0.03**	**0.96**	**0.29**
SJVAPCD Annual Threshold	10	10	100	27	15	15
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Phases II - IV						
Mobile	0.18	7.29	1.76	0.08	3.00	0.89
TRU Source	1.05	1.21	0.11	0.00	0.05	0.05
Total Maximum Daily Emissions (Phases II - IV)	**1.23**	**8.49**	**1.87**	**0.08**	**3.05**	**0.93**
SJVAPCD Annual Threshold	10	10	100	27	15	15
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Project Buildout (Phases I - IV)						
Mobile	0.25	10.04	2.47	0.10	3.95	1.17
TRU Source	1.22	1.41	0.13	0.00	0.06	0.05

Source	Emissions (tons/year)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Total Maximum Daily Emissions (Buildout)	**1.48**	**11.44**	**2.61**	**0.10**	**4.01**	**1.22**
SJVAPCD Annual Threshold	10	10	100	27	15	15
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**

(Urban Crossroads, 2023a, Table 3-14)

Table 4.2-19 Operational Emissions - MDAQMD

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase I						
Summer						
Mobile	1.01	35.66	9.93	0.37	13.19	3.94
TRU Source	2.05	2.28	0.22	0.00	0.09	0.08
Total Maximum Daily Emissions (Phase I)	**3.06**	**37.94**	**10.16**	**0.37**	**13.28**	**4.02**
MDAQMD Daily Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Winter						
Mobile	1.01	35.66	9.93	0.37	13.19	3.94
TRU Source	2.05	2.28	0.22	0.00	0.09	0.08
Total Maximum Daily Emissions (Phase I)	**3.03**	**39.77**	**10.08**	**0.37**	**13.28**	**4.02**
MDAQMD Daily Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Phases II - IV						
Summer						
Mobile	2.40	89.16	23.04	0.99	39.32	11.60
TRU Source	11.93	13.77	1.30	0.00	0.57	0.52
Total Maximum Daily Emissions (Phases II - IV)	**14.33**	**102.94**	**24.34**	**0.99**	**39.89**	**12.12**
MDAQMD Daily Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Winter						
Mobile	20.86	101.96	255.40	1.42	81.42	22.35
TRU Source	11.93	13.77	1.30	0.00	0.57	0.52
Total Maximum Daily Emissions (Phases II - IV)	**32.79**	**115.73**	**256.70**	**1.42**	**81.99**	**22.87**

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
MDAQMD Daily Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Project Buildout (Phases I - IV)						
Summer						
Mobile	3.41	124.82	32.98	1.36	52.52	15.53
TRU Source	13.98	16.05	1.52	0.00	0.66	0.60
Total Maximum Daily Emissions (Buildout)	**17.39**	**140.87**	**34.50**	**1.36**	**53.17**	**16.14**
MDAQMD Daily Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**
Winter						
Mobile	21.85	139.45	265.26	1.78	94.61	26.29
TRU Source	13.98	16.05	1.52	0.00	0.66	0.60
Total Maximum Daily Emissions (Buildout)	**35.83**	**155.50**	**266.78**	**1.78**	**95.27**	**26.89**
MDAQMD Daily Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**YES**	**NO**

(Urban Crossroads, 2023a Table 3-15)

Table 4.2-20 Operational Emissions – SCAQMD

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase I						
Summer						
Mobile	2.76	97.00	27.02	1.00	35.88	10.71
TRU Source	5.57	6.19	0.61	0.00	0.24	0.22
Total Maximum Daily Emissions (Phase I)	**8.32**	**103.19**	**27.63**	**1.00**	**36.13**	**10.94**
SCAQMD Daily Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**
Winter						
Mobile	2.69	101.98	26.82	1.00	35.89	10.71
TRU Source	5.57	6.19	0.61	0.00	0.24	0.22
Total Maximum Daily Emissions (Phase I)	**8.25**	**108.18**	**27.43**	**1.00**	**36.13**	**10.94**
SCAQMD Daily Threshold	55	55	550	150	150	55

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**
Phases II - IV						
Summer						
Mobile	6.52	242.52	62.68	2.70	106.96	31.54
TRU Source	32.45	37.46	3.53	0.00	1.54	1.42
Total Maximum Daily Emissions (Phases II - IV)	**38.97**	**279.98**	**66.21**	**2.70**	**108.50**	**32.96**
SCAQMD Daily Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**
Winter						
Mobile	56.75	277.32	694.69	3.85	221.46	60.78
TRU Source	32.45	37.46	3.53	0.00	1.54	1.42
Total Maximum Daily Emissions (Phases II - IV)	**89.20**	**314.78**	**698.22**	**3.85**	**223.00**	**62.20**
SCAQMD Daily Threshold	55	55	550	150	150	55
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**
Project Buildout (Phases I - IV)						
Summer						
Mobile	9.28	339.51	89.70	3.70	142.84	42.25
TRU Source	38.02	43.66	4.14	0.00	1.79	1.64
Total Maximum Daily Emissions (Buildout)	**47.29**	**383.17**	**93.84**	**3.70**	**144.63**	**43.90**
SCAQMD Daily Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**
Winter						
Mobile	59.44	379.30	721.51	4.85	257.34	71.50
TRU Source	38.02	43.66	4.14	0.00	1.79	1.64
Total Maximum Daily Emissions (Buildout)	**97.45**	**422.96**	**725.65**	**4.85**	**259.13**	**73.14**
SCAQMD Daily Threshold	55	55	550	150	150	55
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**

(Urban Crossroads, 2023a, Table 3-16)

Threshold c: Would the Project expose sensitive receptors to substantial pollutant concentrations?

During construction and operation, the Project has the potential to expose nearby sensitive receptors to pollutant concentrations that may be substantial. Sensitive receptors are defined as occupied residential homes, schools, health care facilities, and other areas where humans sensitive to air pollution reside. The following provides an analysis of the potential of the Project to result in or contribute to CO "hot spots," or to result in cancer risks and non-cancer health hazards.

A. CO "Hot Spot" Analysis

An adverse CO concentration, known as a "hot spot" would occur if an exceedance of the State's one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. At the time that CARB published its 1993 Handbook, the MDAB had a nonattainment designation under the CAAQS and NAAQS for CO, but the MDAB is currently in CO attainment. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams per mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the MDAB is now designated as attainment. To establish a more accurate record of baseline CO concentrations affecting the MDAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The "hot spot" analysis did not predict any violation of CO standards, as shown on Table 3-8 of the Project's AQIA (*Technical Appendix B1*). (Urban Crossroads, 2023a, pp. 60-61)

It should be noted that AVAQMD has not established its own guidelines for CO hotspots analysis. Since the AVAQMD guidelines are based on SCAQMD methodology, it is appropriate to apply the SCAQMD criteria when analyzing CO hotspots within the AVAQMD. Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan[2]), peak carbon monoxide concentrations in the MDAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 8.4 ppm eight-hour CO concentration measured at the Long Beach Boulevard and Imperial Highway intersection (highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared. In contrast, an adverse CO concentration, known as a "hot spot", would occur if an exceedance of the State one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. (Urban Crossroads, 2023a, p. 61)

[2] The 1992 and 2003 analyses from SCAQMD are the most current CO hotspot evaluations they have conducted.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph) – or 24,000 vph where vertical and/or horizontal air does not mix – in order to generate a significant CO impact. (Urban Crossroads, 2023a, p. 61)

The intersection of Sierra Highway and Columbia Way / Avenue M would have the highest a.m. traffic volumes of 7,165 vph and the intersection of 10th Street West and Avenue M would have the highest p.m. of 8,631 vph. As such, total traffic volumes at the intersections considered are less than the traffic volumes identified in the 2003 AQMP. Thus, the Project, along with background and cumulative development, would not produce the volume of traffic required to generate a CO "hot spot" either in the context of the 2003 AQMP which includes analysis for CO hot spots or based on representative Bay Area Air Quality Management District (BAAQMD) CO threshold considerations. Therefore, CO "hot spots" are not an environmental impact of concern for the Project and localized air quality impacts related to mobile-source emissions would therefore be less than significant. (Urban Crossroads, 2023a, p. 62)

Table 4.2-21 Peak Hour Traffic Volumes

Intersection Location	Peak Traffic Volumes (vph)				
	Northbound (AM/PM)	Southbound (AM/PM)	Eastbound (AM/PM)	Westbound (AM/PM)	Total (AM/PM)
SR-14 Northbound Ramps/Avenue M	756/657	0/0	2,919/1,743	1,506/3,394	5,181/5,794
10th Street West/Avenue M	761/1,846	1,181/1,520	3,416/2,215	1,505/3,050	6,863/8,631
Sierra Highway/Avenue M	1,945/1,938	1,393/1,475	1,847/1,944	1,980/2,569	7,165/7,926
4th Street & Avenue M / Columbia Way	631/1,096	151/196	2,705/2,380	1,301/1,547	4,788/5,219

SR14=State Route 14
(Urban Crossroads, 2023a, Table 3-19)

B. Project-Related DPM Source Cancer and Non-Cancer Risks

A Project-specific Health Risk Assessment (HRA) (*Technical Appendix B2* to this EIR) was prepared for the Project based on AVAQMD guidelines to produce conservative estimates of risk posed by exposure to DPM. Refer to Section 2 of the HRA (*Technical Appendix B2*) for a discussion of the methodology, emissions estimation, exposure quantification, carcinogenic chemical risk, and non-carcinogenic exposure used as inputs to the analysis. Nearby sensitive receptors evaluated as part of the HRA are depicted on Figure 4.2-1, *Receptor Locations*, although additional receptors locations further from the Project site were also modeled (Urban Crossroads, 2023b, p. 22). Provided below is a summary of the results of the HRA for the Maximally Exposed Individual Receptor (MEIR), Maximally Exposed Individual Worker (MEIW), and Maximally Exposed Individual School Child (MEISC), as well as a summary of construction and operational cancer and non-cancer risks.

C. Construction Impacts

The land use with the greatest potential exposure to Project construction DPM source emissions for all phases of the Project is Location R2, which is located approximately 607 feet north of the Project site and north of Columbia Way / East Avenue M at an existing residence (42057 5th Street E.) (refer to Figure 4.2-1). Location R2 was placed in the private outdoor living area (backyard of the residence) facing the Project site. At the MEIR, without mitigation, the maximum incremental cancer risk attributable to Project construction DPM source emissions is calculated to be 0.29 in one million, which is less than the AVAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were calculated to be less than 0.01 (<0.01), which does not exceed the applicable threshold of 1.0. (Urban Crossroads, 2023b, p. 29)

With implementation of the mitigation measures listed in Subsection 4.2.7, the land use with the greatest potential exposure to Project construction DPM source emissions remains at Location R2. At the MEIR, with mitigation, the maximum incremental cancer risk is calculated to be 0.21 in one million (0.08 in one million less than before mitigation), which is less than the AVAQMD significance threshold of 10 in one million. At this same location, non-cancer risks were calculated to be less than 0.01 (<0.01), which would not exceed the applicable threshold of 1.0. As discussed in Subsection 4.2.3, the AVAQMD has established an incidence rate of ten persons per one million as the maximum acceptable incremental cancer risk due to DPM exposure from a project. A hazard index of less than one (1.0) means that adverse health effects are not expected. Thus, non-carcinogenic exposures of less than 1.0 are considered less than significant. As such, the Project would not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors located further from the Project site would experience less risk than what is identified for this location. Accordingly, DPM-related cancer and non-cancer health risks during construction activities would be less than significant and no mitigation is required. (Urban Crossroads, 2023b, pp. 29-30)

D. Operational Impacts

Six buildings are proposed in the first phase of the Project's development. Site-specific detail for subsequent phases of development would be determined in the future based on the proposed Specific Plan, but reasonable assumptions are made herein and in the Project's HRA (*Technical Appendix B*) about the future phases of development to enable a complete and comprehensive analysis of the whole of the Project (Urban Crossroads, 2023b, p. 8).

1. Residential Exposure Scenario

The residential land use with the greatest potential exposure to Project DPM source emissions is Location R2, which is located approximately 607 feet north of the Project site at an existing residence (42057 5th Street E.) (refer to Figure 4.2-1). Location R2 was placed in the private outdoor living area (the back yard of the residence) facing the Project site. At the maximally exposed individual receptor (MEIR), without mitigation, the maximum incremental cancer risk attributable to Project DPM source emissions is calculated to be 4.85 in one million, which is less than the AVAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were calculated to be less than

0.01 (<0.01), which would not exceed the applicable significance threshold of 1.0. As discussed in Subsection 4.2.3, the AVAQMD has established an incidence rate of ten persons per one million as the maximum acceptable incremental cancer risk due to DPM exposure from a project. A hazard index of less than 1.0 means that adverse health effects are not expected. (Urban Crossroads, 2023b, p. 29)

With implementation of the mitigation measures listed in Subsection 4.2.7, the residential land use with the greatest potential exposure to Project DPM source emissions remains Location R2. At the MEIR, with mitigation, the maximum incremental cancer risk is calculated to be 3.73 in one million (1.12 in one million less than before mitigation), which is less than the AVAQMD significance threshold of 10 in one million. At this same location, non-cancer risks were calculated to be ess than 0.01 (<0.01), which would not exceed the applicable threshold of 1.0. Because all other modeled residential receptors are exposed to lesser concentrations and are located at a greater distance from the Project site and primary truck route than the MEIR analyzed herein, and TACs generally dissipate with distance from the source, all other residential receptors in the vicinity of the Project site would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project would not cause a significant human health or cancer risk to nearby residences; therefore, impacts would be less than significant and no mitigation is required. (Urban Crossroads, 2023b, pp. 29-30)

2. Worker Exposure Scenario[3]

The worker receptor land use with the greatest potential exposure to Project DPM source emissions is Location R6, which represents the adjacent potential worker receptor approximately 127 feet north of the Project site (refer to Figure 4.2-1). At the maximally exposed individual worker (MEIW) receptor, without mitigation, the maximum incremental cancer risk impact is 1.10 in one million which is less than the AVAQMD's significance threshold of 10 in one million. Maximum non-cancer risks at this same location were calculated to be less than 0.01 (<0.01), which would not exceed the applicable significance threshold of 1.0.

With implementation of the mitigation measures listed in Subsection 4.2.7, the worker receptor land use with the greatest potential exposure to Project DPM source emissions remains Location R6. At the MEIW, with mitigation, the maximum incremental cancer risk is 0.97 in one million (0.13 in one million less than before mitigation), which is less than the AVAQMD significance threshold of 10 in one million. At this same location, non-cancer risks were calculated to be less than 0.01 (<0.01), which would not exceed the applicable threshold of 1.0. As discussed in Subsection 4.2.3, the AVAQMD has established an incidence rate of ten persons per one million as the maximum acceptable incremental cancer risk due to DPM exposure from a project. A hazard index of less than 1.0 means that adverse

[3] AVAQMD guidance does not require assessment of the potential health risk to on-site workers. Excerpts from the document OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines—The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2003), also indicate that it is not necessary to examine the health effects to on-site workers unless required by RCRA (Resource Conservation and Recovery Act) / CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) or the worker resides on-site. (Urban Crossroads, 2023b, p. 2)

health effects are not expected. Because all other MEIWs are located at a greater distance than the MEIW analyzed herein, and DPM dissipates with distance from the source, all other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project would not cause a significant human health or cancer risk to adjacent workers; therefore, impacts would be less than significant and no mitigation is required. (Urban Crossroads, 2023b, p. 30)

3. School Child Exposure Scenario

Proximity to sources of toxics is critical to determining the impact. In traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70-percent drop-off in particulate pollution levels at 500 feet. Based on CARB and SCAQMD emissions and modeling analyses, an 80-percent drop-off in pollutant concentrations is expected at approximately 1,000 feet from a distribution center. (Urban Crossroads, 2023b, p. 30)

The 1,000-foot evaluation distance is supported by research-based findings concerning Toxic Air Contaminant (TAC) emission dispersion rates from roadways and large sources showing that emissions diminish substantially between 500 and 1,000 feet from emission sources. (Urban Crossroads, 2023b, pp. 30-31)

In addition, the Waters Bill (AB 3205) (H&SC Section, 42301.6 through 42301.9) addresses sources of hazardous air pollutants near schools and although not directly applicable to this Project, this bill further evidences the propriety of considering hazardous emissions sources within a defined 1,000-foot radius. That is, pursuant to the Waters Bill, prior to approving an application for a permit to construct or modify a source which emits hazardous air emissions (i.e. DPM), which source is located within 1,000 feet from the outer boundary of a school site, the air pollution control officer shall prepare a public notice in which the proposed project or modification for which the application for a permit is made is fully described. (Urban Crossroads, 2023b, p. 31)

More recent studies suggest that in light of emission reductions due to tightening emission standards over the past twenty years, this 1,000-foot siting distance is overly conservative. Modeling performed for the 2021 report *Evaluating Siting Distances for New Sensitive Receptors Near Warehouses*, prepared by the Ramboll Group, demonstrates a significant reduction in DPM emissions and risk between year 2000 emissions (which were utilized by CARB in establishing its recommended siting guidance of 1,000 feet) and 2023. This reduction is attributed to a significant reduction in DPM emission rates from trucks and TRUs resulting from the adoption of increasingly stringent emission standards. This reduction in DPM emission rates has resulted in a corresponding significant reduction in risk as well, despite increasingly conservative regulatory guidance in the preparation of HRAs, particularly OEHHA's adoption of age sensitivity factors (ASF) in their revised HRA guidance released in 2015. (Urban Crossroads, 2023b, p. 31)

A one-quarter mile radius, or 1,320 feet, is commonly utilized for identifying sensitive receptors, such as schools, that may be impacted by a proposed project. This radius is more robust than, and therefore provides a more health protective scenario for evaluation than the 1,000-foot impact radius identified above. (Urban Crossroads, 2023b, p. 31)

There are no schools located within 0.25-mile of the Project site. The nearest school is Adventureland Preschool, located approximately 6,750 feet (approximately 1.27 miles) southwest of the Project site. Because there is no reasonable potential that TAC emissions would cause significant health impacts at distances of more than 0.25 mile from the air pollution source, there would be no significant impacts that would occur to any schools in the vicinity of the Project. As such, the Project would not cause a significant human health or cancer risk to nearby school children. (Urban Crossroads, 2023b, p. 31)

E. Summary of Construction and Operational DPM Source Emissions

The land use with the greatest potential exposure to Project construction and operational DPM source emissions combined is Location R2, which also is identified as the MEIR (refer to Figure 4.2-1). At the MEIR, without mitigation, the maximum incremental cancer risk attributable to Project construction and operational DPM source emissions is calculated to be 1.90 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be less than 0.01 (<0.01), which would not exceed the applicable threshold of 1.0. (Urban Crossroads, 2023b, p. 31)

With implementation of the mitigation measures listed in Subsection 4.2.7, the land use with the greatest potential exposure to Project construction and operational DPM source emissions is Location R2. At the MEIR, with mitigation, the maximum incremental cancer risk is 1.45 in one million (0.45 in one million less than before mitigation), which is less than the AVAQMD significance threshold of 10 in one million. At this same location, non-cancer risks were calculated to be less than 0.01 (<0.01), which would not exceed the applicable threshold of 1.0. As such, the Project would not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity. It should be noted that the combined construction and operational risk is lower than the operational risk alone as this scenario evaluates the risk for a child that is born at the start of Project construction, exposed to construction-related emissions for the 7.61 year duration of construction activities, and is then exposed to Project operational emissions for an additional 22.31 years for a total exposure duration of 30 years. Because risk estimates for Project construction are relatively low, and exposure that occurs during the earlier years of life is more heavily weighted, the combined construction and operational risk is lower than the calculated operational only exposure risk.

All other receptors during construction and operational activity would experience less risk than what is identified for this location. It should be noted that for clarity purposes, the receptors presented in Figure 4.2-1, do not represent all modeled receptors and instead presents the nearest receptors that would experience the highest pollutant concentrations. A total of 38 receptors extending up to 2.25 miles from the Project site were modeled in the analysis. Appendix 2.8 of *Technical Appendix B*

presents an exhibit detailing the locations of all receptors as modeled in AERMOD. (Urban Crossroads, 2023b, p. 32)

Accordingly, Project construction and operational cancer and non-cancer health risk impacts would be less than significant and no mitigation is required. Connection of Air Quality Impacts to Human Health Consequences

Most local agencies, including the City of Palmdale, lack the data to conduct an assessment of potential health impacts from criteria air pollutant emissions, evaluating thresholds of significance based on potential health impacts from an individual development project. The use of national or generic data to fill the gap of missing local data would not yield accurate results because such data does not capture local air patterns, local background conditions, or local population characteristics, all of which play a role in how a population experiences air pollution. Because it is impracticable to accurately isolate the exact cause of a human disease (for example, the role a particular air pollutant plays compared to the role of other allergens and genetics in causing asthma), existing scientific tools cannot accurately estimate health impacts of the air emissions from the Project without undue speculation. Instead, readers are directed to the above analysis of the air quality impacts from the Project, which provides extensive information concerning the quantifiable and non-quantifiable health risks related to the Project's construction and long-term operation of the Project. Notwithstanding, and as previously stated, per the HRA prepared for the Project, the Project would not cause a significant human health or cancer risk to adjacent land uses as a result of the construction and operation of the Project. (Urban Crossroads, 2023a, p. 67)

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

Land uses generally associated with odor complaints include agricultural uses (livestock and farming), wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities. The Project does not propose or require land uses that would use substantive sources of objectionable odors. Potential temporary and intermittent odors may result from construction equipment exhaust and application of asphalt and architectural coatings. Temporary and intermittent construction-source emissions are controlled through existing requirements and industry Best Management Practices (BMPs) that address proper storage of and application construction materials. (Urban Crossroads, 2023a, pp. 67-68)

Over the life of the Project, odors may result from storage of solid waste pending its transport to area landfills. Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the solid waste regulations of the City of Palmdale. (Urban Crossroads, 2023a, p. 68)

The proposed Project would also be required to comply with AVAQMD Rule 402. Rule 402 provides that "[a] person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of

persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property." (Urban Crossroads, 2023a, p. 68)

Based on the preceding analysis, the Project would not result in other emissions such as those leading to odors a that would adversely affect a substantial number of people; therefore, impacts would be less than significant and no mitigation would be required (Urban Crossroads, 2023a, p. 68).

4.2.5 Cumulative Impact Analysis

With exception of the potential impacts related to odors, the cumulative study area for air quality includes Palmdale and the MDAB. The MDAB is designated as a nonattainment area for State standards of O_3 and PM_{10}. The region is also designated as a nonattainment area for federal standards of O_3. Cumulative growth in population, vehicle use, and industrial activity could inhibit efforts to improve regional air quality and attain ambient air quality standards. Thus, with the exception of potential impacts related to odors, the setting for this cumulative analysis consists of the MDAB and associated growth and development anticipated in the air basin. For the issue of odors, because odors diminish rapidly with distance from the source, the cumulative study area includes the Project site and properties in close proximity to the Project site.

As previously shown in Table 4.2-2, the CAAQS designates the Project region as nonattainment for O_3 and PM_{10}, while the NAAQS designates the Project region as nonattainment for O_3. The AVAQMD relies on the SCAQMD guidance for determining cumulative impacts. The SCAQMD has recognized that there is typically insufficient information to quantitatively evaluate the cumulative contributions of multiple projects because each project applicant has no control over nearby projects. (Urban Crossroads, 2023a, p. 68)

The SCAQMD published a report on how to address cumulative impacts from air pollution, entitled, "White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution." In this report the SCAQMD clearly states (Page D-3): (Urban Crossroads, 2023a, pp. 68-69)

> *"…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.* (Urban Crossroads, 2023a, pp. 68-69)

> *Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."* (Urban Crossroads, 2023a, p. 69)

As such and based on guidance from the SCAQMD, individual projects that do not generate operational or construction emissions that exceed the AVAQMD's recommended daily thresholds for project-specific impacts also would not cause a cumulatively considerable increase in emissions for those pollutants for which the MDAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Conversely, individual project-related construction and operational emissions that exceed AVAQMD thresholds for project-specific impacts would be considered cumulatively considerable. (Urban Crossroads, 2023a, p. 69)

Cumulatively-Considerable Impacts due to Conflict with the AQMP

The Project would not conform to local land use plans as stated previously, and a General Plan Amendment and Zoning Change would be required. The Project would comply with all applicable AVAQMD Rules and Regulations, but would exceed the applicable regional thresholds. The Project would implement mitigation measures, acting to generally reduce the Project's construction-source and operational-source air pollutant emissions. Additionally, incorporation of contemporary energy-efficient technologies and operational programs, and compliance with AVAQMD emissions reductions and control requirements act to reduce Project air pollutant emissions generally. (Urban Crossroads, 2023a, p. 69)

In conclusion, the Project would not be consistent with the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan, resulting in a significant direct and cumulatively considerable impact for which mitigation is not available to reduce the impact to less than significant. The impact would be significant and unavoidable.

During operation, Phase I of the Project, without mitigation, would exceed the applicable regional thresholds for NO_X, CO, and PM_{10} emissions, and Phases II - IV of the Project would exceed applicable regional thresholds for VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$. This represents a potentially significant impact due to a conflict with the AVAQMP AQMP due to operational-related emissions. As other cumulative developments also have the potential to conflict with the AVAQMD AQMP due to operational-related emissions, the Project's operational-related conflict with the AVAQMD AQMP represents a cumulatively-considerable impact for which mitigation would be required. With implementation of the mitigation measures listed in Subsection 4.2.7, operational emissions of Phase I of the Project would still exceed applicable regional thresholds for NO_X and PM_{10}, and when operational emissions of Phases II – IV are added, the Project would exceed applicable regional thresholds for VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$. As such, the Project would be considered to have a significant cumulatively-considerable impact and would not be consistent with the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Antelope Valley (i.e., the applicable air

quality plans in the Project area). Therefore, in regard to operation of the Project, implementation of the Project would result in significant cumulatively-considerable impacts due to a conflict with the applicable air quality management plans.

As discussed under the analysis of Threshold (a) and Threshold (b), without mitigation, Project construction activities would exceed the SCAQMD regional threshold for VOCs. This represents a potentially significant impact due to a conflict with the AVAQMP AQMP due to construction-related emissions. As other cumulative developments also have the potential to conflict with the AVAQMD AQMP due to construction-related emissions, the Project's construction-related conflict with the AVAQMD AQMP represents a cumulatively-considerable impact for which mitigation would be required. This potentially significant impact would be addressed by mitigation measures which outline measures for reducing VOCs during construction of the Project; therefore, with implementation of the mitigation measures outlined in Subsection 4.2.7, significant direct impacts would be less than significant.

Cumulatively-Considerable Criteria Pollutant Impacts

The Project-specific evaluation of emissions presented under the analysis of Threshold (b) demonstrates that during operation, Phase I of the Project, without mitigation, would exceed the applicable regional thresholds for NO_X, CO, and PM_{10} emissions, and when Phases II-IV of the Project is added, the Project would exceed applicable regional thresholds for VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$. This represents a cumulatively-considerable net increase of criteria pollutants for which the Project region is non-attainment under an applicable federal or State ambient air quality standard and mitigation would be required. With implementation of the mitigation measures listed in Subsection 4.2.7 operational emissions of Phase I of the Project would still exceed applicable regional thresholds for NO_X and PM_{10}, and operational emissions of Phase II – IV would still exceed applicable regional thresholds for VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$. As such, the Project would be considered to have a significant cumulatively-considerable impact during operation due to a net increase in criteria pollutants for which the Project region is non-attainment under an applicable federal or State ambient air quality standard.

However, as indicated under Thresholds (a) and (b), without mitigation, Project-related construction activities would exceed the AVAQMD regional thresholds for VOC (refer to Table 4.2-15). As other cumulative developments within the MDAB also have the potential to exceed the SCAQMD regional thresholds during construction, thereby contributing to a net increase of a criteria pollutant in the region, the Project's emissions of VOCs during construction of the Project represents a cumulatively-considerable impact for which mitigation would be required. This potentially significant impact would be addressed by Mitigation Measures which outline measures for reducing NOx emissions and VOCs during construction of the Project. With implementation of the mitigation measures listed in Subsection 4.2.7, significant direct impacts would be less than significant.

Cumulatively-Considerable Impacts to Sensitive Receptors

As discussed in EIR Section 2.0, *Environmental Setting*, the census tract containing the Project site (Census Tract 6037980004) is reported by CalEPA's Office of Environmental Health Hazard Assessment (OEHHA) using the OEHHA's California Communities Environmental Health Screening Tool (CalEnviroScreen 4.0), ranks in the 52nd percentile of communities that are disproportionately burdened by multiple sources of pollution (OEHHA, 2023). The Project site is not located in a SB 535 Disadvantaged Community identified by the California Environmental Protection Agency (CalEPA) (CalEPA, 2023). Future development activities in and around the Project site's census tract have the potential to improve or worsen pollution burdens.

The analysis under Threshold (c) provides substantial evidence that the proposed Project would not cause or contribute to any CO "hot spots" on a direct or cumulatively considerable basis.

Based on the HRA (*Technical Appendix B2*) prepared for the Project, and as also discussed under the analysis of Threshold (c), the Project would not expose the MEIR, MEIW, or MEISC to operational- and/or construction-related cancer risks that would exceed the AVAQMD significance threshold of 10 in one million or non-cancer health risks that would exceed the applicable significance threshold of 1.0 for direct or cumulatively considerable impacts. Because Project-related air quality emissions would not expose nearby sensitive receptors to substantial pollutant concentrations, the Project's contribution of health risk to sensitive receptors would be less than cumulatively considerable. The Project would worsen the pollution burden of the Project site's census tract but not to a level that is considered cumulatively considerable by the AVAQMD.

Cumulatively-Considerable Odor Impacts

The proposed Project would be required to comply with AVAQMD Rule 402, Nuisance to prevent occurrences of public nuisances (including odors) during both construction and long-term operation, and would be subject to the solid waste regulations for the City of Palmdale. Other developments within the cumulative study area similarly would be required to comply with AVAQMD Rules and Regulations and the solid waste regulations of the applicable jurisdictions. Therefore, Project impacts due to other emissions (such as those leading to odors) would be less than cumulatively considerable.

4.2.6 Significance of Impacts Before Mitigation

Threshold a: Significant Direct and Cumulatively-Considerable Impact. During construction of the Project, prior to mitigation, the Project's daily construction emissions would exceed the AVAQMD threshold for VOC. Project operations, prior to mitigation, would exceed the AVAQMD daily thresholds in Phase I for NO_X, CO, PM_{10}, and in Phases II – IV for VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$. Therefore, prior to mitigation, the Project has the potential to conflict with the AVAQMD AQMP during both construction and operational activities, resulting in a significant direct and cumulatively-considerable impact.

Threshold b: Significant Direct and Cumulatively-Considerable Impact. During construction of the Project, prior to mitigation, the Project's daily construction emissions would exceed the AVAQMD

threshold for VOC. Project operations, prior to mitigation, would exceed the AVAQMD thresholds in Phase I for NO_X, CO, PM_{10}, and in Phases II – IV for VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$. Therefore, prior to mitigation, the Project has the potential to result in a cumulatively considerable net increase of a criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard, resulting in a significant direct and cumulatively-considerable impact.

Threshold c: Less than Significant Impact. The Project would not produce the volume of traffic required to generate a CO "hot spot." The Project also would not expose people to cancer risks that would exceed the AVAQMD significance threshold of 10 in one million or non-cancer health risks exceeding the applicable significance threshold of 1.0. Therefore, the Project would not expose sensitive receptors to substantial pollutant concentration. Impacts would be less than significant and no mitigation is required.

Threshold d: Less than Significant Impact. The Project does not propose land uses typically associated with emitting objectionable odors. The proposed Project would be required to comply with AVAQMD Rule 402, Nuisance, to prevent occurrences of public nuisances. Therefore, odors associated with the construction and operation of the Project would be less than significant and no mitigation is required.

4.2.7 MITIGATION

The following Mitigation Measures are designed to reduce emissions attributable to the proposed Project for construction and operations.

AIR MM-1 "Super-Compliant" low VOC paints shall be used during architectural coatings, which have been reformulated to exceed the regulatory VOC limits put forth by AVAQMD's Rule 1113. Super-Compliant low VOC paints shall be no more than 10 grams per liter (g/L) of VOC. Alternatively, the applicant may utilize pre-coated tilt-up concrete buildings that do not require the use of architectural coatings (painting).

AIR MM-2 The Project shall implement the following measures in order to reduce operational mobile source air pollutant emissions to the extent feasible:

- Only haul trucks meeting model year 2010 engine emission standards shall be used for the on-road transport of materials to and from the Project site.

- Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: (1) instructions for truck drivers to shut off engines when not in use; (2) instructions for drivers of diesel trucks to restrict idling to no more than 5 minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged; and (3) telephone numbers of the building facilities manager and

CARB to report violations. Prior to the issuance of each occupancy permit, the City of Palmdale shall conduct a site inspection to ensure that the signs are in place.

- Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the City demonstrating that occupants/tenants of the Project site have been provided documentation on funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment.

- The minimum number of automobile electric vehicle (EV) charging stations required by the California Code of Regulations Title 24 shall be provided. In addition, the buildings shall include electrical infrastructure sufficiently sized to accommodate the potential installation of additional auto and truck EV charging stations in the future.

- Conduit shall be installed to tractor trailer parking areas in logical locations determined by the Project Applicant during construction document plan check, for the purpose of accommodating the future installation of EV truck charging stations at such time this technology becomes commercially available.

AIR MM-3 The Project shall implement the following measure in order to reduce operational energy source air pollutant emissions to the extent feasible:

- The Project shall include rooftop solar panels to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid.

- Install Energy Star-rated heating, cooling, lighting, and appliances.

- Provide information on energy efficiency, energy-efficient lighting and lighting control systems, energy management, and existing energy incentive programs to future tenants of the Project.

- Structures shall be equipped with outdoor electric outlets in the front and rear of the structures to facilitate use of electrical lawn and garden equipment.

AIR MM-4 The Project shall include the following language within tenant lease agreements in order to reduce operational air pollutant emissions to the extent feasible:

- Require tenants to use the cleanest technologies available and to provide the necessary infrastructure to support zero-emission vehicles, equipment, and appliances that would be operating on site. This requirement shall apply to

equipment such as forklifts, handheld landscaping equipment, yard trucks, office appliances, etc.

- Require future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans, when economically feasible.

- Tenants shall be in, and monitor compliance with, all current air quality regulations for on-road trucks including the CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation.

AIR MM-5 Prior to the issuance of a building permit, Developer shall provide documentation to the City of Palmdale demonstrating that the Project could achieve Leadership in Energy and Environmental Design (LEED) certification to meet or exceed CALGreen Tier 2 standards in effect at the time of building permit application.

AIR MM-6 During Project construction, Developer will comply with the following:

- Require all generators, and all diesel-fueled off-road construction equipment greater than 75 horsepower, to be zero-emissions or equipped with CARB Tier IV-compliant engines (as set forth in Section 2423 of Title 13 of the California Code or Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. After either (1) the completion of grading or, (2) the completion of an electrical hook-up at the site, whichever is first, require all generators and all diesel-fueled off-road construction equipment, to be zero-emissions or equipped with CARB Tier IV-compliant engines (as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. An exemption from these requirements may be granted by the City in the event that the Project Applicant documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment (for example, if a Tier IV Final piece of equipment is not necessarily available at the time of construction and a lower tier equipment is used instead (e.g., Tier IV interim), and another piece of equipment could be upgraded from a Tier IV Final to a higher tier (i.e., Tier V) or replaced with an alternative-fueled (not diesel-fueled) equipment to offset emissions associated with using a piece of equipment that does not Meet Tier IV Final standards). Before an exemption may be considered by the City, the Project Applicant shall be required to demonstrate that at least two construction fleet owners/operators in the Region were contacted and that those owners/operators are confirmed Tier IV Final or better equipment could not be located in the Region. To

ensure that Tier IV Final construction equipment or better would be used during the proposed Project's construction, the Project Applicant shall include this requirement in applicable bid documents, purchase orders, and contracts. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.

- Provide infrastructure for zero-emission off-road construction equipment if the contractors selected to construct the Project plan to use zero-emission off-road construction equipment.

- Provide electrical hook-ups to the power grid, rather than diesel-fueled generators, for contractors' electric construction tools, such as saws, drills, and compressors. In applicable bid documents and contracts with contractors selected to construct the Project, include language requiring all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers, etc. (used during Project construction to be electric.

- Require construction equipment to be turned off when not in use.

- Recycle and/or salvage to reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1 of the California Green Building Standards Code Part 11.

- On days when the hourly average wind speed for the City of Palmdale exceeds 20 miles per hour, additional dust control measures shall be implemented, such as increased surface watering. Grading and excavation shall be prohibited when sustained wind speeds exceed 30 miles per hour.

- Apply and maintain surface treatments (such as PURETi Coat or PlusTi) on impervious ground surfaces that lessen impervious surface-related radiative forcing.

- Use paints, architectural coatings, and industrial maintenance coatings for all interior painting that have volatile organize compound levels of less than 10 g/L.

AIR MM-7 During operation of the proposed Project, Developer will comply with the following:

- All outdoor cargo handling equipment (including yard trucks, hostlers, yard goats, forklifts, and landscaping equipment) shall be zero- emission vehicles. Each building shall include the necessary charging stations or other necessary

infrastructure for cargo handling equipment. The building manager or their designee shall be responsible for enforcing these requirements.

- In anticipation of a transition to zero emissions truck fleets during the lifetime of the Project, install at least ten (10) heavy-duty truck vehicle charging stations by buildout of Phase 1 of the Project, install at least ten (10) heavy-duty truck vehicle charging stations by buildout of Phase II of the Project, and install at least five (5) heavy-duty truck vehicle charging stations by buildout of Phase 1 of the Project

- Commit to on-site solar generation sufficient to meet at least 75% of the Project's total operational energy requirements from within the building envelope.

- Prior to certificate of occupancy, install conduit and infrastructure for Level 2 (or faster) electric vehicle charging stations on-site for employees for the percentage of employee parking spaces commensurate with Title 24 requirements in effect at the time of building permit issuance plus additional plus charging stations equal to 5 percent of the total employee parking spaces in the building permit, whichever is greater. By buildout of each phase of the Project, install Level 2 (or faster) electric vehicle charging stations for 25 percent of the employee parking spaces required.

- Install HVAC and/or HEPA air filtration systems in all warehouse facilities.

- Prior to tenant occupancy, provide documentation to the City of Palmdale demonstrating that occupants/tenants of the Project site have been provided documentation that:

  - Recommends the use of electric or alternatively fueled sweepers with high efficiency particulate air (HEPA) filters;
  - Recommends the use of water-based or low VOC cleaning; and
  - For occupants with more than 250 employees, require the establishment of a transportation demand management program (TDM) to reduce employee commute vehicle emissions.

- Include contractual language in tenant lease agreements requiring that any facility operator shall:
  - Ensure that site enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies, for example, by requiring attendance at California Air Resources Board (CARB)-approved courses.
  - Be required to train managers and employers on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks. The

building manager or their designee shall be responsible for enforcing these requirements.

- Be in, and monitor compliance with, all current air quality regulations for on-road trucks including CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program (PSIP), and the Statewide Truck and Bus Regulation.

4.2.8 Design Features (DF) and Regulatory Requirements (RR)

The Project Applicant has agreed to implement the following design features and regulatory requirements in order to further reduce the level of emissions of criteria pollutants from the Project. The City of Palmdale is required to assure that implementing development complies with the assumptions relied upon herein and applicable regulatory requirements pertaining to the topic of Air Quality, which include the following regulatory requirements and design features. The Project shall be conditioned to implement the following design features and regulatory requirements as part of the City's Conditions of Approval for the Project. Sustainable design features and operational programs would be incorporated into facilities developed pursuant to the currently proposed Project. The Project also incorporates and expresses the following project design features and attributes promoting sustainability. Because these features/attributes are integral to the Project, and/or are regulatory requirements, they are not considered to be mitigation measures.

AIR DF-1: **Water Conservation.** To reduce water demands and associated energy use, the Project would implement a Water Conservation Strategy and demonstrate a minimum 20 percent (%) reduction in indoor and outdoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy). Prior to the issuance of building permits for the Project, the Project applicant shall provide building plans that include the following water conservation measures:

- Install low-water use appliances and fixtures
- Restrict the use of water for cleaning outdoor surfaces and prohibit systems that apply water to non-vegetated surfaces
- Implement water-sensitive urban design practices in new construction
- Install rainwater collection systems where feasible.

AIR DF-2 **Solid Waste Reduction.** In order to reduce the amount of waste disposed at landfills, the Project would implement a 75% waste diversion program. Prior to the issuance of building permits for the Project, the Project applicant shall provide building plans that include the following solid waste reduction measures:

- Provide storage areas for recyclables and green waste in new construction, and food waste
- storage, if a pick-up service is available.
- Evaluate the potential for onsite composting.

AIR RR-1 The Project shall comply with the provisions of AVAQMD Rule 401, Visible Emissions, which requires that a person shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

a. As dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or

b. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (b)(1)(A) of Rule 401.

AIR RR-2 The Project shall comply with the provisions of AVAQMD Rule 402, Nuisance, which requires that a person shall not discharge air contaminants or other materials that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

AIR RR-3 The Project shall comply with the provisions of AVAQMD Rule 403, Fugitive Dust, by implementing the following dust control measures during construction activities, such as earth-moving activities, grading, and equipment travel on unpaved roads. Prior to grading permit issuance, the following notes shall be included on the grading plans. Project contractors shall be required to ensure compliance with the notes. The notes also shall be specified in bid documents issued to prospective construction contractors.

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per AVAQMD guidelines in order to limit fugitive dust emissions, or water shall be applied to the soil not more than 15 minutes prior to moving such soil to limit Visible Dust Emissions (VDE) to 20 percent opacity.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered or subject to the application of dust suppressants sufficient to limit VDE to 20 percent opacity.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 mph or less.

AIR RR-4 The Project shall comply with AVAQMD rules related to sulfur content in fuels, including Rule 431.1, Sulfur Content of Gaseous Fuels; Rule 431.2, Sulfur Content of Liquid Fuels; and Rule 431.3, Sulfur Content of Fossil Fuels.

AIR RR-5 The Project shall comply with the provisions of AVAQMD Rule 1113, Architectural Coatings, by requiring that all architectural coatings must comply with the VOC limits established in Table 1 of Rule 1113.

4.2.9 Significance of Impacts After Mitigation

Thresholds a and b: Significant Direct and Cumulatively-Considerable Impact. As shown in Table 4.2-22, *Emissions Summary of Construction (With Mitigation)*, with the implementation of mitigation measures, emissions resulting from construction of the Project would be reduced and would not exceed criteria pollutant thresholds established by the AVAQMD for emissions of any criteria pollutant. Therefore, with implementation of the mitigation measures, construction activities associated with the Project would not 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.

As shown in Table 4.2-23, *Summary of Peak Operational Emissions (With Mitigation)*, with the implementation of Mitigation Measures, Phase I VOC emissions resulting from operation of the Project would be reduced and would not exceed the threshold established by the AVAQMD.

After implementation of feasible mitigation, NO_X and PM_{10} emissions from Phase I of the Project would still exceed applicable daily air pollutant significance thresholds established by the AVAQMD. Emissions of VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$ from Phases II - IV of the Project also would still exceed applicable daily air pollutant significance thresholds established by the AVAQMD. Therefore, the Project would result in a cumulatively-considerable net increase of air pollutants for which the Project region is non-attainment under an applicable federal or State ambient air quality standard (Urban Crossroads, 2023a, pp. 37-38).

It should be noted that a majority of the Project's NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions are derived from vehicle usage which the City does not have the regulatory authority to control or enforce. Neither the Project Applicant nor the Lead Agency can substantively or materially affect reductions in Project-related vehicular source emissions beyond the regulatory requirements and the feasible mitigation measures identified in this EIR. While there are no feasible mitigation measures that would reduce vehicular emissions to less than significant, the Project will install EV supply equipment in accordance with the California Building Code which will allow charging stations to be supplied on the Project site based on demand. Charging stations could lead to less use of gasoline-burning automobiles and thus, less air pollutant emissions. Hence, overall, there are no feasible mitigation measures that would reduce emissions to less than significant and this impact is considered significant and unavoidable. (Urban Crossroads, 2023a, p. 49)

Table 4.2-22 Emissions Summary of Construction (With Mitigation)

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
2024	7.81	73.01	91.83	0.17	13.99	8.18
2025	92.57	48.00	161.79	0.13	20.02	5.98
2026	7.27	59.59	106.69	0.16	15.36	7.41
2027	85.24	43.04	138.95	0.12	18.42	5.35
2028	6.16	54.12	90.25	0.16	12.62	7.00
2029	50.52	33.93	87.29	0.09	10.66	3.29
2031[1]	6.39	25.88	94.06	0.11	17.46	4.66
Winter						
2024	7.96	48.31	93.91	0.17	16.63	4.87
2025	7.59	33.60	88.76	0.10	16.48	4.74
2026	6.41	31.46	79.13	0.10	15.36	4.35
2027	6.17	29.72	75.69	0.10	15.19	4.25
2028	4.08	22.52	48.14	0.07	8.67	2.60
2029	3.94	21.53	46.11	0.07	8.61	2.54
2030	5.82	50.02	89.36	0.17	12.56	6.83
2031	91.83	46.81	99.91	0.17	20.93	5.71
2032	5.32	25.57	67.02	0.11	17.42	4.62
Maximum Daily Emissions	**92.57**	**73.01**	**161.79**	**0.17**	**20.93**	**8.18**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

[1] It should be noted that the construction schedule for Phase 4 spans over only one summer season, as such there are emissions for 2030 and 2032 for the summer season.

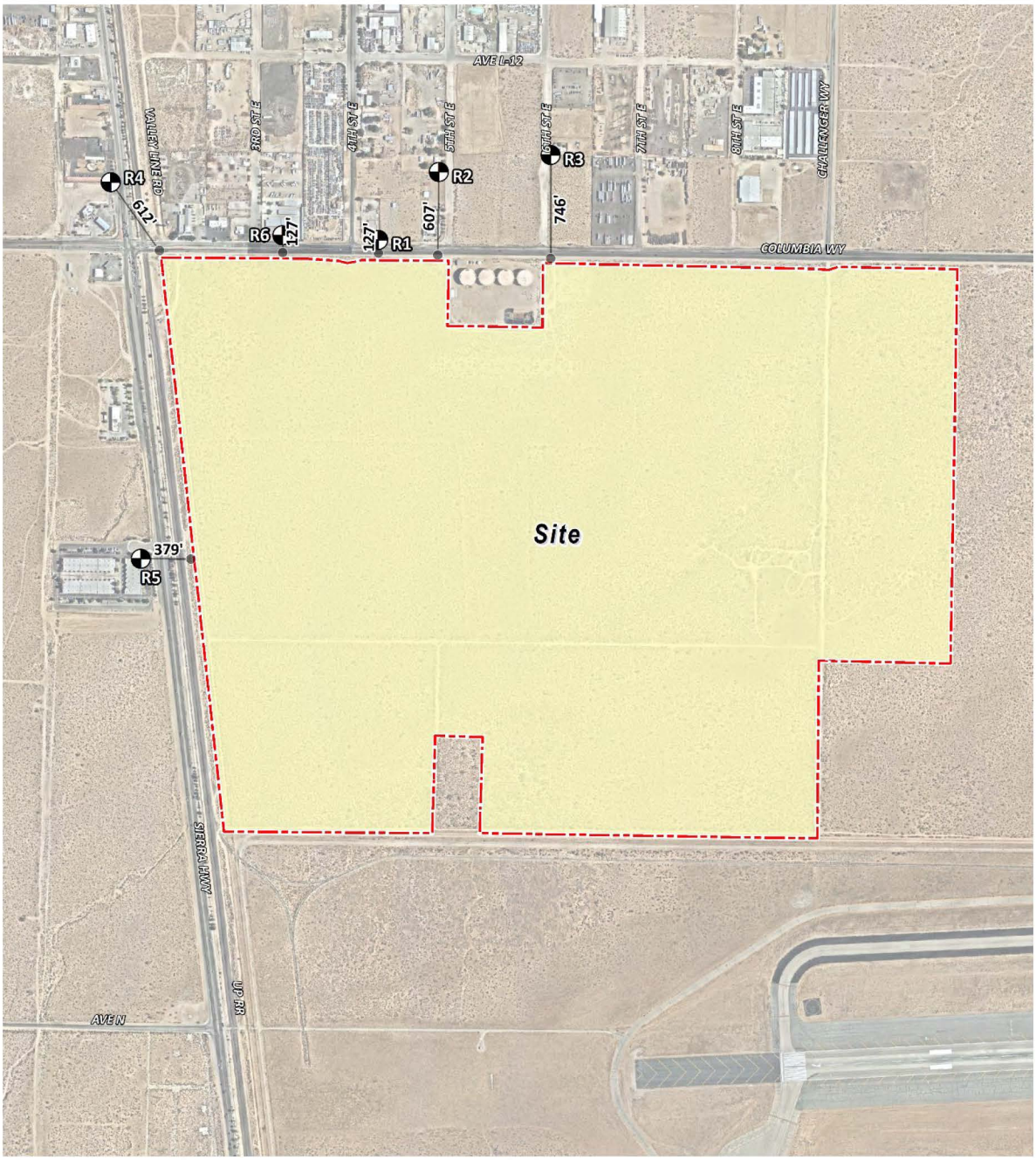
Source: CalEEMod construction-source (mitigated) emissions are presented in Appendices 3.1 through 3.4. (Urban Crossroads, 2023a, Table 3-6)

Table 4.2-23 Summary of Peak Operational Emissions (With Mitigation)

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase I						
Summer						
Mobile	41.29	166.04	518.78	2.29	131.24	35.81
Area	51.80	0.00	0.00	0.00	0.00	0.00
Energy Source	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Source	5.91	16.51	15.06	0.03	0.87	0.87
On-Site Equipment Source	0.00	0.00	0.00	0.00	0.00	0.00
TRU Source	8.19	9.11	0.89	0.00	0.36	0.33
Total Maximum Daily Emissions (Phase I)	**107.18**	**191.67**	**534.73**	**2.32**	**132.47**	**37.00**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**YES**	**NO**
Winter						
Mobile	38.32	176.40	399.58	2.20	131.25	35.81
Area	51.80	0.00	0.00	0.00	0.00	0.00
Energy Source	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Source	5.91	16.51	15.06	0.03	0.87	0.87
On-Site Equipment Source	0.00	0.00	0.00	0.00	0.00	0.00
TRU Source	8.19	9.11	0.89	0.00	0.36	0.33
Total Maximum Daily Emissions (Phase I)	**104.22**	**202.02**	**415.54**	**2.23**	**132.47**	**37.00**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**YES**	**NO**
Phases II - IV						
Summer						
Mobile	84.62	403.70	1001.69	5.74	336.26	92.16
Area	129.93	0.00	0.00	0.00	0.00	0.00
Energy Source	0.02	0.30	0.25	0.00	0.02	0.02
Stationary Source	6.89	19.26	17.57	0.03	1.01	1.01
On-Site Equipment Source	0.00	0.00	0.00	0.00	0.00	0.00
TRU Source	47.72	55.10	5.19	0.00	2.27	2.09
Total Maximum Daily Emissions (Phases II - IV)	**269.19**	**478.36**	**1024.71**	**5.78**	**339.57**	**95.29**

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**
Winter						
Mobile	78.55	427.48	779.99	5.56	336.26	92.16
Area	129.93	0.00	0.00	0.00	0.00	0.00
Energy Source	0.02	0.30	0.25	0.00	0.02	0.02
Stationary Source	6.89	19.26	17.57	0.03	1.01	1.01
On-Site Equipment Source	0.00	0.00	0.00	0.00	0.00	0.00
TRU Source	47.72	55.10	5.19	0.00	2.27	2.09
Total Maximum Daily Emissions (Phases II - IV)	**263.11**	**502.14**	**803.01**	**5.60**	**339.57**	**95.29**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**
Project Buildout (Phases I - IV)						
Summer						
Total Maximum Daily Emissions (Buildout)	**376.37**	**670.03**	**1559.44**	**8.10**	**472.03**	**132.29**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**
Winter						
Total Maximum Daily Emissions (Buildout)	**367.33**	**704.16**	**1218.55**	**7.83**	**472.04**	**132.29**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**

(Urban Crossroads, 2023a, Table 3-10)



Source(s): Urban Crossroads (11-14-2023)

Figure 4.2-1

Not to Scale

Receptor Locations

4.3 BIOLOGICAL RESOURCES

The analysis in this Subsection is based on the following site-specific biological reports and surveys prepared by Psomas, Glenn Lukos Associates, and Elanco: 1) "Biological Resources Technical Report," dated December 2022, included as *Technical Appendix C1* (Psomas, 2023a); 2) "Results of the Focused Special Status Plant/Desert Native Plant Survey", dated September 27, 2022, included as *Technical Appendix C2* (Psomas, 2022a); 3) "Results of a Focused Survey for Burrowing Owl", dated August 24, 2022, included as *Technical Appendix C3* (Psomas, 2022b); 4) "Results of the Swainson's Hawk Survey" dated October 24, 2023, included as *Technical Appendix C4* (Psomas, 2023b); 5) "Jurisdictional Delineation Report", dated November 21, 2022, included as *Technical Appendix C5* (Psomas, 2022c); 6) "Mohave Ground Squirrel Survey", dated September 28, 2022, included as *Technical Appendix C6* (Elanco, 2022); 7) "Results of the Joshua Tree Survey" dated September 22, 2022 included as *Technical Appendix C7* (Psomas, 2023c)*;* 8) "Results of a Focused Desert Tortoise Survey" dated September 21, 2022, included as *Technical Appendix C8* (Glenn Lukos Associates, 2022); and 9) "Supplemental Letter Assigning Impacts and Mitigation for Phase I and Phases 2–4 for the Antelope Valley Commerce Center Project" dated December 8, 2023, included as *Technical Appendix C9* (Psomas, 2023d). All references used in this subsection are included in EIR Section 7.0, *References*.

As defined in the Biological Resources Technical Report (*Technical Appendix C1),* and when used in this EIR Section, the term "Study Area" includes the Project site plus a 50-foot buffer around the perimeter of the Project site. (Psomas, 2023a, p. 11)

4.3.1 EXISTING CONDITIONS

The Project site is located within the Mojave Desert, an area referred to as "the high desert." The Project site is vacant and undeveloped. An unpaved portion of Challenger Way runs north to south through the eastern portion of the Project site. A graded dirt access road runs around the perimeter of the Project site and two graded dirt roads run east-west and north-south in the southern portion of the Project site. An unnamed sandy wash occurs in the extreme northwest corner of the Project site. Approximately 6-acre area in the southeastern portion of the Project site is highly disturbed and shows visible evidence of recent and historical illegal squatting, including extensive off-road vehicle disturbance and higher than average trash cover. Along the edges of the easternmost perimeter access road, moderate illegal dumping has occurred, and there are a few other trash piles scattered throughout the Project site. (Psomas, 2023a, pp. 19-20)

As shown on Figure 4.3-1, *Soils Map*, soil types in the Study Area include Adelanto coarse sandy loam (2 to 5 percent slopes); Cajon loamy sand (0 to 2 percent slopes); Cajon loamy sand (2 to 9 percent slopes); Cajon loamy sand, loamy substratum (0 to 2 percent slopes); Cajon loamy fine sand (0 to 2 percent slopes), hummocky; and Hesperia fine sandy loam (0 to 2 percent slopes). (Psomas, 2023a, p. 19 and Exhibit 4)

A. Vegetation Types and Other Areas

As shown on Figure 4.3-2, *Vegetation Types and Other Areas*, the following vegetation types and other areas occur in the Study Area: big sagebrush – disturbed rubber rabbitbrush scrub, rubber rabbitbrush scrub, disturbed rubber rabbitbrush – Nevada ephedra scrub, rubber rabbitbrush - Nevada joint-fir scrub/Joshua tree woodland, Nevada ephedra - cheesebush - Cooper's box thorn/Joshua tree woodland, creosote bush scrub, Joshua tree woodland, disturbed Joshua tree woodland, and bare ground. (Psomas, 2023a, pp. 20-21)

1. Disturbed Big Sagebrush - Rubber Rabbitbrush Scrub

Disturbed big sagebrush – rubber rabbitbrush scrub occurs in the far northwestern portion of the Study Area, within, and on the banks of, the dry wash. This vegetation type is co-dominated by mid- and large-stature rubber rabbitbrush (*Ericameria nauseosa)* and big sagebrush (*Artemisia tridentata*) shrubs spaced closely together. Other shrub species also occurring sparsely, include Nevada ephedra and four-wing saltbush. Ground cover is mostly comprised of redstem filaree (*Erodium cicutarium*) and tessellated fiddleneck (*Amsinckia tessellata*). Disturbances from vehicular traffic are visible, and other human disturbances such as trash occur in this location. This Association is not considered a sensitive natural community by the California Department of Fish and Wildlife (CDFW). (Psomas, 2023a, p. 21)

2. Rubber Rabbitbrush Scrub

Rubber rabbitbrush scrub occurs adjacent to the dirt access road that runs around the perimeter of the site. This vegetation type is mostly comprised of rubber rabbitbrush shrubs spaced closely together. Other shrub species also occurring include Nevada ephedra and four-wing saltbush. Ground cover consists of many different species including but not limited to pectocarya (*Pectocarya spp*.), sapphire eriastrum (*Eriastrum sapphirinum*), cushion cryptantha (*Cryptantha circumscissa var. circumscissa*), and Fremont's phacelia (*Phacelia fremontii*). This vegetation type conforms to the *Ericameria nauseosa* Alliance in A Manual of California Vegetation which is not considered a sensitive natural community by the CDFW. (Psomas, 2023a, p. 21)

3. Disturbed Rubber Rabbitbrush - Nevada Ephedra Scrub

Disturbed rubber rabbitbrush – Nevada ephedra scrub occurs in the north-central portion of the Study Area adjacent to the chain-link fence surrounding the four large water tanks. This area is characterized by small- to large-stature rubber rabbitbrush and Nevada ephedra shrubs spaced relatively far apart. Some other shrub species that occur are cheesebush (*Ambrosia salsola*), Anderson's box-thorn (*Lycium andersonii*), and four-wing saltbush (*Atriplex canescens*). Ground cover is comprised of species such as pectocarya, cryptantha (*Cryptantha sp*.), tessellated fiddleneck, and sapphire eriastrum. Historical photographs show evidence of mechanical disturbance in this area. This vegetation type is not included in A Manual of California Vegetation. The closest Association this vegetation type would conform to is the *Ericameria nauseosa* Alliance which is not considered a sensitive natural community by the CDFW and would not be considered locally sensitive. (Psomas, 2023a, p. 21)

4. Rubber Rabbitrush – Nevada Ephedra Scrub/Joshua Tree Woodland

Rubber rabbitbrush – Nevada ephedra scrub/Joshua tree woodland occurs in the northern and central portions of the Study Area. This area is co-dominated by small- to large-stature rubber rabbitbrush and Nevada ephedra shrubs spaced relatively far apart, and small- to medium-stature Joshua trees spaced far apart. Some other shrub species that occur are thorny hop-sage (*Grayia spinosa*), winter fat (*Krascheninnikovia lanata*), axillary cottonthorn (*Tetradymia axillaris*), four-wing saltbush, and creosote bush (*Larrea tridentata*). Ground cover is comprised of species such as pectocarya, cryptantha (*Cryptantha sp.),* tessellated fiddleneck, sapphire eriastrum, and desert dandelion. Historical photographs show evidence of mechanical disturbance in this area. This vegetation type is not included in A Manual of California Vegetation. The closest Associations this vegetation type would conform to are the *Ericameria nauseosa* Alliance and the *Yucca brevifolia* Woodland Alliance. The *Yucca brevifolia* Woodland Alliance component of this vegetation type would be considered a sensitive natural community by the CDFW; whereas, the *Ericameria nauseosa* Alliance component would not. (Psomas, 2023a, p. 22)

5. Nevada Ephedra - Cheesebush - Cooper's Box Thorn/Joshua Tree Woodland

Nevada ephedra - cheesebush - Cooper's box thorn/Joshua tree woodland occurs in the southwestern portion of the Study Area. This area is co-dominated by small- to large-stature Nevada ephedra, cheesebush, and Cooper's box thorn shrubs with small- and medium-stature Joshua trees spaced relatively far apart throughout. Some other shrub species that occur are thorny hop-sage, winter fat, axillary cottonthorn, narrow-scaled cottonthorn (*Tetradymia stenolepis*), four-wing saltbush, and bladder-sage (*Scutellaria mexicana*). Ground cover is comprised of species such as pectocarya, cryptantha (*Cryptantha sp*.), tessellated fiddleneck, sapphire eriastrum, Arizona popcornflower (*Plagiobothrys arizonicus*), wire-lettuce (*Stephanomeria pauciflora*), and annual bur-sage (*Ambrosia acanthicarpa*). The closest Associations for this vegetation type would conform to the *Lycium cooperi* (provisional) Alliance and the *Yucca brevifolia* Woodland Alliance. The *Yucca brevifolia* Woodland Alliance component of this vegetation type would be considered a sensitive natural community by the CDFW; whereas, while the *Lycium cooperi* (provisional) Alliance component would not. (Psomas, 2023a, p. 22)

6. Creosote Bush Scrub

Creosote bush scrub occurs in the northwestern portion of the Study Area. This area is dominated by medium- to large-stature creosote bush shrubs spaced relatively close together. Some other shrub species that occur are Joshua tree, four-wing saltbush, big sagebrush, and Mormon tea. Ground cover is comprised of species such as erodium, pectocarya, tessellated fiddleneck, sapphire eriastrum, and annual bur-sage (*Ambrosia acanthicarpa*). This vegetation type conforms to the *Larrea tridentata* Alliance in A Manual of California Vegetation which is not considered a sensitive natural community by the CDFW. (Psomas, 2023a, pp. 22-23)

7. Joshua Tree Woodland and Disturbed Joshua Tree Woodland

Joshua tree woodland and disturbed Joshua tree woodland generally occurs throughout the southern two-thirds of the Study Area. This vegetation type is dominated by western Joshua trees with various shrubs as the dominant understory species. Creosote bush shrubs are the dominant under story species in the southeastern portion of the area. Dominant understory shrubs occurring throughout the rest of this vegetation type include a mosaic of various species such as Nevada ephedra, Mormon tea, rubber rabbitbrush, Cooper's box-thorn, Anderson's box-thorn, and cheesbush. Ground cover species richness is highest in these areas. Species occurring include but are not limited to tessellated fiddleneck, common goldfields (*Lasthenia gracilis*), white layia (*Layia glandulosa*), desert dandelion (*Malacothrix glabrata*), little stephanomeria (*Stephanomeria exigua ssp. exigua*), Arizona popcornflower, weak purple mat (*Nama demissum*), thistle sage (*Salvia carduacea*), short-flower wild buckwheat (*Eriogonum brachyanthum*), rose-and-white wild buckwheat (*Eriogonum gracillimum*), western Mojave wild buckwheat (*Eriogonum mohavense*), and two-toothed wild buckwheat (*Eriogonum viridescens*). These vegetation types conform to the *Yucca brevifolia* Woodland Alliance in A Manual of California Vegetation which is considered a sensitive natural community by the CDFW. (Psomas, 2023a, p. 23)

8. Other Landcover

Other land cover in the Study Area consists of bare ground. Bare ground consists of graded dirt access roads with less than five percent vegetation cover. (Psomas, 2023a, p. 23)

B. Wildlife Populations and Movement Patterns

1. Fish

Surface water is scarce in the Mojave Desert; most water is in underground aquifers. Streams are ephemeral or intermittent and are fed by springs, snow melt, and rainfall. Drainage features observed in the Study Area consists of an unnamed sandy wash in the extreme northwest portion of the Study Area. Because there is no water on the Study Area, except immediately following rain, drainage features would not provide suitable habitat for fish; therefore, no fish species are expected to occur in the Study Area. (Psomas, 2023a, p. 23)

2. Amphibians

Most desert amphibian species are restricted to areas of permanent water, desert washes, desert oases, or moist areas with riparian habitat. Therefore, amphibian species are not expected to occur in the Study Area due to the lack of permanent water, desert washes, desert oases, moist vegetation types, and landscaped areas. (Psomas, 2023a, pp. 23-24)

3. Reptiles

The following nine common reptile species were observed in the Study Area: long-nosed leopard lizard *(Gambelia wislizenii*), western fence lizard (*Sceloporus occidentalis*), yellow-backed spiny lizard (*Sceloporus uniformis*), common side-blotched lizard (*Uta stansburiana*), desert night lizard (*Xantusia*

vigilis), Great Basin whiptail (*Aspidoscelis tigris tigris*), coachwhip (*Masticophis flagellum*), gophersnake (*Pituophis catenifer*), and northern Mohave rattlesnake (*Crotalus scutulatus scutulatus*). Other common reptiles that may occur include but are not limited to California kingsnake (*Lampropeltis californiae*), zebra-tailed lizard (*Callisaurus draconoides*), and red racer (*Coluber flagellum*). (Psomas, 2023a, p. 24)

4. Birds

A variety of bird species are expected to be resident in the Study Area, using the habitats throughout the year. Other species are present only during certain seasons. Common bird species observed in the Study Area include: California quail (*Callipepla californica*), Eurasian collared-dove (*Streptopelia decaocto*), mourning dove (*Zenaida macroura*), common nighthawk (*Chordeiles minor*), sharp-shinned hawk (*Accipiter striatus*), red-tailed hawk (*Buteo jamaicensis*), ladder backed woodpecker (*Picoides scalaris*), Say's phoebe (*Sayornis saya*), ash-throated flycatcher (*Myiarchus cinerascens*), Cassin's kingbird (*Tyrannus vociferans*), western kingbird (*Tyrannus verticalis*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), cliff swallow (*Petrochelidon pyrrhonota*), cactus wren (*Campylorhynchus brunneicapillus*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), house finch (*Haemorhous mexicanus*), black-throated sparrow (*Amphispiza bilineata*), lark sparrow (*Chondestes grammacus*), white-crowned sparrow (*Zonotrichia leucophrys*), Bell's sparrow (*Artemisiospiza belli*), and yellow-rumped warbler (*Setophaga coronata*). (Psomas, 2023a, p. 24)

Bird species that were observed and may breed on the Study Area include California quail, mourning dove, red-tailed hawk, ladder-backed woodpecker, Say's phoebe, ash-throated flycatcher, western kingbird, common raven, horned lark, cactus wren, northern mockingbird, European starling, house finch, lark sparrow, and Bell's sparrow. Active nests of common raven and common nighthawk were observed incidentally on the Study Area during surveys in 2022. (Psomas, 2023a, p. 24)

5. Mammals

The following eight mammals were observed in the Study Area: white-tailed antelope squirrel (*Ammospermophilus leucurus*), California ground squirrel (*Otospermophilus beecheyi*), Merriam's kangaroo rat (*Dipodomys merriami*), Panamint kangaroo rat (*Dipodomys panamintinus*), southern grasshopper mouse (*Onychomys torridus*), deer mouse (*Peromyscus maniculatus*), black-tailed jackrabbit (*Lepus californicus*), bobcat (*Lynx rufus*), and kit fox (*Vulpes macrotis*). (Psomas, 2023a, p. 24)

Other common mammals that may occur in the Study Area include but are not limited to the following: desert cottontail (*Sylvilagus audubonii*), desert pocket mouse (*Chaetodipus penicillatus*), desert woodrat (*Neotoma lepida*), Botta's pocket gopher (*Thomomys bottae*), and northern raccoon (*Procyon lotor*). Bat species that are either expected to occur or that may occur in the Study Area for foraging include canyon bat (*Parastrellus hesperus*) and western mastiff bat (*Eumops perotis californicus*). Canyon bat and pallid bat may also occur for roosting, while western mastiff bat would not be expected to roost on the Study Area due to the lack of suitable roosting habitat. (Psomas, 2023a, pp. 24-25)

6. *Wildlife Movement*

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information. Corridors mitigate the effects of this fragmentation by 1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; 2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fire or disease) will result in population or local species extinction; and 3) serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other necessary resources. Wildlife movement activities usually fall into one of three movement categories: 1) dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions); 2) seasonal migration; and 3) movements related to home range activities (e.g., foraging for food or water; defending territories; or searching for mates, breeding areas, or cover). (Psomas, 2023a, p. 25)

Wildlife movement in the Study Area is mostly constrained by existing roadways and also by fencing associated with the inactive Palmdale Regional Airport located to the south of the Project site. However, wildlife is somewhat unconstrained on the immediate eastern border of the Study Area in the area between the Project site and fencing associated with the inactive Palmdale Regional Airport perimeter fence, located approximately 0.5-mile from the eastern edge of the Study Area. In addition, undeveloped areas of land occur west of the Project site and west of Sierra Highway. (Psomas, 2023a, p. 26)

C. ***Special Status Biological Resources***

Special status biological resources that were observed, reported, or that Psomas determined to have the potential to occur in the Study Area are discussed below. These resources include plant and wildlife species that have been afforded special status and/or recognition by federal and State resource agencies, as well as private conservation organizations. In general, the principal reason an individual taxon (i.e., species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size, geographic range, and/or distribution resulting in most cases, from habitat loss. In addition to species, special status biological resources include vegetation types and habitats that are either unique; of relatively limited distribution in the region; or are of particularly high wildlife value. (Psomas, 2023a, p. 27)

1. *Special Status Vegetation Species*

Two special status vegetation types, Joshua Tree woodland and disturbed Joshua tree woodland, occur in the Study Area. The remaining vegetation types: disturbed big sagebrush – rubber rabbitbrush scrub, rubber rabbitbrush scrub, rubber rabbitbrush – Nevada ephedra scrub, rubber rabbitbrush – Nevada ephedra scrub/Joshua tree woodland, Nevada ephedra – cheesebush – Cooper's box thorn/Joshua tree

woodland, and creosote bush scrub are considered "secure" by the CDFW on a global and State level (see Table 4 in *Technical Appendix C1*) and these vegetation types are not considered special status by the CDFW. (Psomas, 2023a, p. 29)

2. Special Status Plants

Table 6 of *Technical Appendix C1* provides a summary of the special status plant species reported to occur in the region of the Study Area and includes information on the status, species background, potential for occurrence, and results of focused survey efforts. Table 6 includes species reported by the California Natural Diversity Database (CNDDB) and the California Native Plant Society (CNPS), supplemented with species from Psomas' experience that either occur nearby or could occur based on the presence of potentially suitable habitat. (Psomas, 2023a, p. 31)

Two special status plant species, crowned muilla (*Muilla coronata*) and the western Joshua tree (*Yucca brevifolia*), were observed on the Study Area by Psomas. The crowned muilla has a California Rare Plant Rank (CRPR) of 4.2. This perennial herb (bulb) typically blooms between March and April and occurs in open desert scrub and woodland between approximately 2,509 feet to 6,429 feet above mean sea level (msl). This species is known from the Mojave Desert, desert mountains, Tehachapi Mountain area, southern high Sierra Nevada and east to the White and Inyo Mountains. (Psomas, 2023a, p. 33)

One confirmed crowned muilla observation (one individual) was documented by Psomas along the southern edge of the Study Area. This individual was desiccated (dried out, lacking vitality) and contained one seed. Considering the time of year the observation was made (early April), it can be inferred that this individual bloomed in the previous season. In addition, a population of approximately ten individuals in the Themidaceae (Brodiaea) family were observed in the eastern portion of the Study Area. These individuals were observed in a vegetative state and could not be identified further at the time of the survey. Psomas visited the Study Area multiple times; however, blooming never occurred, therefore further identification was not possible. Given the structure of the leaves, it is likely that this population is also crowned muilla. Both locations occur in Joshua tree woodland in sandy soils. See Exhibit 7 of the Biological Resources Technical Report (*Technical Appendix C1*), for a map showing the location of each crowned muilla. (Psomas, 2023a, p. 33)

The western Joshua tree's western extent occurs near Gorman, California; the southern extent occurs in Joshua Tree National Park; the eastern extent in Tikaboo Valley, Nevada; and the northern extent near Alkali, Nevada. The western Joshua tree is arborescent (tree-like) with a distinct trunk, which branches only after a flower is produced on the main stalk. The western Joshua tree is currently listed as a California Candidate Threatened species and therefore requires obtaining an Incidental Take Permit (ITP) prior to Project site disturbance, granted through either the CESA Incidental Take Permit (ITP) process or the Joshua Tree Conservation Act ITP process. (Psomas, 2023a, p. 33)

Joshua Trees documented in the Study Area are shown on Figure 4.3-3, *Biological Resources Impact Map*. The precise location of each Joshua Tree is shown on Exhibits 8-1 through 8-65 of the Project's Biological Technical Report (*Technical Appendix C1*) as well as Exhibits 3-1 through 3-65 of the

Project's Joshua Tree Survey Report (*Technical Appendix C7).* Photographs of individual Joshua trees are included as part of the Project's Administrative Record and are available for review at the City of Palmdale.

Psomas documented a total of 8,196 western Joshua trees in the Study Area, of which 6,644 are recorded as living and 1,552 are recorded dead. Of the 8,196 total western Joshua trees, 7,184 trees are within the Study Area and 1,012 trees are located off-site within a surveyed 186-foot buffer. During the survey, each Joshua tree received a pre-numbered metal tag affixed with a 3-inch metal nail on the north side of the trunk for orientation purposes during potential future transplanting. Individual Joshua trees were measured for diameter at breast height (4.5 feet above natural grade), and height. Total branching, spread, number of fresh panicles (loose branching cluster of flowers), and the presence and number of clones was also counted. Whether the tree was flowering or had any lean (e.g., no lean, slight lean, lean, extreme lean not touching ground, extreme lean touching ground) was noted. An overall assessment of health was made on a grading system: excellent, good, fair, poor, critical, dead standing, dead freshly fallen, dead moderately aged, dead severely aged. Following the field survey, each tree was assessed for its suitability for transplantation/relocation based on a general health assessment and size threshold (height and minimal branching). Per the City's Joshua Tree Ordinance, only trees less than or equal to 15 feet in height, and in good condition are recommended for transplanting. Those trees in close proximity to other trees (e.g., clonal) were not selected for potential transplanting due to difficulties presented from underground root systems. A detailed data table of each tree and corresponding attributes, as well as those trees potentially suitable for transplantation, is contained in Appendix D of *Technical Appendix C1*. (Psomas, 2023c, pp. 3-4)

The western Joshua tree is a species designated as candidate for listing as threatened pursuant to California Environmental Species Act (CESA) (Fish & G. Code § 2050 *et seq*)). Take of western Joshua tree is defined as any activity that results in the removal of a western Joshua tree, or any part thereof, or impacts the seedbank surrounding one or more western Joshua trees. The western Joshua tree is granted full protection of a threatened species under CESA. Take of any endangered, threatened, candidate species is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9). Impacts on western Joshua tree requires a mandatory finding of significance under CEQA (CEQA Guidelines, § 15065). (CDFW, 2022)

3. Desert Native Plants Act

The 2022 focused plant surveys conducted by Psomas identified two plant species protected by the California Desert Native Plants Act (CDNPA) occurring in the Study Area: western Joshua tree and silver cholla (*Cylindropuntia echinocarpa*). The western Joshua tree was discussed above. Twelve silver cholla were identified on the Study Area. See Figure 4.3-3. (Psomas, 2023a, p. 34)

In addition, Psomas identified nine cactus individuals identified by the CDNPA in the Phase I development area of the Project site (Psomas, 2023d, p. 3).

4. Special Status Wildlife Species

Thirty-two special status wildlife species have been reported in the Project site's vicinity. Suitable or marginally suitable habitat for 17 of these species occurs on or adjacent to the Project site. Special status wildlife species reported from the site's vicinity include species of raptors and other birds, bats, mammals and reptiles as discussed below. (Psomas, 2023a, pp. 50-52) Table 10 of *Technical Appendix C1* provides a summary of special status wildlife species reported to occur in the region of the Project site and includes information on the status, species background, nearest reported location, potential for occurrence, and results of focused survey efforts (where applicable). Table 10 also includes species reported by the CNDDB, supplemented with species from the Project Biologist's (Psomas) experience that either occur nearby or could occur based on the presence of suitable habitat. (Psomas, 2023a, p. 35)

❑ Special Status Raptor Species

Eight special status raptor species have the potential to forage throughout the Project site: 1) Cooper's hawk; 2) short-eared owl; 3) long-eared owl; 4) northern harrier; 5) burrowing owl; 6) merlin; 7) American peregrine falcon; and 8) prairie falcon. Potentially suitable foraging habitat occurs throughout the Study Area. Of the seven special status raptor species with the potential to occur, one species, the burrowing owl, has the potential to nest on the Project site. (Psomas, 2023a, p. 50)

Burrowing Owl

Burrowing owl is a California Species of Special Concern (SSC). Suitable habitat and potentially suitable burrows for the burrowing owl occur mostly in the creosote bush dominated portions of the Project site. No burrowing owl individuals or active/inactive burrowing owl burrows were observed on the Study Area during focused surveys. (Psomas, 2022b, p. 4) However, six potential burrowing owl burrows were identified as shown on Figure 4.3-4, *Burrowing Owl Survey Results*.

Swainson's Hawk

Swainson's hawks were historically more numerous and widespread breeders in Southern California, even nesting on the coast as far south as San Diego County. Previously a scarce summer resident in the Mojave and Colorado deserts, the species is known to still be rather scarce in this region and restricted to desert woodland habitats of Joshua tree, Mojave yucca, and possibly desert riparian habitats. It is known to be considered a very rare summer resident in the region and listed known nesting sites such as the Lanfair Valley in San Bernardino County, Owens Valley in Inyo County, and the Antelope Valley in Los Angeles County. Unpublished data indicates that there has been recolonization of historic habitats in the Antelope Valley and population increases in the Owens Valley. The Bureau of Land Management's West Mojave Plan states that all recent nest sites for the West Mojave Planning Area (WMPA) are in the Antelope, Victor, and Apple Valleys from near Palmdale and Lancaster, Los Angeles County, east to Adelanto and Victorville in San Bernardino County. In the WMPA, breeding habitat is provided by Joshua tree woodland, riparian woodland, and ornamental vegetation in the vicinity of suitable foraging habitats that include native as well as agricultural habitats. Primary trees selected for nest sites in the WMPA are Joshua trees, Fremont

cottonwoods, and other large trees used in agricultural windbreaks. A search of the CDFW's California Natural Diversity Database (CNDDB) shows historic nesting localities for Swainson's hawk in the vicinity of the Project site. Multiple breeding locations have been documented in CNDDB in the Antelope Valley, including Palmdale, between 2018 and 2020. (Psomas, 2023b, pp. 3-4)

No Swainson's hawk species were observed in the survey area during the focused surveys. One Swainson's hawk pair was observed nesting in a non-native elm tree in the yard of a residence at 50th Street East and East Avenue L, approximately 4.0 miles east of the Project site, and six migrating Swainson's hawks were observed foraging in the agricultural fields along 50th Street East between East Avenue L-8 and East Avenue L. Since the nest location was outside the survey area, detailed monitoring observations were not conducted. One additional raptor species, red-tailed hawks, was observed during the surveys. No red-tailed hawk territories were documented within the survey area. (Psomas, 2022b, p. 4; Psomas, 2023a, p. 14) No Swainson's hawk species were observed in the survey area during the focused surveys. Although the species may occur as a flyover, Psomas determined that the species is not expected to occur for nesting or foraging on the Project site and no suitable nesting or foraging habitat (agricultural fields) occur on the Project site. (Psomas, 2023a, Table 10)

❑ Special Status Bird Species

One special status bird species, the mountain plover, has a low potential to occur for foraging but is not expected to nest on the Project site. The mountain plover occurs in the region of the Project site only during wintertime in agricultural fields and disturbed areas. The Project site provides limited, marginal, potentially suitable foraging habitat in the more disturbed portions of the site. (Psomas, 2023a, pp. 51-52)

Two additional special status bird species have the potential to nest and forage on the Project site: 1) loggerhead shrike and 2) LeConte's thrasher. Loggerhead shrike is a California Species of Special Concern. A loggerhead shrike was observed on the Project site. Psomas determined that potentially suitable nesting habitat for this species occurs in the large shrubs and western Joshua trees throughout the Project site and suitable foraging habitat occurs throughout the biological Study Area. LeConte's thrasher was observed on the Project site and prefers to nest in large thorny shrubs in sandy substrate which is available in species such as boxthorn shrubs throughout the Project site (except for bare ground). LeConte's thrasher may forage throughout the site. (Psomas, 2023a, p. 52)

❑ Los Angeles County Sensitive Bird Species

The following bird species that the Los Angeles Audubon Society considers "at-risk" in the region may forage on the Project site: 1) greater roadrunner; 2) mountain bluebird (wintering); 3) vesper sparrow; 4) western meadowlark; 5) lesser nighthawk; 6) cactus wren; 7) California towhee; and 8) black-throated sparrow. The species that may also breed on the Project site include the cactus wren (old nests observed), greater roadrunner, California towhee, and lesser nighthawk (observed breeding). Although not recognized by State or federal agencies, the Los Angeles County Department of Regional Planning considers these species worthy of consideration as sensitive. (Psomas, 2023a, p. 45)

❑ Special Status Bat Species

Three special status bat species have the potential to forage throughout the Project site: 1) pallid bat; 2) Townsend's big-eared bat; and 3) western mastiff bat. (Psomas, 2023a, p. 52)

❑ Desert Kit Fox and American Badger

The desert kit fox is protected by the CDFW California Fish and Game Code, which prohibits the take of individuals. Although American badgers are not afforded the same protection by the CDFW, the measures to protect active desert kit fox dens can also be applied to protect active American badger dens; thus, this species is typically included in measures to protect active dens. Desert kit fox was observed on the Project site during surveys by Psomas and American badger has the potential to occur throughout the Project site and adjacent areas. (Psomas, 2023a, pp. 52-53)

❑ Mohave Ground Squirrel

Mohave ground squirrel (MGS) is a CESA-listed species. Mohave ground squirrels have been documented historically to occur within the Antelope Valley region. The Project site could support requisite habitat elements for MGS such as burrows under vegetation found in desert scrub and Joshua tree woodland. The limits of MGS' geographic range are not known precisely. (CDFW, 2022)

As discussed in the Mohave Ground Squirrel Survey (*Technical Appendix C6*), MGS occur in a range of open desert habitats, most commonly in creosote scrub but also in Joshua tree woodland, desert saltbush scrub, desert sink scrub, desert greasewood scrub, and shadscale scrub. MGS are active only during the spring-summer months and spend most of the year (approximately seven months) below ground. MGS protocol surveys were conducted in accordance with the 2010 CDFW MGS Survey Guidelines and consisted of an initial visual survey, followed by live trapping and camera trapping efforts. The Project site is located in the southwestern corner of the MGS range where MGS occurrences are uncommon and population densities have historically been low. A CNDDB query for the Lancaster East quadrangle showed that no MGS have been recorded in the vicinity of the Project site since 1985. The closest and most recent MGS occurrence on CNDDB was recorded in 1985 at 2.0 miles north of the Project site. Although some suitable habitat was detected during the visual survey, including the presence of MGS food plants and soils suitable for burrowing, no MGS were captured during the live trapping or camera trapping surveys. Based on the results of the protocol survey, CDFW guidelines indicate that CDFW will stipulate that no MGS occur on the Project site. (Elanco, 2022, pp. 1, 7-12)

❑ Special Status Reptile Species

One special status reptile species, the northern legless lizard, may occur on the Project site and therefore is considered present. The northern legless lizard is typically found in moist areas underground. Therefore, the species may occur near the roots of large shrubs and western Joshua trees where the moisture content is highest. (Psomas, 2023a, p. 53)

Psomas conducted protocol surveys for Blainville's horned lizard in 2022. Based on the results of the surveys, the species is not expected to occur on the site; marginally suitable habitat occurs at the ends of the species' range and Psomas did not observe the species during the 2022 protocol focused surveys. (Psomas, 2023a, Table 10)

Desert Tortoise

Desert tortoise is an Endangered Species Act (ESA) and CESA-listed species. The Project site is within the range of desert tortoise (CDFW, 2022). It is noted that the Project site is not within USFWS critical habitat. FWS designated critical habitat areas for the desert tortoise in 1994 (USFWS 1994) and prescribed management actions to aid recovery, with critical habitat providing legal protection. The closest critical habitat unit to the Project stie is the Fremont-Kramer Critical Habitat Unit, approximately 16 miles to the northeast of the Project site (USFWS, 2022).

Glenn Lukos Associates conducted focused surveys for the desert tortoise for all suitable habitat areas within the Project site on April 26, 2023 and May 20, 2023. Surveys were conducted in accordance with the 2018 USFWS Mojave Desert Tortoise Pre-project Survey Protocol, which requires 10-meter-wide belt transects for "small project areas" (less than 500 acres) on any lands subject to ground-disturbing activities associated with the Project. No desert tortoise or diagnostic sign were detected during the focused surveys. (Glenn Lukos Associates, 2022, pp. 2-3)

5. Jurisdictional Resources

Jurisdictional resources considered include wetlands and non-wetland "waters of the United States" (WOTUS) regulated by the United States Army Corps of Engineers (USACE); "waters of the State" regulated by the Regional Water Quality Control Board (RWQCB); and the bed, bank, and channel of all lakes, rivers, and/or streams (and associated riparian vegetation), as regulated by the CDFW. (Psomas, 2022c, ES-1)

The limits of non-wetland WOTUS and "waters of the State" were identified by the presence of an ordinary high water mark (OHWM) and by determining potential reservoir inundation limits. Wetland features were identified based on the USACE's three-parameter approach in which wetlands are defined by the presence of hydrophytic vegetation, hydric soils, and the presence of wetland hydrology indicators. (Psomas, 2022c, p. 4)

As shown on Figure 4.3-5, *Jurisdictional ,* one jurisdictional feature, an unnamed sandy wash was identified in the extreme northwest corner of the Study area. This feature appears to historically be an overflow channel in the Amargosa River floodplain. Urbanization of the surrounding area has hydrologically cut off this channel from the Amargosa River, and it currently conveys stormwater runoff in a northernly direction. The entire Project site, which is generally flat, was surveyed and no other jurisdictional features were observed. A summary of the jurisdictional resource is provided in Table 4.3-1, *Summary of Jurisdictional Resources on the Project Site* and photographs are provided in Appendix I, Attachment C, of *Technical Appendix C1* that illustrate the general biological conditions of the Project site. (Psomas, 2022c, p. 9)

Table 4.3-1 Summary of Jurisdictional Resources on the Project Site

Feature	Latitude/Longitude (decimal degrees)		Feature Length	OHWM Width Range (feet)	Area of RWQCB Jurisdiction (acres)		CDFW Jurisdiction Width Range (feet)	Areas of CDFW Jurisdiction (Acres)
	Upstream End	Downstream End			Wetland	Non-Wetland		
Unnamed sandy wash	34.644716°, -118.127546°	34.645723°, -118.127408°	330	2-3	0.00	0.015	50-93	0.498
				Totals	**0.00**	**0.015**		**0.498**

OHWM: Ordinary High Water Mark; USACE: U.S. Army Corps of Engineers; RWQCB: Regional Water Quality Control Board; CDFW: California Department of Fish and Wildlife

(Psomas, 2022c, Table 1)

Based on the results of the jurisdictional delineation field work, Psomas determined that the total amount of jurisdictional resources on the Project site are as follows (Psomas, 2022c, pp. ES-1):

- USACE Jurisdictional "waters of the US":
  - Wetlands: 0.00 acre
  - Non-wetland waters: 0.00 acre (due to lack to connectivity to Traditional Navigable Waterway)
- RWQCB Jurisdictional "waters of the State":
  - Wetlands: 0.00 acre
  - Non-wetland waters: 0.015 acres
- CDFW Jurisdictional Streambeds:
  - Streambeds/Riparian Habitat: 0.498 acres

❑ Waters of the United States Determination

Water that passes through the on-site drainage continues northward through a culvert that passes under Avenue M. North of the Project site, water would potentially flow through drainage ditches that occur between the railroad tracks and various developed lots. Water flows toward Rosamond Lake (an inland dry lakebed on Edwards Air Force Base) though the gradient of the urban ditches appear to fluctuate so that water would likely infiltrate the soil somewhere south of Avenue H. Because there are no Traditional Navigable Waterways in the region that would receive water from the Project site, the on-site waters would not be considered WOTUS and would not be under the USACE's jurisdiction. (Psomas, 2022c, p. 9)

❑ Wetlands Determination

No hydrophytic vegetation was observed during the field survey and no depressions were noted where ponded water conditions would occur that would suggest development of wetland conditions. As shown on Figure 4.3-6, *National Wetland Inventory*, the National Wetland Inventory identifies one area in the northern-central part of the Project site that is noted as a potential wetland area. Psomas's review of historic aerial photographs of that area, surface water is observed in 2009 but appears to be in a small rectangular area where some ground disturbance had occurred, suggesting an artificial feature. No surface water was observed in any subsequent aerial photographs. Aerial photographs prior

to 2009 indicated no noticeable difference between the area and the surrounding landscape. To determine if wetland conditions were present in this area, Psomas excavated a wetland sampling point to determine if hydric soil conditions were present. (Psomas, 2022c, p. 9) Vegetation at the sampling location was dominated by rubber rabbitbrush, a species that is common to recently disturbed areas, further suggesting that past water ponding was the result of some type of soil disturbance. Only upland vegetation was present in the vicinity of the sampling point and no indicators of hydric soil or wetland hydrology were observed. Therefore, Psomas determined that no wetland conditions are considered present on the Project site. (Psomas, 2022c, p. 10)

❑ Regional Water Quality Control Board Jurisdiction

WOTUS are not considered present in the survey area due to the lack of connectivity to a Traditional Navigable Waterway. However, the Regional Water Quality Control Board's (RWQCB's) definition of "waters of the State" is much broader and includes intermittent and ephemeral waters and those that are not connected to a Traditional Navigable Waterway. Therefore, the sandy wash described above would be considered "waters of the State." The limits of non-wetland "waters of the State" were defined by the presence of the OHWM. Evidence of an OHWM in the survey area consists of scour marks created by storm water flowing through the survey area. Approximately 0.015 acre of non-wetland "waters of the State" under the regulatory authority of the Lahontan RWQCB occur on the Project site (Table 4.3-1). The extent of RWQCB jurisdiction is shown on Exhibit 6, *Jurisdictional Waters*, in Appendix I of *Technical Appendix C1*. (Psomas, 2022c, p. 10)

❑ California Department of Fish and Wildlife Jurisdiction

The limits of CDFW jurisdiction on the Project site were mapped to the top of the bank. There is no adjacent riparian habitat present along either feature, thus CDFW's jurisdiction is limited to the top of the stream bank. Psomas determined that the total amount of CDFW's jurisdictional area is 0.498 acre. (Psomas, 2022c, p. 10)

❑ Joshua Tree and Native Desert Vegetation Preservation

As discussed previously, a total of 8,196 western Joshua trees were documented in the survey area, of which 6,644 are living and 1,552 are dead. Of the 8,196 western Joshua trees, 7,184 are within the Project site and 1,012 are located off-site within the 186-feet survey buffer area.

4.3.2 Regulatory Setting

A. Federal Regulations

1. Federal Endangered Species Act

The Federal Endangered Species Act (ESA) protects plants and animals that the United States Fish and Wildlife Service (USFWS) has listed as endangered or threatened. A federally listed species is protected from unauthorized "take," which is defined in the ESA as acts to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct" (16 USC Sections 1532 [19] and 1538[a]). In this definition, harm includes "any act which actually kills or injures fish

or wildlife, and emphasizes that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife" (50 Code of Federal Regulations [CFR], Title 50, Section 17.3). Unless performed for scientific or conservation purposes with the permission of the USFWS, take of listed species is only permissible if the USFWS issues an Incidental Take Permit (ITP). When issuing an ITP, all federal agencies, including the USFWS, must ensure that their activities are "not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species" (16 USC 1536[a]). Enforcement of the ESA is administered by the USFWS. (Psomas, 2023a, p. 2)

The ESA also provides for designation of critical habitat, defined as specific areas within the geographical range occupied by a species where physical or biological features "essential to the conservation of the species" are found and "which may require special management considerations or protection" (16 USC 1538[5][A]). Critical habitat may also include areas outside of the current geographical area occupied by the species that are nonetheless essential for the conservation of the species. (Psomas, 2023a, p. 2)

2. Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act requires consultation with the USFWS and the fish and wildlife agencies of states where the "waters of any stream or other body of water are proposed or authorized, permitted or licensed to be impounded, diverted . . . or otherwise controlled or modified" by any agency under a federal permit or license. Consultation is to be undertaken for the purpose of "preventing loss of and damage to wildlife resources." (Psomas, 2023a, p. 2)

3. Sections 404 and 401 of the Clean Water Act of 1972

Section 404 of the Clean Water Act (CWA) (33 USC 1251 et seq.) regulates the discharge of dredged or fill material into waters of the United States, including wetlands. The USACE is the designated regulatory agency responsible for administering the 404 permit program and for making jurisdictional determinations. (Psomas, 2023a, p. 2)

Under Section 401 of the CWA, an activity requiring a USACE Section 404 permit must obtain a State Water Quality Certification, or waiver thereof, to ensure that the activity will not violate established federal or State water quality standards. The State Water Resources Control Board (SWRCB), in conjunction with the nine California RWQCBs, is responsible for administering the Section 401 water quality certification program. Under Section 401 of the federal CWA, an activity involving discharge into a water body must obtain a federal permit and a State Water Quality Certification to ensure that the activity will not violate established water quality standards. The SWRCB's and RWQCB's jurisdiction also extend to all "waters of the State" when no waters of the United States are present, including wetlands and non-wetland waters of the State (isolated and non-isolated). The EPA is the federal regulatory agency responsible for implementing the CWA. However, it is the SWRCB, in conjunction with the nine RWQCBs, who essentially has been delegated the responsibility of administering the water quality certification (Section 401) program. (Psomas, 2023a, pp. 2-3)

The Navigable Waters Protection Rule was published in the Federal Register on April 21, 2020, and became effective on June 22, 2020. The Navigable Water Protection Rule provides new regulatory text defining waters of the United States. One of the major changes to the definition of waters of the United States is that ephemeral waters are no longer subject to USACE regulation under the CWA. (Psomas, 2023a, p. 3)

On May 28, 2020, the SWRCB's issued *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* went into effect. Under these new regulations, the SWRCB and its nine RWQCBs will assert jurisdiction over all existing waters of the United States and all waters that would have been considered waters of the United States under the definition that existed prior to the 2020 Navigable Waters Protection Rule (i.e., ephemeral waters). Thus, the waters of the United States that would no longer be under USACE jurisdiction following the Navigable Waters Protection Rule would still be under the SWRCB's jurisdiction as waters of the State. (Psomas, 2023a, p. 3)

4. Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703–711), as amended in 1972, makes it unlawful at any time, by any means or in any manner, unless permitted by regulations, to "pursue; hunt; take; capture; kill; attempt to take, capture, or kill; possess; offer for sale; sell; offer to barter; barter; offer to purchase; purchase; deliver for shipment; ship; export; import; cause to be shipped, exported or imported; deliver for transportation; transport or cause to be transported; carry or cause to be carried; or receive for shipment, transportation, carriage, or export, any migratory bird; any part, nest, or eggs of any such bird; or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof. " (16 USC 703). (Psomas, 2023a, p. 3)

The MBTA covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. This regulation seeks to protect migratory birds and active nests. The MBTA protects over 800 species, including geese, ducks, shorebirds, raptors, songbirds, and many relatively common species. Bird species protected under the provisions of the MBTA are identified by the List of Migratory Birds (50 CFR 10.13), as updated by the 1983 American Ornithological' Society Checklist and published supplements by the USFWS. (Psomas, 2023a, p. 3)

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: 1) *Accipitridae* (kites, hawks, and eagles); 2) *Cathartidae* (New World vultures); 3) *Falconidae* (falcons and caracaras); 4) *Pandionidae* (ospreys); 5) *Strigidae* (typical owls); and 6) *Tytonidae* (barn owls). The provisions of the 1972 amendment to the MBTA protect all species and subspecies of these families. (Psomas, 2023a, p. 3)

5. *Bald and Golden Eagle Protection Act*

The Bald and Golden Eagle Protection Act (16 USC 668) provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds. The 1972 amendments increased penalties for violating provisions of the Act and strengthened other enforcement measures. A 1978 amendment authorizes the Secretary of the Interior to permit the taking of golden eagle nests that interfere with resource development or recovery operations. (Psomas, 2023a, pp. 3-4)

A 1994 Memorandum from President William Clinton to the heads of Executive Agencies and Departments establishes the policy concerning collection and distribution of eagle feathers for Native American religious purposes. (Psomas, 2023a, p. 4)

B. ***State Regulations***

1. *California Environmental Quality Act*

With regards to plants and animals, Section 15380 of the CEQA Guidelines independently defines "Endangered" and "Rare" species separately from the definitions of the California Endangered Species Act (CESA). Under CEQA, "Endangered" species of plants or animals are defined as those whose survival and reproduction in the wild are in immediate jeopardy, while "Rare" species are defined as those that 1) have such low numbers that they could become endangered if their environment worsens or 2) are likely to become endangered within the foreseeable future (i.e., "threatened" as used in the ESA). In addition, a lead agency can consider a non-listed species (e.g., species with a California Rare Plant Rank [CRPR], California Species of Special Concern, or species of Local Concern) to be treated as if it were endangered, rare, or threatened for the purposes of CEQA if the species can be shown to meet the criteria in the definition of "rare" or "endangered" in the project region. (Psomas, 2023a, p. 4)

The CEQA Guidelines designates certain "trustee agencies" that have jurisdiction by law over natural resources affected by a project which are held in trust for the people of California. CDFW is the trustee responsible for the conservation, protection, and management of wildlife, native plants, and habitat necessary to maintain biologically sustainable populations. Trustee agencies are generally required to be notified of CEQA documents relevant to their jurisdiction, whether or not these agencies have actual permitting authority or approval power over aspects of the underlying project. The CDFW is then required to provide the requisite biological expertise to review and comment on environmental documents and impacts arising from project activities and make recommendations regarding those resources held in trust for the people of California (California Fish and Game Code §1802). (Psomas, 2023a, p. 4)

2. *California Endangered Species Act*

The State of California implements the California Endangered Species Act (CESA) which is enforced by the CDFW. While the provisions of the CESA are similar to the ESA, CDFW maintains a list of California Threatened and Endangered species, independent of the ESA threatened and endangered

species list. It also lists species that are considered rare and candidates for listing, which also receive protection. The California list of endangered and threatened species is contained in Title 14, Sections 670.2 (plants) and 670.5 (animals) of the California Code of Regulations (CCR). (Psomas, 2023a, p. 4)

State-listed threatened and endangered species are protected under provisions of the CESA. Activities that may result in the take of individuals, defined in CESA as acts to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill," are regulated by the CDFW. While habitat degradation or modification is not included in the definition of take under CESA, the CDFW has interpreted take to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species. (Psomas, 2023a, pp. 4-5)

If it is determined that the take would not jeopardize the continued existence of the species, an ITP can be issued by the CDFW as specified within Section 2081 of the CCR or per the Joshua tree Conservation Act (for Joshua trees only). If a State-listed species is also federally-listed, and the USFWS has issued an ITP that satisfies the CDFW's requirements, CDFW may issue a consistency finding in accordance with Section 2080.1 of the California Fish and Game Code. (Psomas, 2023a, p. 5)

3. California State Legislature

California State Legislature passed the Western Joshua Tree Conservation Act (Assembly Bill AB1008) on June 27, 2023, which was signed by Governor Gavin Newsom on July 10, 2023, and retroactively took effect July 1, 2023. This bill, among other things, would authorize the department to authorize, by permit, the taking of a western Joshua tree if specified conditions are met, including, but not limited to, that the permittee mitigates all impacts to, and taking of, the western Joshua tree. The bill would authorize, in lieu of completing the mitigation measures on its own, a permittee to elect to satisfy the mitigation obligation by paying a fee to the State pursuant to a specified fee schedule. The bill would require the department to present the final conservation plan at a public meeting of the commission, for its review and approval, by December 31, 2024, and would require the commission to take final action on the plan by June 30, 2025. (Psomas, 2023a, p. 6)

The bill's in-lieu fee Joshua tree mitigation fund is available for projects located in the area bounded by the intersection of Highway 58 and Interstate 5, then east along Highway 58 to the intersection of Interstate 15, then north along Interstate 15 to the intersection of Highway 247, then south along Highway 247 to the intersection of Highway 18, then west along Highway 18 to the intersection of Highway 138, then west and north along Highway 138 to the intersection of Interstate 5, then north along Interstate 5 to Highway 58. Alternatively, in-lieu fees can be paid in areas outside of the geographical area described above if the project is in a jurisdiction that has entered into an agreement with the State pursuant to the bill. The Project site is located within the bill's in-lieu fee Joshua tree mitigation fund area. (Psomas, 2023a, p. 6)

Updates, an interactive map, and additional information regarding the Western Joshua Tree Conservation Act can be found at www.wildlife.ca.gov/Conservation/Environmental-Review/WJT. (Psomas, 2023a, p. 6)

4. California Desert Native Plants Act

The California Desert Native Plants Act (CDNPA) codified in Sections 80001–80201 of the California Food and Agricultural Code, was enacted to protect California desert native plants from unlawful harvesting on both public and privately owned lands. This act is applicable within Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego counties. Within these counties, the Act prohibits the harvest, transport, sale, or possession of specific native desert plants without a valid permit or wood receipt and with the required tags and seals. (Psomas, 2023a, p. 5)

5. California Fish and Game Code

The CDFW administers the California Fish and Game Code. Particular sections of the Code are applicable to natural resource management.

❑ Native Plant Protection Act

Sections 1900 through 1913 of the California Fish and Game Code were developed to preserve, protect, and enhance endangered and rare plants in the State of California. The Native Plant Protection Act requires all State agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least 10 days in advance of any change in land use that would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed. (Psomas, 2023a, p. 6)

❑ Unlawful Take or Destruction of Nests or Eggs

These sections duplicate federal protection under the MBTA. Section 3503 of the California Fish and Game Code makes it unlawful to take, possess, or destroy any bird's nest or any bird's eggs. Further, any birds in the orders *Falconiformes* or *Strigiformes* (birds of prey, such as hawks, eagles, and owls) and their nests and eggs are protected under Section 3503.5 of the California Fish and Game Code. Finally, Section 3513 of the California Fish and Game Code prohibits the take and possession of any migratory nongame bird, as designated in the MBTA. (Psomas, 2023a, p. 6)

❑ California Fully Protected Species

The State of California created the "Fully Protected" classification in an effort to identify and provide additional protection to those animals that are rare or that face possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under State and/or federal endangered species acts; however, some have not been formally listed. (Psomas, 2023a, p. 7)

Various sections of the California Fish and Game Code provide lists of fully protected reptile and amphibian (§ 5050), bird (§ 3511), and mammal (§ 4700) species that may not be taken or possessed at any time, except as provided in Sections 2081.7, 2081.9, or 2835. CDFW is unable to authorize the issuance of permits or licenses to take these species, except for necessary scientific research. (Psomas, 2023a, p. 7)

❑ Fur-Bearing Mammals

Section 460 of the California Fish and Game Code prohibits the taking of the following fur-bearing mammals: fisher (*Martes pennanti*), American marten (*Martes americana*), North American river otter (*Lontra canadensis*), desert kit fox (*Vulpes macrotis arsipus*), and red fox (*Vulpes vulpes*). (Psomas, 2023a, p. 7)

❑ Natural Communities Conservation Planning Act

The Natural Community Conservation Planning Act, codified in Sections 2800 through 2835 of the California Fish and Game Code and signed into law in October 1991, authorizes the preparation of Natural Community Conservation Plans (NCCPs). This Act is a State of California effort to protect critical vegetative communities and their dependent wildlife species. The purpose of an NCCP is to sustain and restore those species and their habitat identified by the CDFW that are necessary to maintain the continued viability of those biological communities impacted by human changes to the landscape. The NCCP process provides an alternative to protecting species on a "single species basis" as in the federal and State endangered species acts. Under the Act, the CDFW is responsible for creating process planning and conservation guidelines for NCCP programs. Local governments and landowners may then prepare the NCCPs so that they comply with the CESA. (Psomas, 2023a, p. 7)

❑ California Fish and Game Code (Sections 1600 through 1616)

California Fish and Game Code Sections 1600 et seq. establish a process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources or, when adverse impacts cannot be avoided, ensure that adequate mitigation and/or compensation is provided. (Psomas, 2023a, p. 7)

California Fish and Game Code Section 1602 requires any person, state, or local governmental agency or public utility to notify the CDFW before beginning any activity that will do one or more of the following:

- Substantially obstruct or divert the natural flow of a river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. (Psomas, 2023a, p. 7)

Section 1602 of the California Fish and Game Code applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. The CDFW's regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFW takes jurisdiction to the top bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place within or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. A Section 1602 Lake or Streambed Alteration Agreement would be required if impacts to identified CDFW jurisdictional areas occur. (Psomas, 2023a, p. 8)

6. California Porter-Cologne Water Quality Control Act

Pursuant to the California Porter-Cologne Water Quality Control Act, the SWRCB and the nine RWQCBs may require permits, known as Waste Discharge Requirements (WDRs), for the fill or alteration of the waters of the State. The term "waters of the State" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050[e]). The SWRCB and RWQCB have interpreted their authority to require WDRs to extend to any proposal to fill or alter waters of the State, even if those same waters are not under USACE jurisdiction. Pursuant to this authority, the State and Regional Boards may require the submission of a "report of waste discharge" under Section 13260, which is treated as an application for WDRs. (Psomas, 2023a, p. 8)

The Porter-Cologne Water Quality Control Act charges the SWRCB and the nine RWQCBs statewide with protecting water quality throughout California. Typically, the SWRCB and RWQCB act in concert with the USACE under Section 401 of the CWA in relation to permitting fill of federally jurisdictional waters. The SWRCB and the RWQCBs may require permits (i.e., WDRs) for the fill or alteration of the waters of the State. (Psomas, 2023a, p. 8)

C. Regional Plans

1. West Mojave Plan

The West Mojave Plan is an amendment to the California Desert Conservation Area (CDCA) Plan that represents a collaboration of resource agencies, local jurisdictions, and others with a stake in the future of the western Mojave Desert. The Bureau of Land Management (BLM) is the federal Lead Agency, and the state Lead Agencies are the County of San Bernardino and the City of Barstow. The West Mojave Plan includes the West Mojave Desert area encompassing 9.3 million acres in Inyo, Kern, Los Angeles, and San Bernardino Counties; 3.3 million acres of public lands administered by the BLM; 3 million acres of private lands; 102,000 acres administered by the State of California; and the balance of military lands administered by the Department of Defense. A Final Environmental Impact Report and Statement for the West Mojave Plan was prepared in 2005. While the USFWS issued a Biological Opinion for the federal portion of the plan in 2006, the State portion of the plan has not been permitted.

Until the State portion of the plan is passed, it cannot be used by State or private entities. (Psomas, 2023a, p. 8)

The West Mojave Plan establishes a regional biological strategy to conserve plant and animal species and their habitats, prevent future listing, and provide for an efficient, equitable, and cost-effective process for complying with threatened and endangered species law. The West Mojave Plan addresses desert tortoise (*Gopherus agassizii*), Mohave ground squirrel (*Xerospermophilus mohavensis*), and over 100 species of plants and animals; designates areas of critical environmental concern and other special management areas specifically designed to promote species conservation; designates routes of travel on public lands; and establishes other management prescriptions to guide grazing, mineral exploration and development, recreation, and other public land uses. (Psomas, 2023a, pp. 8-9)

D. Local Plans, Policies, and Regulations

1. City of Palmdale General Plan

The Conservation Element of the City's General Plan (Palmdale 2045) outlines the goals and policies related to conservation of natural and cultural resources in Palmdale. The goal applicable to the Project site's known or potentially present biological resources is Goal CON-1, aimed at protecting Significant Ecological Areas in and around the City, including, but not limited to, sensitive flora and fauna habitat areas. (City of Palmdale, 2023, p. 291)

2. Joshua Tree and Native Desert Vegetation Preservation

On December 15, 2020, the City of Palmdale issued an Urgency Ordinance Amending Chapter 14.04 of the Palmdale Municipal Code (Joshua Tree and Native Desert Vegetation Preservation) to require compliance with the California Endangered Species Act (CESA). As disclosed above in Subsection 4.3.1, there are western Joshua trees on the Project site under existing conditions; there are no California Juniper trees on the Project site under existing conditions. The "Results of the Joshua Tree Survey" dated September 22, 2022 included as *Technical Appendix C7* satisfies the requirements found in the Palmdale Municipal Code and CESA.

4.3.3 Basis for Determining Significance

Section IV. of Appendix G to the CEQA Guidelines addresses typical adverse effects to biological resources, and includes the following threshold questions to evaluate the Project's impacts to biological resources:

> 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 Wildlife or U.S. Fish and Wildlife Service;*

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

c. 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;

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

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

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

In order to evaluate whether an impact on biological resources would result in a substantial adverse effect, both the resource itself and how that resource fits into a regional context must be considered. The regional setting of the Project site includes the portion of the Mojave Desert encompassed by the USGS' Palmdale, Lancaster East, Lancaster West, Alpine Butte, Littlerock, and Ritter Ridge 7.5-minute quadrangles that generally extends north to Rosamond, east to 70th Street East, south to the north slope San Gabriel Mountains, and west to 70th Street West. (Psomas, 2023a, p. 47)

For impact analysis purposes, a substantial adverse effect is defined as the loss or harm of a magnitude which, based on current scientific data and knowledge, would substantially diminish population numbers of a species or distribution of a habitat type within the region or eliminate the functions and values of a biological resource in the region. (Psomas, 2023a, p. 47)

4.3.4 Impact Analysis

Both direct and indirect impacts on biological resources are evaluated. Direct impacts are those that involve the initial loss of habitat or individuals due to vegetation clearing and construction-related activities. Indirect impacts would be those related to impacts on the adjacent remaining habitat due to construction activities (e.g., noise, dust) or operation of a project (e.g., human activity). (Psomas, 2023a, p. 45)

Biological impacts associated with the Project were evaluated with respect to the following special status (synonymous with "sensitive") biological issues:

- Species listed under federal or State Endangered Species Acts;
- Species proposed for listing under federal or State Endangered Species Acts

- Non-listed species that meet the criteria in the definition of "Rare" or "Endangered" in the CEQA Guidelines (i.e., 14 California Code of Regulations, Section 15380)[1];
- Species designated as California Species of Special Concern;
- Vegetation types (synonymous with "habitat" and "community") suitable to support a federally or State-listed Endangered or Threatened plant or wildlife species;
- Streambeds, waterbodies, wetlands, and their associated vegetation; and
- Vegetation types, other than wetlands, considered special status by regulatory agencies (e.g., the USFWS, the CDFW) or resource conservation organizations; and
- Other species or issues of concern to regulatory agencies or conservation organizations. (Psomas, 2023a, p. 45)

The actual and potential occurrence of these resources in the Study Area were correlated with the significance criteria in order to determine whether Project impacts on these resources would be considered significant. (Psomas, 2023a, p. 46)

As described in Section 3.0, *Project Description*, the Project would be developed in four phases. Construction activities for Phase I are anticipated to begin in June 2024 and end in August 2025. Construction activities for Phases II – IV are expected to occur between June 2026 and December 2031. Therefore, impacts are evaluated per phases of construction.

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

A. Phase I Analysis

Vegetation types and other areas that would be impacted by Phase I of the Project are shown in Table 4.3-2, *Vegetation Types and Other Areas Impacted by Phase I of the Project* and Figure 4.3-3, *Biological Resources Impact Map*.

[1] Section 15380 of the CEQA Guidelines indicates that a lead agency can consider a non-listed species (e.g., plant with a California Rare Plant Rank (CRPR) of 1B.1) to be Endangered, Rare, or Threatened if the species can be shown to meet the criteria in the definition of Rare or Endangered. For the purposes of this discussion, the current scientific knowledge on the population size and distribution for each special status species was considered in determining if a non-listed species meets the definitions for Rare and Endangered according to Section 15380 of the CEQA Guidelines.

Table 4.3-2 Vegetation Types and Other Areas Impacted by Phase I of the Project

Vegetation Types and Other Areas	Impacted (Acres)
Joshua tree woodland	75.28
rubber rabbitbrush - Nevada ephedra scrub/Joshua tree woodland	37.62
disturbed rubber rabbitbrush - Nevada ephedra scrub	21.73
creosote bush scrub	0.06
bare ground	1.06
Total	**135.75**

Note: total acreage may not equal the addition of each row above due to rounding of acreage within each row. Additional impacts within the paved roadway and shoulder are expected but not reflected within these calculations due to subsequent engineering refinements. Other differences in acreage may occur due to slight shift in engineering line work resulting in slivers of unaccounted impact area. However, no direct impact on biological resources is expected to result from these variations. Vegetation types identified reflected as multiple vegetation types with a slash and/or dash between the words indicates a mixed communities with small patches of each disturbed throughout.

(Psomas, 2023d, Table 1)

1. Direct Impacts

❑ General Habitat and Wildlife

As shown in Table 4.3-2, Phase I of the Project would permanently impact approximately 134.69 acres of native vegetation types rubber rabbitbrush - Nevada ephedra scrub, and creosote bush scrub) and 1.06 acres of bare ground. The loss of native and non-native vegetation that provides wildlife habitat is considered an adverse impact. However, the loss of native and non-native habitat on the Project site would not be expected to reduce populations of common wildlife species below self-sustaining levels in the Project region. Although this impact would be considered adverse but less than significant, and no mitigation would be required, BIO MM-1 is included to lessen adverse effects of common wildlife species by requiring a biological monitoring during vegetation removal to facilitate wildlife salvage. (Psomas, 2023d, p. 2)

Several common bird species have the potential to nest in the vegetation or on the ground on the Project site. The loss of an active migratory bird nest, including nests of common species, would be considered a violation of the MBTA and Sections 3503, 3503.5, and 3513 of California Fish and Game Code. The MBTA and California Fish and Game Code prohibits the taking of migratory birds, nests, and eggs. The potential loss of an active nest would be considered adverse but not significant because the impact does not meet the significance criteria. However, BIO MM-2 has been included to address the time frame in which construction could occur to avoid active nests and includes a requirement for pre-construction surveys and avoidance of active nests. Implementation of BIO MM-2 would prevent the adverse impact and ensure that construction impacts would not violate the provisions of the MBTA and California Fish and Game Code. (Psomas, 2023d, p. 2)

❑ Special Status Vegetation Types

One special status vegetation type and one partial special status vegetation type, occur in the Phase I impact area: Joshua tree woodland (75.28 acres), and rubber rabbitbrush - Nevada ephedra scrub/Joshua tree woodland (37.62 acres), respectively. The rubber rabbitbrush - Nevada ephedra scrub vegetation type is not considered special status by CDFW. The Joshua tree woodland portion of this vegetation type is ranked as G4, S3, and is considered sensitive by the CDFW. For purposes of the impact analysis, approximately half of this vegetation type would be considered sensitive (18.81 acres). Impacts to a total of 94.10 acres of these sensitive vegetation types would be considered potentially significant. Implementation of BIO MM-1, BIO MM-3, BIO MM-4, and BIO MM-5 would reduce impacts to a less than significant level. (Psomas, 2023d, p. 3)

❑ Special Status Plant Species

Two special status plant species were observed in Phase I during focused surveys: crowned muillia (*Muilla coronata*) and western Joshua tree (*Yucca brevifolia*). Impacts to crowned muillia would not be considered significant because of their relative abundance in the Project region and the small population on the Project site. (Psomas, 2023d, p. 3)

Impacts to the western Joshua tree, a California Candidate Threatened species, would be considered significant and mitigation would be required. An Endangered Species Act Section 10(a)(1)(B) ITP or Western Joshua Tree Conservation Act ITP would be required for impacts to Joshua trees. Implementation of BIO MM-1, BIO MM-3, BIO MM-4, and BIO MM-5 would reduce impacts to a less than significant level. (Psomas, 2023d, p. 3)

❑ Desert Native Plants Act

Phase 1 of the Project would impact a total of nine cactus individuals protected by the California Desert Native Plants Act (CDNPA). These impacts are considered potentially significant and would require a permit from Los Angeles County. Implementation of BIO MM-6 would reduce potential impacts to less than significant and ensure compliance with the CDNPA. (Psomas, 2023d, p. 3)

❑ Special Status Wildlife Species

Burrowing owl has potential to nest in the Phase I area. Impacts to burrowing owl would be considered potentially significant. Implementation of BIO MM-1 and BIO MM-7 would reduce this impact to a less than significant level through measures that would avoid and minimize the potential for loss of an active nest/burrow and/or the direct mortality of individuals. Two additional special status bird species have potential to nest and forage in Phase 1: loggerhead shrike, and LeConte's thrasher. Implementation of BIO MM-2 would ensure that measures are taken to avoid and minimize impacts on active nests. Several bird species Los Angeles Audubon Society considers "at-risk" in the region may occur for foraging on the Project site. Implementation of BIO MM-2 would ensure that measures are taken to avoid and minimize impacts on active nests. (Psomas, 2023d, p. 3)

Desert kit fox and American badger may occur in Phase I for foraging and breeding. Impacts to these

species would be considered potentially significant. Implementation of BIO MM-8 would include conditions that would avoid and minimize impacts on desert kit foxes and American badgers and active dens. (Psomas, 2023d, p. 3)

One special status reptile species may occur in Phase I: northern legless lizard. Impacts to this species would be considered potentially significant. Implementation of BIO MM-1 would lessen any potential adverse impacts to this species. (Psomas, 2023d, p. 4)

2. Indirect Impacts

❑ Water Quality

Drainages in the vicinity of Phase I of the proposed Project could be impacted as a result of changes in water quality. These impacts would be considered potentially significant. Implementation of BIO MM-9, which includes Best Management Practices that would reduce construction-related pollutants, would reduce this impact to a less than significant level. (Psomas, 2023d, p. 4)

❑ Noise and Vibration

Common and special status bird species have the potential to nest in habitat adjacent to Phase I. Impacts to nesting birds would be considered potentially significant. Implementation of BIO MM-2 would ensure that construction impacts would not violate the provisions of the MBTA or California Fish and Game Code Sections 3503, 3503.5, and 3513. (Psomas, 2023d, p. 4)

❑ Night Lighting

Night lighting in Phase I of the Project may impact the behavioral patterns of nocturnal and crepuscular (i.e., active at dawn and dusk) wildlife adjacent to night lighting. This impact is potentially significant. Implementation of BIO MM-10, which requires that spillover of night light be limited to the extent practicable, would reduce this impact to a less than significant level. (Psomas, 2023d, p. 4)

❑ Invasive Exotic Plant Species

Landscaping in Phase I of the Project that includes the installation of non-native, invasive plant species (e.g., species listed in the California Invasive Plant Council's invasive plant inventory) can be detrimental to surrounding native habitat. These impacts would be considered potentially significant. Implementation of BIO MM-11 would prohibit the use of non-native, invasive plant species in landscaping associated with Phase I of the Project. This measure would reduce this potential impact to a less than significant level. (Psomas, 2023d, p. 4)

❑ Human Activity

Construction activities in Phase I of the Project can create disturbance, which in turn provides a place for non-native weedy species to spread. Additionally, construction equipment can introduce non-native weed seeds to the area if equipment is not properly cleaned. These impacts would be considered potentially significant. Implementation of BIO MM-12 would require the use of Best Management

Practices associated with prevention of the spread of weed seeds to reduce this potential impact to a less than significant level. (Psomas, 2023d, p. 4)

Common and special status bird species have the potential to nest in habitat adjacent to Phase I of the Project. Human activity in the vicinity of an active nest could result in the loss of an active bird nest. These impacts would be considered potentially significant. Implementation of BIO MM-2 would ensure that construction impacts resulting from increased human activity would not violate the provisions of the MBTA or California Fish and Game Code Sections 3503, 3503.5, and 3513. (Psomas, 2023d, p. 4)

B. Phases II - IV Analysis

Vegetation types and other areas that would be impacted by Phases II - IV of the Project are shown in Table 4.3-3, *Vegetation Types and Other Areas Impacted by Phases II - IV of the Project* and Figure 4.3-2, *Vegetation Types and Other Areas*.

Table 4.3-3 Vegetation Types and Other Areas Impacted by Phases II - IV of the Project

Vegetation Types and Other Areas	Impacted (Acres)
Joshua tree woodland	123.05
Disturbed Joshua tree woodland	6.17
rubber rabbitbrush - Nevada ephedra scrub/Joshua tree woodland	30.56
creosote bush scrub	9.17
bare ground	2.76
Total	**171.64**

Note: total acreage may not equal the addition of each row above due to rounding of acreage within each row. Additional impacts within the paved roadway and shoulder are expected but not reflected within these calculations due to subsequent engineering refinements. Other differences in acreage may occur due to slight shift in engineering line work resulting in slivers of unaccounted impact area. However, no direct impact on biological resources is expected to result from these variations. Vegetation types identified reflected as multiple vegetation types with a slash and/or dash between the words indicates a mixed communities with small patches of each disturbed throughout.

(Psomas, 2023d, Table 2)

1. Direct Impacts

❑ **General Habitat and Wildlife**

Phases II - IV would permanently impact approximately 168.95 acres of native vegetation types (Joshua tree woodland, disturbed Joshua tree woodland, rubber rabbitbrush - Nevada ephedra scrub/Joshua tree woodland, creosote bush scrub) and 2.69 acres of bare ground. The loss of native and non-native vegetation that provides wildlife habitat is considered an adverse impact. However, the loss of native and non-native habitat on the Project site would not be expected to reduce populations of common wildlife species below self-sustaining levels in the Project region. Although this impact

would be considered adverse but less than significant, and no mitigation would be required, BIO MM-1 is included to lessen adverse effects of common wildlife species. (Psomas, 2023d, p. 5)

Several common bird species have the potential to nest in the vegetation or on the ground on the Project site. The loss of an active migratory bird nest, including nests of common species, would be considered a violation of the MBTA and Sections 3503, 3503.5, and 3513 of California Fish and Game Code. The MBTA and California Fish and Game Code prohibits the taking of migratory birds, nests, and eggs. The potential loss of an active nest would be considered adverse but not significant because the impact does not meet the significance criteria identified above. However, BIO MM-2 has been included to address the time frame in which construction could occur to avoid active nests and includes a requirement for pre-construction surveys and avoidance of active nests. Implementation of BIO MM-2 would prevent the adverse impact and ensure that construction impacts would not violate the provisions of the MBTA and California Fish and Game Code. (Psomas, 2023d, p. 5)

❑ Special Status Vegetation Types

Two special status vegetation types and one partial special status vegetation type occur in Phases I - IV of the Project: Joshua tree woodland (123.05 acres), disturbed Joshua tree woodland (6.17 acres), and rubber rabbitbrush – Nevada ephedra scrub/Joshua tree woodland (30.56 acres), respectively. The rubber rabbitbrush - Nevada ephedra scrub vegetation type is not considered special status by CDFW. The Joshua tree woodland portion of this vegetation type is ranked as G4, S3, and is considered sensitive by the CDFW. For purposes of the impact analysis, approximately half of this vegetation type would be considered sensitive (15.28 acres). Impacts to a total of 144.50 acres of these sensitive vegetation types would be considered potentially significant. Implementation of BIO MM-1, BIO MM-3, BIO MM-4, and BIO MM-5 would reduce impacts to a less than significant level. (Psomas, 2023d, p. 6)

❑ Special Status Plant Species

One special status plant species was observed in the Phases II – IV Project area during focused surveys: western Joshua tree. Impacts to the western Joshua tree, a California Candidate Threatened species, would be considered significant and mitigation would be required. An Endangered Species Act Section 10(a)(1)(B) ITP or Western Joshua Tree Conservation Act ITP would be required for impacts to Joshua trees. Implementation of BIO MM-1, BIO MM-3, BIO MM-4, and BIO MM-5 would reduce impacts to a less than significant level. (Psomas, 2023d, p. 6)

❑ Special Status Wildlife Species

Burrowing owl has the potential to nest in the Phases II – IV areas of the Project site. Impacts to burrowing owl would be considered potentially significant. Implementation of BIO MM-2 would reduce this impact to a less than significant level through measures that would avoid and minimize the potential for loss of an active nest/burrow and/or the direct mortality of individuals. Two additional special status bird species have potential to nest and forage in Phases II -IV: loggerhead shrike, and LeConte's thrasher. Implementation of BIO MM-2 would ensure that measures are taken to avoid and

minimize impacts on active nests. Several bird species Los Angeles Audubon Society considers "at-risk" in the region may occur for foraging on the Project site. Implementation of BIO MM-2 would ensure that measures are taken to avoid and minimize impacts on active nests. (Psomas, 2023d, p. 6)

Desert kit fox and American badger may occur in Phases II - IV for foraging and breeding. Impacts to these species would be considered potentially significant. Implementation of BIO MM-7 would include conditions that would avoid and minimize impacts on desert kit foxes and American badgers and active dens. (Psomas, 2023d, p. 6)

One special status reptile species may occur in Phases II - IV: northern legless lizard. Impacts to this species would be considered potentially significant. Implementation of BIO MM-1 would lessen any potential adverse impacts to this species to a less than significant level. (Psomas, 2023d, p. 6)

2. Indirect Impacts

❑ Water Quality

Drainages in the vicinity of Phases II - IV could be impacted as a result of changes in water quality. These impacts would be considered potentially significant. Implementation of BIO MM-8, which includes Best Management Practices that would reduce construction-related pollutants, would reduce this impact to a less than significant level. (Psomas, 2023d, p. 6)

❑ Noise and Vibration

Common and special status bird species have the potential to nest in habitat adjacent to Phases II -IV. Impacts to nesting birds would be considered potentially significant. Implementation of BIO MM-2 would ensure that construction impacts would not violate the provisions of the MBTA or California Fish and Game Code Sections 3503, 3503.5, and 3513. (Psomas, 2023d, p. 7)

❑ Night Lighting

Night lighting in Phases II - IV may impact the behavioral patterns of nocturnal and crepuscular (i.e., active at dawn and dusk) wildlife adjacent to night lighting. This impact is potentially significant. Implementation of BIO MM-10, which requires that spillover of night light be limited to the extent practicable, would reduce this impact to a less than significant level. (Psomas, 2023d, p. 7)

❑ Invasive Exotic Plant Species

Landscaping in Phases II - IV that includes the installation of non-native, invasive plant species (e.g., species listed in the California Invasive Plant Council's invasive plant inventory) can be detrimental to surrounding native habitat. These impacts would be considered potentially significant. Implementation of BIO MM-11 would prohibit the use of non-native, invasive plant species in landscaping associated with Phases II-IV. This measure would reduce this potential impact to a less than significant level. (Psomas, 2023d, p. 7)

❑ **Human Activity**

Construction activities in Phases II - IV create disturbance, which in turn provides a place for non-native weedy species to spread. Additionally, construction equipment can introduce non-native weed seeds to the area if equipment is not properly cleaned. These impacts would be considered potentially significant. Implementation of BIO MM-9 would require use of Best Management Practices associated with prevention of the spread of weed seeds to reduce this potential impact to a less than significant level. (Psomas, 2023d, p. 7)

Common and special status bird species have the potential to nest in habitat adjacent to Phases II - IV. Human activity in the vicinity of an active nest could result in the loss of an active bird nest. These impacts would be considered potentially significant. Implementation of BIO MM-2 would ensure that construction impacts resulting from increased human activity would not violate the provisions of the MBTA or California Fish and Game Code Sections 3503, 3503.5, and 3513. (Psomas, 2023d, p. 7)

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

A. Jurisdictional Resources

1. Waters of the United States

During the field survey, Psomas identified one jurisdictional feature, an unnamed sandy wash in the northwest corner of the Project site. While this feature is located within the Project area, it is outside the impact area of Phase I and Phases II – IV of the Project. This feature appears to historically be an overflow channel in the Amargosa River floodplain. Subsequent urbanization of the surrounding areas has cut off this channel hydrologically from the Amargosa River so that it conveys stormwater runoff in a northerly direction. Because there are no Traditional Navigable Waterways in the region that would receive water from the Project site, the on-site waters would not be considered "waters of the United States" (WOTUS) and would not be under the USACE's jurisdiction. Therefore, because no impacts to WOTUS would occur as a result of implementation of either Phase I or Phases II – IV of the Project, impacts would be less than significant and no mitigation is required. (Psomas, 2023a, pp. 29-30)

2. Regional Water Quality Control Board and California Department of Fish and Wildlife Jurisdiction

WOTUS are not considered present in the survey area due to the lack of connectivity to a Traditional Navigable Water (TNW). However, the RWQCB's definition of "waters of the State" is much broader and includes intermittent and ephemeral waters and those that are not connected to a TNW. Therefore, the sandy wash described above would be considered "waters of the State." (Psomas, 2023a, p. 29)

The limits of non-wetland "waters of the State" were defined by the presence of the Ordinary High Water Mark (OHWM). Evidence of an OHWM in the survey area consists of scour marks created by

storm water flowing through the survey area. As shown on Table 4.3-1, approximately 0.015-acre of non-wetland "waters of the State" under the regulatory authority of the Lahontan RWQCB occur on the Project site. (Psomas, 2023a, p. 30)

The limits of CDFW jurisdiction on the Project site were mapped to the top of the bank. There is no adjacent riparian habitat present along these features so that CDFW's jurisdiction is limited to the top of the stream bank. Based on this boundary, the total amount of CDFW's jurisdictional area is 0.498 acre (Psomas, 2023a, p. 30)

Accordingly, based on the proposed limits of disturbance of Phase I and Phases II – IV of the Project, the sandy wash would be avoided and no direct impacts to jurisdictional waters would occur. Therefore, impacts would be less than significant and no mitigation would be required. (Psomas, 2023a, p. 50)

Construction of the Project would involve substantial ground disturbance during clearing and grading of the site. Grading associated with the Project would not significantly alter the existing topography of the site. The proposed grading activities would generate silt which could be carried off-site during a heavy rainfall event. However, the Project applicant would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities on-site which would involve preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would include best management practices to minimize the potential for erosion and siltation to occur.

With mandatory adherence to the SWPPP requirements, it is expected that soil erosion and disturbance would not cause streambank erosion or excess sediment input into the unnamed sandy wash. Following development of the Project site, all runoff generated on the developed portions of the Project site would be routed to the proposed infiltration basin, with no runoff leaving the Project site. Thus, the Project has no potential to contribute runoff or excess sediment to the unnamed sandy wash, and impacts would be less than significant. Further discussion regarding the hydrology of the Project site can be found in EIR *Section 4.9 Hydrology and Water Quality*.

B. Sensitive Natural Communities

1. Phase I Analysis as discussed under Threshold a) Above.

❑ Special Status Vegetation Types

One special status vegetation type and one partial special status vegetation type, occur in the Phase I impact area: Joshua tree woodland (75.28 acres), and rubber rabbitbrush - Nevada ephedra scrub/Joshua tree woodland (37.62 acres), respectively. The rubber rabbitbrush - Nevada ephedra scrub vegetation type is not considered special status by CDFW. The Joshua tree woodland portion of this vegetation type is ranked as G4, S3, and is considered sensitive by the CDFW. For purposes of the impact analysis, approximately half of this vegetation type would be considered sensitive (18.81 acres). Impacts to a total of 94.10 acres of these sensitive vegetation types would be considered potentially significant. Implementation of BIO MM-1, BIO MM-3, BIO MM-4, and BIO MM-5 would reduce impacts to a less than significant level. (Psomas, 2023d, p. 3)

❑ **Special Status Plant Species**

Two special status plant species were observed in Phase I during focused surveys: crowned muillia (*Muilla coronata*) and western Joshua tree (*Yucca brevifolia*). Impacts to crowned muillia would not be considered significant because of their relative abundance in the Project region and the small population on the Project site. (Psomas, 2023d, p. 3)

Impacts to the western Joshua tree, a California Candidate Threatened species, would be considered significant and mitigation would be required. An Endangered Species Act Section 10(a)(1)(B) ITP or Western Joshua Tree Conservation Act ITP would be required for impacts to Joshua trees. Implementation of BIO MM-1, BIO MM-3, BIO MM-4, and BIO MM-5 would reduce impacts to a less than significant level. (Psomas, 2023d, p. 3)

❑ **Desert Native Plants Act**

Phase 1 of the Project would impact a total of nine cactus individuals protected by the California Desert Native Plants Act (CDNPA). These impacts are considered potentially significant and would require a permit from Los Angeles County. Implementation of BIO MM-6 would reduce potential impacts to less than significant and ensure compliance with the CDNPA. (Psomas, 2023d, p. 3)

1. Phases II - IV Analysis as Discussed under Threshold a) Above

❑ **Special Status Vegetation Types**

Two special status vegetation types and one partial special status vegetation type occur in Phases I- IV of the Project: Joshua tree woodland (123.05 acres), disturbed Joshua tree woodland (6.17 acres), and rubber rabbitbrush – Nevada ephedra scrub/Joshua tree woodland (30.56 acres), respectively. The rubber rabbitbrush - Nevada ephedra scrub vegetation type is not considered special status by CDFW. The Joshua tree woodland portion of this vegetation type is ranked as G4, S3, and is considered sensitive by the CDFW. For purposes of the impact analysis, approximately half of this vegetation type would be considered sensitive (15.28 acres). Impacts to a total of 144.50 acres of these sensitive vegetation types would be considered potentially significant. Implementation of BIO MM-1, BIO MM-3, BIO MM-4, and BIO MM-5 would reduce impacts to a less than significant level. (Psomas, 2023d, p. 6)

❑ **Special Status Plant Species**

One special status plant species was observed in the Phases II – IV Project area during focused surveys: western Joshua tree. Impacts to the western Joshua tree, a California Candidate Threatened species, would be considered significant and mitigation would be required. An Endangered Species Act Section 10(a)(1)(B) ITP or Western Joshua Tree Conservation Act ITP would be required for impacts to Joshua trees. Implementation of BIO MM-1, BIO MM-3, BIO MM-4, and BIO MM-5 would reduce impacts to a less than significant level. (Psomas, 2023d, p. 6)

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

No hydrophytic vegetation was observed during the field survey and no depressions were noted where ponded water conditions would occur that would suggest development of wetland conditions. The National Wetland Inventory shows one area in the northern-central part of the site that is noted as a potential wetland area. In reviewing historic aerial photographs of that area, surface water is observed in 2009 but appears to be in a small rectangular area where some ground disturbance had occurred, suggesting an artificial feature. No surface water was observed in any subsequent aerial photographs. Aerial photographs prior to 2009 indicated no noticeable difference between the area and the surrounding landscape. To determine if wetland conditions were present in this area, a wetland sampling point was excavated to determine if hydric soil conditions were present. (Psomas, 2023a, p. 30) Vegetation at the sampling location was dominated by rubber rabbitbrush, a species that is common to recently disturbed areas, further suggesting that past water ponding was the result of some type of soil disturbance. Only upland vegetation was present in the vicinity of the sampling point and no indicators of hydric soil or wetland hydrology were observed. Therefore, no wetland conditions are considered present on the Project site and there is no potential for impacts to wetlands to occur. (Psomas, 2022c, p. 10)

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

The Project site does not include water that supports any known migratory fish or established native resident or migratory wildlife corridors or a known native wildlife nursery site.

As discussed above in Subsection 4.3.1, wildlife movement in the Study Area is mostly constrained by existing roadways and by fencing associated with the inactive Palmdale Regional Airport located to the south of the Project site. However, wildlife is somewhat unconstrained on the immediate eastern border of the Study Area in the area between the Project site and fencing associated with the inactive Palmdale Regional Airport perimeter fence, located approximately 0.5-mile from the eastern edge of the Study Area. In addition, undeveloped areas of land occur west of the Project site and west of Sierra Highway. (Psomas, 2023a, p. 26)

Given the constraints on wildlife movement under existing conditions, and the determination that the Project site does not include water that supports any known migratory fish or established native resident or migratory wildlife corridors or a known native wildlife nursery site, neither Phase I or Phases II-IV of the Project would 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. Thus, impacts would be less than significant and no mitigation is required.

As discussed in the analysis for Threshold (a), several common bird species have the potential to nest in the vegetation or on the ground on the Project site. The loss of an active migratory bird nest, including nests of common species, would be considered a violation of the MBTA and Sections 3503, 3503.5, and 3513 of California Fish and Game Code. The MBTA and California Fish and Game Code prohibits the taking of migratory birds, nests, and eggs. The potential loss of an active nest would be considered adverse but not significant because the impact does not meet the significance criteria. However, BIO MM-2 has been included to address the time frame in which construction could occur to avoid active nests and includes a requirement for pre-construction surveys and avoidance of active nests. Implementation of BIO MM-2 would prevent the adverse impact and ensure that construction impacts would not violate the provisions of the MBTA and California Fish and Game Code. (Psomas, 2023d, p. 2) With implementation of Mitigation Measure BIO MM-1, the direct and cumulatively considerable impacts of the Project on migratory birds protected by the MBTA would be less than significant.

Threshold e: ***Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

The Conservation Element of the City's General Plan includes Goal CON-1, which is applicable to the proposed Project and aimed at protecting Significant Ecological Areas in and around the City, including, but not limited to, sensitive flora and fauna habitat areas. Specifically, Policy CON-1.1 is aimed at local compliance with the California Endangered Species Act and the Federal Endangered Species Act (ESA). Policy CON-1.2 relates to enforcement of the City's Native Vegetation Ordinance to protect western Joshua trees and Juniper trees. Policy CON-1.3 requires implementation of the West Mojave Plan for protection of desert tortoise and Mohave ground squirrel. Policy CON-1.5 relates to the preservation of natural drainage courses and riparian areas where ecological resources exist in significant concentrations. CON-5.1 is aimed at protecting natural recharge areas such as Amargosa Creek from pollutants or other materials which might degrade groundwater supplies. (City of Palmdale, 2023, pp. 291-292) Other Conservation Element policies for the protection of biological resources do not apply to the Project, as the Project site is not in a mapped Significant Ecological Area, does not contain wetlands and is not targeted for open space preservation.

PMC Chapter 14.04, Native Desert Vegetation Preservation, is designed to protect western Joshua trees and California Juniper trees in the City. Psomas did not identify any California juniper trees on the site; however, Psomas documented 8,196 western Joshua trees as occurring in the survey area, and impacts to 7,184 western Joshua trees on the Project site are anticipated during Project implementation. Impacts to the western Joshua tree would be significant on a direct and cumulatively considerable basis. Thus, mitigation is required. (Psomas, 2023a, p. 33) An Endangered Species Act Section 10(a)(1)(B) ITP or Western Joshua Tree Conservation Act ITP would be required for impacts to Joshua trees. Implementation of BIO MM-1, BIO MM-3, BIO MM-4, and BIO MM-5 would reduce impacts to a less than significant level. (Psomas, 2023d, p. 3)

There are no additional biological resources on the Project site that are separately protected by local policies or ordinances.

***Threshold f**: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

Although the Project site is located within the geographic boundaries of the West Mojave Plan, the Project would not be processed under the West Mojave Plan because it is a private project and the West Mojave Plan can only be used for projects on federal land. Even though the Project's construction and operational activities are not required to comply with the West Mojave Plan, it is noted that the Project would not interfere with any conservation areas designed by the West Mojave Plan including Habitat Conservation Areas, Special Review Areas, critical habitat on Military Lands, existing Area of Critical Environmental Concern, or BLM Wilderness Area. (Psomas, 2023a, p. 53)

Because implementation of the Project would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, no impact would occur as a result of implementation of the Project; thus, no mitigation is required.

4.3.5 CUMULATIVE IMPACT ANALYSIS

This cumulative impact analysis for biological resources considers development of the Project site in conjunction with other development projects in the vicinity of the Project site as well as full General Plan buildout in the City. As noted in Subsection 4.3.1, the regional setting of the Project includes the portion of the Mojave Desert encompassed by the USGS' Palmdale, Lancaster East, Lancaster West, Alpine Butte, Littlerock, and Ritter Ridge 7.5-minute quadrangles that generally extends north to Rosamond, east to 70th Street East, south to the north slope San Gabriel Mountains, and west to 70th Street West. (Psomas, 2023a, p. 47)

Candidate, Sensitive, or Special Status Species

The Project site contains two special status vegetation types – Joshua tree woodland and disturbed Joshua tree woodland. Implementation of the proposed Project would impact 238.64 acres of Joshua tree woodland and disturbed Joshua tree woodland. Impacts would be significant and mitigation is provided. The goal of mitigation is to ensure no net loss of habitat following implementation of the Project; this would also apply to all other cumulative projects. When issuing an ITP, all federal agencies, including the USFWS, must ensure that their activities are "not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species" (16 USC 1536[a]). Enforcement of the FESA is administered by the USFWS. (Psomas, 2023a, p. 2)

Because implementation of the Project would impact a limited amount of habitat relative to the amount of foraging habitat available in the region, the Project would not contribute to a substantial adverse cumulatively considerable impact on any special status raptor species.

Although the Project site provides potentially suitable foraging habitat throughout the site for one special status bird species, the mountain plover; because implementation of the Project would impact

a limited amount of habitat relative to the amount of habitat available for this species in the region, impacts would be less than cumulatively considerable.

Two additional special status bird species have the potential to forage on the Project site: 1) loggerhead shrike and 2) LeConte's thrasher. A total of 304.17 acres (128.51+175.66) of potentially suitable nesting and foraging habitat for LeConte's thrasher and loggerhead shrike would be permanently impacted through implementation of the proposed Project. Because implementation of the Project would impact a limited amount of habitat relative to the amount of habitat available for the two additional special status bird species, impacts due to the loss of habitat for these species would be less than cumulatively considerable. (Psomas, 2023d, pp. 3 and 6; Psomas, 2023a, p. 52)

The Audubon "at-risk" species that have the potential to occur on the Project site for foraging include: 1) cactus wren; 2) greater roadrunner; 3) lesser nighthawk; 4) mountain bluebird (wintering); 5) vesper sparrow; 6) western meadowlark; 7) California towhee, and 8) black-throated sparrow. Species that may also breed on the Project site include the cactus wren, greater roadrunner, California towhee, and lesser nighthawk. Although they are not recognized by State or federal agencies, the Los Angeles County Department of Regional Planning considers these species worthy of consideration as sensitive. A total of 307.92 acres (129.50 +178.42) of foraging habitat (e.g., all vegetation types) for each species and breeding habitat for cactus wren, greater roadrunner, and lesser nighthawk would be permanently impacted through implementation of the Project. However, because implementation of the Project would impact a limited amount of habitat relative to the amount of habitat available for these species in the region, impacts would be less than cumulatively considerable. (Psomas, 2023a, p. 52)

Three special status bat species have the potential to forage throughout the Project site: 1) pallid bat, 2) Townsend's big-eared bat, and 3) western mastiff bat. A total of 307.92 acres (129.50 +178.42) of potentially suitable foraging habitat (e.g., all vegetation types) for these species would be permanently impacted through implementation of the proposed Project. However, because implementation of the Project would impact a limited amount of habitat relative to the amount of habitat available for these species in the region, impacts would be less than cumulatively considerable. (Psomas, 2023a, p. 52)

A total of 307.92 acres (129.50 +178.42) of potential suitable habitat for the desert kit fox and American badger would be permanently impacted through implementation of the proposed Project. However, because implementation of the Project would impact a limited amount of habitat relative to the amount of available habitat for these species in the region, the loss of habitat would be less than cumulatively considerable.

A total of 304.17 acres (128.51+175.66) of potentially suitable habitat for the northern legless lizard would be permanently impacted through implementation of the proposed Project. However, because implementation of the Project would impact a limited amount of habitat relative to the amount of available habitat for these species in the region, the loss of habitat would be less than cumulatively considerable.

Riparian Habitat or Other Sensitive Natural Community

One jurisdictional feature, an unnamed sandy wash, was identified in the northwest corner of the Project site; however, it is outside the impact area of the Project. Because no impacts to WOTUS would occur as a result of implementation of the Project, impacts would be less than cumulatively significant.

State or Federally Protected Wetlands

Because no wetlands occur on the Project site, there is no potential for implementation of the Project to result in a cumulatively considerable impact to State or federally protected wetlands.

Movement of any Native Resident or Migratory Fish or Wildlife, Wildlife Corridors, or Native Wildlife Nursery Sites

Given the constraints on wildlife movement under existing conditions, and the determination that the Project site does not include water that supports any known migratory fish or established native resident or migratory wildlife corridors or a known native wildlife nursery site, implementation of the proposed Project would not 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. Thus, impacts would be less than cumulatively significant.

In regard to migratory birds, the MBTA and California Fish and Game Code prohibits the taking of migratory birds, nests, and eggs; therefore, the Project has the potential to impact nesting migratory birds if active nests were disturbed during the nesting season (February 1 and September 15). All development projects are required to comply with the MBTA and California Fish and Game Code; therefore, impacts would be less than cumulatively considerable.

Any Local Policies or Ordinances Protecting Biological Resources

Although implementation of the Project would impact two special status vegetation types, Joshua tree woodland and disturbed Joshua tree woodland, and one special status species, the western Joshua tree, the Project would comply with local policies and ordinances by implementing appropriate mitigation measures and acquiring the appropriate permits required as discussed previously. Thus, no cumulatively considerable impact would occur.

Adopted Habitat Conservation Plan Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan

Because implementation of the Project would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, no cumulatively considerable impact would occur.

4.3.6 Significance of Impacts Before Mitigation

Threshold a: Significant Direct and Indirect Impact. Phase I of the Project would impact 75.28 acres of Joshua tree woodland. Phases II – IV of the Project would impact 123.05 acres of Joshua tree

woodland and 6.17 acres of disturbed Joshua tree woodland. Phase I and Phases II – IV would directly impact 7,184 western Joshua trees. The Project also has the potential to directly and indirectly impact nesting migratory birds protected by the MBTA and the CDFW if active nests are disturbed during the nesting season (February 1 through September 15). Additionally, the Project has the potential to directly impact desert kit fox that may utilize the Project site for denning and the burrowing owl that may utilize the Project for nesting/burrowing. Phase 1 of the Project would impact a total of nine cactus individuals protected by the California Desert Native Plants Act (CDNPA). One special status reptile, the northern legless lizard may occur in Phase I.

Threshold b: Less than Significant Impact. Based on the proposed limits of disturbance of Phase I and Phases II – IV of the Project, the jurisdictional sandy wash, located in the northwest corner of the Project site, would be avoided and no direct impacts to jurisdictional waters would occur. Therefore, impacts would be less than significant and no mitigation would be required.

Threshold c: No Impact. Because no wetland conditions occur on the Project site, there is no potential for the Project to 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. Therefore, no impact would occur and no mitigation is required.

Threshold d: Significant Direct and Cumulatively Considerable Impact. The Project has the potential to impact nesting birds if active nests are disturbed during the nesting season (February 1 through September 15). The Project would not substantially interfere with the movement of any other 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.

Threshold e: Significant Direct Impact. Phase I of the Project would impact 75.28 acres of Joshua tree woodland. Phases II – IV of the Project would impact 123.05 acres of Joshua tree woodland and 6.17 acres of disturbed Joshua tree woodland. Phase I and Phases II – IV would directly impact 7,184 western Joshua trees. No California juniper trees are present on the site under existing conditions. The Project's disturbance footprint is intentionally designed to avoid the unnamed sandy wash located in the northwest corner of the Project site.

Threshold f: No Impact. Implementation of the Project would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.3.7 MITIGATION

The following Mitigation Measures are required for the Project and would avoid, minimize, or mitigate impacts on biological resources discussed above under Thresholds (a) and (d). Mitigation Measures shall be implemented on a phase-by-phase basis dependent on Project impacts for each phase.

A. *Mitigation Measures Applicable to Phase I of the Project*

BIO MM-1 **Avoidance and Minimization Measures to Avoid Incidental Take of Joshua Tree/Joshua Tree Woodland and Species of Special Concern.** For all vegetation removal activities, the Project Applicant shall retain a qualified biologist to ensure that incidental construction impacts on Joshua trees and special status wildlife species are avoided or minimized to the maximum extent practical. The following shall be required:

a. **Biological Monitor.** Prior to the issuance of a grading permit or any other permit that would authorize vegetation removal from or ground disturbance on the site, the Project Applicant shall retain a qualified biologist ("Dedicated Biologist") to monitor vegetation removal and initial ground disturbing construction activities for the potential presence of sensitive wildlife species. The Dedicated Biologist shall possess Scientific Collection Permits from CDFW for sensitive species that have a reasonable potential of being encountered on the site on the basis of suitable habitat. The Dedicated Biologist shall be on the site full time during vegetation removal and grading activities. Should any sensitive species be observed, the Dedicated Biologist shall have the authority to pause or redirect construction equipment away from observed sensitive species and direct or move the species out of harm's way to the extent practicable, to a location of suitable habitat outside of the Project's impact footprint. Construction work may recommence in areas where sensitive species were observed only after the Dedicated Biologist has determined it is safe to do so. The Dedicated Biologist shall remain on site daily during ground disturbing activities and vegetation removal to advise workers to proceed with caution and ensure that sensitive wildlife, if present, is not unnecessarily harmed.

b. **Wildlife Relocation Plan**. Prior to issuance of the first permit that authorizes vegetation removal or ground disturbance, the Dedicated Biologist shall prepare and submit to the City a Wildlife Relocation Plan. The Wildlife Relocation Plan shall describe all wildlife species that could occur within the Project site and proper handling and relocation protocols. The Wildlife Relocation Plan shall include species-specific relocation areas, at least 200 feet outside of the Project site and in suitable and safe relocation areas. No wildlife nests, eggs, or nestlings may be removed or relocated at any time.

c. **Injured or Dead Wildlife**. If the Dedicated Biologist or construction contractor observe that any wildlife species of special concern (SSC) are harmed or a dead or injured animal is found, construction work in the immediate area shall stop immediately, the Dedicated Biologist shall be notified, and the dead or injured wildlife shall be documented. A formal report shall be sent to CDFW and the City within three calendar days of the incident or finding. The report shall include the date, time of the finding or incident (if known), and location of the carcass or

injured animal and circumstances of its death or injury (if known). Work in the immediate area may only resume once the proper notifications have been made and additional measures have been identified to prevent additional injury or death.

d. **Contractor Coordination**. The Dedicated Biologist shall coordinate with the Project's construction Contractor(s) involved in vegetation clearing and ground-disturbing construction activities to accomplish the following:
   i. Attendance at the pre-construction tailboard meeting (i.e., on-site meeting prior to work activities) to ensure that timing and location of construction activities do not conflict with other mitigation requirements (e.g., seasonal surveys for nesting birds). The meeting shall be conducted with the Construction Contractor and other key construction personnel to describe the importance of restricting work to designated areas.
   ii. Discussion with the Construction Contractor of procedures to minimize harm/harassment of wildlife that may be encountered during construction.
   iii. Review/designation of the construction area with the Construction Contractor in accordance with the Final Grading Plan. Haul roads, access roads, and on-site staging and storage areas shall be sited in grading areas to minimize degradation of habitat adjacent to these areas. If activities outside these limits are necessary, they shall be evaluated by the Biologist to ensure no special status species or habitats will be affected.
   iv. A field review that is conducted to stake designated construction limits (to be set by a Surveyor retained by the Project Applicant). Any construction activity areas immediately adjacent to Joshua tree woodland may be flagged or temporarily fenced by the Biological Monitor at their discretion.
   v. Submittal of a brief report to the City discussing any unapproved disturbances resulting in impacts to special status resources within 48 hours of the incident.

BIO MM-2 **Nesting Birds/Raptors.** To avoid impacts on active nests for common and special status birds and raptors, the Project Applicant shall schedule vegetation clearing and blasting (blasting is not anticipated) during the non-breeding season (i.e., September 16 to January 31) to the extent feasible. If Project timing requires that vegetation clearing occur between February 1 and September 15, the Project Applicant or its designee shall retain a qualified Biologist to conduct a pre-construction survey for nesting birds and raptors. The pre-construction survey shall be conducted by a qualified Biologist within three days prior to vegetation clearing. The pre-construction nesting bird survey area shall include the Project impact area (i.e., disturbance footprint) plus a 250-foot buffer to search for nesting birds and a 500-foot buffer to search for nesting raptors. If no active nests are found, no further mitigation would be required.

If an active nest is located in the pre-construction nesting bird survey area, the Biologist shall delineate an appropriate buffer to protect the nest based on the sensitivity of the species. A protective buffer of 500 feet shall be used to protect nesting raptors. If appropriate, a smaller buffer may be considered (as determined by the Biologist) based

on site topography, existing disturbance, sensitivity of the individuals (established by observing the individuals at the nest), and the type of construction activity. No construction activities shall be allowed in the designated buffer until the Biologist determines that nesting activity has ended. Construction may proceed within the buffer area once the Biologist determines that nesting activity has ceased (i.e., fledglings have left the nest or the nest has failed). The designated buffer shall be clearly marked in the field and shall be mapped as Environmentally Sensitive Areas (ESAs) on construction plans.

Prior to the initiation of construction activities, an email summary of the results shall be submitted to the City by the Project Applicant with a map of any active nests found and their designated buffers. Construction shall be allowed to proceed if standard buffer distances are employed for any active nests. The Biologist shall then prepare a formal Letter Report describing methods used, results of the survey, recommended buffers, and/or justification for buffer reductions. The Letter Report shall be submitted to the City within one week of completion of the survey. If an active nest is observed during the survey, the Letter Report shall include a map showing the designated protective buffer.

BIO MM-3 **Take Permits.** Prior to the issuance of grading or building permits, the Project Applicant shall obtain a CESA Section 2081 Incidental Take Permit (ITP) or a Joshua Tree Conservation Act ITP from the California Department of Fish and Wildlife (CDFW) allowing impacts to western Joshua tree, a State Candidate species. Compensatory mitigation for impacts on Joshua tree woodland are described in BIO MM-4. If regulatory status changes at any point prior to impacts, and the species is no longer designated as a State Candidate for listing or a State listed species, an ITP would no longer be required.

BIO MM-4 **Joshua Tree Woodland.** The Project Applicant shall provide mitigation for permanently impacting Joshua tree woodland and disturbed Joshua tree woodland. The goal of this mitigation is to ensure no net loss of habitat following implementation of the Project. Mitigation ratios (i.e., the amount of mitigation acreage compared to the amount of impacted habitat) shall be negotiated with the resource agencies but shall be no less than 1:1, replacing each acre of habitat lost with of one acre of equivalent or higher quality habitat. This mitigation may be in the form of habitat preservation, restoration, enhancement, and/or establishment (i.e., creation), or an in-lieu fee program, discussed below. The Project Applicant shall implement one or a combination of these options, as approved by CDFW in the permit described in BIO MM-3. Successful implementation of BIO MM-3 shall eliminate the requirements of BIO MM-4.

1. Preservation consists of acquisition of mitigation lands containing viable occurrences of the species, or that enhance the sustainability of the occurrences by protecting buffer lands and protecting those occurrences in perpetuity under a conservation easement or an in-lieu fee program that is transferred to a qualified land trust or public agency.
2. Restoration consists of the re-establishment or rehabilitation of mitigation land with the goal of returning natural or historic functions and characteristics. Restoration may result in a gain in habitat function, acreage, or both.
3. Enhancement consists of activities that heighten, intensify, or improve one or more habitat functions. Enhancement results in a gain in habitat function but does not result in a net gain in habitat acreage.
4. Establishment consists of the development of habitat in an area where it did not previously exist through manipulation of the physical, chemical, and/or biological characteristics of the site.

Compensatory mitigation may be in the form of permittee-responsible mitigation, in which the permittee maintains liability for the construction and long-term success of the mitigation site or through mitigation banking/in-lieu fee program, where liability for Project success is transferred to a third party (i.e., a mitigation bank/in-lieu fee sponsor). If the Project Applicant elects to provide mitigation through mitigation banking/in-lieu fee program, the mitigation bank/program shall be selected by the Project Applicant and approved by CDFW and payment shall be made prior to the issuance of grading or building permits. The Joshua Tree Conservation Act ITP process establishes an in-lieu fee program directly with CDFW (See BIO MM-3).

For permittee-responsible mitigation involving establishment, restoration, or enhancement of habitat, the Project Applicant shall retain a qualified Biologist to prepare a Habitat Mitigation Monitoring Plan (HMMP) to mitigate for loss Joshua tree woodland habitat. The HMMP shall be reviewed/approved by the CDFW prior to issuance of grading or building permits. The detailed HMMP shall contain the following items:

a. **Responsibilities and Qualifications of the Personnel to Implement and Supervise the Plan.** The responsibilities of the Project Applicant or its designee, specialists, and maintenance personnel, as well as the qualifications of specialists and maintenance personnel that will supervise and implement the plan, shall be specified.
b. **Site Selection.** Site selection for restoration, establishment, enhancement, and/or preservation mitigation shall be determined in coordination with the Project Applicant, or its designee, and resource agencies. The mitigation site(s) shall be

located in a dedicated open space area or on land that shall be dedicated and/or purchased off site.

c. **Site Preparation and Planting Implementation.** Site preparation shall include the following, as determined by specific site conditions and permit requirements: protection of existing native species, trash and weed removal, native species salvage and reuse (i.e., duff), soil treatments (i.e., imprinting, decompacting), temporary irrigation installation, erosion-control measures (i.e., rice or willow wattles), seed mix application, and container species.

d. **Schedule.** A schedule that requires planting to occur between October 1 and March 1 shall be developed.

e. **Maintenance Plan/Guidelines.** The maintenance plan shall include the following, as determined by specific site conditions and permit requirements: weed control, herbivory control, trash removal, irrigation system maintenance, maintenance training, and replacement planting.

f. **Monitoring Plan.** The site shall be monitored and maintained for a minimum of five years to ensure successful establishment of riparian habitat within the restored and created areas. The monitoring plan shall include qualitative monitoring (i.e., photographs and general observations); quantitative monitoring (e.g., randomly placed transects); performance criteria, as approved by the resource agencies; and monthly reports for the first year with quarterly reports thereafter and annual reports for all five years.

g. **Long-Term Preservation.** Long-term preservation of the site shall be outlined in the restoration and enhancement plan to ensure the mitigation site is not impacted by future development.

Although monitoring plans are typically scheduled for five years, if performance standards are successfully met prior to five years, the Project Applicant may request to be released from remaining monitoring requirements by CDFW.

BIO MM-5 **City of Palmdale Permit.** Per the City of Palmdale Emergency Ordinance No. 1556, a City approved Biologist shall prepare a Desert Vegetation Preservation Plan and the City shall issue a permit for Joshua tree removal prior to Project impacts. The City may defer to a CDFW ITP (See BIO MM-3), with no additional requirements, if one is issued for the project.

BIO MM-6 **California Desert Native Plant Harvesting Permits.** Prior to the initiation of construction, the Project Applicant shall obtain the necessary permits, tags, and/or seals, and shall pay the appropriate fees for removal of any individuals of a species protected by the California Desert Native Plant Protection Act. This includes nine silver cholla.

BIO MM-7 **Burrowing Owl Pre-Construction Survey.** Per the Staff Report on Burrowing Owl Mitigation (CDFG 2012), the Project Applicant shall retain a qualified Biologist to conduct a pre-construction survey for the burrowing owl no less than 14 days prior to any ground disturbance by the Project and no greater than 30 days prior to ground disturbance in each Project area. The pre-construction survey shall include the area of proposed disturbance plus a 500-foot buffer (if access is available).

If an active burrow is observed outside the breeding season (i.e., September 1 to January 31) and it cannot be avoided, the burrowing owl shall be passively excluded from the burrow following methods described in CDFG 2012. One-way doors shall be used to exclude owls from the burrows; doors shall be left in place for at least 48 hours. Once the burrow is determined to be unoccupied, as verified by site monitoring, the burrow shall be closed by a qualified Biologist who shall excavate the burrow using hand tools. Prior to excluding an owl from an active burrow, a receptor burrow survey shall be conducted to confirm that at least two potentially suitable unoccupied burrows are within approximately 688 feet prior to installation of the one-way door. If two natural receptor burrows are not located, one artificial burrow shall be created for every burrow that would be closed.

If an active burrow is observed outside the breeding season (i.e., September 1 to January 31) and it can be avoided, the Biologist shall determine an appropriate protective buffer for the burrow based on CDFW guidelines. The buffer shall range from 160 feet to 1,640 feet depending on the level of impact and the time of year (See Table below). The designated buffer shall be clearly marked in the field and shall be mapped as an ESA on construction plans. The Project Applicant or its designee shall contact CDFW to determine whether a reduced buffer can be accommodated without adversely impacting occupied burrows.

If an active burrow is observed during the breeding season (i.e., February 1 to August 31), the active burrow shall be protected until nesting activity has ended (i.e., all young have fledged from the burrow). The Biologist shall determine the appropriate protective buffer for the burrow based on CDFW guidelines. The buffer shall range from 650 to 1,640 feet depending on the level of impact and the time of year (See Table below). The designated buffer shall be clearly marked in the field and shall be mapped as an ESA on construction plans. The Project Applicant or its designee shall contact CDFW to determine whether a reduced buffer can be accommodated without adversely impacting occupied burrows. Construction shall be allowed to proceed when the qualified Biologist has determined that all fledglings have left the nest. Compensatory mitigation for the loss of foraging habitat shall be satisfied with implementation of MM BIO 6.

Burrowing Owl Protective Buffer Sizes				
	Time of Year	Level of Disturbance		
		Low	Medium	High
Nesting sites	April 1 to August 15	656 feet (200 meters)	1,640 feet (500 meters)	1,640 feet (500 meters)
Nesting sites	August 16 to October 15	656 feet (200 meters)	656 feet (200 meters)	1,640 feet (500 meters)
Nesting sites	October 16 to March 31	164 feet (50 meters)	328 feet (100 meters)	1,640 feet (500 meters)

Upon completion of the pre-construction burrowing owl survey, a Letter Report shall be prepared and submitted to CDFW documenting the results of the survey within two weeks of completion of the survey effort. If an active burrow is observed, the Letter Report shall include a description of the protective buffer that has been designated and a summary of any additional correspondence with the CDFW.

If time lapses of greater than 30 days occur during construction in a particular portion of the work area, an additional survey shall be conducted by a qualified Biologist within 24 hours prior to vegetation clearing and/or ground disturbance in that area. If any new burrowing owl burrows are observed, the conditions above shall be applied.

BIO MM-8 **Desert Kit Fox/American Badger Burrows.** The Project Applicant shall retain a qualified Biologist to conduct a pre-construction burrow survey for desert kit fox and American badger no less than 14 days and no more than 30 days prior to initiation of ground disturbance/construction activities. Ideally, this survey shall be conducted outside the breeding season (i.e., February 1 to September 15) to allow for passive exclusion, if necessary. The pre-construction survey shall include the Project site plus a 200-foot buffer (if access is available). If no active burrows are found, no further mitigation would be required.

If an active burrow is observed outside the breeding season (i.e., September 16 to January 31) and it cannot be avoided, the burrow shall be closed using passive exclusion. One-way doors shall be used to exclude American badgers from their burrows; doors shall be left in place for at least five nights. Progressive soil blocking shall be used to discourage use by desert kit fox. Once the burrow is determined to be unoccupied (i.e., not used for five nights), as verified by site monitoring (e.g., wildlife cameras), the burrow shall be closed by a qualified Biologist who shall excavate the burrow using hand tools.

If an active burrow is observed outside the breeding season (i.e., September 16 to January 31) and it can be avoided, a 50-foot protective buffer shall be delineated around the burrow. The designated buffer shall be clearly marked in the field and shall be mapped as an ESA on construction plans. The Project Applicant shall consult with

CDFW to determine whether a reduced buffer can be accommodated without adversely impacting occupied burrows.

If an active den is observed during the breeding season (i.e., February 1 to September 15), the active den shall be protected with a 100-foot buffer until breeding activity has ended. The designated buffer shall be clearly marked in the field and shall be mapped as an ESA on construction plans. The Project Applicant shall contact CDFW to determine whether a reduced buffer can be accommodated without adversely impacting the occupied den. Construction shall be allowed to proceed when the qualified Biologist has determined that the burrow is no longer active based on site monitoring (i.e., no activity has been observed at the burrow for five nights).

Upon completion of the pre-construction burrow survey, a Letter Report shall be prepared and submitted to CDFW documenting the results of the survey within two weeks of completing the survey effort. If an active burrow/den is observed, the Letter Report shall include a description of the protective buffer that has been designated and a summary of any additional correspondence with the CDFW.

BIO MM-9 **Best Management Practices**. The Project Applicant shall incorporate Best Management Practices (BMPs), including applicable measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of runoff discharged by Project activities does not adversely affect the Project area. In particular, BMPs shall be designed to prevent (to the extent feasible) the runoff of toxins, chemicals, petroleum products, or other elements that might degrade water quality. Additionally, BMPs shall be used to minimize erosion.

The areas where stockpiling can occur shall be selected in consultation with the monitoring Biologist. Spoils shall be stockpiled in disturbed areas lacking native vegetation. The Construction Contractor shall clearly mark stockpile areas to define the limits where stockpiling can occur.

The Construction Contractor shall designate an area for vehicle maintenance that is not within or adjacent to drainages or native vegetation. Fueling and maintenance of equipment shall take place within the vehicle maintenance area. Impervious ground surfaces or plastic covering shall be used to prevent spillage or leakage onto the ground surface. Any spilled hazardous materials shall be immediately cleaned and hazardous materials properly disposed of. Construction Contractor equipment shall be checked for leaks prior to operation and repaired as necessary.

BIO MM-10 **Night Lighting**. The Project Applicant or its designee shall ensure that night lighting shall be directed away from open space areas and shielding shall be incorporated in the final Project design to minimize spillover of night lighting into adjacent open space to

the greatest extent practicable. Any such light fixtures installed adjacent to open space areas shall direct/reflect light downward and away from adjacent habitat areas.

BIO MM-11 **Landscaping**. The Project Applicant or its designee shall retain a qualified Biologist to review the landscaping plan to ensure that any landscaping component of the Project does not include the planting of exotic, invasive species that would potentially degrade the quality of the surrounding natural open space. A list of potential landscaping plant species shall be submitted to the Biologist for review; the Biologist shall ensure that exotic plant species known to be invasive (e.g., those on the California Invasive Plant Council's [Cal-IPC's] invasive plant inventory) are not included on the list. The Biologist shall make recommendations for more suitable plant species if necessary. Once a final plant palette is prepared, landscaping installed in the development area shall include only species on the approved palette.

BIO MM-12 **Prevention of the Spread of Weed Seeds**. The introduction of exotic plant species shall be avoided and minimized to the extent practicable. Weed seeds entering the construction area via vehicles shall be minimized by requiring construction vehicles to be washed prior to delivery to the Project site. Track-clean or other methods of vehicle cleaning shall be used by the Construction Contractor to prevent weed seeds from entering/exiting the construction areas on vehicles. Additionally, wattles used for erosion control shall be certified as weed-free.

B. Mitigation Measures Applicable to Phases II – IV of the Project

With the exception of BIO MM-6, all of the mitigation measures identified above as BIO MM-1, BIO MM-2, BIO MM-3, BIO MM-4, BIO MM-5, BIO MM-7, BIO MM-8, BIO MM-9, BIO MM-10, BIO MM-11, and BIO MM-12 shall also apply to Phases II – IV of the Project.

4.3.8 Design Features (DF0 and Regulatory Requirements (RR)

The City of Palmdale is required to assure that implementing development complies with the assumptions relied upon herein and applicable regulatory requirements pertaining to the topic of Biological Resources, which include the following regulatory requirements and design features. The Project shall be conditioned to implement the following design features and regulatory requirements as part of the City's Conditions of Approval for the Project.

BIO RR-1 **National Pollutant Discharge Elimination System (NPDES) Compliance**. The Project Applicant or its designee shall incorporate Best Management Practices (BMPs) during Project construction, including applicable measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of water runoff discharged by Project activities does not adversely affect biological resources. BMPs shall be designed to prevent, to the extent feasible, the runoff of toxins, chemicals, petroleum products, or other elements that might degrade water quality. Additionally, BMPs shall be used to minimize erosion.

BIO RR-2 **Clean Up Requirements for Accidental Hazardous Waste Spills**. Construction contractors shall immediately stop work and, pursuant to pertinent State and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so, to minimize impacts to biological resources

BIO DF-1 **Landscaping**. The Project Applicant or its designee shall retain a qualified biologist to review the landscaping plan to ensure that any landscaping component of the Project does not include the planting of exotic, invasive species that would potentially degrade the quality of the surrounding natural open space. A list of potential landscaping plant species shall be submitted to the qualified biologist for review; the qualified biologist shall ensure that exotic plant species known to be invasive (e.g., those on the California Invasive Plant Council's (Cal-IPC's) invasive plant inventory)) are not included on the list. The qualified biologist shall make recommendations for more suitable plant species if necessary. The qualified biologist shall sign the landscaping plan as approved prior to City approval of the landscaping plan. Once a final plant palette is prepared and approved by the City, landscaping installed in the development area shall include only species on the approved palette.

BIO DF-2 **Contractor Education.** Prior to the initiation of ground-disturbing construction activities, the Project's construction contractor supervisors shall be trained by a qualified biologist on the topic of best management construction practices to avoid and minimize impacts to sensitive biological resources present on and around the Project site. The construction supervisors shall be responsible for enforcement of best practices by its personnel. The training shall occur within 30 days of the contractor initiating work on the Project site.

BIO DF-3 **Construction Monitoring Notebook**. The qualified biologist shall maintain a construction-monitoring notebook on the site throughout the construction period, which shall include a copy of the biological resources mitigation measures with attachments and a list of signatures of all construction supervisory personnel who have successfully completed the education program. The Project Applicant or successor in interest shall ensure that a copy of the construction monitoring notebook is available for review at the Project site upon request by the CDFW.

BIO DF-4 **Delineation of Property Boundaries**. Before beginning activities that would cause ground-disturbing impacts, the contractor shall, in consultation with a qualified biologist, clearly delineate the boundaries of construction activity with fencing, stakes, or flags, consistent with the grading plan, within which the impacts would occur. All impacts outside the fenced, staked, or flagged areas shall be avoided, and all fencing, stakes, and flags shall be maintained until the completion of impacts in that area as determined by the qualified biologist.

BIO DF-5 **Stockpiling**. During Project construction, areas where stockpiling can occur shall be selected in consultation with a qualified biologist. Spoils shall be stockpiled in disturbed areas lacking native vegetation. The construction contractor in coordination with a qualified biologist shall clearly mark stockpile areas in the field to define the limits where stockpiling can occur.

BIO DF-6 **Designation of Construction Vehicle Maintenance Area**. The construction contractor shall designate an area for vehicle maintenance that is not within or adjacent to any drainage area or native vegetation. Fueling and maintenance of equipment shall take place within the vehicle maintenance area. Impervious ground surfaces or plastic covering shall be used to prevent spillage or leakage onto the ground surface. Any spilled hazardous materials shall be immediately cleaned and hazardous materials properly disposed of. Contractor equipment shall be checked for leaks prior to operation and repaired as necessary.

BIO DF-7 **Prevention of the Spread of Weed Seeds**. The introduction of exotic plant species shall be avoided and minimized to the extent practicable. Weed seeds entering the construction area via vehicles shall be minimized by requiring construction vehicles to be washed prior to delivery to the Project site. Track-clean or other methods of vehicle cleaning shall be used by the construction contractor to prevent weed seeds from entering/exiting the construction areas on vehicles. Additionally, wattles used for erosion control shall be certified as weed-free.

BIO DF-8 **Lighting**. Lighting for construction activities and operations shall be directed inward toward the Project site and lighting shall not be directed toward adjacent undeveloped areas.

BIO DF-9 **Trash and Debris.** The following avoidance and minimization measures shall be implemented during project construction:

a. Fully covered trash receptacles that are animal-proof shall be installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash contained within the receptacles shall be removed at least once a week from the Project site.
b. Construction work areas shall be kept clean of debris, such as cable, trash, and construction materials. All construction/contractor personnel shall collect all litter, vehicle fluids, and food waste from the Project site on a daily basis.

BIO DF-10 **Herbicides and Rodenticides**. The Project Applicant or successor in interest shall limit herbicide use for invasive plant species and shall use herbicides only if it has been determined by a qualified biologist that hand or mechanical efforts are infeasible. To prevent drift, the Project Applicant or successor in interest shall apply herbicides only when wind speeds are less than seven miles per hour. All herbicide application shall be

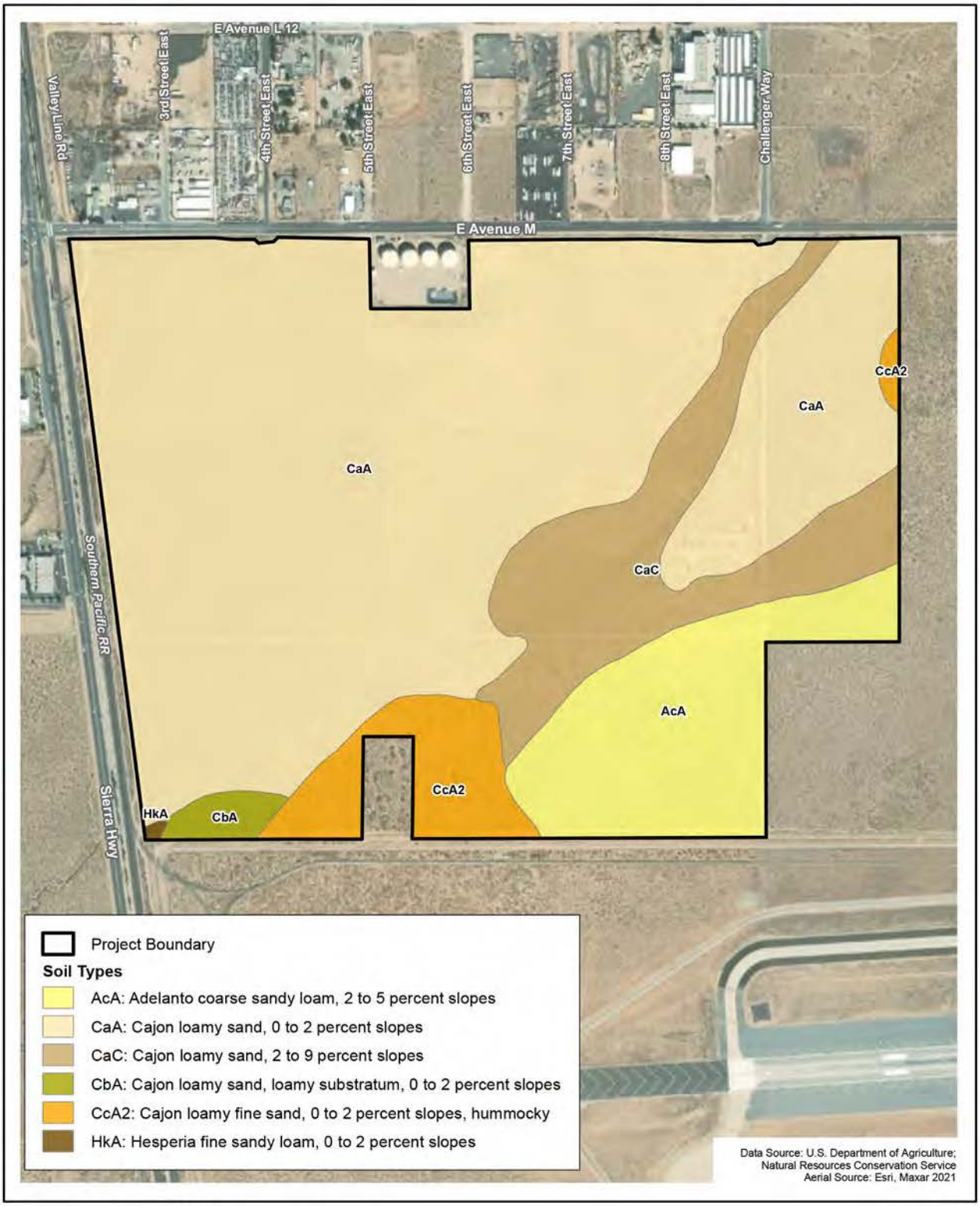
performed by a licensed applicator and in accordance with all applicable federal, State, and local laws and regulations. In addition, no rodenticides and second-generation anticoagulant rodenticides shall be used during Project construction and operational activities.

4.3.9 Significance of Impacts After Mitigation

Threshold a: Less than Significant with Mitigation Incorporated. With implementation of Mitigation Measures BIO MM-1, BIO MM-2, BIO MM-7, and BIO MM-8, the direct and indirect impacts of the Project to sensitive wildlife species would be reduced to less than significant. With implementation of Mitigation Measures BIO MM-1, BIO MM-3, BIO MM-4, and BIO MM-5, direct impacts to the western Joshua tree would be reduced to less than significant. With implementation of BIO MM-6, direct impacts to the nine cactus individuals that occur in the Phase I area and that are protected by the California Desert Native Plants Act (CDNPA), would be reduced to less than significant. .

Threshold d: Less than Significant with Mitigation Incorporated. With implementation of Mitigation Measure BIO MM-2, the direct and cumulatively considerable impacts of the project on migratory birds protected by the MBTA would be reduced to less than significant.

Threshold e: Less than Significant with Mitigation Incorporated. With implementation of Mitigation Measures BIO MM-1, BIO MM-3, BIO MM-4, and BIO MM-5, direct impacts to the western Joshua tree would be reduced to less than significant.



Source(s): PSOMAS (10-23-2023)

Figure 4.3-1

Not to Scale

Soils Map

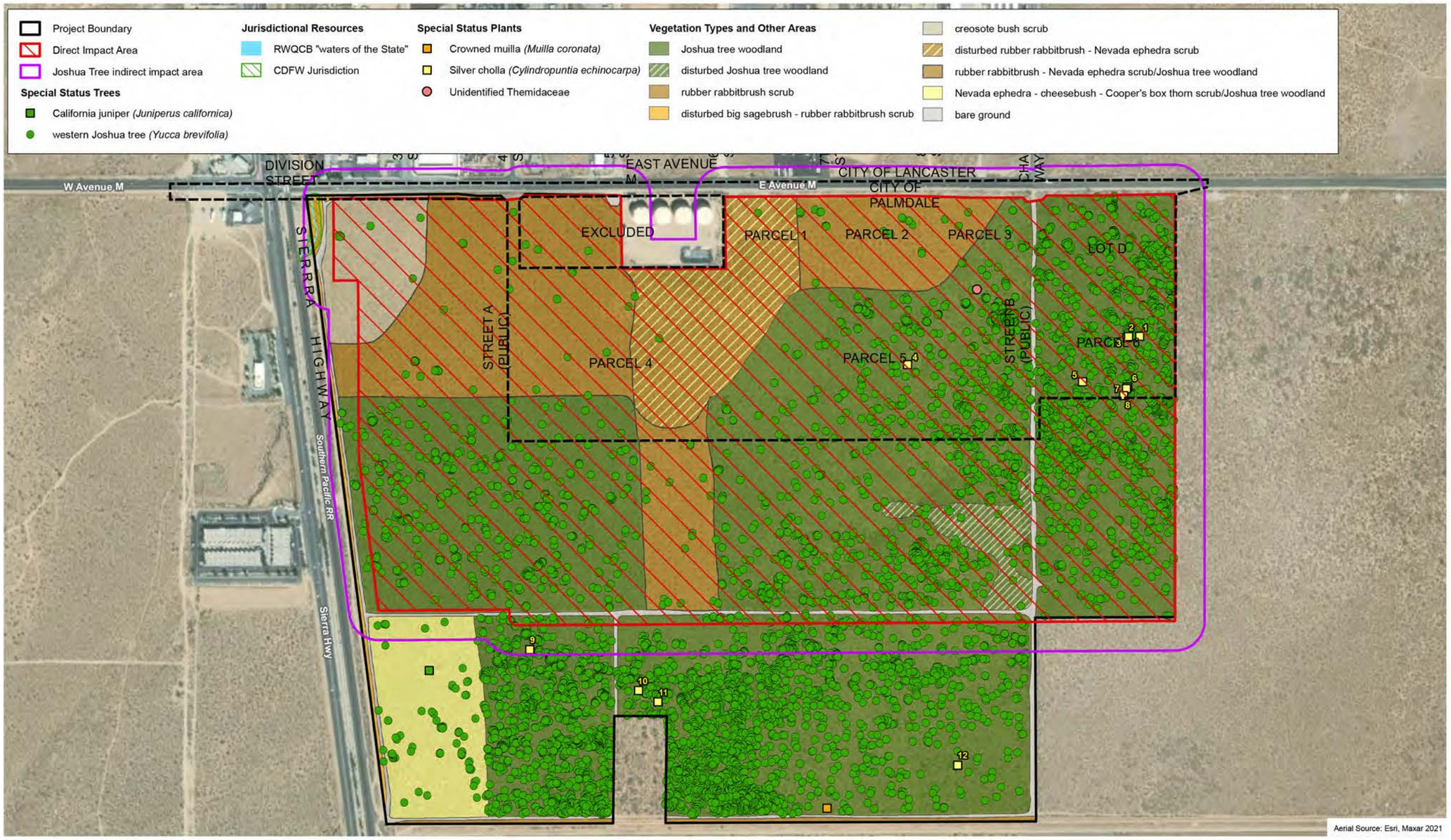


Source(s): PSOMAS (10-23-2023)

Figure 4.3-2

Not to Scale

Vegetation Types and Other Areas

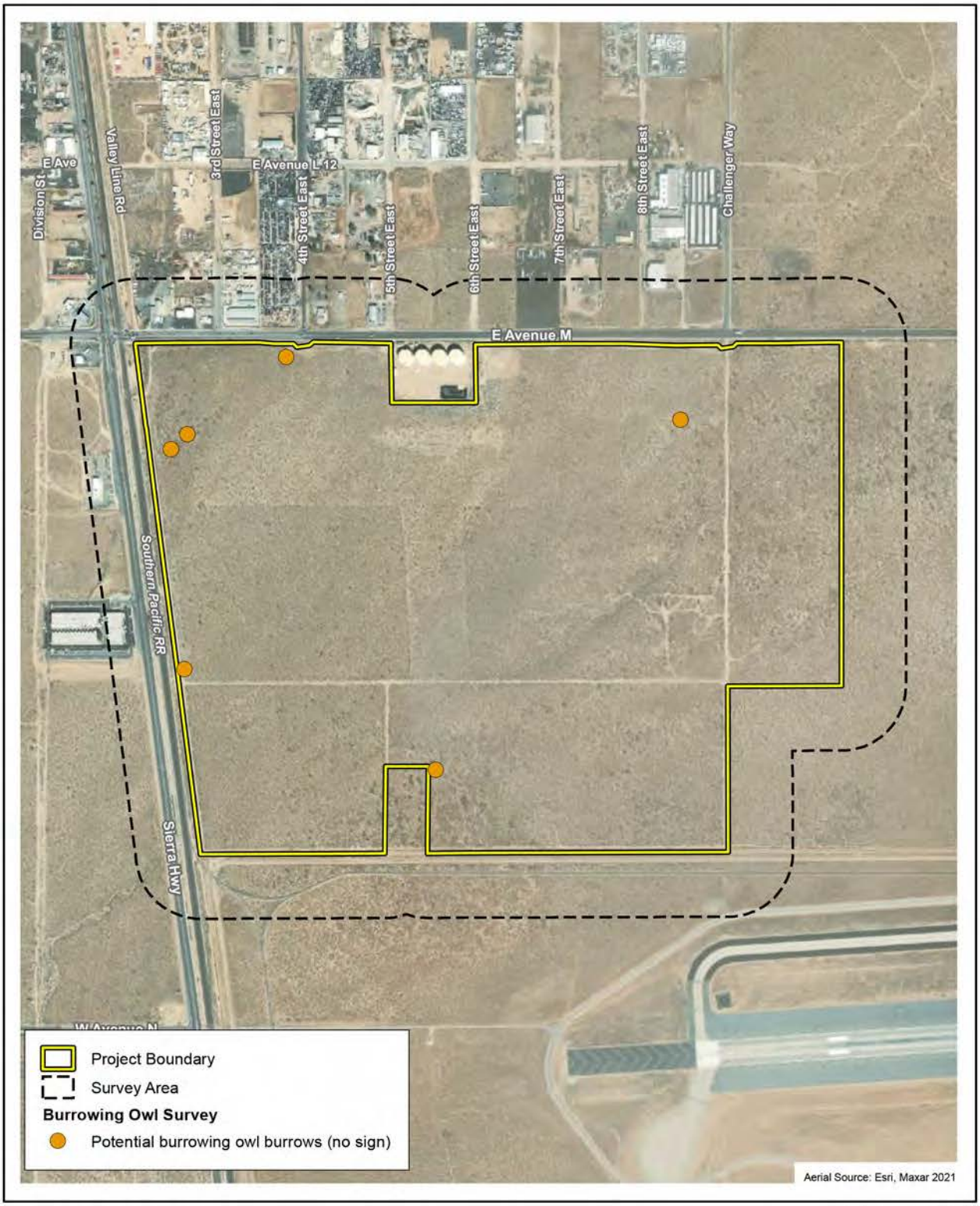


Source(s): PSOMAS (10-23-2023)

Figure 4.3-3

Not to Scale

Biological Resources Impact Map

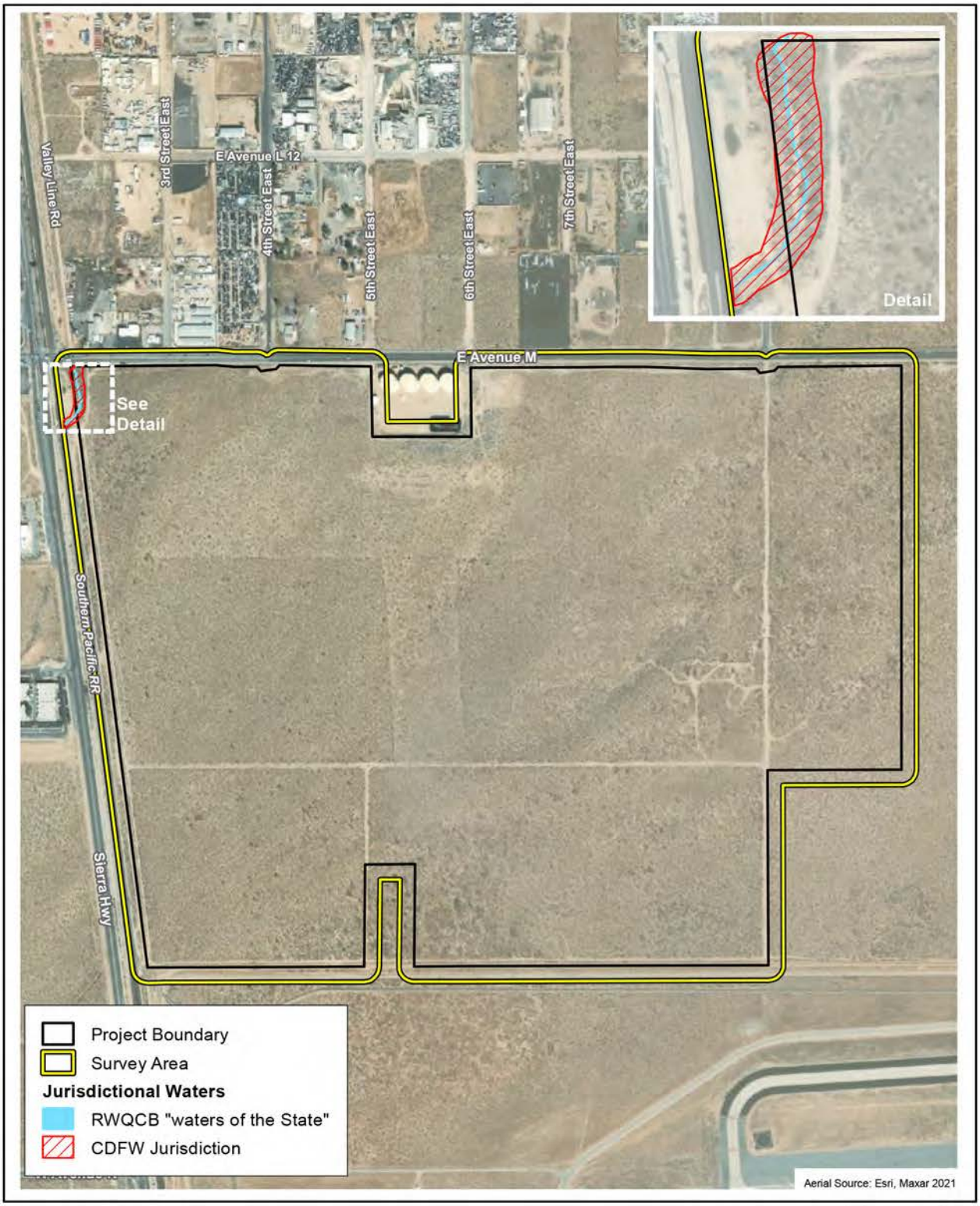


Source(s): PSOMAS (08-24-2022)

Figure 4.3-4

Not to Scale

Burrowing Owl Survey Results

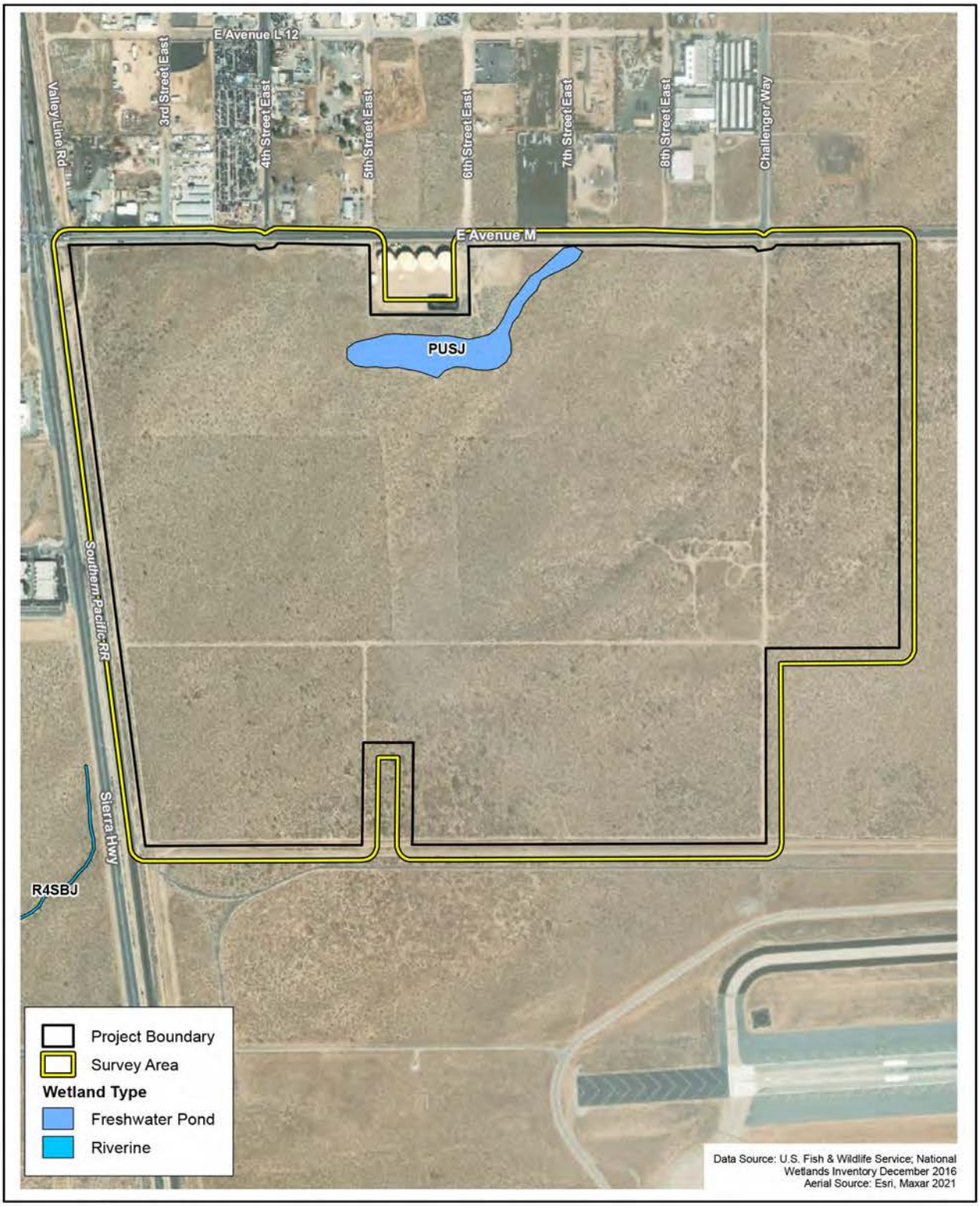


Source(s): PSOMAS (11-21-2022)

Figure 4.3-5

Not to Scale

Jurisdictional Waters

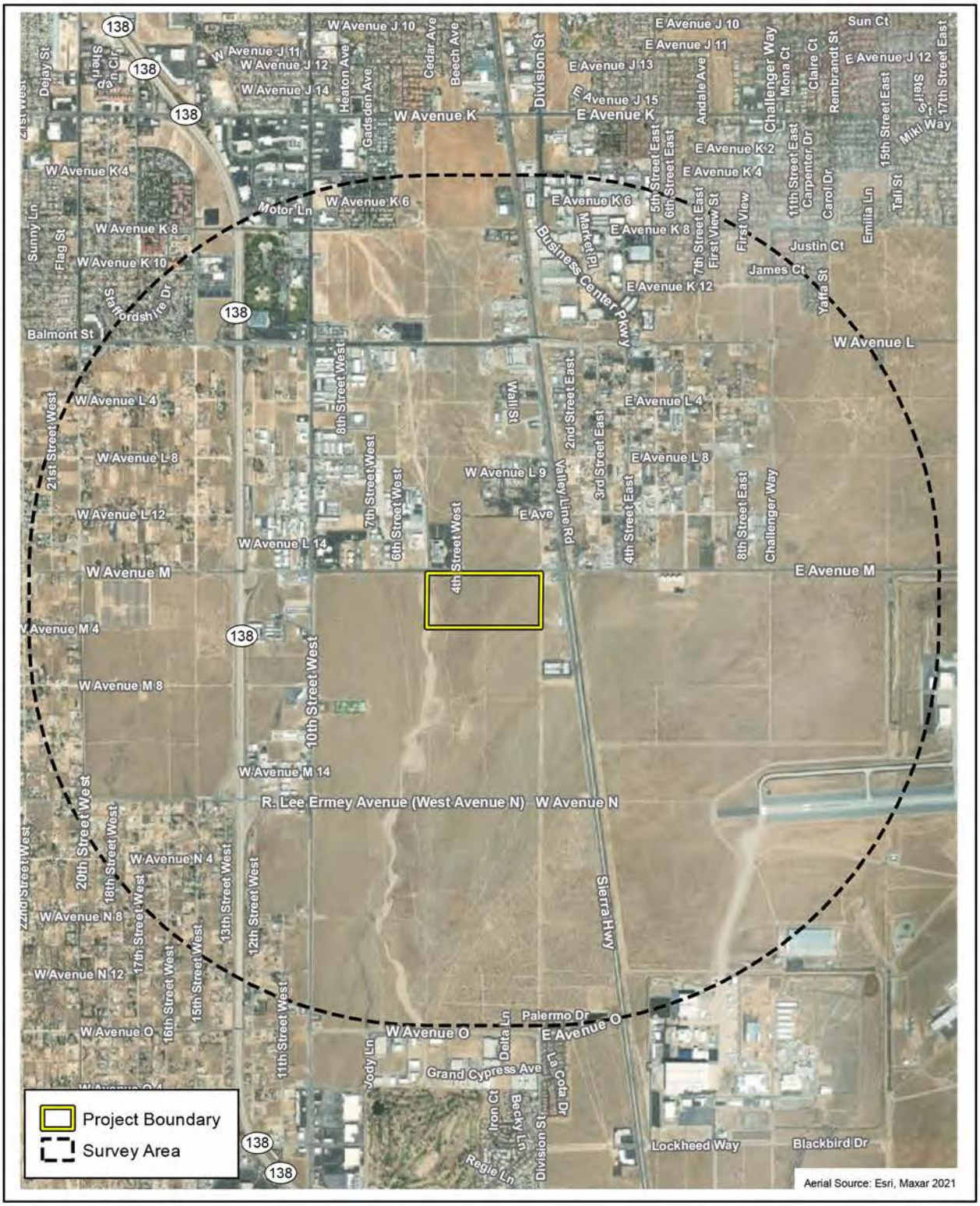


Source(s): PSOMAS (11-21-2022)

Figure 4.3-6

Not to Scale

National Wetland Inventory


Project Boundary
Survey Area
Aerial Source: Esri, Maxar 2021
W Avenue K
E Avenue K
W Avenue L
E Avenue L
W Avenue M
E Avenue M
W Avenue N
E Avenue O
W Avenue O
R. Lee Ermey Avenue (West Avenue N)
Palermo Dr
Grand Cypress Ave
Balmont St
Motor Ln
Business Center Pkwy
Sierra Hwy
Lockheed Way
Blackbird Dr
Division St
Challenger Way
Valley Line Rd
Market Pl
Justin Ct
James Ct
Sun Ct
Miki Way
Regie Ln
Iron Ct
Becky Ln
Delta Ln
Jody Ln
La Cota Dr
Carol Dr
Emilia Ln
Tali St
Yaffa St
Carpenter Dr
Rembrandt St
Claire Ct
Mona Ct
Andale Ave
Gadsden Ave
Heaton Ave
Cedar Ave
Beech Ave
Sunny Ln
Flag St
Dejay St
Stafford Dr
Sherri Cir
Sherri Ln
Stefford Shire Dr
First View
Carpenter Dr
Rembrandt St
Claire Ct
Mona Ct
Challenger Way
Andale Ave
Division St
Beech Ave
Cedar Ave
Heaton Ave
Gadsden Ave
Sunny Ln
Flag St
Dejay St
Sherri Cir
Sherri Ln
Stefford Shire Dr
Emilia Ln
Tali St
Yaffa St
Carol Dr

4.4 CULTURAL RESOURCES

The analysis in this subsection is based on a site-specific Cultural Resources Investigation (herein, "CRI") prepared by PaleoWest, titled, "Cultural Resource Investigation in Support of the Antelope Valley Commerce Center Project," dated June 2, 2022, and included as *Technical Appendix D* to this EIR (PaleoWest, 2022a). All references used in this subsection are included in EIR Section 7.0, *References*. No confidential information is contained in *Technical Appendix D;* however, much of the written and oral communication between Native American tribes, the City, and PaleoWest is considered confidential in respect to places that have traditional tribal cultural significance (Gov. Code § 65352.4), and although relied upon in part to inform the preparation of this EIR subsection, those communications are treated as confidential and are not available for public review. Under existing law, environmental documents must not include information about the location of archaeological sites or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records Act (Cal. Code Regs. § 15120(d)).

4.4.1 EXISTING CONDITIONS

A. Prehistoric, Ethnohistoric, and Historical Setting

A general overview of prehistoric, ethnographic, and historical periods in the vicinity of the Project study area is presented below, and summarized in greater detail in *Technical Appendix D.*

Over the past century, archaeologists have generally divided the prehistory of the Western Mojave Desert into five distinct periods or sequences distinguished by specific material (i.e., technological) or cultural traits. Recently, cultural-ecological chronological frameworks are based on climatic periods (e.g., Early Holocene) "to specify spans of calendric time and cultural complexes (e.g., Lake Mojave Complex) to denote specific archaeological manifestations that existed during (and across) those periods." In this scheme, the cultural history for the area is divided into the Late Pleistocene (10,000–8000 calibrated [cal] Before Present (B.P.)), the Early Holocene (8000–6000 cal B.P.), the Middle Holocene (7000–3000 cal B.P.), and the Late Holocene (2000 cal B.P. to Contact) as presented below and discussed in further detail in *Technical Appendix D*. (PaleoWest, 2022a, p. 7)

1. Prehistoric Setting

- **Late Pleistocene (ca. 10,000 to 8,000 cal Before Present (B.P.))**

The earliest cultural complex recognized in the Mojave Desert is Clovis, aptly named for the fluted projectiles often associated with Pleistocene megafaunal remains. Arguments for pre-Clovis Paleoindian human occupation in the Mojave Desert rely on relatively sparse evidence and unpublished data, although considering the growing body of evidence suggesting a pre-Clovis occupation of the Americas, the argument cannot simply be ruled out. Paleoindian culture is poorly understood in the region due to a relative dearth of evidence stemming from a handful of isolated fluted projectile point discoveries and one presumed occupation site on the shore of China Lake. Archaeologists tend to interpret the available data as evidence of a highly mobile, sparsely populated hunting society that occupied temporary camps near permanent Pleistocene water sources. (PaleoWest, 2022a, p. 7)

❑ Early Holocene (ca. 8,000 to 6,000 cal B.P.)

Two archaeological patterns are recognized during the Early Holocene period: the Lake Mojave Complex (sometimes referred to as the Western Pluvial Lakes Tradition) and the Pinto Complex. The Lake Mojave Complex is characterized by stemmed projectile points of the Great Basin Series, abundant bifaces, steep-edged unifaces, and crescents. Archaeologists have also identified, in less frequency, cobble-core tools and ground stone implements. The Pinto Complex, on the other hand, is distinguished primarily by the presence of Pinto-style projectile points. Although evidence suggests some temporal overlap, the inception of the Pinto Complex is generally considered a Middle Holocene cultural complex that begins during the latter part of the Early Holocene. (PaleoWest, 2022a, p. 7)

During the Lake Mojave cultural complex, inhabitants of the region used more extensive foraging ranges, as indicated by an increased frequency of extra-local materials. Spheres of influence also expanded as potential long-distance trade networks were established between desert and coastal peoples. Groups were still highly mobile, but they practiced a more foragerlike settlement subsistence strategy. Residential sites indicate more extensive periods of occupation and recurrent use. In addition, residential and temporary sites also indicated a diverse social economy, characterized by discrete workshops and special-use camps (e.g., hunting camps). Diet also appears to have diversified, with a shift away from dependence upon environments such as lakeside marshes, to the exploitation of multiple environments containing rich resource patches. (PaleoWest, 2022a, p. 8)

❑ Middle Holocene (ca. 7,000 to 3,000 cal B.P.)

The Pinto Complex is the primary cultural complex in the Mojave Desert during the Middle Holocene. Extensive use of tool stone other than obsidian and high levels of tool blade reworking were characteristic of this complex and the earlier Lake Mojave Complex. A reduction in tool stone source material variability, however, suggests a contraction of foraging ranges that had expanded during the Early Holocene. Conversely, long distance trade with coastal peoples continued uninterrupted, as indicated by the presence of Olivella shell beads. (PaleoWest, 2022a, p. 8)

The most distinguishing characteristic of the Pinto Complex is the prevalence of ground stone tools, which are abundant in nearly all identified Pinto Complex sites. The emphasis on milling tools indicates greater diversification of the subsistence economy during the Middle Holocene. Groups increased reliance on plant processing while continuing to supplement their diet with protein from small and large game animals. (PaleoWest, 2022a, p. 8)

Recent archaeological research in the Mojave Desert suggests there was a greater degree of regional cultural diversity during the Middle Holocene than previously thought. Scholars have proposed a new Middle Holocene cultural complex associated with sites exclusively at Twentynine Palms in the southeastern Mojave Desert. Artifacts recovered from Deadman Lake Complex sites, such as Olivella dama shell from the Sea of Cortez, and contracting-stem and lozenge-shaped projectile points similar to those recovered from Ventana Cave in Arizona, may suggest closer cultural contact with Southwest Archaic cultures than Pinto cultures to the north and west. However, it is also possible that the proposed

complex simply reflects a technologically distinct segment of the Pinto, rather than a distinct culture. (PaleoWest, 2022a, p. 8)

- **Late Holocene (ca. 2,000 cal B.P. to Contact)**

The Late Holocene in the greater Southern California region is characterized by increases in population, higher degrees of sedentism, expanding spheres of influence, and greater degrees of cultural complexity. In the Mojave Desert, the Late Holocene is divided into several cultural complexes: the Gypsum Complex (2000 cal B.C. to cal A.D. 200), the Rose Spring Complex (cal A.D. 200 to 1100), and the Late Prehistoric Complexes (cal A.D. 1100 to contact). (PaleoWest, 2022a, p. 8)

The Gypsum Complex is defined by the presence of side-notched (Elko series), concave-based (Humboldt series), and well-shouldered contracting stem (Gypsum series) projectile points. Other indicative artifacts include quartz crystals, painted ceramics, rock art, and twig figures, which are generally associated with ritual activities. (PaleoWest, 2022a, pp. 8-9)

The Rose Spring Complex is defined by the presence of distinct projectile points (i.e., Rose Spring and Eastgate series) and artifacts, including stone knives, drills, pipes, bone awls, milling implements, marine shell ornaments, and large quantities of obsidian. Of greater significance, however, are the characteristic advancements in technology, settlement strategies, and evidence for expanding and diverging trade networks. (PaleoWest, 2022a, p. 9)

The Rose Spring Complex marks the introduction of bow and arrow technology to the Mojave Desert, likely from neighboring groups to the north and east. As populations increased, groups began to consolidate into larger, more sedentary residential settlements indicated by the presence of well-developed middens and architectural styles. West and north of the Mojave River, increased trade activity along existing exchange networks ushered in a period of relative material wealth, exhibited by increased frequencies of marine shell ornaments and tool stone, procured almost exclusively from the Coso obsidian source. East and south of the Mojave River, archaeological evidence suggests there was a greater influence from Southwest and Colorado River cultures (i.e., Hakataya; Patayan). (PaleoWest, 2022a, p. 9)

Between approximately A.D. 1100 and Contact (approximately 1769, i.e., when Europeans and Native Americans first came in to regular contact in California), a number of cultural complexes emerged that archaeologists believe may represent prehistoric correlates of known ethnographic groups. Collectively known as the Late Prehistoric Cultural Complexes, during this time material distinctions between groups were more apparent, as displayed by the distribution of projectile point styles (e.g., Cottonwood vs. Desert Side-notched), ceramics, and lithic materials. Long-distance trade continued, benefiting those occupying “middleman” village sites along the Mojave River where abundant shell beads and ornaments, and lithic tools were recovered from archaeological contexts. (PaleoWest, 2022a, p. 9)

The Late Prehistoric Cultural Complex was also a time of increasing regional influence and territorial expansion. Strong regional developments were noted in the Mojave Desert that included Anasazi

interest in turquoise in the Mojave Trough, Hakatayan (Patayan) influence from the Colorado River, and the expansion of Numic Paiute and Shoshonean culture eastward. These developments led to a proposal that a number of interaction spheres were operating in the Mojave Desert during the Late Prehistoric. Interaction spheres were delineated based on the distribution of projectile point styles, ceramics, and obsidian and argued that the spheres broke along geographical lines that reflected the territorial boundaries of known ethnohistoric groups. (PaleoWest, 2022a, p. 9)

2. Ethnohistoric Setting

Four groups consider the Antelope Valley to be part of their traditional use area – the Serrano, Vanyume, Tataviam and Kitanemuk. A summary of the ethnographic information on each of these groups is provided below. (PaleoWest, 2022a, p. 9)

❑ Serrano

The Serrano territory included the San Bernardino Mountains, east of Cajon Pass, as well as the desert area that lies immediately south of Victorville, extending east as far as Twentynine Palms and south as far as Yucaipa Valley. The Serrano were primarily hunters and gatherers. Vegetal staples varied with village locality: acorns and piñon nuts in the foothills; mesquite, yucca roots, cacti fruits, and piñon nuts in or near the desert regions. Diets were supplemented with other roots, bulbs, shoots, and seeds. An increased yield of herbaceous plants was created by periodic burning. Communal gathering expeditions, involving several lineages under one leader's authority, were not uncommon. The bow-and-arrow was used for large game, while smaller game and birds were killed with curved throwing sticks, traps, and snares. Occasionally, game was hunted communally, especially during annual mourning ceremonies. (PaleoWest, 2022a, p. 10)

The Serrano lived in circular, domed structures that were constructed of willow frames and covered with tule thatch. These structures were utilized primarily as sleeping and storage areas, with most activities taking place outside or under a shade structure consisting simply of four posts and a roof. On occasion, an individual would erect a separate house for private use. (PaleoWest, 2022a, p. 10)

Technologically, the Serrano were quite accomplished and produced a vast array of articles. Their manufactured goods included baskets, pottery, rabbit-skin blankets, awls, arrow straighteners, sinew-backed bows, arrows, drills, stone pipes, musical instruments (rattles, rasps, whistles, bull-roarers, and flutes), feathered costumes, mats, bags, storage pouches, and nets. Food acquisition and processing required the manufacture of additional items such as knives, stone or bone scrapers, pottery trays and bowls, bone or horn spoons, and stirrers. Mortars, made of either stone or wood, and metates were also manufactured. (PaleoWest, 2022a, p. 10)

❑ Vanyume

The Vanyume inhabited the Mojave River. Unlike their Serrano neighbors, the Vanyume maintained friendly relations with the Chemehuevi and Mojave peoples. The Vanyume had a small population, which dwindled rapidly following Spanish settlement of California. No Vanyume speaking members

survived into the twentieth century, therefore, little is known about this group. (PaleoWest, 2022a, p. 11)

❑ Tataviam

The Tataviam are a Native American group that resided in and around the region encompassing the Project study area. They belong to the family of Serrano people who migrated down into the Antelope, Santa Clarita, and San Fernando valleys sometime before 1550 B.P. They settled into the Santa Clara River drainage system, east of Piru Creek, but also marginally inhabited the upper San Fernando Valley. Their territory also may have extended over the Sawmill Mountains to include at least the southwestern fringes of the Antelope Valley, which they apparently shared with the Kitanemuk, who occupied the greater portion of the Antelope Valley.

The Tataviam were hunters and gatherers who prepared their foodstuffs in much the same way as their neighbors. Their primary foods included yucca, acorns, juniper berries, sage seeds, deer, the occasional antelope, and smaller game such as rabbits and ground squirrels. There is no information regarding Tataviam social organization, though information from neighboring groups shows similarities among Tataviam, Chumash, and Gabrielino ritual practices. At first contact with the Spanish in the late eighteenth century, the population of this group was estimated at less than 1000 people. However, this ethnographic estimate of the entire population is unlikely to be accurate, since it is based only on one small village complex and cannot necessarily be indicative of the entire population of Tataviam. Given the archaeological evidence at various Tataviam sites, as well as the numbers incorporated into the Spanish Missions, pre-contact population and early contact population easily exceeded 1,000 people. The Tataviam people lived in small villages and were semi-nomadic when food was scarce. (PaleoWest, 2022a, p. 11)

❑ Kitanemuk

The Kitanemuk belonged to the northern section of the people known as the "Serrano." The name, "Serrano," however, is only a generic term meaning "mountaineers" or "those of the Sierras." Ethnographers group the Kitanemuk with the Serrano based on linguistic similarities though the Kitanemuk did not identify themselves as Serrano. They lived on the upper Tejon and Paso creeks and held the streams on the rear side of the Tehachapi Mountains, the small creeks draining the rear slope of the Liebre and Sawmill Range, and the Antelope Valley and the westernmost part of the Mojave Desert. Although the extent of their territorial claims in the desert region is not certain. (PaleoWest, 2022a, pp. 11-12)

The Kitanemuk lived in permanent winter villages of 50 to 80 people or more. During the late spring, summer, and fall months they dispersed into smaller, highly mobile gathering groups. They followed a seasonal round, visiting different environmental regions as the important food producing plants became ready for harvest. The Kitanemuk shared some elements of culture with the rest of the Serrano groups, who lived to the east in parts of the Antelope Valley, the upper Mojave River area, and the San Bernardino Mountains. Some customs, however, such as rituals and practices to honor the dead, may have been different. The Kitanemuk appear to have buried their dead, while the Serrano cremated them.

The population of the Kitanemuk has been placed in the 500 to 1000 range at the time of arrival of the Spanish. There were no permanent communities on the valley floor. Instead, the Antelope Valley provided a Native American trade route from Arizona and New Mexico to the California coast. The Native American population of California was estimated to be 133,000 in 1770, just before the mission era. But by 1910, they numbered about 16,350. (PaleoWest, 2022a, p. 12)

3. Historical Setting

❑ Mojave Desert Region

European exploration of the Mojave Desert began in the sixteenth century, but sustained Euro-American settlement of the region did not occur until the mid-nineteenth century. This period is discussed above from the point of view of Native American history. Below, the Euro-American expansion into the region and subsequent historical developments is described. (PaleoWest, 2022a, p. 12)

The European settlement in the Mojave Desert began when Spanish missionaries and explorers entered the area in the eighteenth century. The first Europeans in the area led an expedition into the western Mojave in 1772 in pursuit of Spanish soldiers who had deserted. Later forays into the Mojave were undertaken in 1776 to explore overland routes between Santa Fe, New Mexico, and Southern California. The Old Spanish Trail, which passes through the Mojave Desert, was not firmly established as a travel route until the 1830s. (PaleoWest, 2022a, pp. 12-13)

The Mexican War of Independence from Spain began in 1810. The Mexicans were victorious in 1821 and declared the Republic of Mexico in 1823. California was made a territory of the Republic in 1825. During Mexican rule, from 1825 to 1847, the rancheros became wealthy from trade in hides, tallow, wine, and brandy. The missions' properties were redistributed between 1834 and 1836, making the rancheros even wealthier. American traders, drawn by low prices for cowhides and other raw materials, made contacts with the Californios. Some married the daughters of the rancheros, started business enterprises, and became increasingly influential in the finance and commerce of the region. (PaleoWest, 2022a, p. 13)

During the Mexican-American War, on August 13, 1846, Captain John Fremont entered the pueblo of Los Angeles and declared it an American territory. The Treaty of Cahuenga ended the conflict in California in 1847 and The Treaty of Guadalupe Hidalgo officially ended the war in 1848. (PaleoWest, 2022a, p. 13)

American exploration into the Mojave Desert began in the nineteenth century. Jedediah Smith was the first American to enter the Mojave in 1826 and 1827. Smith followed the Old Spanish Trail, which runs south and east of the current Project site, and ultimately reached the Pacific Ocean. In 1844, John C. Fremont traveled through the Mojave from the north and eventually met up with the Old Spanish Trail. (PaleoWest, 2022a, p. 13)

By the 1850s, the Old Spanish Trail was established as a reliable overland route to California, and it became easier for people to move into the area. Once California was ceded to the United States, the land was open for settlement and development. With the discovery of gold in the Sierra Nevada Mountains, California's population boomed. Mining led to the creation of roads throughout the State. Later, these mining roads would be used to establish railroads that operated in the region. (PaleoWest, 2022a, p. 13)

Construction of the Southern Pacific Railroad (SPRR), linking San Francisco to Los Angeles via the Mojave Desert, was completed in 1876. With the construction of the railroad, historic development of the Antelope Valley increased. Lancaster, to the northwest of Palmdale, was first settled in 1876 with the completion of the SPRR. In the early 1880s, Moses Langley Wicks founded a Scottish agricultural colony of around 150 people near present-day Lancaster. In 1884, Wicks purchased and platted the town site. In the late 1880s, Lancaster was sold to James P. Ward, and the first land boom occurred in the Antelope Valley. Ample rain during this period led to bumper wheat and barley harvests. The subsequent ten-year drought had severe consequences for farmers in Palmdale and Lancaster. The Antelope Valley experienced another swell of population growth in the early 1900s when the region housed large numbers of workers constructing the Los Angeles Aqueduct. The area also experienced a period of growth in the 1930s following construction of the Muroc Air Force Base. (PaleoWest, 2022a, pp. 13-14)

❑ Antelope Valley

The Antelope Valley lies on the west end of the Mojave Desert, in the northern extent of Los Angeles County, and extends into southern Kern County. Several non-native expeditions traversed the Antelope Valley starting in 1776, but the first non-native settlements did not occur until the 1850s through a combination of factors. Discovery of gold in Kern County and Silver in Inyo County in the early 1850s established new wagon routes, followed by the Butterfield mail stagecoach mail route in 1858, and the Los-Angeles Havilah Stage Line in 1864. The establishment of Fort Tejon in 1854 on the west end of the valley created a safe outpost for travelers, and a telegraph line that connected San Francisco to Los Angeles was completed in 1860. Construction of the Southern Pacific Railroad through this section of the Antelope Valley was completed in 1876 as part of the connecting route between San Francisco and Los Angeles. The alignment passed through the newly established railroad towns of Rosamond and Lancaster, approximately seven miles west and south of the Project site. (PaleoWest, 2022a, p. 14)

❑ Palmdale

The present town of Palmdale originated as two small communities called Palmenthal and Harold. Palmenthal was settled in 1886 by Swiss and German settlers. That year, the Palmdale Water District was established and shortly thereafter an irrigation ditch was excavated by the Palmdale Irrigation Company to divert water from Littlerock Creek to Palmdale. In 1890, the ditch was described as seven miles in length. The principal crops the water supported were alfalfa, corn, potatoes, vegetables, fruit trees, and vineyards. In 1894, drought hit the area, and an increased supply of water was needed. An earthen dam, forming Harold Reservoir (now Palmdale Lake), was constructed by the Antelope Valley Irrigation Company in 1895, and another earthen ditch, linking Littlerock Creek to Harold Reservoir,

was excavated alongside the earlier ditch. A flume and wooden trestle were incorporated into this design. The settlers prospered, temporarily growing grain and fruit. An extended period of drought in the 1890s brought the boom to an end, and Palmenthal was largely abandoned. The Community of Harold which was also known as Alpine Station and Trejo Post Office, was established at the crossroads of the SPRR and Fort Tejon Road (now Barrel Springs Road). The community of Harold was essentially abandoned when the railroad moved the site of its booster engine station to another location north of Harold. (PaleoWest, 2022a, pp. 14-15)

Mining in the Mojave Desert led to increased settlement during the latter half of the nineteenth century. Gold was discovered in the southwestern portion of Antelope Valley in 1842 in what is today known as Placerita Canyon. Gold, silver, and copper were also mined from the Soledad Canyon region during the Civil War period. The town of Mojave was the rail terminus for the 20-mule-team borax wagons that operated from Death Valley between the years 1884 and 1889. The United States Borax and Chemical Company (formerly the Pacific Coast Borax Company) developed sodium borate mining at Boron, about 30 miles north of Victorville. Gold was discovered at Standard Hill in 1894, and the Cactus Queen Mine produced the largest quantity of silver ore in California until World War II. By 1896, the Alpine Plaster Company had established a gypsum quarry one mile south of Palmdale, and the Fire Pulp Plaster Company also worked Palmdale's gypsum deposits. All of this activity rejuvenated the development of the Antelope Valley. (PaleoWest, 2022a, p. 15)

The town of Palmdale was established in 1899 when settlers who remained at Palmenthal and Harold relocated closer to the SPRR station and the San Francisco to New Orleans stagecoach line. In 1905, following the end of the drought, irrigation systems using pumps powered by gasoline, and later electricity, replaced the previous reliance on artesian wells. This more reliable source of water revived the agricultural industry in the Antelope Valley. Completion of the Los Angeles Aqueduct in 1914 (to the west of Palmdale) further prompted development of the Palmdale area. Palmdale's population began to steadily increase. Irrigated lands in the Valley increased from 5,000 acres in 1910 to 11,900 acres in 1919. Alfalfa, pears, and apples became staple crops in the area and agriculture remained the primary industry of the Antelope Valley, with Palmdale serving as the trading center of poultry and cattle ranchers and fruit growers, until World War II. After World War II, Palmdale grew as a center for aerospace and defense industries with the establishment of Edwards Air Force Base in Kern County and United States Air Force Plant 42 (USAF Plant 42) in Palmdale. (PaleoWest, 2022a, pp. 15-16)

When Palmdale incorporated in 1962, its land area measured 2.1 square miles. By 1965, the city limits contained 22.4 square miles, and by 1983, Palmdale had grown to 45 square miles and had 130 additional square miles in its planning area. Palmdale was the fastest growing city in the State in the 1980s, climbing 573 percent from a population of 12,227 in 1980 to 68,842 in 1990. The vast majority of Palmdale's land is vacant (75 percent), providing space for continued growth and development in the future. Palmdale has become a 'bedroom' community, with a large number of residents commuting to the Los Angeles area to work. (PaleoWest, 2022a, p. 16)

B. Cultural Resources Inventory

1. Records Search Results

PaleoWest completed a literature review and records search at the South-Central Coastal Information Center (SCCIC), housed at California State University Fullerton. The inventory effort included the Project site and a 0.5-mile radius around the Project site, collectively termed herein as the Project study area. The objective of the records search was to identify prehistoric or historic cultural resources previously recorded within the Project study area during prior cultural resource investigations. (PaleoWest, 2022a, p. 16)

As part of the cultural resources inventory, PaleoWest staff also examined historical maps and aerial images to characterize the developmental history of the Project study area and vicinity. A summary of the results of the record search and background research is provided below.

2. Previous Cultural Resources Investigations

The records search results indicate that no fewer than 26 previous cultural resource investigations have been completed within the Project study area since 1984 (refer to Table 4-1 of the Project's CRI, included as EIR *Technical Appendix D*). Seven of these studies include or intersect the Project site. As a result, PaleoWest determined that approximately 100 percent of the Project site has been previously inventoried for cultural resources. (PaleoWest, 2022a, p. 16)

The records search indicated that 16 cultural resources were previously documented within the Project study area (refer to Table 4-2 of the Project's CRI, included as EIR *Technical Appendix D*). Most of the resources consist of historic period refuse scatters. Two of the previously recorded cultural resources are mapped on the Project site and are both isolated prehistoric period flaked stone tools that were collected at the time they were recorded. (PaleoWest, 2022a, p. 18)

3. Additional Sources

Additional sources consulted during the cultural resource literature and data review included the National Register of Historic Places (NRHP), the Office of Historic Preservation (OHP) Archaeological Determinations of Eligibility, and the Office of Historic Preservation Built Environment Resources Directory (BERD). A search of the additional sources determined that there are no listed cultural resources recorded within the Project study area. (PaleoWest, 2022a, p. 19)

According to PaleoWest's review of historical maps and aerial images, a single structure is shown in the northwest extent of the Project site on the 1915 and 1917 Elizabeth Lake maps but is not present on later topographic maps nor on aerial photographs, which suggests it was demolished by 1930. Other development present in the vicinity of the Project site in the 1910s include the road which later become known as Sierra Highway and the SPRR. Aerial imagery indicates that since 1948, the Project site has remained largely undeveloped except for several dirt roads, including 10th Street East, and one small structure located near the eastern edge of the Project site. Based on a review of US Department of the Interior Bureau of Land Management (BLM) General Land Office (GLO) records, this small structure

is likely related to a homestead issued to Beverly Montague Forman in 1937 on land purchased from the U.S. Government through the Homestead Act of 1862. The building is visible on a 1948 aerial photograph. Although it appears to have been demolished by 1953, remnants of the foundation can be seen in aerial images up until at least 2018. Although it is not mapped on any of the reviewed USGS topographic maps, the dirt roads that lead to the structure are depicted on maps from this period. (PaleoWest, 2022a, p. 19)

Finally, a buried site sensitivity analysis was conducted of the Project site to determine the potential for encountering subsurface cultural materials during construction activities. The Project site lacks many of the natural resources (e.g., springs or permanent water sources) that were exploited by prehistoric inhabitants of the region. A small ephemeral drainage intersects the northwestern corner of the Project site and runs in a southwest direction to Amargosa Creek, approximately one mile west of the Project site. No other hydrological features are present near the Project site. Rosamond and Rogers Dry Lake are located approximately 11 miles to the north and Littlerock Wash is located approximately 6 miles to the east.

Today, the Project study area is rural, consisting of undeveloped parcels where the original landform surface may still be observed. The underlying geology consists of Holocene quaternary alluvium comprising the unconsolidated fill of the Antelope Valley and has an estimated thickness of 100 feet or more. These deposits consist of unconsolidated to weakly consolidated fine to medium sand with fine gravel. Gravels are primarily from granitic sources with many sub-angular fine gravel quarts clasts. This depositional environment is generally not conducive to the preservation of buried cultural deposits due to the high energy involved in the transportation of sand and gravel. However, low to moderate energy deposits may exist in portions of the alluvial landscape that have a higher potential for site preservation. Given the lack of natural resources in the Project site and the low density of prehistoric sites identified in the records search area (two isolated artifacts) , the Project site has a low to moderate sensitivity for preserving buried archaeological sites. (PaleoWest, 2022a, pp. 19-20)

4. Native American Heritage Commission Sacred Lands File Search

PaleoWest contacted the Native American Heritage Commission (NAHC) in February 2022 for a review of the Sacred Lands File (SLF). The objective of the SLF search was to determine if the NAHC had any knowledge of Native American cultural resources (e.g., traditional use or gathering area, place of religious or sacred activity, etc.) within the immediate vicinity of the Project site. The NAHC responded on March 24, 2022 stating that the SLF was completed with negative results. The NAHC suggested that nine individuals representing six Native American tribal groups be contacted to elicit information regarding cultural resource issues related to the proposed Project. PaleoWest sent outreach letters to the nine individuals on March 25, 2022. These letters were followed up by phone calls on April 1, 2022. Five responses were received, including responses from the Tribal Historic and Cultural Preservation Officer for the Fernandeño Tataviam Band of Mission Indians, the Historic Preservation Officer for the Quechan Tribe of the Fort Yuma Reservation, the Chairperson of the San Fernando Band of Mission Indians, the Cultural Resources Analyst for the Yuhaaviatam of San Manuel Nation, and the Co-Chairperson for the Serrano Nation of Mission Indians. (PaleoWest, 2022a, p. 20)

Refer to Subsection 4.14, *Tribal Cultural Resources*, for further detail regarding the City of Palmdale's coordination and consultation with the Native American tribes on the NAHC Contact List

C. *Field Investigation*

1. Field Methods

A cultural resources survey of the Project site was completed by PaleoWest between March 21 through March 25, 2022. The fieldwork effort included an intensive pedestrian survey of the entire Project site. The survey was conducted by walking a series of parallel transects spaced at 10 to 15-meter (33 to 50 feet) intervals. To ensure discovery and documentation of any visible potentially significant cultural resources within the Project site, the archaeologist carefully inspected all areas within the Project site likely to contain or exhibit sensitive cultural resources. (PaleoWest, 2022a, p. 22)

2. Field Results

According to PaleoWest, a small area in the southeastern Project site west of 10th Street East / Challenger Way was not surveyed due to the presence of a temporary encampment with tents and multiple vehicles. This area was approximately 100 feet in diameter. The archaeologists were able to survey the perimeter and look into the area that was not accessible on foot. No cultural resources were observed within the encampment, and due to its location within a seasonal wash, it is unlikely that any intact cultural resources would occur there. In addition to the encampment, other noted disturbances in the Project site included modern trash and vehicular use. (PaleoWest, 2022a, p. 23)

Fifteen newly identified historic period archaeological sites were documented in the Project site. All of these resources date to the Historic Period. As part of the survey effort, the mapped locations of the two previously collected prehistoric period isolates (P-19-100024 and P-19-100025) were also revisited. The purpose of the revisit was to examine these areas for any additional prehistoric materials that may be present in the Project site. No prehistoric period remains were identified as a result of the pedestrian survey.

The cultural resource assessment included record searches, background research, and a pedestrian survey of the Project site. As a result of these efforts, fifteen cultural resources were identified on the Project site, all of which are archaeological sites dating to the historic period and consisting of refuse scatter. None of the sites have been recommended eligible for listing in the CRHR. Geological information reviewed for the Project site indicates that the buried site sensitivity for the Project site is low to moderate. (PaleoWest, 2022a, p. 36)

4.4.2 Regulatory Setting

The following is a brief description of the federal, State, and local environmental laws and related regulations governing the protection of cultural resources.

A. Federal Regulations

1. National Register of Historic Places

The National Register of Historic Places (NRHP) is the official list of the Nation's historic places worthy of preservation. Authorized by the NHPA of 1966, the NPS's National Register of Historic Places (NRHP) is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archaeological resources. (NPS, 2022a) To be considered eligible, a property must meet the National Register Criteria for Evaluation. This involves examining the property's age, integrity, and significance, as follows:

- Age and Integrity. Is the property old enough to be considered historic (generally at least 50 years old) and does it still look much the way it did in the past?

- Significance. Is the property associated with events, activities, or developments that were important in the past? With the lives of people who were important in the past? With significant architectural history, landscape history, or engineering achievements? Does it have the potential to yield information through archaeological investigation about our past? (NPS, 2022a)

Nominations can be submitted to a State Historic Preservation Office (SHPO) from property owners, historical societies, preservation organizations, governmental agencies, and other individuals or groups. The SHPO notifies affected property owners and local governments and solicits public comment. If the owner (or a majority of owners for a district nomination) objects, the property cannot be listed but may be forwarded to the NPS for a Determination of Eligibility (DOE). Listing in the NRHP provides formal recognition of the historical, or archaeological significance of a property based on national standards used by every state. (NPS, 2022a)

Under Federal Law, the listing of a property in the National Register places no restrictions on what a non-federal owner may do with their property, up to and including destruction, unless the property is involved in a project that receives Federal assistance, usually funding or licensing/permitting. National Register listing does not lead to public acquisition or require public access. (NPS, 2022a)

2. National Historic Landmarks Program

National Historic Landmarks (NHLs) are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. Today, over 2,600 historic places bear this national distinction. Working with citizens throughout the nation, the NHL Program draws upon the expertise of NPS staff who guide the nomination process for new Landmarks and provide assistance to existing Landmarks. (NPS, 2022b)

3. *American Indian Religious Freedom Act*

The American Indian Religious Freedom Act (AIRFA) requires each executive branch agency with statutory or administrative responsibility for the management of Federal lands, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies are also required to maintain the confidentiality of sacred sites. Each executive branch agency with statutory or administrative responsibility for the management of Federal lands are required to implement procedures to ensure reasonable notice is provided of proposed actions or land management policies that may restrict future access to or ceremonial use of, or adversely affect the physical integrity of, sacred sites. (NOAA, n.d.)

4. *Federal Antiquities Act*

The Antiquities Act is the first law to establish that archaeological sites on public lands are important public resources. It obligates federal agencies that manage the public lands to preserve for present and future generations, the historic, scientific, commemorative, and cultural values of the archaeological and historic sites and structures on these lands. It also authorizes the President of the United States to protect landmarks, structures, and objects of historic or scientific interest by designating them as National Monuments. (NPS, 2023)

B. *State Regulations*

1. *California Administrative Code, Title 14, Section 4308*

Section 4308, *Archaeological Features*, of Title 14 of the California Administrative Code provides that: "No person shall remove, injure, disfigure, deface, or destroy any object of archaeological, or historical interest or value." (CCR, n.d.)

2. *California Code of Regulations Title 14, Section 1427*

California Code of Regulations Title 14, Section 1427 provides that: "No person shall collect or remove any object or thing of archaeological or historical interest or value, nor shall any person injure, disfigure, deface or destroy the physical site, location or context in which the object or thing of archaeological or historical interest or value is found." (NAHC, n.d.)

3. *California Register of Historic Resources*

The State Historical Resources Commission has designed the California Register of Historic Resources program for use by State and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The Register is the authoritative guide to the State's significant historical and archaeological resources. The California Register program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance; identifies historical resources for State and local planning purposes; determines eligibility for State historic preservation grant funding; and affords certain protections under CEQA. (OHP, n.d.)

In order for a resource to be included on the Register of Historic Resources, the resources must meet one of the following criteria:

- Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States (Criterion 1);
- Associated with the lives of persons important to local, California or national history (Criterion 2);
- Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values (Criterion 3); or
- Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation (Criterion 4). (OHP, n.d.)

For resources included on the Register of Historic Resources, environmental review may be required under CEQA if property is threatened by a project. Additionally, local building inspectors must grant code alternatives provided under the State Historical Building Code. Further, the local assessor may enter into contract with a property owner for property tax reduction pursuant to the Mills Act. A property owner also may place his/her/their own plaque or marker at the site of the resource. A resource cannot be listed over an owner's objections; however, consent of a property owner is not required. The State Historical Resources Commission (SHRC) can, however, formally determine a property eligible for the California Register if the resource owner objects. (OHP, n.d.)

4. Assembly Bill 52

California Assembly Bill 52 (AB 52) (2014) Chapter 532 amended Section 5097.94 of, and added Sections 21073, 21074, 21080.3.1, 21080.3.2, 21802.3, 21083.09, 21084.2 and 21084.3 to the California Public Resources Code, relating to Native Americans. AB 52 was approved on September 25, 2014. By including tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and Tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to tribal cultural resources. By taking this proactive approach, the legislature also intended to reduce the potential for delay and conflicts in the environmental review process. (OPR, 2017a)

The Public Resources Code now establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." (Pub. Resources Code, § 21084.2.) To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the release of a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report is required for a project. (Pub. Resources Code, § 21080.3.1.) (OPR, 2017a)

If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code

§ 20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources. These rules apply to projects that have a Notice of Preparation for an Environmental Impact Report or Negative Declaration or Mitigated Negative Declaration filed on or after July 1, 2015. (OPR, 2017a)

Section 21074 of the Public Resources Code defines "tribal cultural resources." In brief, in order to be considered a "tribal cultural resource," a resource must be either:

(1) Listed, or determined to be eligible for listing, on the national, state, or local register of historic resources; or

(2) A resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource. (OPR, 2017a)

In the latter instance, the lead agency must determine that the resource meets the criteria for listing in the state register of historic resources. In applying those criteria, a lead agency must consider the value of the resource to the tribe. (OPR, 2017a)

Because the proposed Project has a NOP for an EIR, AB 52 is applicable to the Project.

5. Traditional Cultural Places Act (Senate Bill 18)

Senate Bill 18 (SB 18) requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places ("cultural places") through local land use planning. SB 18 also requires the Governor's Office of Planning and Research (OPR) to include in the General Plan Guidelines advice to local governments for how to conduct these consultations.

The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level land use decisions are made by a local government.

SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code § 65300 et seq.) and specific plans (defined in Government Code § 65450 et seq.). Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, existing State planning law requires local governments to use the same processes for adoption and amendment of specific plans as for general plans (see Government Code § 65453). Therefore, where SB 18 requires consultation and/or notice for a general plan adoption or amendment, the requirement extends also to a specific plan adoption or amendment (OPR, 2005).

Because the proposed Project proposes a Specific Plan and a General Plan Amendment, the Project is subject to Senate Bill 18.

6. State Health and Safety Code

California Health and Safety Code (HSC) § 7050.5(b) requires that excavation and disturbance activities must cease "In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery…" until the coroner can determine regarding the circumstances, manner, and cause of any death. The coroner is then required to make recommendations concerning the treatment and disposition of the human remains. Further, this section of the Code makes it a misdemeanor to intentionally disturb, mutilate or remove interred human remains. HSC § 7051 specifies that the removal of human remains from "internment or a place of storage while awaiting internment" with the intent to sell them or to dissect them with "malice or wantonness" is a public offense punishable by imprisonment in a state prison. Lastly, HSC §§ 8010-8011 established the California Native American Graves Protection and Repatriation Act consistent with the federal law addressing the same. The Act stresses that "all California Indian human remains and cultural items are to be treated with dignity and respect." It encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums in California. It also outlines the need for aiding California Indian tribes, including non-federally recognized tribes, in filing repatriation claims. (CA Legislative Info, n.d.)

California Health and Safety Code, § 5097.98 states that whenever the commission receives notification of a discovery of Native American human remains pursuant to HSC subdivision (c) of § 7050.5, it shall immediately notify those persons that are the most likely descendants. The descendants may inspect the site and make recommendations to the landowner as to the treatment of the human remains. The landowner shall ensure that the immediate vicinity around the remains is not damaged or disturbed by further development activity until coordination has occurred with the descendants regarding their recommendations for treatment, taking into account the possibility of multiple human remains. The descendants shall complete their inspection and make recommendations within 48 hours of being granted access to the site. (CA Legislative Info, n.d.)

7. California Code of Regulations Section 15064.5

The California Code of Regulations, Title 14, Chapter 3, § 15064.5 (the State CEQA Guidelines) establishes the procedure for determining the significance of impacts to archaeological and historical resources, as well as classifying the type of resource. Cultural resources are aspects of the environment that require identification and assessment for potential significance. The evaluation of cultural resources under CEQA is based upon the definitions of resources provided in CEQA Guidelines § 15064.5, as follows: (OPR, 2022)

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4850 et seq.).

- A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) including the following:
    - Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
    - Is associated with the lives of persons important in our past;
    - 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; or
    - Has yielded, or may be likely to yield, information important in prehistory or history.
- The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

4.4.3 Basis for Determining Significance

Based on Section V. of Appendix G to the State CEQA Guidelines, the Project would result in a significant impact to cultural resources if the Project or any Project-related component would:

a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;

b. Cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5; or

c. Disturb any human remains, including those interred outside of formal cemeteries.

4.4.4 IMPACT ANALYSIS

Threshold a: Would the Project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

As discussed in Subsection 4.4.1, although fifteen cultural resources were identified in the Project site, all of which are archaeological sites comprised of refuse scatter dating to the historic period, none of the sites are recommended eligible for listing in the CRHR. Geological information reviewed for the project indicates that the buried site sensitivity for the Project site is low to moderate. (PaleoWest, 2022a, p. 37) Based on the environmental and geological setting, and the scarcity of substantial prehistoric archaeological remains documented in the records search, the site has a low to moderate sensitivity for buried historic period resources. However, although unlikely, there is a remote potential that historical resources could be uncovered during grading activities associated with the Project. As such, there is a potential for the Project to have a significant impact if significant historic resources meeting the definition given in CEQA Guidelines Section 15064.5 are unearthed and not properly treated, for which mitigation would be required. This potentially significant impact will be addressed by Mitigation Measures CUL MM-1 through CUL MM-4, which require that a qualified archaeological monitor and a qualified Native American Tribal monitor are retained to monitor the Project site during earthmoving activities and implement mitigation to the satisfaction of the City in the event that any significant resources are unearthed during excavation and grading activities. Implementation of Mitigation Measures CUL MM-1 through CUL MM-4 would ensure the proper identification and subsequent treatment of any significant historical or archaeological resources that may be encountered during ground-disturbing activities associated with Project construction. With implementation of the required mitigation, the Project's potential impacts to important cultural resources would be less than significant.

Threshold b: Would the Project cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5?

Based on the cultural records search and pedestrian survey of the Project site, no known archaeological resources are present on the Project site. Because no archaeological resources are known to exist on the Project site, implementation of the proposed Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5. However, although unlikely, there is a remote potential that historical resources could be uncovered during grading activities associated with the Project. As such, there is a potential for the Project to have a significant impact if significant historic resources meeting the definition given in CEQA Guidelines Section 15064.5 are unearthed and not properly treated, for which mitigation would be required. This potentially significant impact will be addressed by Mitigation Measures CUL MM-1 through CUL MM-4, which require that a qualified archaeological monitor and a qualified Native American Tribal monitor are retained to monitor the Project site during earthmoving activities and implement mitigation to the satisfaction of the City in the event that any significant archaeological or tribal cultural resources are unearthed during excavation and grading activities. Implementation of Mitigation Measures CUL MM-1 through CUL MM-4 would ensure the proper identification and subsequent treatment of any significant historical or archaeological resources that may be encountered during ground-disturbing activities associated with

Project construction. With implementation of the required mitigation, the Project's potential impacts to important cultural resources would be less than significant.

Threshold c: Would the Project disturb any human remains, including those interred outside of formal cemeteries?

The Project site does not contain a cemetery and no known formal cemeteries are located within the immediate vicinity of the Project site. Field surveys conducted on the Project site did not identify the presence of any human remains and no human remains are known to exist beneath the surface of the site. Nevertheless, the remote potential exists that human remains may be unearthed during grading and excavation activities associated with Project construction.

If human remains are unearthed during Project construction, the construction contractor would be required by law to comply with California Health and Safety Code § 7050.5 "Disturbance of Human Remains." According to § 7050.5(b) and (c), if human remains are discovered, the County Coroner must be contacted and if the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner is required to contact the NAHC by telephone within 24 hours. Pursuant to California Public Resources Code § 5097.98, whenever the NAHC receives notification of a discovery of Native American human remains from a county coroner, the NAHC is required to immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or their authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants must complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. According to Public Resources Code § 5097.94(k), the NAHC is authorized to mediate disputes arising between landowners and known descendants relating to the treatment and disposition of Native American human burials, skeletal remains, and items associated with Native American burials. With mandatory compliance to California Health and Safety Code § 7050.5 and Public Resources Code § 5097.98, any potential impacts to human remains, including human remains of Native American ancestry, that may result from development of the Project would be less than significant.

4.4.5 Cumulative Impact Analysis

This cumulative impact analysis considers development of the proposed Project in conjunction with other development projects and planned development within Antelope Valley. This study area was selected for evaluation because it encompasses a broad region with similar geological, biological, and climatic conditions with commonalities for like historic and archaeological resources.

Historic and Archaeological Resources

As noted under the analysis of Thresholds (a) and (b) above, the Project site has a low to moderate sensitivity for buried historic and prehistoric archaeological resources. However, although unlikely,

there is a remote potential that historical or archaeological resources could be uncovered during grading activities associated with the Project. As other cumulative developments within the region also have the potential to result in impacts to subsurface pre-historic or historical resources, the potential impacts of the Project to cultural resources would be cumulatively considerable.

Human Remains

As discussed under the analysis of Threshold (c) above, mandatory compliance with the provisions of California Health and Safety Code § 7050.5 as well as Public Resources Code § 5097 et seq., would ensure that Project impacts to human remains would remain below a level of significance. Because other cumulative developments also would be subject to compliance with California Health and Safety Code § 7050.5 and Public Resources Code §5097 et seq., the impacts to human remains are evaluated as less than significant on a cumulatively considerable basis.

4.4.6 Significance of Impacts Before Mitigation

Threshold a: Significant Direct and Cumulatively Considerable Impact. Although fifteen cultural resources were identified on the Project site, all of which are comprised of refuse scatter dating to the historic period, none of the sites are recommended eligible for listing in the CRHR. Additionally, the Project site has a low to moderate sensitivity for buried historical resources. However, although unlikely, there is a remote potential that significant historical resources could be uncovered during grading and trenching activities associated with the Project's construction. If significant historical resources are encountered and not properly identified and treated, the Project would have a significant direct and cumulatively considerable impact for which mitigation would be required.

Threshold b: Significant Direct and Cumulatively Considerable Impact. No known significant archaeological resources are present on the property and the Project site has a low to moderate sensitivity for buried prehistoric archaeological resources. However, although unlikely, there is a remote potential that significant archaeological resources could be uncovered during grading and trenching activities associated with the Project's construction. If significant archaeological resources are encountered and not properly identified and treated, the Project would have a significant direct and cumulatively considerable impact for which mitigation would be required.

Threshold c: Less Than Significant Impact. In the unlikely event that human remains are discovered during Project grading or other ground disturbing activities, the Project's contractors would be required to comply with the applicable provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097 et seq. Mandatory compliance with State law would ensure that human remains, if encountered, are appropriately treated and would preclude the potential for significant impacts to human remains.

4.4.7 MITIGATION

The following Mitigation Measures address potential impacts to cultural resources that may be buried beneath the site and discovered during the Project's construction activities as discussed under Thresholds (a) and (b).

CUL MM-1 Cultural Resource Sensitivity Training. Prior to construction and as needed throughout the construction period involving ground-disturbing construction activities, a construction worker Cultural Resource Sensitivity Training program shall be provided to all construction workers involved in ground-disturbing activities prior to employment at the Project site. The training shall be prepared and conducted by a qualified professional that meets the Secretary of Interior's Professional Qualification Standards in conjunction with a Tribal Historic Preservation Officer or a designated Tribal Representative from one of the consulting Native American tribes, retained by the construction contractor or by the Project Applicant. The training session shall focus on the historic, archaeological, and tribal cultural resources that may be encountered during ground-disturbing activities, as well as the procedures to be followed in such an event. Workers attending the training shall sign a form that shall be kept by the construction contractor or Project Applicant and made available to the City upon request.

CUL MM-2 Tribal Monitoring Agreement. Prior to the issuance of grading permits, the Project Applicant shall enter into an Tribal Monitoring Agreement with the consulting tribe(s) for a Tribal Monitor. The designated Tribal Monitor(s) shall be on-site during all initial ground-disturbing activities, including but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post replacement, construction excavation for all utility and irrigation lines, and landscaping of any kind. In conjunction with a qualified professional that meets the Secretary of Interior's Professional Qualification Standards, the designated Tribal Monitor(s) shall have the authority to temporarily divert, redirect, or halt the ground-disturbing activities to allow identification, evaluation, and potential recovery of cultural resources. The Project Applicant shall submit a fully executed copy of agreement(s) to the City of Palmdale to ensure compliance with this requirement. Upon verification, the City shall clear this condition. The agreement(s) shall not modify any condition of approval or mitigation measure.

CUL MM-3 Cultural Resource Management Plan. Prior to any ground-disturbing activities the qualified professional that meets the Secretary of Interior's Professional Qualification Standards shall develop a Cultural Resource Management Plan (CRMP) and/or Archaeological Monitoring and Treatment Plan (AMTP) to address the details, timing, and responsibilities of all archaeological and cultural resource activities that occur on the Project site. This Plan shall be written in consultation with the consulting tribe(s).

CUL MM-4 On-Site Monitoring. During all ground-disturbing activities the qualified professional that meets the Secretary of Interior's Professional Qualification Standards and the Tribal Monitor(s) shall be on-site full-time. The frequency of inspections shall depend on the rate of excavation, the materials excavated, and any discoveries of Tribal Cultural Resources (TCRs) as defined in California Public Resources Code Section 21074. Archaeological and tribal monitoring shall be discontinued when the depth of grading and the soil conditions no longer retain the potential to contain cultural deposits. The qualified professional that meets the Secretary of Interior's Professional Qualification Standards , in consultation with the Tribal Monitor(s) shall have the authority to temporarily divert and/or temporarily halt ground-disturbance operations in the area of discovery to allow for the evaluation of potentially significant cultural resources. Isolates and clearly non-significant deposits shall be minimally documented in the field and collected so that the monitored grading can proceed.

If a potentially significant cultural resource(s) is discovered, work shall stop within a 100-foot perimeter of the discovery and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. All work shall be diverted away from the vicinity of the find, so that the find can be evaluated by the qualified professional that meets the Secretary of Interior's Professional Qualification Standards and Tribal Monitor(s). The archaeologist shall notify the Lead Agency (City of Palmdale) and consulting Tribe(s) of said discovery. The qualified professional that meets the Secretary of Interior's Professional Qualification Standards , in consultation with the Lead Agency, the consulting Tribe[s], and the Tribal Monitor, shall determine the significance of the discovered resource. A recommendation for the treatment and disposition of the Tribal Cultural Resource (TCR) shall be made by the qualified professional that meets the Secretary of Interior's Professional Qualification Standards in consultation with the Tribe(s) and the Tribal Monitor(s) and be submitted to the Lead Agency for review and approval. Below are the possible treatments and dispositions of significant cultural resources in order of CEQA preference:

a. Full avoidance.

b. If avoidance is not feasible, preservation in place.

c. If preservation is not feasible, all items shall be reburied in an area away from any future Project impacts and reside in a permanent conservation easement or Deed Restriction.

d. If all other options are proven infeasible, data recovery through excavation and then in a curation facility that meets Federal Curation Standards (CFR 79.1).

4.4.8 Design Features (DF) and Regulatory Requirements (RR)

The City of Palmdale is required to assure that implementing development complies with the assumptions relied upon herein and applicable regulatory requirements pertaining to the topic of Cultural Resources, which include the following regulatory requirements and design features. The

Project shall be conditioned to implement the following design features and regulatory requirements as part of the City's Conditions of Approval for the Project.

CUL RR-1 If human remains are encountered during ground-disturbing construction activities, compliance with California Health and Safety Code § 7050.5 and Public Resources Code § 5097 et. seq. shall be required. State Health and Safety Code § 7050.5 states that no further disturbance shall occur until the Los Angeles County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resource Code § 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Los Angeles County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the "most likely descendant." The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code § 5097.98. Evidence of compliance with this mitigation measure, if human remains are found, shall be provided to the City Planning Department upon the completion of a treatment plan and final report detailing the significance and treatment finding.

4.4.9 Significance of Impacts After Mitigation

Thresholds a and b: Less Than Significant Impact with Mitigation Incorporated. Implementation of Mitigation Measures CUL MM-1 through CUL MM-4 and CUL RR-1 would ensure the proper identification and subsequent treatment of any significant historical or archaeological resources that may be encountered during ground-disturbing activities associated with Project construction. With implementation of the required mitigation, the Project's potential impacts to important historical and archaeological resources would be reduced to less than significant.

4.5 ENERGY

The analysis in this Subsection is based primarily on a technical study titled, "Antelope Valley Commerce Center Energy Analysis," dated October 20, 2023, prepared by Urban Crossroads and included as *Technical Appendix E* (Urban Crossroads, 2023c). All references used in this subsection are included in EIR Section 7.0, *References*.

4.5.1 EXISTING CONDITIONS

Under existing conditions, the Project site is vacant and undeveloped; therefore, no energy is consumed on the Project site under existing conditions.

A. California Energy Trends

The most recent data for California's estimated total energy consumption and natural gas consumption is from 2021, released by the United States (US) Energy Information Administration (EIA) in published California State Profile and Energy Estimates (Urban Crossroads, 2023c, p. 10).

- In 2021, approximately 7,359 trillion British Thermal Unit (BTU) of energy was consumed;
- In 2021, approximately 605 million barrels of petroleum was consumed;
- In 2021, approximately 2,101 billion cubic feet of natural gas was consumed; and
- In 2021, approximately 1 million short tons of coal was consumed.

According to the EIA, in 2022 the U.S. petroleum consumption comprised about 90% of all transportation energy use, excluding fuel consumed for aviation and most marine vessels. In 2022, about 251,923 million gallons (or about 5.99 million barrels) of finished petroleum products were consumed in the U.S., an average of about 690 million gallons per day (or about 16.4 million barrels per day). In 2021, California consumed approximately 12,157 million gallons in motor gasoline (33.31 million per day) and approximately 3,541 million gallons of diesel fuel (9.7 million per day). (Urban Crossroads, 2023c, p. 10)

The most recent data provided by the EIA for energy use in California is reported from 2021 and provided by demand sectors as follows (Urban Crossroads, 2023c, p. 10):

- Approximately 37.8 percent - transportation sector;
- Approximately 23.2 percent - industrial sector;
- Approximately 20.0 percent - residential sector; and
- Approximately 19.0 percent - commercial sector.

In 2022, total system electric generation for California was 287,220 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 203,257 GWh which accounted for about 71 percent of the electricity it uses; the rest was imported from the Pacific Northwest (12 percent) and the US Southwest (17 percent). Natural gas is the main source for electricity generation

at 47.46 percent of the total in-state electric generation system power as shown in Table 2-1 of *Technical Appendix E*. (Urban Crossroads, 2023c, p. 11)

B. *Electricity*

Southern California Edison (SCE) covers a 50,000 square mile service area that includes the City of Palmdale. In total, SCE provides electric power to more than 15 million persons in 15 counties and in 180 incorporated cities. Based on SCE's 2021 Power Content Label Mix, SCE derives electricity from fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers. (Urban Crossroads, 2023c, p. 13)

Table 4.5-1, *SCE 2020 Power Content Mix*, summarizes SCE's specific proportional shares of electricity sources in 2021. As indicated in Table 4.5-1, the 2021 SCE power mix has renewable energy at 31.4 percent of the overall energy resources. Geothermal resources are at 5.7 percent, wind power is at 10.2 percent, large hydroelectric sources are at 2.3 percent, solar energy is at 14.9 percent, and coal is at zero percent. (Urban Crossroads, 2023c, p. 14)

Table 4.5-1 SCE 2020 Power Content Mix

Energy Resources	2020 SCE Power Mix
Eligible Renewable	**31.4%**
-Biomass & Waste	0.1%
-Geothermal	5.7%
-Eligible Hydroelectric	0.5%
-Solar	14.9%
-Wind	10.2%
Coal	**0.0%**
Large Hydroelectric	**2.3%**
Natural Gas	**22.3%**
Nuclear	**9.2%**
Other	**0.2%**
Unspecified Sources of power*	34.6%
Total	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources. (Urban Crossroads, 2023c, Table 2-2)

C. *Transportation Energy Resources*

The Department of Motor Vehicles (DMV) identified 36.2 million registered vehicles in California, and those vehicles consume an estimated 17.2 billion gallons of fuel each year. California's on-road transportation system includes 396,616 lane miles, more than 26.6 million passenger vehicles and light

trucks, and almost 9.0 million medium- and heavy-duty vehicles. While gasoline consumption has been declining since 2008, it is still, by far, the dominant fuel. California is the second-largest consumer of petroleum products, after Texas, and accounts for eight percent of the nation's total consumption. California is the largest U.S. consumer of motor gasoline and jet fuel, and 83 percent of the petroleum consumed in California is used in the transportation sector. (Urban Crossroads, 2023c, pp. 17-18)

4.5.2 Regulatory Setting

A. Federal Plans, Policies, and Regulations

Federal and state agencies regulate energy use and consumption through various regulations and programs. On the federal level, the United States Department of Transportation (US DOT), United States Department of Energy (US DOE), and United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. (Urban Crossroads, 2023c, p. 20)

1. Intermodal Surface Transportation Efficiency Act of 1991

The Intermodal Surface Transportation Efficiency Act (ISTEA) promoted the development of intermodal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. The ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were required to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions. (Urban Crossroads, 2023c, p. 20)

2. Transportation Equity Act for the 21st Century

The Transportation Equity Act of the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. The TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. The TEA-21 continues the program structure established for highways and transit under the ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. The TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems (ITS), to help improve operations and management of transportation systems and vehicle safety. (Urban Crossroads, 2023c, p. 20)

B. State Plans, Policies, and Regulations

1. Integrated Energy Policy Report

Senate Bill 1389 (SB 1389) (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to

conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety (Public Resources Code § 25301a). The CEC prepares these assessments and associated policy recommendations every two years, with updates on alternate years, as part of the Integrated Energy Policy Report (IEPR). (Urban Crossroads, 2023c, p. 20)

The 2022 IEPR was adopted in February 2023, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2022 IEPR introduces a new framework for embedding equity and environmental justice at the CEC and the California Energy Planning Library which allows for easier access to energy data and analytics for a wide range of users. Additionally, energy reliability, western electricity integration, gasoline cost factors and price spikes, the role of hydrogen in California's clean energy future, fossil gas transition and distributed energy resources are topics discussed within the 2022 IEPR. (Urban Crossroads, 2023c, pp. 20-21)

2. State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The State Energy Plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access. (Urban Crossroads, 2023c, p. 21)

3. California Code Title 24, Part 6, Energy Efficiency Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Standards Code; effective on January 1, 2023. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made. (Urban Crossroads, 2023c, p. 21)

4. Pavley Fuel Efficiency Standards

Assembly Bill 1493 (AB 1493) which has come to be known as the Pavley Fuel Efficiency Standards, enacted on July 22, 2002, required the California Air Resources Board (CARB) to develop and adopt regulations that reduce greenhouse gas (GHG) emitted by passenger vehicles and light duty trucks. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial

passenger vehicles (cars and light-duty trucks). Although aimed at reducing GHG emissions, specifically, a co-benefit of the Pavley standards is an improvement in fuel efficiency and consequently a reduction in fuel consumption. (Urban Crossroads, 2023c, p. 23)

5. California Renewable Portfolio Standards

First established in 2002 under Senate Bill 1078 (SB 1078), California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable resources to 44 percent of total retail sales by 2024. (Urban Crossroads, 2023c, p. 23)

6. Senate Bill 350 (SB 350) – Clean Energy and Pollution Reduction Act of 2015

In October 2015, the legislature approved, and the Governor signed, Senate Bill 350 (SB 350), which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies toward a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027;
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the CEC, and local publicly owned utilities; and
- Reorganize the Independent System Operator (ISO) to develop more regional electricity transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States. (Urban Crossroads, 2023c, p. 23)

C. Local Plans

1. City of Palmdale General Plan

The Sustainability, Climate Action, and Resilience Element of the City's General Plan (Palmdale 2045) establishes goals and policies related to City's greenhouse gas reduction and sustainability strategies, including a goal for the lowering of fossil fuel use. The specific goals related to energy and applicable to the Project are aimed at decarbonized buildings for new construction and major renovations (Goal SCR-3) and reducing greenhouse gas emissions from transportation (Goal SCR-4). (City of Palmdale, 2023)

4.5.3 Methodology for Calculating Project Energy Demands

Information from the CalEEMod version 2022.1 outputs for the Project's Air Quality Impact Analysis (AQIA) (*Technical Appendix B1*) was utilized in the analysis, detailing Project related construction

equipment, transportation energy demands, and facility energy demands. (Urban Crossroads, 2023c, p. 25)

In May 2022 the California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including the Antelope Valley Air Quality Management District (AVAQMD), released the latest version of CalEEMod version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 4.1 through 4.4 of *Technical Appendix E*. (Urban Crossroads, 2023c, p. 25)

On May 2, 2022, the EPA approved the 2021 version of the EMissions FACtor model (EMFAC) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, vehicle miles traveled (VMT) from motor vehicles that operate on highways, freeways, and local roads in California, and is commonly used by the California Air Resources Board (CARB) to project changes in future emissions from on-road mobile sources. The Energy Analysis (*Technical Appendix E)* for the Project utilizes the different fuel types for each vehicle class from the annual EMFAC2021 emission inventory in order to derive the average vehicle fuel economy which is then used to determine the estimated annual fuel consumption associated with vehicle usage during Project construction and operational activities. For purposes of analysis, the 2024 and 2032 analysis years were utilized to determine the average vehicle fuel economy used throughout the duration of the Project. (Urban Crossroads, 2023c, pp. 25-26)

4.5.4 Basis for Determining Significance

According to Section I of Appendix G to the CEQA Guidelines, the proposed Project would result in a significant impact associated with energy if the Project or any Project-related component would:

a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Regarding the determination of significance under Threshold (a), if energy consumed by the Project's construction and/or operation of the Project cannot be accommodated with existing available resources and energy delivery systems, and/or the Project requires and/or consumes more energy than industrial uses in California of similar scale and intensity, the Project would result in wasteful, inefficient, or unnecessary consumption of energy. There is no adopted quantitative threshold applicable to the Project for determining a significant energy impact.

4.5.5 IMPACT ANALYSIS

Threshold a:	***Would the Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?***

A discussion of the expected energy demands for the Project during construction and operation is provided below.

A. Energy Use During Construction

1. Construction Power Cost and Electricity Usage

The focus below is on the energy implications of the construction process, specifically the power cost from on-site electricity consumption during construction of the proposed Project.

For analytical purposes, construction of the Project is expected to commence in June 2024 and conclude in January 2032. The expected construction schedule used in the analysis, previously shown on Table 3-2 through Table 3-5, *Expected Construction Schedule (Phases I through IV),* in EIR Section 3.0*, Project Description*, represents a worst-case analysis scenario should construction commence any time after June 2024, because construction equipment is becoming less energy use intensive as older pieces of construction equipment are retired from construction fleets over time and replaced with newer and more energy efficient models. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA Guidelines. (Urban Crossroads, 2023c, p. 26)

Based on the 2023 National Construction Estimator, the typical power cost per 1,000 square feet (s.f.) of construction per month is estimated to be $2.50. As indicated in Table 4.5-2, *Construction Power Cost*, the total power cost of the on-site electricity usage during the construction of the Project is estimated to be approximately $571,632.35. (Urban Crossroads, 2023c, p. 27)

The total Project construction electricity usage is the summation of the products of the power cost (estimated in Table 4.5-3) by the utility provider cost per kilowatt hour (kWh) of electricity. (Urban Crossroads, 2023c, p. 28)

The SCE's general service rate schedule was used to determine the electrical usage of the Project. As of January 1, 2023, SCE's general service rate is 13 cents per kilowatt hours (kWh) of electricity for industrial services. As shown on Table 4.5-3, *Construction Electricity Usage*, the total electricity usage from on-site Project construction related activities is estimated to be approximately 4,339,754 kWh. (Urban Crossroads, 2023c, p. 28)

Table 4.5-2 Construction Power Cost

Land Use	Power Cost (per 1,000 SF of construction per month)	Size (1,000 SF)	Construction Duration (months)	Project Construction Power Cost
Phase I				
General Light Industrial	$2.50	103.418	16	$4,136.72
Manufacturing	$2.50	68.715	16	$2,748.60
Warehousing	$2.50	516.396	16	$20,655.84
High-Cube Fulfillment (Non-Sort)	$2.50	753.171	16	$30,126.84
High-Cube Fulfillment (Sort)	$2.50	680.469	16	$27,218.76
High-Cube Cold Storage Warehouse	$2.50	251.057	16	$10,042.28
Parking Lot	$2.50	656.338	16	$26,253.52
Other Asphalt Surfaces	$2.50	2,000.417	16	$80,016.69
Phase I Total Project Construction Cost				**$201,199.25**
Phase II				
Manufacturing	$2.50	137.448	15	$5,154.30
Warehousing	$2.50	412.342	15	$15,462.83
High-Cube Parcel Hub	$2.50	1630.362	15	$61,138.58
Parking Lot	$2.50	732.652	15	$27,474.45
Other Asphalt Surfaces	$2.50	1,786.121	15	$66,979.55
Phase II Total Project Construction Cost				**$176,209.70**
Phase III				
High-Cube Fulfillment (Non-Sort)	$2.50	867.432	15	$32,528.70
High-Cube Cold Storage Warehouse	$2.50	289.144	15	$10,842.90
Fast-Food Restaurant Without-Drive Thru	$2.50	2.5	15	$93.75
Fast-Food Restaurant With-Drive Thru	$2.50	2.5	15	$93.75
Coffee Shop With Drive Thru	$2.50	2	15	$75.00
Commercial Retail	$2.50	53.984	15	$2,024.40
Parking Lot	$2.50	241.004	15	$9,037.65
Other Asphalt Surfaces	$2.50	1,384.815	15	$51,930.57
Phase III Total Project Construction Cost				**$106,626.72**
Phase IV				
High-Cube Cold Storage	$2.50	137.448	15	$5,154.30

Land Use	Power Cost (per 1,000 SF of construction per month)	Size (1,000 SF)	Construction Duration (months)	Project Construction Power Cost
High-Cube Fulfillment (Non-Sort)	$2.50	412.342	15	$15,462.83
Other Asphalt Surfaces	$2.50	1,786.121	15	$66,979.55
Phase IV Total Project Construction Cost				**$87,596.67**
Total Construction Power Cost				**$571,632.35**

(Urban Crossroads, 2023c, Table 4-2)

Table 4.5-3 Construction Electricity Usage

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
Phase I		
General Light Industrial	$0.13	31,405
Manufacturing	$0.13	20,867
Warehousing	$0.13	156,816
High-Cube Fulfillment (Non-Sort)	$0.13	228,719
High-Cube Fulfillment (Sort)	$0.13	206,641
High-Cube Cold Storage Warehouse	$0.13	76,240
Parking Lot	$0.13	199,313
Other Asphalt Surfaces	$0.13	607,476
Phase I Total Project Construction Electricity Usage (kWh)		**1,527,477**
Phase II		
Manufacturing	$0.13	39,131
Warehousing	$0.13	117,392
High-Cube Parcel Hub	$0.13	464,156
Parking Lot	$0.13	208,582
Other Asphalt Surfaces	$0.13	508,499
Phase II Total Project Construction Electricity Usage (kWh)		**1,337,760**
Phase III		
High-Cube Fulfillment (Non-Sort)	$0.13	246,953
High-Cube Cold Storage Warehouse	$0.13	82,318
Fast-Food Restaurant Without-Drive Thru	$0.13	712
Fast-Food Restaurant With-Drive Thru	$0.13	712
Coffee Shop With Drive Thru	$0.13	569
Commercial Retail	$0.13	15,369

Parking Lot	$0.13	68,613
Other Asphalt Surfaces	$0.13	394,250
Phase III Total Project Construction Electricity Usage (kWh)		**809,495**
Phase IV		
High-Cube Cold Storage	$0.13	39,131
High-Cube Fulfillment (Non-Sort)	$0.13	117,392
Other Asphalt Surfaces	$0.13	508,499
Phase IV Total Project Construction Electricity Usage (kWh)		**665,022**
Total Construction Electricity Usage		**4,339,754**

(Urban Crossroads, 2023c, Table 4-3)

2. Project Construction Equipment Fuel Estimates

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction. The site-specific construction fleet may vary due to specific needs at the time of construction. The associated construction equipment was generally based on CalEEMod defaults. Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are shown in Table 4.5-4, *Construction Equipment Fuel Consumption Estimates*.

The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower hour per gallon (hp-hr-gal.), obtained from CARB 2018 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines. For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is consistent with industry standards but it is recognized that this is a conservative assumption as some construction equipment and particularly smaller pieces of equipment are starting to be manufactured as electric powered. Diesel fuel would be supplied by existing commercial fuel providers serving the Project area and region. As presented in Table 4.5-4, Project construction activities would consume an estimated 381,590 gallons of diesel fuel. Project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose. (Urban Crossroads, 2023c, p. 31)

Table 4.5-4 Construction Equipment Fuel Consumption Estimates

Phase Name	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption
Phase I								
Site Preparation	30	Rubber Tired Dozers	367	5	8	0.4	5,872	9,522
		Crawler Tractors	87	7	8	0.43	2,095	3,397
Grading	80	Excavators	36	1	8	0.38	109	473
		Graders	148	3	8	0.41	1,456	6,298
		Rubber Tired Dozers	367	2	8	0.4	2,349	10,157
		Scrapers	423	6	8	0.48	9,746	42,145
		Crawler Tractors	87	2	8	0.43	599	2,588
Building Construction	260	Cranes	367	1	8	0.29	851	11,966
		Forklifts	82	3	8	0.2	394	5,532
		Generator Sets	14	3	8	0.74	249	3,494
		Crawler Tractors	87	3	8	0.43	898	12,618
		Welders	46	2	8	0.45	331	4,655
Paving	20	Pavers	81	2	8	0.42	544	588
		Paving Equipment	89	4	8	0.36	1,025	1,108
		Rollers	36	4	8	0.38	438	473
Architectural Coating	40	Air Compressors	37	2	8	0.48	284	614
Phase I Construction Fuel Demand (Gallons Diesel Fuel)								**115,630**
Phase II								
Site Preparation	30	Rubber Tired Dozers	367	5	8	0.4	5,872	9,522
		Crawler Tractors	87	7	8	0.43	2,095	3,397
Grading	45	Excavators	36	1	8	0.38	109	266
		Graders	148	3	8	0.41	1,456	3,542
		Rubber Tired Dozers	367	2	8	0.4	2,349	5,713
		Scrapers	423	6	8	0.48	9,746	23,706
		Crawler Tractors	87	2	8	0.43	599	1,456
Building Construction	260	Cranes	367	1	8	0.29	851	11,966
		Forklifts	82	3	8	0.2	394	5,532
		Generator Sets	14	3	8	0.74	249	3,494
		Crawler Tractors	87	3	8	0.43	898	12,618
		Welders	46	2	8	0.45	331	4,655
Paving	20	Pavers	81	2	8	0.42	544	588
		Paving Equipment	89	4	8	0.36	1,025	1,108

Phase Name	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption
		Rollers	36	4	8	0.38	438	473
Architectural Coating	40	Air Compressors	37	2	8	0.48	284	614
Phase II Total Project Construction Electricity Usage (kWh)								**88,653**
Phase III								
Site Preparation	30	Rubber Tired Dozers	367	5	8	0.4	5,872	9,522
		Crawler Tractors	87	7	8	0.43	2,095	3,397
Grading	45	Excavators	36	1	8	0.38	109	266
		Graders	148	3	8	0.41	1,456	3,542
		Rubber Tired Dozers	367	2	8	0.4	2,349	5,713
		Scrapers	423	6	8	0.48	9,746	23,706
		Crawler Tractors	87	2	8	0.43	599	1,456
Building Construction	260	Cranes	367	1	8	0.29	851	11,966
		Forklifts	82	3	8	0.2	394	5,532
		Generator Sets	14	3	8	0.74	249	3,494
		Crawler Tractors	87	3	8	0.43	898	12,618
		Welders	46	2	8	0.45	331	4,655
Paving	20	Pavers	81	2	8	0.42	544	588
		Paving Equipment	89	4	8	0.36	1,025	1,108
		Rollers	36	4	8	0.38	438	473
Architectural Coating	40	Air Compressors	37	2	8	0.48	284	614
Phase III Total Project Construction Electricity Usage (kWh)								**88,653**
Phase IV								
Site Preparation	30	Rubber Tired Dozers	367	5	8	0.4	5,872	9,522
		Crawler Tractors	87	7	8	0.43	2,095	3,397
Grading	45	Excavators	36	1	8	0.38	109	266
		Graders	148	3	8	0.41	1,456	3,542
		Rubber Tired Dozers	367	2	8	0.4	2,349	5,713
		Scrapers	423	6	8	0.48	9,746	23,706
		Crawler Tractors	87	2	8	0.43	599	1,456
Building Construction	260	Cranes	367	1	8	0.29	851	11,966
		Forklifts	82	3	8	0.2	394	5,532
		Generator Sets	14	3	8	0.74	249	3,494
		Crawler Tractors	87	3	8	0.43	898	12,618

Phase Name	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption
		Welders	46	2	8	0.45	331	4,655
Paving	20	Pavers	81	2	8	0.42	544	588
		Paving Equipment	89	4	8	0.36	1,025	1,108
		Rollers	36	4	8	0.38	438	473
Architectural Coating	40	Air Compressors	37	2	8	0.48	284	614
Phase I-IV Total Project Construction Electricity Usage (kWh)								**88,653**
Total Construction Fuel Demand (gallons diesel fuel)								**381,590**

(Urban Crossroads, 2023c, Table 4-5)

3. Construction Trips and Vehicle Miles Traveled

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul trucks commuting to and from the site. The number of workers, vendor, and haul trips are presented in Table 4.5-5, *Construction Trips and VMT*. It should be noted that for vendor trips, specifically, CalEEMod only assigns vendor trips to the building construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for vendor trips were adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity. (Urban Crossroads, 2023c, p. 35)

Table 4.5-5 Construction Trips and VMT

Phase Name	Worker Trips Per Day	Vendor Trips Per Day
Phase I		
Site Preparation	30	32
Grading	35	84
Building Construction	997	273
Paving	25	0
Architectural Coating	199	0
Phase II		
Site Preparation	30	32
Grading	35	48
Building Construction	916	277
Paving	25	0
Architectural Coating	183	0
Phase III		
Site Preparation	30	18

Grading	35	27
Building Construction	506	155
Paving	25	0
Architectural Coating	101	0
Phase IV		
Site Preparation	30	38
Grading	35	56
Building Construction	1073	325
Paving	25	0
Architectural Coating	215	0

(Urban Crossroads, 2023c, Table 4-6)

4. Construction Worker Fuel Estimates

With respect to estimated VMT for the Project, the construction worker trips (personal vehicles used by workers commuting to the Project from home) would generate an estimated 17,555,853 VMT during the 61 months of construction. Based on CalEEMod methodology, it is assumed that 50 percent of all construction worker trips are from light-duty-auto vehicles (LDA), 25 percent are from light-duty-trucks (LDT1), and 25 percent are from light-duty-trucks (LDT2). Data regarding Project related construction worker trips were based on CalEEMod defaults utilized in the AQIA (*Technical Appendix B1*) prepared for the Project. (Urban Crossroads, 2023c, p. 36)

Vehicle fuel efficiencies for LDA, LDT1, and LDT2 were estimated using information generated within the 2021 version of the EMFAC developed by CARB. EMFAC2021 was run for the LDA, LDT1, and LDT2 vehicle class within the California sub-area for the 2024 and 2032 calendar years. Data from EMFAC2021 is shown in Appendix 4.5 of the Project's Energy Analysis (*Technical Appendix E*) prepared for the Project. (Urban Crossroads, 2023c, p. 36)

As shown in Table 4.5-6, *Construction Worker Fuel Consumption Estimates (LDA)*, Table 4.5-7, *Construction Worker Fuel Consumption Estimates (LDT1)*, and Table 4.5-8, *Construction Worker Fuel Consumption Estimates (LDT2)*, the estimated annual fuel consumption resulting from Project construction worker trips is 785,820 gallons during full construction of the Project. This represents a "single-event" gasoline fuel demand and would not require ongoing or permanent commitment of fuel resources for this purpose. (Urban Crossroads, 2023c, p. 36)

Table 4.5-6 Construction Worker Fuel Consumption Estimates (LDA)

Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Phase I						
2024						
Site Preparation	30	8	18.5	4,163	31.04	134
Grading	80	9	18.5	12,950	31.04	417
Building Construction	42	249	18.5	193,667	31.04	6,240
2025						
Building Construction	218	249	18.5	1,005,225	31.88	31,536
Paving	20	6	18.5	2,313	31.88	73
Architectural Coating	40	50	18.5	36,815	31.88	1,155
Phase II						
2026						
Site Preparation	30	8	18.5	4,163	32.71	127
Grading	45	9	18.5	7,284	32.71	223
Building Construction	79	229	18.5	334,684	32.71	10,232
2027						
Building Construction	181	229	18.5	766,807	33.38	22,973
Paving	20	6	18.5	2,313	33.38	69
Architectural Coating	40	46	18.5	33,855	33.38	1,014
Phase III						
2028						
Site Preparation	30	8	18.5	4,163	34.18	122
Grading	45	9	18.5	7,284	34.18	213
Building Construction	77	127	18.5	180,199	34.18	5,272
2029						
Building Construction	183	127	18.5	428,266	34.97	12,246
Paving	20	6	18.5	2,313	34.97	66
Architectural Coating	40	25	18.5	18,685	34.97	534
Phase IV						
2030						
Site Preparation	30	8	18.5	4,163	35.75	116
Grading	36	9	18.5	5,828	35.75	163
2031						
Grading	9	9	18.5	1,457	36.51	40
Building Construction	252	268	18.5	1,250,582	36.51	34,254

Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Paving	20	6	18.5	2,313	36.51	63
Architectural Coating	40	54	18.5	39,775	36.51	1,089
2032						
Building Construction	8	268	18.5	39,701	37.23	1,066
Total Construction Worker (LDA) Fuel Consumption						**129,439**

(Urban Crossroads, 2023c, Table 4-7)

Table 4.5-7 Construction Worker Fuel Consumption Estimates (LDT1)

Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Phase I						
2024						
Site Preparation	30	8	18.5	4,163	24.70	169
Grading	80	9	18.5	12,950	24.70	524
Building Construction	42	249	18.5	193,667	24.70	7,842
2025						
Building Construction	218	249	18.5	1,005,225	25.12	40,012
Paving	20	6	18.5	2,313	25.12	92
Architectural Coating	40	50	18.5	36,815	25.12	1,465
Phase II						
2026						
Site Preparation	30	8	18.5	4,163	25.59	163
Grading	45	9	18.5	7,284	25.59	285
Building Construction	79	229	18.5	334,684	25.59	13,079
2027						
Building Construction	181	229	18.5	766,807	25.95	29,547
Paving	20	6	18.5	2,313	25.95	89
Architectural Coating	40	46	18.5	33,855	25.95	1,305
Phase III						
2028						
Site Preparation	30	8	18.5	4,163	26.43	158
Grading	45	9	18.5	7,284	26.43	276
Building Construction	77	127	18.5	180,199	26.43	6,818
2029						
Building Construction	183	127	18.5	428,266	26.92	15,909

Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Paving	20	6	18.5	2,313	26.92	86
Architectural Coating	40	25	18.5	18,685	26.92	694
Phase IV						
2030						
Site Preparation	30	8	18.5	4,163	27.43	152
Grading	36	9	18.5	5,828	27.43	212
2031						
Grading	9	9	18.5	1,457	27.93	52
Building Construction	252	268	18.5	1,250,582	27.93	44,771
Paving	20	6	18.5	2,313	27.93	83
Architectural Coating	40	54	18.5	39,775	27.93	1,424
2032						
Building Construction	8	268	18.5	39,701	28.43	1,397
Total Construction Worked (LDT1) Fuel Consumption						**166,602**

(Urban Crossroads, 2023c, Table 4-8)

Table 4.5-8 Construction Worker Fuel Consumption Estimates (LDT2)

Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Phase I						
2024						
Site Preparation	30	15	18.5	8,325	24.35	342
Grading	80	18	18.5	25,900	24.35	1,063
Building Construction	42	499	18.5	387,335	24.35	15,904
2025						
Building Construction	218	499	18.5	2,010,451	25.09	80,128
Paving	20	13	18.5	4,625	25.09	184
Architectural Coating	40	100	18.5	73,630	25.09	2,935
Phase II						
2026						
Site Preparation	30	15	18.5	8,325	25.83	322
Grading	45	18	18.5	14,569	25.83	564
Building Construction	79	458	18.5	669,367	25.83	25,915
2027						

Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Building Construction	181	458	18.5	1,533,613	26.41	58,078
Paving	20	12.5	18.5	4,625	26.41	175
Architectural Coating	40	91.5	18.5	67,710	26.41	2,564
Phase III						
2028						
Site Preparation	30	15	18.5	8,325	27.05	308
Grading	45	18	18.5	14,569	27.05	539
Building Construction	77	253	18.5	360,399	27.05	13,323
2029						
Building Construction	183	253	18.5	856,532	27.66	30,968
Paving	20	13	18.5	4,625	27.66	167
Architectural Coating	40	51	18.5	37,370	27.66	1,351
Phase IV						
2030						
Site Preparation	30	15	18.5	8,325	28.24	295
Grading	36	18	18.5	11,655	28.24	413
2031						
Grading	9	18	18.5	2,914	28.78	101
Building Construction	252	537	18.5	2,501,163	28.78	86,913
Paving	20	13	18.5	4,625	28.78	161
Architectural Coating	40	108	18.5	79,550	28.78	2,764
2032						
Building Construction	8	537	18.5	79,402	29.27	2,713
Total Construction Worker (LDT2) Fuel Consumption						**328,190**
Total Construction Worker (LDA, LDT1 & LDT2) Fuel Consumption						**785,820**

(Urban Crossroads, 2023c, Table 4-9)

5. Construction Vendor Fuel Estimates

With respect to estimated VMT, the construction vendor trips (vehicles that deliver materials to the site during construction) would generate an estimated 2,896,953 VMT along area roadways for the Project over the duration of construction activity. It is assumed that 50 percent of all vendor trips are from medium-heavy duty trucks (MHD) and 50 percent of all vendor trips are from heavy-heavy duty trucks (HHD). These assumptions are consistent with the CalEEMod defaults utilized within the within the Air Quality Impact Analysis (AQIA) (*Technical Appendix B1*) prepared for the Project. Vehicle fuel efficiencies for MHDs and HHDs were estimated using information generated within

EMFAC2021. EMFAC2021 was run for the MHD and HHD vehicle classes within the California sub-area for the 2024 and 2032 calendar years. Data from EMFAC2021 is shown in Appendix 4.3 of *Technical Appendix E*. (Urban Crossroads, 2023c, p. 40)

As shown in Table 4.5-9, *Construction Vendor Fuel Consumption Estimates (MHDT)* and Table 4.5-10, *Construction Vendor Fuel Consumption Estimates (HHDT)*, it is estimated that 546,493 gallons of fuel would be consumed related to construction vendor trips during construction of the Project. These vendor trips would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources. (Urban Crossroads, 2023c, p. 40)

Table 4.5-9 Construction Vendor Fuel Consumption Estimates (MHDT)

Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Phase I						
2024						
Site Preparation	30	16	10.2	4,896	8.43	581
Grading	80	42	10.2	34,272	8.43	4,068
Building Construction	42	137	10.2	58,477	8.43	6,941
2025						
Building Construction	218	137	10.2	303,521	8.54	35,537
Phase II						
2026						
Site Preparation	30	16	10.2	4,896	8.67	565
Grading	45	24	10.2	11,016	8.67	1,270
Building Construction	79	139	10.2	111,603	8.67	12,870
2027						
Building Construction	181	139	10.2	255,699	8.81	29,014
Phase III						
2028						
Site Preparation	30	9	10.2	2,754	9.02	305
Grading	45	14	10.2	6,197	9.02	687
Building Construction	77	78	10.2	60,869	9.02	6,747
2029						
Building Construction	183	78	10.2	144,662	9.29	15,578
Phase IV						

Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2030						
Site Preparation	30	19	10.2	5,814	9.61	605
Grading	36	28	10.2	10,282	9.61	1,069
2031						
Grading	9	28	10.2	2,570	10.02	256
Building Construction	252	163	10.2	417,690	10.02	41,674
2032						
Building Construction	8	163	10.2	13,260	10.47	1,266
Total Construction Worker (MHDT) Fuel Consumption						**159,033**

(Urban Crossroads, 2023c, Table 4-10)

Table 4.5-10 Construction Vendor Fuel Consumption Estimates (HHDT)

Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Phase I						
2024						
Site Preparation	30	16	10.2	4,896	6.37	768
Grading	80	42	10.2	34,272	6.37	5,376
Building Construction	42	137	10.2	58,477	6.37	9,173
2025						
Building Construction	218	137	10.2	303,521	6.50	46,700
Paving	20	0	10.2	0	6.50	0
Architectural Coating	40	0	10.2	0	6.50	0
Phase II						
2026						
Site Preparation	30	16	10.2	4,896	6.64	737
Grading	45	24	10.2	11,016	6.64	1,659
Building Construction	79	139	10.2	111,603	6.64	16,810
2027						
Building Construction	181	139	10.2	255,699	6.80	37,606
Paving	20	0	10.2	0	6.80	0

Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Architectural Coating	40	0	10.2	0	6.80	0
Phase III						
2028						
Site Preparation	30	9	10.2	2,754	6.98	395
Grading	45	14	10.2	6,197	6.98	888
Building Construction	77	78	10.2	60,869	6.98	8,721
2029						
Building Construction	183	78	10.2	144,662	7.17	20,184
Paving	20	0	10.2	0	7.17	0
Architectural Coating	40	0	10.2	0	7.17	0
Phase IV						
2030						
Site Preparation	30	19	10.2	5,814	7.36	790
Grading	36	28	10.2	10,282	7.36	1,397
2031						
Grading	9	28	10.2	2,570	7.56	340
Building Construction	252	163	10.2	417,690	7.56	55,273
Paving	20	0	10.2	0	7.56	0
Architectural Coating	40	0	10.2	0	7.56	0
2032						
Building Construction	8	163	10.2	13,260	7.75	1,710
Total Construction Worker (HHDT) Fuel Consumption						**208,527**
Total Construction Worder (MHDT & HHDT) Fuel Consumption						**546,493**

(Urban Crossroads, 2023c, Table 4-11)

6. Construction Energy Efficiency/Conservation Measures

In 2014, CARB adopted the nation's first regulation aimed at cleaning up off-road construction equipment such as bulldozers, graders, and backhoes. These requirements ensure fleets gradually turnover the oldest and dirtiest equipment to newer, cleaner models and prevent fleets from adding older, dirtier equipment. As such, the equipment used for Project construction would conform to CARB regulations and California emissions standards. There are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities, or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment utilized in the construction of the Project would

therefore not result in the inefficient wasteful, or unnecessary consumption of fuel. (Urban Crossroads, 2023c, p. 43)

Construction contractors would be required to comply with applicable CARB regulations regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption. (Urban Crossroads, 2023c, p. 43)

Additional construction-source energy efficiencies would occur due to required California regulations and best available control measures (BACM). For example, CCR Title 13, Motor Vehicles, Section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Section 2449(d)(3) requires that grading plans reference the requirement that a sign must be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling." In this manner, construction equipment operators are required to be informed that engines are to be turned off at or prior to five minutes of idling. (Urban Crossroads, 2023c, p. 43)

A full analysis related to the energy needed to form construction materials is not included in this analysis because at this time, an analysis of the energy needed to create Project-related construction materials would be extremely speculative and thus has not been prepared. In general, construction processes promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing, and refinement. Use of materials in bulk reduces energy demands associated with the preparation and transport of construction materials as well as the transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations. (Urban Crossroads, 2023c, p. 43)

7. Summary of Construction Energy Demands

The estimated power cost of on-site electricity usage during the construction of the Project is assumed to be approximately $571,632.35. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project buildout, is calculated to be approximately 4,339,754 kWh. (Urban Crossroads, 2023c, p. 49)

Construction equipment used by the Project would result in single event consumption of approximately 381,590 gallons of diesel fuel. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the proposed construction process of the Project that are unusual or energy-intensive, and Project construction equipment would conform to the

applicable CARB emissions standards, acting to promote equipment fuel efficiencies. (Urban Crossroads, 2023c, p. 49)

CCR Title 13, Title 13, Motor Vehicles, Section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding the unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. BACMs inform construction equipment operators of this requirement. (Urban Crossroads, 2023c, p. 49)

Construction worker trips for full construction of the Project would result in an estimated fuel consumption of 785,820 gallons of fuel. Additionally, fuel consumption from construction vendor trips (MHDs and HHDs) would total approximately 546,493 gallons. Diesel fuel would be supplied by City and regional commercial vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved using bulk purchases, transport, and the use of construction materials. The 2022 IEPR released by the CEC has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements. As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary. (Urban Crossroads, 2023c, p. 49)

B. Energy Use During Project Operations

Energy consumption in support of or related to Project operations would include transportation fuel demands (fuel consumed by passenger car and truck vehicles accessing the Project site), fuel demands from operational equipment, and facilities energy demands (energy consumed by building operations and site maintenance activities). (Urban Crossroads, 2023c, p. 44)

1. Transportation Fuel Demands

Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies of vehicles accessing the Project site. The VMT per vehicle class was determined by evaluating the vehicle fleet mix and the total VMT. Similar to worker and vendors trips, operational vehicle fuel efficiencies were estimated using information generated within EMFAC2021 developed by CARB. EMFAC2021 was run for the Los Angeles County (Mojave Desert) area for the 2025, 2027, 2029, and 2032 calendar year. Data from EMFAC2021 is shown in Appendix 4.5 of *Technical Appendix E*. (Urban Crossroads, 2023c, p. 44)

In order to account for the possibility of refrigerated uses (cold storage) that would be accommodated by the up to 251,057-sf of high-cube cold storage use identified for Phase I, up to 289,144-sf of high-cube cold storage use identified for Phase III and up to 638,889-sf of high-cube cold storage use identified for Phase IV, it is assumed that all trucks accessing this land use are presumed to also have TRUs. Therefore, for modeling purposes 190 two-way truck trips during Phase I, 218 two-way truck trips during Phase III and 480 two-way truck trips during Phase IV have been estimated to include TRUs. TRUs are also accounted for during on-site and off-site travel. TRU calculations are based on EMFAC2021. (Urban Crossroads, 2023c, p. 44)

As shown in Table 4.5-11, *Total Project-Generated Traffic Annual Fuel Consumption*, it is estimated that the Project buildout would result in a 190,792,749 annual VMT and an estimated annual fuel consumption of 11,884,520 gallons of fuel. (Urban Crossroads, 2023c, p. 44)

Table 4.5-11 Total Project-Generated Traffic Annual Fuel Consumption

Vehicle Type	Average Vehicle Fuel Economy (mpg)	Annual VMT	Estimated Annual Fuel Consumption (gallons)
Phase I			
LDA	31.88	21,798,878	683,873
LDT1	25.12	1,668,611	66,417
LDT2	25.09	6,743,598	268,772
MDV	20.20	5,592,841	276,832
LHDT1	16.57	2,844,379	171,663
LHDT2	16.15	804,014	49,778
MHDT	8.54	3,301,093	101,807
HHDT	6.50	10,530,712	1,620,245
MCY	41.84	1,059,263	25,315
TRUs			88,855
Phase I Total (All Vehicles)		**54,343,388**	**3,353,556**
Phase II			
LDA	33.38	23,896,598	715,915
LDT1	25.95	1,710,771	65,921
LDT2	26.41	7,479,373	283,244
MDV	21.17	5,870,594	277,355
LHDT1	17.30	3,679,050	212,667
LHDT2	16.61	1,045,254	62,924
MHDT	8.81	5,820,915	101,807
HHDT	6.80	17,284,077	2,541,973
MCY	42.07	1,133,819	26,949
Phase II Total (All Vehicles)		**67,920,451**	**4,288,755**
Phase III			
LDA	34.97	12,479,544	356,858
LDT1	26.92	841,634	31,264
LDT2	27.66	3,982,998	144,005
MDV	22.20	1,968,564	88,689
LHDT1	18.32	2,118,172	115,649

Vehicle Type	Average Vehicle Fuel Economy (mpg)	Annual VMT	Estimated Annual Fuel Consumption (gallons)
LHDT2	17.33	627,709	36,225
MHDT	9.29	1,549,725	101,807
HHDT	7.17	5,157,614	719,606
OBUS	6.47	8,532	1,319
UBUS	4.23	8,824	2,088
MCY	42.41	1,573,587	37,107
SBUS	8.25	40,898	4,955
MH	5.87	78,012	13,292
TRUs			100,992
Phase III Total (All Vehicles)		**30,435,811**	**1,753,855**
Phase IV			
LDA	37.23	11,506,065	309,076
LDT1	28.43	717,445	25,237
LDT2	29.27	3,799,436	129,801
MDV	23.64	2,642,773	111,777
LHDT1	20.35	3,806,017	187,019
LHDT2	18.86	1,128,021	59,815
MHDT	10.47	2,969,375	101,807
HHDT	7.75	10,998,985	1,418,741
MCY	42.84	524,981	12,255
TRUs			132,825
Phase IV Total (All Vehicles)		**38,093,099**	**2,488,353**
Phases I-IV Total (all vehicles)		**190,792,749**	**11,884,520**

(Urban Crossroads, 2023c, Table 4-12)

2. On-site Cargo Handling Equipment Fuel Demands

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For the Project, on-site modeled operational equipment includes 75 horsepower (hp), diesel-powered tractors/loaders/backhoes operating four hours per day for 365 days of the year: (Urban Crossroads, 2023c, p. 46)

- Phase I includes eleven (11) pieces of on-site cargo handling equipment
- Phase II includes nine (9) pieces of on-site cargo handling equipment
- Phase III includes six (6) pieces of on-site cargo handling equipment
- Phase IV includes ten (10) pieces of on-site cargo handling equipment

As shown in Table 4.5-12, *On-Site Cargo Handling Equipment Fuel Consumption Estimates*, Project on-site equipment would consume an estimated 98,098 gallons of natural gas. (Urban Crossroads, 2023c, p. 46)

Table 4.5-12 On-Site Cargo Handling Equipment Fuel Consumption Estimates

Equipment	Quantity	Usage Hours	Days of Operation	EMFAC2021 Fuel Consumption (gal./yr)	EMFAC2021 Activity (hrs./yr)	Total Fuel Consumption
Cargo Handling Equipment	11	4	365	178	95	29,974
Phase I On-Site Cargo Handling Equipment Fuel Demand (gallons fuel)						**29,974**
Cargo Handling Equipment	9	4	365	187	100	24,525
Phase II On-Site Cargo Handling Equipment Fuel Demand (gallons fuel						**24,525**
Cargo Handling Equipment	6	4	365	198	106	16,350
Phase III On-Site Cargo Handling Equipment Fuel Demand (gallons fuel						**16,350**
Cargo Handling Equipment	10	4	365	215	115	27,250
Phase IV On-Site Cargo Handling Equipment Fuel Demand (gallons fuel						**27,250**
Phase I-IV On-Site Cargo Handling Equipment Fuel Demand (gallons fuel)						**98,098**

(Urban Crossroads, 2023c, Table 4-13)

3. Facility Energy Demands

Project building operations and activities would result in the consumption of electricity and natural gas, which would be supplied to the Project by SCE and SoCalGas. As summarized on Table 4.5-13, *Project Annual Operational Energy Demand Summary*, the Project would result in 1,129,120 kBTU/year of natural gas demand and 59,689,613 kWh/year of electricity. (Urban Crossroads, 2023c, p. 47)

Based on information provided by the Project Applicant, the industrial portion of the Project would not use natural gas for the building envelopes. As such, natural gas consumption has been analyzed for the commercial portion and not the industrial portion of the Project in this study. (Urban Crossroads, 2023c, p. 47)

Table 4.5-13 Project Annual Operational Energy Demand Summary

Land Use	Natural Gas Demand (kBTU/year)	Electricity Demand (kWh/year)
Phase I		
General Light Industrial	0	992,062
Manufacturing	0	659,165
Warehousing	0	2,416,921
High-Cube Fulfillment (Non-Sort)	0	3,525,114
High-Cube Fulfillment (Sort)	0	3,184,842
High-Cube Cold Storage Warehouse	0	4,854,956
Parking Lot	0	575,049
Other Asphalt Surfaces	0	0
Phase I Total Project Energy Demand	**0**	**16,208,108**
Phase II		
Manufacturing	0	1,318,502
Warehousing	0	1,929,910
High-Cube Parcel Hub	0	7,630,686
Parking Lot	0	641,827
Other Asphalt Surfaces	0	0
Phase II Total Project Energy Demand	**0**	**16,208,108**
Phase III		
High-Cube Fulfillment (Non-Sort)	0	4,059,897
High-Cube Cold Storage Warehouse	0	5,591,485
Fast-Food Restaurant Without-Drive Thru	287,829	86,576
Fast-Food Restaurant With-Drive Thru	287,829	86,576
Coffee Shop With Drive Thru	230,263	69,261
Commercial Retail	323,199	530,197
Parking Lot	0	211,017
Other Asphalt Surfaces	0	0
Phase III Total Project Energy Demand	**1,129,120**	**10,635,007**
Phase IV		
High-Cube Cold Storage	0	12,354,875
High-Cube Fulfillment (Non-Sort)	0	8,970,697
Other Asphalt Surfaces	0	0
Phase IV Total Project Energy Demand	**0**	**16,208,108**

Land Use	Natural Gas Demand (kBTU/year)	Electricity Demand (kWh/year)
Phases I-IV Total Project Energy Demand	**0**	**16,208,108**

(Urban Crossroads, 2023c, Table 4-14)

4. Operational Energy Efficiency/Conservation Measures

Energy efficiency/energy conservation attributes of the Project would be complemented by increasingly stringent State and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards, and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title 24, California Green Building Standards Code). (Urban Crossroads, 2023c, p. 48)

5. Enhanced Vehicle Fuel Efficiencies

Project annual fuel consumption estimates presented previously in Table 4.5-11 represent likely potential maximums that would occur for the Project. Under subsequent future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system. (Urban Crossroads, 2023c, p. 48)

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. (Urban Crossroads, 2023c, p. 49)

C. Summary of Project's Operational Energy Demands

1. Transportation Energy Demands

Annual vehicular trips and related VMT generated by the operation of the Project would result in a fuel demand of 11,884,520 gallons of fuel, which would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with other industrial uses of similar scale and configuration, as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Ed., 2021) and CalEEMod. As such, Project operations would not result in excessive and wasteful vehicle trips and VMT, nor excess and wasteful vehicle energy consumption compared to other industrial uses. (Urban Crossroads, 2023c, pp. 49-50)

It should be noted that the State strategy for the transportation sector for medium and heavy-duty trucks is focused on making trucks more efficient and expediting truck turnover rather than reducing VMT from trucks. This is in contrast to the passenger vehicle component of the transportation sector where both per-capita VMT reductions and an increase in vehicle efficiency are forecasted to be needed to achieve the overall state emissions reductions goals. (Urban Crossroads, 2023c, p. 50)

Heavy duty trucks involved in the goods movement sector are generally controlled on the technology side and through fleet turnover of older trucks and engines to newer and cleaner trucks and engines. The first battery-electric heavy-heavy duty trucks were tested in 2022 and South Coast Air Quality Management District (SCAQMD) is looking to integrate this new technology into large-scale truck operations. The following state strategies reduce GHG emissions from the medium and heavy-duty trucks: (Urban Crossroads, 2023c, p. 50)

- CARB's Mobile Source Strategy focuses on reducing greenhouses gases (GHGs) through the transition to zero and low emission vehicles and from medium-duty and heavy-duty trucks;
- CARB's Sustainable Freight Action Plan establishes a goal to improve freight efficiency by 25 percent by 2030, deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030;
- CARB's Emissions Reduction Plan for Ports and Goods Movement (Goods Movement Plan) in California focuses on reducing heavy-duty truck-related emissions focus on establishment of emissions standards for trucks, fleet turnover, truck retrofits, and restriction on truck idling (CARB 2006). While the focus of Goods Movement Plan is to reduce criteria air pollutant and air toxic emissions, the strategies to reduce these pollutants would also generally have a beneficial effect in reducing GHG emissions;
- CARB's On-Road Truck and Bus Regulation (2010) requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent; and.
- CARB's Heavy-Duty (Tractor-Trailer) GHG Regulation requires SmartWay tractor trailers that include idle-reduction technologies, aerodynamic technologies, and low-rolling resistant tires that would reduce fuel consumption and associated GHG emissions. (Urban Crossroads, 2023c, p. 50)

The Project would implement project design features that would facilitate the accessibility, parking, and loading of trucks on-site. Enhanced fuel economies realized pursuant to federal and State regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project site proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. The Project includes the installation of sidewalks along both sides of three public streets proposed for constructed as part of the Project: Public Street A, Public Street B, and Public Street C to facilitate and encourage pedestrian access. Facilitating pedestrian and bicycle access would reduce VMT and associated energy consumption. In compliance with the CALGreen and City requirements, the Project would promote the use of bicycles as an alternative means of transportation by providing short-term and/or long-term

bicycle parking accommodations. As such, the Project's transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary. (Urban Crossroads, 2023c, pp. 50-51)

2. On-Site Cargo Handling Equipment Fuel Demands

On-site cargo handling equipment used by the Project would result in approximately 98,098 gallons of diesel. On-site equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the proposed operations of the Project that are unusual or energy-intensive, and on-site equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies. (Urban Crossroads, 2023c, p. 51)

3. Facility Energy Demands

Project facility operational energy demands are estimated to be 1,129,120 kBTU/year of natural gas for the commercial portion and 59,689,613 kWh/year of electricity. Natural gas would be supplied to the Project by SoCalGas and electricity would be supplied by SCE. The Project proposes conventional industrial and commercial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. The Project does not propose uses that are inherently energy intensive; energy demands in total would be comparable to other industrial uses of similar scale and configuration. (Urban Crossroads, 2023c, p. 51) Therefore, the proposed Project would not result in the inefficient, wasteful, or unnecessary consumption of energy.

Based on the foregoing analysis, implementation of the Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; therefore, impacts are less than significant and no mitigation is required.

Threshold b: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The Project would comply with applicable federal, State and regional requirements. A summary of the Project's consistency is provided below.

A. Consistency with ISTEA

Transportation and access to the Project site is provided by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because SCAG is not planning for intermodal facilities on or through the Project site. (Urban Crossroads, 2023c, p. 53)

B. Consistency with TEA-21

The Project site is located along major transportation corridors with proximate access to the interstate freeway system. The Project site facilitates access, acts to reduce VMT, takes advantage of existing infrastructure systems, and promotes land use compatibility through co-location of similar uses. The

Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21. (Urban Crossroads, 2023c, p. 53)

C. Consistency with IEPR

Electricity would be provided to the Project by SCE. SCE's *Clean Power and Electrification Pathway* (CPEP) white paper builds on existing State programs and policies. The Project is consistent with, and would not otherwise interfere with, nor obstruct implementation of the goals presented in the 2022 IEPR. Additionally, the Project would comply with the applicable Title 24 standards which would ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary. As such, implementation of the proposed Project would support the goals presented in the 2022 IEPR. (Urban Crossroads, 2023c, p. 53)

D. Consistency with State of California Energy Plan

The Project site is located along major transportation corridors with proximate access to the interstate freeway system. The Project site facilitates access and takes advantage of existing infrastructure systems. The Project therefore supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan. (Urban Crossroads, 2023c, p. 54)

E. Consistency with California Code Title 24, Part 6, Energy Efficiency Standards

As previously stated, CCR, Title 24, Part 11: CALGreen is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2009, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Standards Code that were published on July 1, 2022; effective on January 1, 2023. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made. (Urban Crossroads, 2023c, p. 54)

F. Consistency with AB 1493

AB 1493 is not applicable to the Project as it is a statewide measure establishing vehicle emissions standards. No feature of the Project would interfere with the implementation of the requirements under AB 1493. (Urban Crossroads, 2023c, p. 54)

G. Consistency with RPS

California's RPS is not applicable to the Project as it is a statewide measure that establishes a renewable energy mix. No feature of the Project would interfere with implementation of the requirements under RPS. (Urban Crossroads, 2023c, p. 54)

H. Consistency with SB 350

The proposed Project would use energy from SCE which has committed to diversifying their portfolio of energy sources by increasing energy from wind and solar sources. No feature of the Project would interfere with implementation of SB 350. Additionally, the Project would be designed and constructed to implement the energy efficiency measures for new industrial developments and would include several measures designed to reduce energy consumption. (Urban Crossroads, 2023c, p. 54)

I. Consistency with the City's General Plan

The Sustainability, Climate Action, and Resilience Element of the City's General Plan establishes goals and policies related to City's greenhouse gas reduction and sustainability strategies, including a goal for the lowering of fossil fuel use. General Plan Goal SCR-3 is aimed at decarbonized buildings for new construction and major renovations and as a new construction project, the proposed Project is consistent with this goal. Consistent with Goal SCR - 3.1, the Project is designed to integrate CALGreen green building and energy efficiency standards including the installation of EV charging stations. Per Policy SCR - 3.3, the proposed building is designed to include rooftop photovoltaic panels to the maximum feasible extent. Under Goal SCR - 4, Policy SCR - 4.1 encourages bicycle facilities in new projects and the proposed Project's design includes bicycle racks in accordance with CALGreen. By including energy-saving features and operational programs into the proposed Project including, but not limited to, building design features required by CALGreen, these design features would assist in achieving the City's goal of reducing energy usage and make Palmdale a more sustainable community. (Urban Crossroads, 2023c, p. 54)

J. Conclusion

Based on the preceding analysis, the Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Therefore, impacts would be less than significant and no mitigation is required.

4.5.6 Cumulative Impact Analysis

The proposed Project and other development projects would be required to comply with the same applicable federal, state, and local regulatory measures aimed at reducing fossil fuel consumption and the conservation of energy. Accordingly, the Project would not cause or contribute to a significant cumulatively considerable impact related to conflicts with a State or local plan for renewable energy or energy efficiency.

4.5.7 Significance of Impacts Before Mitigation

Threshold a: Less than Significant Impact. The amount of energy and fuel estimated to be consumed by construction and operation of the Project would not be inefficient, wasteful, or unnecessary. Furthermore, the Project would not cause or result in the need for additional energy facilities or energy delivery systems.

Threshold b: Less than Significant Impact. The Project would not cause or result in the need for additional energy production or transmission facilities. The Project would not conflict with or obstruct the achievement of energy conservation goals within the State of California identified in State and local plans for renewable energy and energy efficiency.

4.5.8 Mitigation

Impacts would be less than significant; therefore, no mitigation is required; however, mitigation measures AIR MM-1 through AIR MM-5 would be implemented.

4.5.9 Design Features (DF) and Regulatory Requirements (RR)

Refer to the design features and regulatory requirements listed in EIR Subsection 4.2, *Air Quality*, many of which also reduce the Project's energy consumption.

4.6 GEOLOGY AND SOILS

This Subsection assesses the existing surface and subsurface geologic conditions and features of the Project site and determines the potential for impacts associated with these features. The analysis in this subsection is based in part on information from the report titled, "Geotechnical Investigation, Proposed Warehouse Development: Phase I SEC East Avenue M and Sierra Highway," prepared by Southern California Geotechnical (herein, "SCG"), dated September 29, 2023, and included as EIR *Technical Appendix F1* (SCG, 2023). In addition, this subsection includes an evaluation of potential impacts to paleontological resources, which is based on a site-specific technical report prepared by PaleoWest, titled, "Paleontological Resource Technical Memorandum for the Antelope Valley Commerce Center Project, Los Angeles County, California," dated June 2, 2022, and included as *Technical Appendix G* to this EIR (PaleoWest, 2022b). Refer to Section 7.0, *References*, for a complete list of reference sources.

4.6.1 EXISTING CONDITIONS

A. *Regional Geologic Setting*

The City of Palmdale is located in the southern part of the Mojave geomorphic province. The Mojave is a broad interior region of isolated mountain ranges separated by stretches of desert plains. There are two important fault trends that control topography in the Mojave: a prominent northwest-southeast trend and a secondary east-west trend (apparent alignment with Transverse Ranges is significant). The Mojave province is wedged in a sharp angle between the Garlock Fault (southern boundary Sierra Nevada) and the San Andreas Fault, where it bends east from its northwest trend. The northern boundary of the Mojave is separated from the prominent Basin and Range geomorphic province by the eastern extension of the Garlock Fault. (City of Palmdale, 2022a, p. 4.7-1)

B. *Local Geologic Setting*

SCG conducted subsurface exploration at the Project site consisting of 35 borings (identified as Boring Nos. B-1 through B-35) advanced to depths of approximately 5 to 30 feet below the existing site grades. Boring Nos. B-1 through B-29 were performed as part of the design-level investigation for Phase I of the Project site. Boring Nos. B-30 through B-32 were performed for Phase III of the Project site. Boring Nos. B-33 through B-35 were performed for Phase II of the Project site. The borings within Phase II and Phase III of the Project site were performed in order to assess the feasibility of developing within these portions of the overall site, with respect to the geotechnical conditions. No borings were performed for Phase IV of the Project site. (SCG, 2023, p. 6) The approximate locations of the borings are indicated on the Boring Location Plan, included as Plate 2 in Appendix A to the Project's Geotechnical Investigation (EIR *Technical Appendix F1*). Based on the results of the analysis, the Project site contains the following geotechnical conditions:

- Groundwater: No free water was encountered during the boring drillings. Based on the moisture content of the recovered soil samples and the lack of free water in the borings, the static groundwater table is at a greater depth than approximately 30 feet below existing grades. (SCG, 2023, p. 7)

- Alluvium. Native alluvium was encountered at the ground surface at all of the boring locations, extending to at least the maximum depth of approximately 30 feet. Most of the borings encountered loose sands, silty sands and sandy silts, extending to depths of approximately 2.5 to 8.5 feet. At greater depths and extending to the maximum depth explored of approximately 30 feet, the alluvium generally consists of medium dense and occasional dense sands, silty sands and sandy silts. Boring No. B-1 encountered a stratum consisting of medium dense to very dense gravelly sands at a depth of approximately 17 to 25 feet. Boring No. B-14 encountered a stratum consisting of very dense sandy silts at a depth of approximately 22 to 25 feet. Boring No. B-33 encountered a stratum consisting of very dense silty sands at a depth of approximately 22 to 25 feet. (SCG, 2023, p. 6)

C. *Site Topography*

The Project site is mostly level, with an average elevation of approximately 2,528 feet above mean sea level (amsl). Overall site topography slopes downward to the east-northeast at a gradient less than approximately one percent. (SCG, 2023, p. 4) (AES, 2022, p. 5)

D. *Faulting and Seismicity*

Research of available maps indicates that the Project site is not located within an Alquist-Priolo Earthquake Fault Zone. Furthermore, SCG did not identify any evidence of faulting during the geotechnical investigation conducted on the Project site. Therefore, the possibility of significant fault rupture on the site is considered to be low. The potential for other geologic hazards such as seismically induced settlement, lateral spreading, tsunamis, inundation, seiches, flooding, and subsidence affecting the site is considered low. (SCG, 2023, p. 11)

E. *Groundwater*

Free water was not encountered during the drilling of any of the exploratory borings on the Project site. Based on the moisture content of the recovered soil samples and the lack of free water in the borings, the static groundwater table is at a greater depth than approximately 30 feet below existing site grades. (SCG, 2023, p. 7)

As part of research conducted by SCG, available groundwater data was reviewed in order to determine the historic high groundwater level for the site. The primary reference used to determine the historic groundwater depths in this area is the California Geological Survey (CGS) Seismic Hazard Zone Report 094 and Seismic Hazard Zone Report 095, Seismic Hazard Zone Report for the Lancaster West 7.5-Minute Quadrangle, and Seismic Hazard Zone Report for the Lancaster East 7.5-Minute Quadrangle, respectively, which indicate that the historic high groundwater level for the site is approximately 370 feet below the ground surface. (SCG, 2023, p. 7)

SCG also obtained recent water level data from the California State Water Resources Control Board GeoTracker website which indicated that the nearest monitoring well on record is located approximately 300 feet northeast of the Project site. Water level readings within this monitoring well

indicate a groundwater level of approximately 399 feet below the ground surface in January 2019. Several monitoring wells are located within approximately 1.0 mile of the Project site. Water level readings within these monitoring wells indicate a high groundwater level of approximately 121 feet (February 1922) below the ground surface. (SCG, 2023, p. 7)

F. Liquefaction

Liquefaction is the loss of the strength in generally cohesionless, saturated soils when the pore-water pressure induced in the soil by a seismic event becomes equal to or exceeds the overburden pressure. The primary factors that influence the potential for liquefaction include groundwater table elevation, soil type and grain size characteristics, relative density of the soil, initial confining pressure, and intensity and duration of ground shaking. The depth within which the occurrence of liquefaction may impact surface improvements is generally identified as the upper 50 feet below the existing ground surface. Liquefaction potential is greater in saturated, loose, poorly graded fine sands with a mean (d_{50}) grain size in the range of 0.075 to 0.2 mm. Clayey (cohesive) soils or soils which possess clay particles (d<0.005mm) in excess of 20 percent generally are not considered to be susceptible to liquefaction, nor are those soils which are above the historic static groundwater table. (SCG, 2023, p. 13)

The Earthquake Zones of Required Investigation, Lancaster West Quadrangle, and Earthquake Zones of Required Investigation, Lancaster East Quadrangle, published by the CGS indicate that the Project site is not located within a designated liquefaction hazard zone. Based on the mapping performed by the CGS and the lack of a historic high ground water table within the upper approximately 50 feet of the ground surface, liquefaction is not considered to be a design concern for the Project site. (SCG, 2023, p. 13)

G. Expansive Soils

Laboratory testing performed on a representative sample of the near surface soils indicates that the materials are non-expansive, with an Expansion Index (EI) of 0. Therefore, expansive soils are not considered to be a design constraint for future development on the Project site. (SCG, 2023, p. 14)

H. Seiches

A seiche is an underwater wave that oscillates through a body of water which may be triggered by earthquakes or landslides. In general, seiches are present in larger lakes as a result of the depth, temperature, and contours of the body of water. The potential for seiches affecting the Project site is considered low. (SCG, 2023, p. 11)

I. Soil Types and Erosion Potential

Table 4.6-1, *Summary of On-Site Soils*, provides a summary of the soils present on the Project site and identifies the associated rate of runoff and erosion susceptibility. As shown on Table 4.6-1, the entirety of the Project site contains soils that have a very low to negligible rate of runoff. Table 4.6-1 also indicates that approximately 87.2 percent of the Project site contains soils that have a slight

susceptibility to erosion, while the remaining 12.8 percent of the Project site contains soils that have a moderate susceptibility to erosion. (USDA, n.d.; USDA, 1970, p. 10)

Table 4.6-1 Summary of On-Site Soils

Map Symbol	Map Unit Name	Rate of Runoff	Erosion Susceptibility	Acres in AOI[1,2]	Percent of AOI[1, 2]
Aca	Adelanto coarse sandy loam, 2 to 5 percent slopes	Very Low	Slight	52.7	12.2%
CaA	Cajon loamy sand, 0 to 2 percent slopes	Negligible	Slight	297.8	68.7%
CaC	Cajon loamy sand, 2 to 9 percent slopes	Very Low	Moderate	53.6	12.8%
CbA	Cajon loamy sand, loamy substratum, 0 to 2 percent slopes	Very Low	Slight	4.5	1.0%
CcA2	Cajon loamy fine sand, 0 to 2 percent slopes, hummocky	Negligible	Slight	22.7	5.2%
HkA	Hesperia fine sandy loam, 0 to 2 percent slopes	Very Low	Slight	0.3	0.1%
	Totals:	--	--	**433.9**	**100.0%**

[1]AOI = Area of Interest.
[2] Values reflect rounding.
(USDA, n.d.) (USDA, 1970)

J. Paleontological Resources

1. Paleontological Sensitivity

Absent specific agency guidelines, most professional paleontologists in California adhere to the guidelines set forth by the Society of Vertebrate Paleontology (SVP) to determine the course of paleontological mitigation for a given project. These guidelines establish protocols for the assessment of the paleontological resource potential of underlying geologic units and outline measures to mitigate adverse impacts that could result from project development. Using baseline information gathered during a paleontological resource assessment, the paleontological resource potential of the geologic unit(s) (or members thereof) underlying a project area can be assigned to one of four categories defined by the SVP. These categories include high sensitivity, undetermined sensitivity, low sensitivity and no sensitivity for paleontological resource potential, as described below. (PaleoWest, 2022b, p. 6)

- High Sensitivity: Vertebrate fossils, as well as the respective stratigraphic units in which these vertebrate fossils were discovered, are likely present, and likely have significant scientific value. In areas of high sensitivity, full-time monitoring is recommended during project-related ground disturbance.
- Low Sensitivity: Stratigraphic units that have yielded few fossils in the past, based upon review of available literature and museum collections records, are considered to possess low paleontological sensitivity. Monitoring is usually not recommended during excavation within a stratigraphic unit of low sensitivity, although spot monitoring may be recommended to confirm that disturbance remains restricted to low-sensitivity units.

- Undetermined Sensitivity: In certain instances, the lack of available literature on a particular geologic unit, or absence of exposures of that unit, make it difficult to determine a unit's likelihood of yielding fossiliferous remains. Under these circumstances, further studies may be recommended to assess the unit's paleontological resource potential (i.e., field survey). If a unit remains of "undetermined" paleontological sensitivity, then it is treated as possessing "high" sensitivity for purposes of initial monitoring and mitigation.
- No Sensitivity: This category includes geological strata that are either too young (less than 10,000 years old), too weathered, metamorphosed, or too coarse-grained to preserve significant fossilized remains. Metamorphic and plutonic igneous rocks normally do not contain fossils due to the high heat and pressure during their formation, and commonly possess no paleontological sensitivity.

The presence of documented Pleistocene fossil localities in the vicinity of the Project site, at a depth of four feet and less, combined with the lack of mapped exposures of Pleistocene sediments within the Project area would give surficial sediments (Qa) an "Undetermined Sensitivity." Excavations may impact Pleistocene deposits of Qa, which should be treated as "High Sensitivity." (PaleoWest, 2022b, p. 9)

2. Site-Specific Geology and Paleontology

According to published geologic maps, the Project area is entirely underlain by surficial sediments of unconsolidated, undissected alluvial gravel, sand, and silt (Qa) of Holocene age (11,700 years ago to present). Due to their young age, Holocene deposits have not been able to accumulate or preserve significant biological material and are typically considered to have low paleontological sensitivity. In addition, Holocene deposits can transition with depth into older Pleistocene age (2.6 million years ago to 11,700 years ago) deposits which have a high paleontological sensitivity. The geologic units underlying the Palmdale area are described as "Pleistocene alluvium which is of high potential… covered by a thin layer of recent [Holocene] alluvium." Elsewhere in Los Angeles County, Pleistocene deposits have produced remains of a diverse fauna of hundreds of terrestrial and marine organisms. (PaleoWest, 2022b, pp. 7, 9)

3. Paleontological Records Search Results

The Natural History Museum of Los Angeles County (NHMLAC) does not have on record any previously recorded vertebrate fossil localities directly within the boundary of the Project site; however, several fossil localities from sedimentary deposits similar to those within the Project site have been recorded in the vicinity of the Project site. North of the Project Site, LA County Museum Vertebrate Paleontology (LACM VP) 7853 produced abundant remains of multiple large and small mammals and scaled reptiles between three and eleven feet (ft) below ground surface (bgs). Southeast of the Project site, LACM VP 5946 produced remains of a lizard (*Gambelia wislizenii*) between zero and ten ft bgs. Further to the southeast, LACM VP 5947 produced remains of a pocket gopher (*Thomomys*) between 0 and 10 ft bgs, and LACM VP CIT451 produced remains of Mastodon (Mammutidae) and horse (Equidae) at an unknown depth. A supplemental review of online museum

collections records maintained by the University of California Museum of Paleontology (UCMP), San Diego Natural History museum (SDNHM), Paleobiology Database (PBDB), and The Quaternary Faunal Mapping Project (FAUNMAP) returned no previously recorded vertebrate localities in the vicinity of the Project site. Extensive Pleistocene fossils have been recovered from deposits in Los Angeles County, but they are almost exclusively from further south, such as the La Brea Tar Pits of the Los Angeles Basin and San Pedro Sand of Palos Verdes Peninsula. Table 1 of the Project's Paleontological Resource Technical Memorandum (*Technical Appendix G*) summarizes the compiled information on known vertebrate localities from the vicinity of the Project site. (PaleoWest, 2022b, p. 9)

4.6.2 Regulatory Setting

The following is a brief description of the federal, State, and local environmental laws and related regulations governing issues related to geology and soils.

A. Federal Regulations

1. Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was substantially reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2023e)

2. Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act (PRPA) was signed into law on March 30, 2009 (Public Law 111-11, Title VI, Subtitle D; 16 U.S.C. §§ 470aaa - 470aaa-11). PRPA directs the Department of Agriculture (US Forest Service) and the Department of the Interior (National Park Service, Bureau of Land Management, Bureau of Reclamation, and Fish and Wildlife Service) to implement comprehensive paleontological resource management programs. Section 6310 of PRPA specifically states, "As soon as practical after the date of enactment of this Act, the Secretary shall issue such regulations as are appropriate to carry out this subtitle, providing opportunities for public notice and comment." (NPS, 2023b)

B. State Regulations

1. Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (A-P Act) was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The A-P Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The A-P Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The A-P Act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. ["Earthquake Fault Zones" were called "Special Studies Zones" prior to January 1, 1994.] The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. Single-family wood-frame and steel-frame dwellings up to two stories not part of a development of four units or more are exempt. However, local agencies can be more restrictive than State law requires. (CA Legislative Info, n.d.)

Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally 50 feet). (CA Legislative Info, n.d.)

2. Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) of 1990 (Public Resources Code, Chapter 7.8, § 2690-2699.6) directs the Department of Conservation, California Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the SHMA is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards. Staff geologists in the Seismic Hazards Program gather existing geological, geophysical, and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret these data regionally in order to evaluate the severity of the seismic hazards and designate as Zones of Required Investigation (ZORI) those areas prone to liquefaction and earthquake–induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. (CDC, n.d.)

The law requires the State Geologist to establish regulatory zones ZORI and to issue Seismic Hazard Zone maps. These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development. Single-family wood-frame or steel-frame dwellings up to two stories not part of a development of four or more units are exempt from the State requirements. However, local agencies can be more restrictive than State law requires. (CDC, n.d.; CGS, 2008, p. 5)

Before a development permit can be issued or a subdivision approved, cities and counties must require a site-specific investigation to determine whether a significant hazard exists at the site and, if so, recommend measures to reduce the risk to an acceptable level. The investigation must be performed by state-licensed engineering geologists and/or civil engineers. The SHMA requires site-specific geotechnical investigations be conducted within the ZORI to identify and evaluate seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy. (CDC, n.d.)

3. Natural Hazards Disclosure Act

The Natural Hazards Disclosure Act, effective June 1, 1998 (as amended June 9, 1998), requires that sellers of real property and their agents provide prospective buyers with a "Natural Hazard Disclosure Statement" when the property being sold lies within one or more state-mapped hazard areas, including a Seismic Hazard Zone. The disclosure required is only a disclosure between the seller, the seller's agent, and the prospective buyer (CA Legislative Info, n.d.)

4. Essential Services Buildings Seismic Safety Act

In 1986, the California Legislature determined that buildings providing essential services should be capable of providing those services to the public after a disaster. Their intent in this regard was defined in legislation known as the Essential Services Buildings Seismic Safety Act of 1986 and includes requirements that such buildings shall be "…designed and constructed to minimize fire hazards and to resist…the forces generated by earthquakes, gravity, and winds." This enabling legislation can be found in the California Health and Safety Code, Chapter 2, § 16000 through 16022. In addition, the California Building Code defines how the intent of the act is to be implemented in Title 24, Part 1 of the California Building Standards Administrative Code, Chapter 4, Articles 1 through 3. (CAB, n.d.)

5. California Building Standards Code

California Code of Regulations (CCR) Title 24 is reserved for State regulations that govern the design and construction of buildings, associated facilities, and equipment. These regulations are also known as building standards (reference California Health and Safety Code § 18909). Health and Safety Code (state law) § 18902 gives CCR Title 24 the name California Building Standards Code (CBSC). The CBSC in CCR Title 24 is published by the California Building Standards Commission and it applies to all building occupancies (see Health and Safety Code §§ 18908 and 18938) throughout the State of California. Cities and counties are required by State law to enforce CCR Title 24 (reference Health and Safety Code §§ 17958, 17960, 18938(b), and 18948). Cities and counties may adopt ordinances making more restrictive requirements than provided by CCR Title 24, because of local climatic, geological, or topographical conditions. Such adoptions and a finding of need statement must be filed with the California Building Standards Commission (Reference Health and Safety Code §§ 17958.7 and 18941.5). (CBSC, 2022)

6. Porter-Cologne Water Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code § 13000 *et seq*.), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous non-point source (NPS) related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. In addition, regional water quality control plans (basin plans) have been adopted by each of the Regional Water Boards and are updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. (SWRCB, 2014) The Project site is

located in the Antelope Valley Watershed, which is within the purview of the Lahontan RWQCB. Therefore, the Water Quality Control Plan for the Lahontan Region (Basin Plan) is the governing water quality plan for the region.

7. California Administrative Code, Title 14, Section 4308

Section 4308, *Archaeological Features*, of Title 14 of the California Administrative Code provides that: "No person shall remove, injure, disfigure, deface, or destroy any object of archaeological, or historical interest or value." (CCR, n.d.)

8. California Public Resources Code

Public Resources Code § 5097.5 states that "A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands." Public Resources Code § 30244 states that, "Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required." (CCR, n.d.)

C. Local Regulations

1. General Plan Safety Element

The Palmdale 2045 General Plan Safety Element outlines goals and policies related to hazards and safety in Palmdale, including seismic safety. Per California Government Code section 65302, a Safety Element provides protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence; liquefaction; and other seismic hazards identified pursuant to Chapter 7.8 (commencing with Section 2690) of Division 2 of the Public Resources Code, and other geologic hazards known to the legislative body. The Safety Element also includes mapping of known geologic hazards and addresses evacuation routes as they relate to geologic hazards. (City of Palmdale, 2023)

2. Palmdale Hazard Mitigation Plan

The Local Hazard Mitigation Plan (LHMP) analyzes natural and manmade hazards and mitigation procedures to help protect those who reside in Palmdale. Mitigation activities include among other items adoption of disaster resistant ordinances and regulations, including for seismic hazards. (City of Palmdale, 2022a, p. 4.7-12)

3. Palmdale Municipal Code

Palmdale Municipal Code (PMC) Chapter 8.04 contains health, safety, and technical construction codes, which include requirements for construction near a known active earthquake fault. Additionally,

the PMC requires an engineering geology and/or geotechnical engineering report containing a finding regarding the safety of the building site for the proposed structure against hazard from landslide, settlement or slippage and a finding regarding the effect that the proposed building or grading construction will have on the geologic stability of property outside of the building site. (PMC, 2023) (City of Palmdale, 2022a, p. 4.7-12)

4. Palmdale Storm Water Management Plan (2003)

The Palmdale Storm Water Management Plan (SWMP) was adopted in 2003. The SWMP was prepared by the City of Palmdale Department of Public Works with the objective to preserve the quality of City waters, including storm water conveyances such as closed conduits, open channels, drainage basins, and dry wells. The City was issued a "small" Municipal Separate Storm Sewer System (MS4) permit by the Lahontan RWQCB which authorizes the City to legally discharge stormwater into local waterways. The California State Water Resources Control Board (SWRCB) designated the City of Palmdale MS4 as a "small" MS4 because it is located within an urbanized area defined by the US Census Bureau. As part of the MS4 permit requirements, the City was required to develop and submit a SWMP to the Lahontan RWQCB. The goal of the City's SWMP is to reduce the discharge of pollutants to the MS4 to the Maximum Extent Practicable (MEP). A requirement of the SWMP is that each development attenuate post-developed flows to 85 percent of pre-developed flows with the objective of protecting downstream properties. Additional requirements of the SWMP include employing BMPs for on-site detention/retention of stormwater runoff erosion events and tracking. (City of Palmdale, 2023, p. 329) (City of Palmdale, 2003, p. 3) (City of Palmdale, 2022a, p. 4.10-13)

4.6.3 Basis for Determining Significance

Based on Section VII. of Appendix G to the State CEQA Guidelines, the Project would result in a significant impact to geology and soils if the Project or any Project-related component would:

a. *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*
    i. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42;*
    ii. *Strong seismic ground shaking;*
    iii. *Seismic-related ground failure, including liquefaction; or*
    iv. *Landslides;*
b. *Result in substantial soil erosion or the loss of topsoil;*
c. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;*

d. Be located on expansive soil, as defined in Section 1803.5.3. of the California Building Code (2019), creating substantial direct or indirect risks to life or property;

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

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

4.6.4 IMPACT ANALYSIS

Threshold a:	***Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:***
	i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.?
	ii. Strong seismic ground shaking?
	iii. Seismic-related ground failure, including liquefaction?
	iv. Landslides?

A. Seismic-Related Hazards

As previously indicated in Subsection 4.6.1, the Project site is not located within an Alquist-Priolo Earthquake Fault Zone, and the possibility of significant fault rupture on the site is considered to be low (SCG, 2023, p. 11). According to Palmdale 2045 General Plan Final Environmental Impact Report (SCH #2021060494), Figure 4.7-3, Fault Map of Palmdale, the Project site is not located within a fault zone. The nearest fault is the Littlerock Fault which is a fault trace that branches off from the primary fault - the San Andreas Fault. The Littlerock Fault is located approximately 4.45 miles southwest of the Project site (CGS, n.d.) (City of Palmdale Public Works Department, 2021, p. 49) Therefore, because the Project is not located in the immediate vicinity of a known earthquake fault and the possibility of significant fault rupture on the site is considered to be low, no impact would occur.

As with most properties in southern California, the Project site is located in a seismically active area of southern California and is expected to experience moderate to severe ground shaking during the lifetime of the Project. The risk is not considered substantially different than that of other similar properties in the area. The Project is required to be constructed in accordance with the California Building Standards Code (CBSC) and the City Building Code. The CBSC and the City Building Code are designed to preclude significant adverse effects associated with strong seismic ground shaking. Additionally, the Geotechnical Investigation (*Technical Appendix F1*) prepared for the Project includes site-specific recommendations to attenuate seismic-related hazards. Mandatory compliance with the CBSC, the City Building Code, and the recommendations of the site-specific Geotechnical Investigation would ensure that potential effects associated with strong seismic ground shaking would be less than significant.

B. Liquefaction Hazards

As previously indicated in Subsection 4.6.1, the Project site is not located within a designated liquefaction hazard zone. In addition, the subsurface conditions encountered at the Project site are not considered to be conducive to liquefaction. Based on the lack of a historic high ground water table within the upper approximately 50 feet of the ground surface, and the mapping performed by the CGS, SCG determined that liquefaction would not be considered a design concern for the Project site; therefore, impacts would be less than significant. (SCG, 2023, p. 13)

C. Landslides

The Project site and areas immediately surrounding the Project site do not contain steep slopes capable of producing landslide hazards that could affect future development on-site. The closest lands containing steep topography that are capable of producing landslides occur more than six miles southwest of the Project site. (Google Earth, 2022) Accordingly, impacts due to landslide hazards would be less than significant.

Threshold b: Would the Project result in substantial soil erosion or the loss of topsoil?

Although the soils on the Project site are not highly susceptible to erosion (as summarized in Table 4.6-1), approximately 12.8 percent of soils on site are classified as having moderate susceptibility to erosion. Thus, implementation of the Project has the potential to result in soil erosion. The analysis below summarizes the likelihood of the Project to result in substantial soil erosion during temporary construction activities and long-term operation of the Project.

A. Construction-Related Impacts

Proposed grading and construction activities at the Project site would expose underlying soils and disturb surficial soils. Exposed soils would be subject to erosion during rainfall events or high winds due to the removal of stabilizing vegetation and exposure of these erodible materials to wind and water.

Approximately 87.2 percent of the Project site contains soils that have a slight susceptibility to erosion, while the remaining 12.8 percent of the Project site contains soils that have a moderate susceptibility to erosion. The Project would implement the recommendations provided in the Project's Geotechnical Investigation to reduce erosion and thus the potential for water and/or wind erosion impacts to soils during Project construction would be reduced to less than significant levels.

Pursuant to the requirements of the Lahontan Regional Water Quality Control Board (RWQCB), the Project Applicant is required to obtain a NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (NPDES Permit). Compliance with the NPDES Permit is required for projects that result in more than one acre of ground disturbance, including through clearing, grading, grubbing, excavating, stockpiling, and removing or replacing existing facilities. The NPDES Permit requires the landowner and/or contractor to file permit registration documents prior to commencing construction and pay a fee annually throughout the duration of construction. These documents include a notice of intent, risk assessment, site map, stormwater

pollution prevention plan (SWPPP), and signed certification statement. The NPDES Permit specifies minimum Best Management Practice (BMP) requirements for stormwater control based on the risk level of the site. The SWPPP must include measures to ensure the following: all pollutants and their sources are controlled; non-stormwater discharges are identified and eliminated, controlled, or treated; site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges; and BMPs are installed to reduce or eliminate pollutants post-construction are completed and maintained. (City of Palmdale, 2022a, p. 4.10-8). Mandatory compliance with the SWPPP would ensure that the Project does not violate any water quality standards or waste discharge requirements during construction activities.

The Project also would be required to comply with the City's requirements and regulations, including those provided in the City's SWMP prepared as part of the City's MS4 permit compliance. As noted above in Subsection 4.6.2, a requirement of the SWMP is that each development attenuate post-developed flows to 85 percent of pre-developed flows with the objective of protecting downstream properties. Additional requirements of the SWMP include employing BMPs for on-site detention/retention of stormwater runoff erosion events and tracking. (City of Palmdale, 2023, p. 329) (City of Palmdale, 2003, p. 3) (City of Palmdale, 2022a, p. 4.10-13)

Additionally, proposed construction activities would be required to comply with AVAQMD Rule 403, which would reduce the amount of particulate matter in the air and minimize the potential for wind erosion. Rule 403 requires that certain construction practices be followed that limit dust and dirt from leaving the construction site. For example, no dust is allowed to be tracked out of the site by more than 25 feet.

In summary, with mandatory compliance to the requirements noted in the Project's SWPPP and the City's SWMP, as well as mandatory compliance to applicable regulatory requirements including but not limited to the PMC and AVAQMD Rule 403, the potential for water and/or wind erosion impacts during Project construction would be reduced to less than significant levels.

B. Long-Term Operational Impacts

Following construction, wind and water erosion on the Project site would be minimized, as the disturbed areas would be landscaped or covered with impervious surfaces, and drainage would be controlled through an on-site storm drain system. With implementation of the proposed Project, on-site stormwater would be captured through a series of storm drain systems and directed to a proposed aboveground infiltration basin, located in the northern portion of the Project site, directly east of Challenger Way. The on-site basin would be designed to function as an infiltration basin that would mitigate water quality, reduce downstream flows to be less than or equal to existing conditions, and to promote groundwater infiltration. The basin would be sized to mitigate the increased runoff and fully retain the 50-yr storm event. The basin is expected to capture the entire on-site runoff volume and enable it to be infiltrated and released (JLC, 2023, pp. 5-6). The Project does not propose to construct any Master Drainage Plan (MDP) facilities that have been identified by the cities of Palmdale or Lancaster, however the Project would provide drive aisles and streets that can be utilized in the future

to construct the ultimate MDP storm drain system. (JLC, 2023, p. 8) The proposed infiltration basin and lack of discharge from the Project site would preclude the potential for erosion on the Project site. In addition, because no surface runoff from the Project site would leave the Project site following development, the Project has no potential to result in or contribute to erosion hazards downstream. Impacts would be less than significant.

Threshold c:	***Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?***

A. Landslide Hazards

Under existing conditions, the Project site and surrounding areas exhibit little topographic variation, indicating that the potential for landslide hazards is low. Additionally, the Project would not involve the creation of any large slopes that would have the potential to result in landslide hazards. Accordingly, no impact would occur.

B. Lateral Spreading, Subsidence, and Collapse

Due to the lack of potential liquefaction hazards on the Project site and the geotechnical conditions of the Project site, the potential for lateral spreading and subsidence is considered low (SCG, 2023, p. 11). Minor ground subsidence is expected to occur in the soils below the zone of removal, due to settlement and machinery working. The subsidence is estimated to be 0.1 feet. (SCG, 2023, p. 16) Accordingly, the Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site lateral spreading or subsidence. Impacts would be less than significant. The results of laboratory testing indicate that the near-surface soils within the upper approximately 5 to 6 feet possess a slight to moderate potential for collapse when exposed to moisture infiltration. (SCG, 2023, pp. 13-14) However, mandatory compliance with the CBSC, the City Building Code, and the recommendations of the site-specific Geotechnical Investigation would ensure that potential effects associated with collapse would be less than significant.

C. Liquefaction

As previously indicated in Subsection 4.6.1 and under the analysis of Threshold (a), the Project site is not located within a designated liquefaction hazard zone. In addition, the subsurface conditions encountered at the Project site are not considered to be conducive to liquefaction. Based on the lack of a historic high ground water table within the upper approximately 50 feet of the ground surface, and the mapping performed by the CGS, SCG concludes that the Project would not be subject to seismic-related ground failure, including liquefaction, and impacts would be less than significant. (SCG, 2023, p. 13)

Threshold d: ***Would the Project be located on expansive soil, as defined in Section 1803.5.3. of the California Building Code (2019), creating substantial direct or indirect risks to life or property?***

As previously indicated in Subsection 4.6.1, laboratory testing performed on a representative sample of the near surface Project site soils indicates that these materials are non-expansive, with an Expansion Index (EI) of 0 (SCG, 2023, p. 14). Therefore, the Project would not be located on expansive soil, as defined in Section 1803.5.3. of the California Building Code (2019), creating substantial direct or indirect risks to life or property, and no impact would occur.

Threshold e: ***Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?***

The public sewer system that would provide service to the proposed Project is owned and maintained by the City of Palmdale Public Works, Sewer Maintenance Division (COPSM). Wastewater produced by the Project would be conveyed via new sewer laterals to the City's collection and conveyance system to be treated at the Los Angeles County Sanitation District (LACSD) No. 14's Lancaster Water Reclamation Plant (LACSD, 2022). No septic tanks or alternative wastewater disposal systems are proposed as part of the Project. Accordingly, no impact would occur.

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

As previously indicated in Subsection 4.6.1, the presence of documented Pleistocene fossil localities in the vicinity of the Project site, at a depth of four feet and less, combined with the lack of mapped exposures of Pleistocene sediments within the Project area would give surficial sediments (Qa) an "Undetermined Sensitivity." Excavations may impact Pleistocene deposits of Qa, which should be treated as "High Sensitivity." In general, the potential for a given project to result in negative impacts to paleontological resources is directly proportional to the amount of ground disturbance associated with the project; thus, the higher the amount of ground disturbances within geological deposits with a known paleontological sensitivity, the greater the potential for negative impacts to paleontological resources. (PaleoWest, 2022b, pp. 9-10)

As part of Project construction, the Project site would be subject to ground-disturbing activities associated with site grading activities. Sediments in the Project area have an unknown paleontological sensitivity, potentially containing high sensitivity Pleistocene deposits at or near the ground surface. As such, ground-disturbing activities conducted in previously undisturbed portions of the Project site may result in significant impacts to previously undiscovered paleontological resources, such as destruction, damage, or loss of scientifically important paleontological resources. This is considered a potentially significant impact for which mitigation would be required. (PaleoWest, 2022b, p. 10) This potentially significant impact will be addressed by Mitigation Measure GEO MM-1, which outlines the Paleontological Resources Mitigation and Monitoring Plan (PRMMP) for monitoring site

grading/earthmoving activities. Implementation of Mitigation Measure GEO MM-1 would ensure that a PRMMP is prepared and approved by the City prior to the issuance of grading permits. Implementation of the PRMMP would ensure that any paleontological resources that may be uncovered during Project-related ground-disturbing activities would be identified, avoided, salvaged, and curated at an appropriate facility, and further requires the preparation of a Final Paleontological Mitigation Report. Implementation of the required Mitigation Measure GEO MM-1 would reduce the Project's potential impacts to paleontological resources to a less than significant level.

4.6.5 Cumulative Impact Analysis

Geologic Hazards

With the exception of erosion hazards and potential impacts to paleontological resources, potential effects due to geology and soils are inherently restricted to the areas proposed for development and would not contribute to cumulative impacts associated with other existing, planned, or proposed development. That is, thresholds including fault rupture, seismic ground shaking, liquefaction, landslides, expansive soils, and other geologic hazards would involve effects to (and not from) the proposed development and are specific to on-site conditions. Accordingly, addressing these potential hazards for the proposed development would involve using measures to conform to existing requirements, and/or site-specific design and construction efforts that have no relationship to, or impact on, off-site areas. Because of the site-specific nature of these potential hazards and the measures to address them, there would be no connection to similar potential issues or cumulative effects to or from other properties. Cumulatively-considerable impacts would be less than significant.

Soil Erosion or the Loss of Topsoil

As discussed under Threshold (b), during both near-term construction and long-term operation, measures would be incorporated into the design of the Project to ensure that significant erosion hazards do not occur. Other developments within the cumulative study area would be required to comply with similar requirements, such as the need to obtain an NPDES permit and mandatory compliance with the resulting SWPPPs and the City's SWMP. All projects in the cumulative study area also would be required to demonstrate that measures have been incorporated to ensure that development does not result in substantial increases in the amount or rate of runoff under long-term operating conditions, which could in turn increase soil erosion. Further, all projects in the cumulative study area also would be required to comply with AVAQMD Rule 403 as well as the PMC sections related to erosion and sedimentation, which would preclude water- and wind-related erosion hazards during construction. Therefore, because the Project would result in less than significant erosion impacts, and because other projects within the cumulative study area would be subject to similar requirements to control erosion hazards during construction and long-term operation, cumulatively-considerable impacts associated with wind and water erosion hazards are evaluated as less than significant.

Unique Paleontological Resource or Site or Unique Geologic Feature

As noted under the analysis of Threshold (f), the Project site has an "Undetermined Sensitivity" for containing paleontological resources at surface level, with excavations treated as "High Sensitivity."

As such, the Project has the potential to result in impacts to paleontological resources during Project construction (i.e., grading). Other cumulative developments within the region located on geologic formations have a potential to also result in impacts to paleontological resources. Such activities could destroy any fossils present; the destruction of such fossils could adversely impact the region's paleontological resources. Accordingly, Project impacts to paleontological resources that may be buried beneath the site's surface represents a potential cumulatively-considerable impact. This potentially significant impact will be addressed by Mitigation Measure GEO MM-1, which outlines the Paleontological Resources Mitigation and Monitoring Plan (PRMMP) for monitoring site grading/earthmoving activities. Implementation of Mitigation Measure GEO MM-1 would ensure that a PRMMP is prepared and approved by the City prior to the issuance of grading permits. Implementation of the PRMMP would ensure that any paleontological resources that may be uncovered during Project-related ground-disturbing activities would be identified, avoided, salvaged, and curated at an appropriate facility, and further requires the preparation of a Final Paleontological Mitigation Report. Implementation of the required Mitigation Measure GEO MM-1 would reduce the Project's potential impacts to paleontological resources to less than significant.

4.6.6 Significance of Impacts Before Mitigation

Thresholds a: Less than Significant Impact. The Project site is not located within an Alquist-Priolo Earthquake Fault Zone or within a fault zone depicted on the City's Fault Map and thus the risk of fault rupture to occur on the site is considered low. Although the Project site is located in a seismically active area of southern California and is expected to experience moderate to severe ground shaking during the lifetime of the Project, mandatory compliance with the California Building Standards Code (CBSC), the City Building Code, and the recommendations of the site-specific Geotechnical Investigation would ensure that potential effects associated with strong seismic ground shaking would be less than significant. Based on the lack of a historic high ground water table within the upper approximately 50 feet of the ground surface, and the mapping performed by the California Geological Survey (CGS), the Project would not be subject to seismic-related ground failure, including liquefaction, and impacts would be less than significant. The Project site and areas immediately surrounding the Project site do not contain steep slopes capable of producing landslide hazards that could affect future development on site, and there are no components of the proposed Project that would result in the potential for landslide hazards; thus, impacts would be less than significant.

Threshold b: Less than Significant Impact. Approximately 87.2 percent of the Project site contains soils that have a slight susceptibility to erosion, while the remaining 12.8 percent of the Project site contains soils that have a moderate susceptibility to erosion. However, the Project would not result in substantial soil erosion or loss of topsoil as the Project would implement the recommendations provided in the Project's Geotechnical Investigation to reduce soil erosion and the potential for water and/or wind erosion impacts to soils during Project construction would be reduced to less than significant levels. Additionally, the Project Applicant would be required to obtain an NPDES permit for construction activities and adhere to a Stormwater Pollution Prevention Plan (SWPPP) and the City's Stormwater Management Plan (SWMP), as well as the PMC, and AVAQMD Rule 403. With mandatory compliance to these regulatory requirements, the potential for water and wind erosion

impacts during construction would be less than significant. Following development, wind and water erosion on the Project site would be minimized, because the areas disturbed during construction would be landscaped or covered with impervious surfaces and drainage would be controlled through a storm drain system. Furthermore, because all runoff generated on-site would be retained on site and allowed to infiltrate into site soils, the Project has no potential to result in or contribute to erosion hazards downstream. Impacts would be less than significant.

Threshold c: Less than Significant Impact. The Project site and surrounding areas exhibit little topographic variation, indicating that the potential for landslide hazards is low. Additionally, the Project would not involve the creation of any large slopes that would have the potential to result in landslide hazards. Accordingly, no impact due to landslide hazards would occur. Due to the lack of potential liquefaction hazards on site and the geotechnical conditions of the Project site, the potential for lateral spreading and subsidence is considered low, resulting in less than significant impacts. The results of laboratory testing indicate that the near-surface soils within the upper approximately 5 to 6 feet possess a slight to moderate potential for collapse when exposed to moisture infiltration. However, mandatory compliance with the CBSC, the City Building Code, and the recommendations of the site-specific Geotechnical Investigation would ensure that potential effects associated with collapse would be less than significant. In addition, based on the lack of a historic high ground water table within the upper approximately 50 feet of the ground surface, and the mapping performed by the CGS, SCG concludes that the Project would not be subject to seismic-related ground failure, including liquefaction, and impacts would be less than significant.

Threshold d: No Impact. Laboratory testing performed on a representative sample of the near surface soils indicates that these materials are non-expansive, with an Expansion Index (EI) of 0. Therefore, the Project would not be located on expansive soil, as defined in Section 1803.5.3. of the California Building Code (2022) and would not create substantial direct or indirect risks to life or property, and no impact would occur.

Threshold e: No Impact. Sewer service to the proposed Project is owned and maintained by the City of Palmdale Public Works, Sewer Maintenance Division (COPSM). Connection plans for the proposed Project would be reviewed and approved by the City of Palmdale Engineering Division, and no septic tanks or alternative wastewater disposal systems are proposed or allowed as part of the Project. Accordingly, no impact related to septic systems would occur. Wastewater produced by the Project would be conveyed via the new sewer laterals to the City's collection and conveyance system to be treated at the LACSD No. 14's Lancaster Water Reclamation Plant.

Threshold f: Significant Direct and Cumulatively Considerable Impact. The presence of documented Pleistocene fossil localities in the vicinity of the Project site at a depth of four feet and less combined with the lack of mapped exposures of Pleistocene sediments within the Project area would give surficial sediments (Qa) an "Undetermined Sensitivity." Excavations may impact Pleistocene deposits of Qa, which should be treated as "High Sensitivity." As such, ground-disturbing activities conducted in previously undisturbed portions of the Project site may result in significant impacts to previously undiscovered paleontological resources, such as destruction, damage, or loss of scientifically important

paleontological resources. This is evaluated as a potentially significant impact for which mitigation would be required.

4.6.7 MITIGATION

The following Mitigation Measure addresses potential impacts to paleontological resources that could potentially be encountered during grading/earthmoving activities as discussed under Threshold (f).

GEO MM-1 Prior to the issuance of grading permits, the Project Applicant shall retain a qualified paleontologist approved by the City to create and implement a Project-specific plan for monitoring site grading/earthmoving activities (Project paleontologist). The Project paleontologist retained shall review the approved development plan and grading plan and conduct any pre-construction work necessary to render appropriate monitoring and mitigation requirements as appropriate. These requirements shall be documented by the project paleontologist in a Paleontological Resources Mitigation and Monitoring Plan (PRMMP). The PRMMP shall describe the monitoring levels required during excavations, and the location of areas deemed to have a high paleontological resource potential. This PRMMP shall be submitted to the City for approval prior to issuance of a grading permit. Requirements to be included in the PRMMP are as follows:

- Worker's Environmental Awareness Program. Prior to the start of the proposed Project activities, the PRMMP shall require that all field personnel shall receive a worker's environmental awareness training on paleontological resources. The training shall provide a description of the laws and ordinances protecting fossil resources, the types of fossil resources that may be encountered in the Project area, the role of the Project paleontologist, outline steps to follow in the event that a fossil discovery is made and provide contact information for the Project paleontologist. The training shall be developed by the Project paleontologist and can be delivered concurrent with other training including cultural, biological, safety, etc.
- Paleontological Mitigation Monitoring. The PRMMP shall describe the monitoring levels required during excavations, and the location of areas deemed to have a high paleontological resource potential. Monitoring shall entail the visual inspection of excavated or graded areas and trench sidewalls. If the Project paleontologist determines full-time monitoring is no longer warranted, based on the geologic conditions at depth, he/she/they may recommend that monitoring be reduced or cease entirely.
- Fossil Discoveries. If a paleontological resource is discovered, the Project paleontologist shall have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project paleontologist shall complete the following:

- *Salvage of Fossils*. If fossils are discovered, all work in the immediate vicinity shall be halted to allow the Project paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the Project paleontologist shall recover them following standard field procedures for collecting paleontological as outlined in the PRMMP prepared for the Project. The Project paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.
- *Fossil Preparation and Curation*. The PRMMP shall identify the museum that has agreed to accept fossils that may be discovered during Project-related excavations. Upon completion of fieldwork, all significant fossils collected shall be prepared in a properly equipped laboratory to a point ready for curation. Preparation may include the removal of excess matrix from fossil materials and stabilizing or repairing specimens. During preparation and inventory, the fossil specimens shall be identified to the lowest taxonomic level practical prior to curation at an accredited museum. The fossil specimens shall be delivered to the accredited museum or repository no later than 90 days after all fieldwork is completed. The cost of curation shall be assessed by the repository and shall be the responsibility of the Project Applicant.

- Final Paleontological Mitigation Report. Upon completion of ground-disturbing activities (and curation of fossils if necessary), the Project paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.

4.6.8 Design Features (DF) and Regulatory Requirements (RR)

The City of Palmdale is required to assure that implementing development complies with the assumptions relied upon herein and applicable regulatory requirements pertaining to the topic of Geology and Soils, which include the following regulatory requirements and design features. The Project shall be conditioned to implement the following design features and regulatory requirements as part of the City's Conditions of Approval for the Project.

GEO RR-1 Prior to issuance of grading or building permits, the City of Palmdale Building and Safety Division shall verify that all of the recommendations provided in the Project's Geotechnical Investigation prepared by Southern California Geotechnical and included as *Technical Appendix F1* to the Project's EIR, are incorporated into the Project's grading and building plans and implemented by the construction contractors. Recommendations are made for, but are not limited to: 1) Seismic Design Considerations; 2) Geotechnical Design Considerations: all grading activities shall be

completed in accordance with the Grading Guide Specifications included as Appendix D of the Geotechnical Investigation; 3) Site Grading Recommendations; 4) Construction Considerations; 5) Foundation Design and Construction; 6) Floor Slab Design and Construction; 7) Retaining Wall Design and Construction; and 8) Pavement Design Parameters.

GEO RR-2 The Project is required to comply with the provisions of PMC Chapter 8.04, Adoption of Health, Safety and Technical Construction Codes, which generally require that all projects comply with California Building Codes and the International Building Codes. These codes establish site-specific investigation requirements, construction standards, and inspection procedures to ensure that development does not pose a threat to the health, safety, and welfare of the public, and include requirements related to erosion.

GEO RR-3 The Project is required to comply with the provisions of AVAQMD Rule 403 by addressing blowing dust from the Project's construction activities.

GEO RR-4 The Project is required to comply with the provisions of the Project's NPDES permit, the Project's SWPPP as well as the City's SWMP. Compliance would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from stormwater and non-stormwater discharges.

4.6.9 Significance of Impacts After Mitigation

Threshold f: Less than Significant Impact with Mitigation Incorporated. Implementation of Mitigation Measure GEO MM-1 would ensure that a Paleontological Resources Mitigation and Monitoring Plan (PRMMP) is prepared and approved by the City prior to the issuance of grading permits. Implementation of the PRMMP would ensure that any paleontological resources that may be uncovered during Project-related ground-disturbing activities would be identified, avoided, salvaged, and curated at an appropriate facility, and further requires the preparation of a Final Paleontological Mitigation Report. Implementation of the required mitigation would reduce the Project's potential impacts to paleontological resources to a less than significant level.

4.7 GREENHOUSE GAS EMISSIONS

The analysis in this Subsection is based in part on a greenhouse gas (GHG) analysis prepared for the Project by Urban Crossroads, Inc., titled, "Antelope Valley Commerce Center Greenhouse Gas Analysis" (herein, "GHGA"), dated November 14, 2023, and included as EIR *Technical Appendix H* (Urban Crossroads, 2023d). I All references used in this subsection are included in EIR Section 7.0, *References.*

4.7.1 EXISTING CONDITIONS

A. Introduction to Global Climate Change

Global climate change (GCC) is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. Most scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases (GHGs) in the earth's atmosphere, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. Most scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years. (Urban Crossroads, 2023d, p. 11)

An individual project like the proposed Project cannot generate enough GHG emissions to affect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs across the world, which when taken together constitute potential influences on GCC. (Urban Crossroads, 2023d, p. 11)

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation, and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2, N_2O, CH_4, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF_3), and sulfur hexafluoride (SF_6). These gases stay in the atmosphere, anywhere from a minimum of 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radiative heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages. (Urban Crossroads, 2023d, p. 11)

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic activity. Without the natural GHG effect, the earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature. (Urban Crossroads, 2023d, pp. 11-12)

B. Greenhouse Gases

1. Greenhouse Gases and Health Effects

GHGs trap heat in the atmosphere, creating a GHG effect that results in global warming and climate change. Many gases demonstrate these properties. For the purposes of analysis, emissions of CO_2, CH_4, and N_2O are evaluated because these gases are the primary contributors to GCC from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases. (Urban Crossroads, 2023d, pp. 11-12)

❑ Water

Water is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. A climate feedback is an indirect, or secondary change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change. (Urban Crossroads, 2023d, Table 2-1)

As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more and more water vapor. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually condense into clouds, and clouds are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up). (Urban Crossroads, 2023d, Table 2-1)

As the main source of water vapor, approximately 85 percent of evaporation comes from the oceans. Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves. (Urban Crossroads, 2023d, Table 2-1)

At this time, there are no known direct health effects related to water vapor. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor. (Urban Crossroads, 2023d, Table 2-1)

❑ Carbon Dioxide

Carbon Dioxide (CO_2) is an odorless and colorless GHG. Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 parts per million (370 ppm), an increase of more than 30 percent. Left unchecked, the concentration of CO_2 in the atmosphere is projected to increase to a minimum of 540 ppm by Year 2100 as a direct result of anthropogenic sources. (Urban Crossroads, 2023d, Table 2-1)

CO_2 is emitted from natural and manmade sources. Natural sources include the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. CO_2 is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks. (Urban Crossroads, 2023d, Table 2-1)

Outdoor levels of CO_2 are not high enough to result in negative health effects. According to the National Institute for Occupational Safety and Health (NIOSH), high concentrations of CO_2 can result in health effects such as headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of CO_2 in the earth's atmosphere are estimated to be approximately 370 ppm, the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15-minute period. (Urban Crossroads, 2023d, Table 2-1)

❑ Methane

Methane (CH_4) is an extremely effective absorber of radiation, although its atmospheric concentration is less than CO_2 and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs. CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH_4. Other anthropocentric sources include fossil-fuel combustion and biomass burning. CH_4 is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Exposure to high levels of CH_4 can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate. (Urban Crossroads, 2023d, Table 2-1)

❑ Nitrous Oxide

Nitrous Oxide (N_2O), also known as laughing gas, is a colorless GHG. Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314

parts per billion (ppb). N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes such as fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions, also contribute to its atmospheric load. It is used as an aerosol spray propellant, such as in whipped cream bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. N_2O can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction. N_2O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage). (Urban Crossroads, 2023d, Table 2-1)

- **Chlorofluorocarbons**

Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs have no natural source but were first synthesized in 1928 and used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years. In confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation (Urban Crossroads, 2023d, Table 2-1).

- **Hydrofluorocarbons**

Hydrofluorocarbons (HFCs) are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential (GWP). The HFCs with the largest measured atmospheric abundances are (in order), Fluoroform (HFC-23), 1,1,1,2-tetrafluoroethane (HFC-134a), and 1,1-difluoroethane (HFC-152a). Prior to 1990, the only significant emissions were of HFC-23. HCF-134a emissions are increasing due to its use as a refrigerant. HFCs are manmade for applications such as automobile air conditioners and refrigerants. No health effects are known to result from exposure to HFCs. (Urban Crossroads, 2023d, Table 2-1)

- **Perfluorochemicals**

Perfluorochemicals (PFCs) have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The EPA estimates that concentrations of CF_4 in the atmosphere are over 70 parts per trillion (ppt). The two main sources of PFCs are primary aluminum production and semiconductor manufacture. No health effects are known to result from exposure to PFCs. (Urban Crossroads, 2023d, Table 2-1)

- **Sulfur Hexafluoride**

Sulfur Hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900). The EPA indicates that concentrations in the 1990s were about 4 ppt. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection. In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing. (Urban Crossroads, 2023d, Table 2-1)

- **Nitrogen Trifluoride (NF_3)**

Nitrogen Trifluoride (NF_3) is a colorless gas with a distinctly moldy odor. The World Resources Institute (WRI) indicates that NF_3 has a 100-year GWP of 17,200. NF_3 is used in industrial processes and is produced in the manufacturing of semiconductors, Liquid Crystal Display (LCD) panels, types of solar panels, and chemical lasers. Long-term or repeated exposure may affect the liver and kidneys and may cause fluorosis. (Urban Crossroads, 2023d, Table 2-1)

2. Potential Global Warming Effects

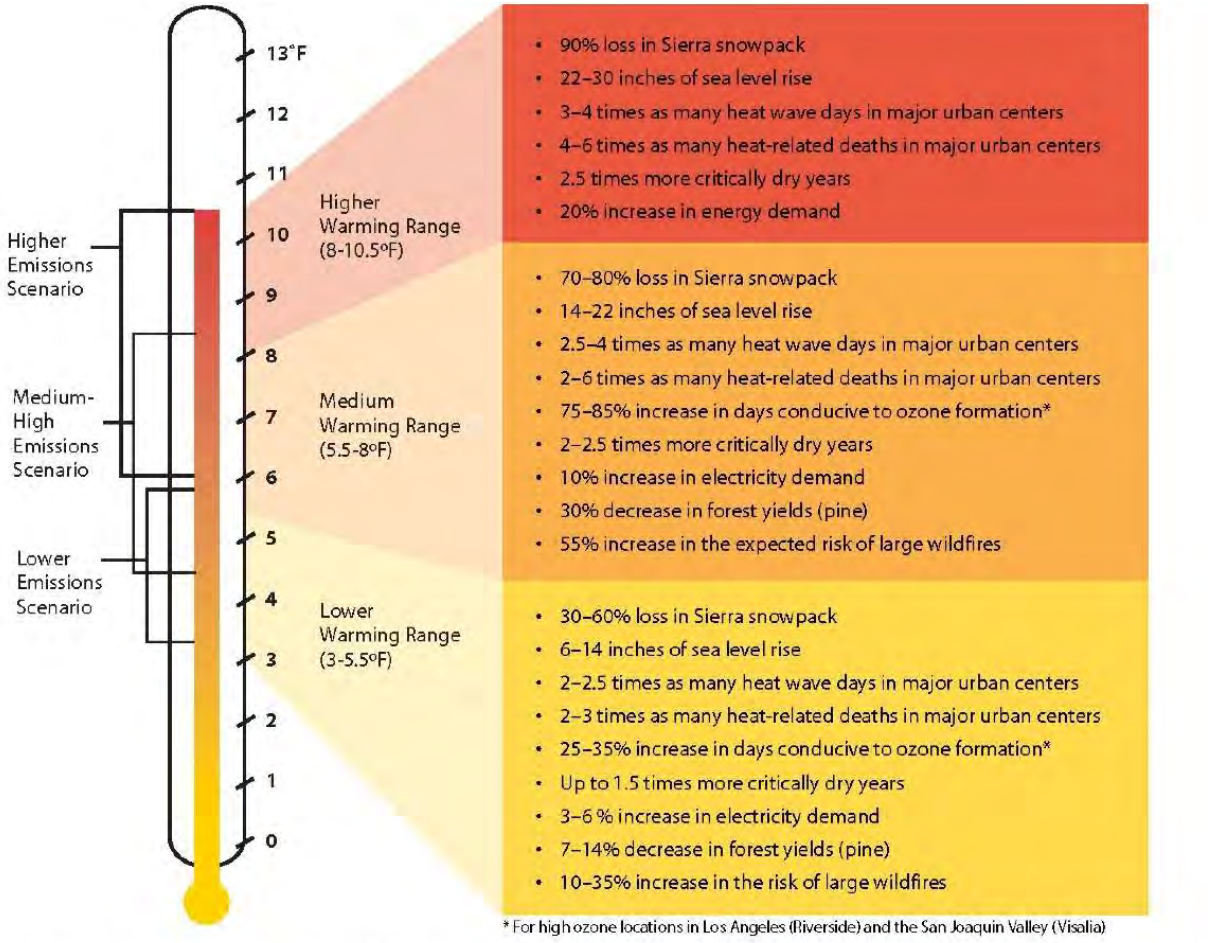
The potential health effects related directly to the emissions of CO_2, CH_4, and N_2O as they relate to development projects such as the proposed Project are still being debated in the scientific community. Their cumulative effects to GCC have the potential to cause adverse effects to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also purport that higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change will likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas. Figure 4.7-1, *Summary of Projected Global Warming Impact, 2070-2099 (as Compared with 1961-1990)*, presents the potential impacts of global warming. (Urban Crossroads, 2023d, p. 17)

3. Global Warming Potential

GHGs have varying GWP values. GWP of a GHG indicates the amount of warming a gas causes over a given period of time and represents the potential of a gas to trap heat in the atmosphere. CO_2 is utilized as the reference gas for GWP, and thus has a GWP of 1. CO_2 equivalent (CO_2e) is a term used for describing the different GHGs in a common unit. CO_2e signifies the amount of CO_2 which would have the equivalent GWP. (Urban Crossroads, 2023d, p. 18)

The atmospheric lifetime and GWP of selected GHGs are summarized in Table 4.7-1, *GWP and Atmospheric Lifetime of Select GHGs*. As shown in in Table 4.7-1, GWP for the 6th Assessment Report, the Intergovernmental Panel on Climate Change (IPCC) scientific and socio-economic assessment on climate change, range from one for CO_2 to 25,200 for SF_6. (Urban Crossroads, 2023d, p. 18)

Figure 4.7-1 Summary of Projected Global Warming Impact, 2070-2099 (as Compared with 1961-1990)



Source: Barbara H. Allen-Diaz. "Climate change affects us all." *University of California, Agriculture and Natural Resources* (Urban Crossroads, 2023d, Exhibit 2-A)

Table 4.7-1 GWP and Atmospheric Lifetime of Select GHGs

Gas	Atmospheric Lifetime (years)	GWP (100-year time horizon)
		6th Assessment Report
CO_2	Multiple	1
CH_4	12 .4	28
N_2O	121	273
HFC-23	222	14,600
HFC-134a	13.4	1,526
HFC-152a	1.5	164
SF_6	3,200	25,200

Source: IPCC Second Assessment Report, 1995 and IPCC Sixth Assessment Report, 2022
(Urban Crossroads, 2023d, Table 2-2)

C. *GHG Emissions Inventories*

1. *Global*

Worldwide anthropogenic GHG emissions are tracked by the IPCC for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human GHG emissions data for Annex I nations are available through 2020. Based on the latest available data, the sum of these emissions totaled approximately 28,026,643 gigagram (Gg) CO_2e as summarized in Table 4.7-2, *Top GHG Producing Countries and the European Union*. (Urban Crossroads, 2023d, p. 18)

Table 4.7-2 Top GHG Producing Countries and the European Union

Emitting Countries	GHG Emissions (Gg CO_2e)
China	12,300,200
United States	5,981,354
European Union (27-member countries)	3,706,110
India	2,839,420
Russian Federation	2,051,437
Japan	1,148,122
Total	**28,026,643**

(Urban Crossroads, 2023d, Table 2-3)

2. *United States*

As shown in Table 4.7-2, the United States, as a single country, was the number two producer of GHG emissions in 2020 (Urban Crossroads, 2023d, p. 18).

3. State of California

California has substantially slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls but is still a substantial contributor to the United States emissions inventory total. The California Air Resource Board (CARB) compiles GHG inventories for the State of California. Based upon the 2022 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2020 GHG emissions period, California emitted an average 369.2 million metric tons of CO_2e per year ($MMTCO_2e$ per year) or 369,200 Gg CO_2e (6.17 percent of the total United States GHG emissions). (Urban Crossroads, 2023d, p. 19)

D. Effects of Climate Change in California

1. Public Health

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from approximately 25 to 35 percent under the lower warming range to approximately 75 to 85 percent under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. Based on Our Changing Climate Assessing the Risks to California by the California Climate Change Center, large wildfires could become up to 55 percent more frequent if GHG emissions are not significantly reduced. (Urban Crossroads, 2023d, p. 19)

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90 degrees Fahrenheit (90°F) in Los Angeles and 95°F in Sacramento by 2100. This is a significant increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat. (Urban Crossroads, 2023d, p. 19)

2. Water Resources

A vast network of man-made reservoirs and aqueducts capture and transport water throughout the State from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages. (Urban Crossroads, 2023d, p. 20)

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as approximately 70 to 90 percent. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which

remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. (Urban Crossroads, 2023d, p. 20)

California's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply. (Urban Crossroads, 2023d, p. 20)

3. Agriculture

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products Statewide. First, California farmers could possibly lose as much as 25 percent of the water supply needed. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth. (Urban Crossroads, 2023d, p. 20)

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, and nuts. (Urban Crossroads, 2023d, p. 20)

In addition, continued GCC could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued GCC could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates. (Urban Crossroads, 2023d, p. 20)

4. Forests and Landscapes

GCC has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks would not be uniform throughout the State. In contrast, wildfires in northern California could increase by up to 90 percent due to decreased precipitation. Moreover, continued GCC has the potential to alter natural ecosystems and biological diversity within the State. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80 precent by the end of the century as a result of increasing temperatures. The

productivity of the State's forests has the potential to decrease as a result of GCC. (Urban Crossroads, 2023d, p. 21)

5. Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the State's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches. (Urban Crossroads, 2023d, p. 21)

4.7.2 REGULATORY SETTING

The following is a brief description of the federal, State, and local environmental laws and related regulations related to GHG emissions.

A. International Regulations

1. Kyoto Protocol

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its Parties by setting internationally binding emission reduction targets. Recognizing that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

The Kyoto Protocol was adopted in Kyoto, Japan, on December 11, 1997 and entered into force on February 16, 2005. On December 8, 2012, in Doha, Qatar, the "Doha Amendment to the Kyoto Protocol" was adopted. The amendment includes:

- New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from January 1, 2013 to December 31, 2020;
- A revised list of GHGs to be reported on by Parties in the second commitment period; and
- Amendments to several articles of the Kyoto Protocol which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period.

On December 21, 2012, the amendment was circulated by the Secretary-General of the United Nations, acting in his capacity as Depositary, to all Parties to the Kyoto Protocol in accordance with Articles 20 and 21 of the Protocol. During the first commitment period, 37 industrialized countries and the European Community committed to reduce GHG emissions to an average of 5 percent against 1990 levels. During the second commitment period, Parties committed to reduce GHG emissions by at least

18 percent below 1990 levels in the eight-year period from 2013 to 2020; however, the composition of Parties in the second commitment period is different from the first. (UNFCCC, n.d.)

2. *The Paris Agreement*

The Paris Agreement builds upon the Convention and for the first time brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries. The central aim of the Paris Agreement is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below two degrees Celsius (2 ˚C) above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 ˚C. Additionally, the Agreement aims to strengthen the ability of countries to deal with the impacts of climate change. The Paris Agreement requires all Parties to put forward their best efforts through "nationally determined contributions" (NDCs) and to strengthen these efforts in the years ahead. This includes requirements that all Parties report regularly on their emissions and on their implementation efforts. The Paris Agreement entered into force on November 4, 2016, thirty days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 percent of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval, or accession with the Depositary. (UNFCCC, n.d.)

B. *Federal Regulations*

1. *Clean Air Act*

Coinciding with the 2009 meeting of international leaders in Copenhagen, on December 7, 2009, the EPA issued an Endangerment Finding under § 202(a) of the Clean Air Act (CAA), introducing federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the CAA. To date, the EPA has not promulgated regulations on GHG emissions, but it has begun to develop them. Previously the EPA had not regulated GHGs under the CAA because it asserted that the Act did not authorize it to issue mandatory regulations to address GCC and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In Massachusetts v. Environmental Protection Agency et al. (127 S. Ct. 1438 [2007]); however, the US Supreme Court held that GHGs are pollutants under the CAA and directed the EPA to decide whether the gases endangered public health or welfare. The EPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. (EPA, 2023a; EPA, 2023k)

C. *State Regulations*

1. *Title 24 Building Energy Standards*

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The

2022 version of Title 24 was adopted by the CEC became effective on January 1, 2023. The 2022 Building Energy Efficiency Standards focuses on four key areas in newly constructed homes and businesses: 1) encouraging electric heat pump technology for space and water heating, which consumes less energy and produces fewer emissions than gas-powered units; 2) establishing electric-ready requirements for single-family homes to position owners to use cleaner electric heating, cooking and electric vehicle (EV) charging options whenever they choose to adopt those technologies; 3) expanding solar photovoltaic (PV) system and battery storage standards to make clean energy available onsite and complement the State's progress toward a 100 percent clean electricity grid; and strengthening ventilation standards to improve indoor air quality.(CEC, n.d.)

Part 11 of Title 24 is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: 1) Planning and design; 2) Energy efficiency; 3) Water efficiency and conservation; 4) Material conservation and resource efficiency; and 5) Environmental air quality." The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the CBSC. Unless otherwise noted in the regulation, all newly constructed buildings in California are subject to the requirements of the CALGreen Code.

2. California Air Resources Board Rules

The CARB enforces rules related to air pollutant emissions in the State of California. Rules which are applicable to the Project include, but are not limited to, those listed below.

- CARB Rule 2480 (13 CCR 2480): Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools, which limits nonessential idling for commercial trucks and school buses within 100 feet of a school.
- CARB Rule 2485 (13 CCR 2485): Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling, which limits nonessential idling to five minutes or less for commercial trucks.
- CARB Rule 2449 (13 CCR 2449): In-Use Off-Road Diesel Idling Restricts, which limits nonessential idling to five minutes or less for diesel-powered off-road equipment.

3. California Assembly Bill 1493

California Assembly Bill 1493 (AB 1493) required the CARB to adopt the nation's first GHG emission standards for passenger vehicles. The US EPA granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles on June 30, 2009. On September 24, 2009, CARB adopted amendments to the Pavley regulations that reduced GHG emissions in new passenger vehicles from model year 2009 through 2016. It is estimated by CARB that the Pavley regulations reduced GHG emissions from California passenger vehicles by

about 22 percent in 2012 and about 30 percent in 2016, all while improving fuel efficiency and reducing motorists' costs. (CARB, n.d.)

4. Executive Order S-3-05

Executive Order S-3-05 (EO S-3-05) documents GHG emission reduction goals, creates the Climate Action Team and directs the Secretary of the California EPA to coordinate efforts with meeting the GHG reduction targets with the heads of other State agencies. EO S-3-05 requires the Secretary to report back to the Governor and Legislature biannually to report: progress toward meeting the GHG goals; GHG impacts to California; and applicable Mitigation and Adaptation Plans. The EO S-3-05 goals for GHG emissions reductions include: reducing GHG emissions to 2000 levels by the year 2010; reducing GHG emissions to 1990 levels by the year 2020; and reducing GHG emissions to 80 percent below 1990 levels by 2050. (CA State Library, 2005)

5. California Assembly Bill 32 – Global Warming Solutions Act of 2006

In September 2006, Governor Schwarzenegger signed AB 32, the California Global Warming Solutions Act of 2006. AB 32 required California to reduce its GHG emissions to 1990 levels by 2020, which represented a reduction of approximately 15 percent below emissions expected under a "business as usual (BAU)" scenario. (CARB, 2018)

In November 2007, CARB completed its estimated calculations of Statewide 1990 GHG levels. Net emission 1990 levels were estimated at 427 million metric tons (MMTs). Accordingly, 427 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) was established as the emissions limit for 2020. For comparison, CARB's estimate for baseline GHG emissions was 473 $MMTCO_2e$ for 2000 and without emissions reduction measures 2010 emissions were projected to be 532 $MMTCO_2e$. BAU conditions (without the reductions to be implemented by CARB regulations) for 2020 were projected to be 596 $MMTCO_2e$. (CARB, 2007)

AB 32 required CARB to develop a Scoping Plan to lay out California's strategy for meeting the goals, and the Scoping Plan must be updated every five years. In December 2008, CARB approved the initial Scoping Plan, which included a suite of measures to sharply cut GHG emissions. Overall, CARB determined that achieving the 1990 emission level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent in the absence of new laws and regulations (referred to as BAU). When the 2020 emissions level projection also was updated to account for implemented regulatory measures, including Pavley (vehicle model years 2009 - 2016) and the renewable portfolio standard (RPS) (12 percent to 20 percent), the 2020 projection in the BAU condition was reduced further to 507 $MTCO_2e$. As a result, based on the updated economic and regulatory data, CARB determined that achieving the 1990 emissions level in 2020 would now only require a reduction of GHG emissions of 80 $MTCO_2e$, or approximately 16 percent (down from 28.5 percent), from the BAU condition.

In May 2014, CARB approved the First Update to the Climate Change Scoping Plan (Update), which built upon the initial Scoping Plan with new strategies and recommendations. The Update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals, highlights

the latest climate change science and provides direction on how to achieve long-term emission reduction goal described in EO S-3-05. The Update recalculated 1990 GHG emissions using new global warming potentials identified in the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report released in 2007. Using those Global Warming Potentials (GWPs), the 427 $MTCO_2e$ 1990 emissions level and 2020 GHG emissions limit identified in the 2008 Scoping Plan would be slightly higher, at 431 $MTCO_2e$. Based on the revised 2020 emissions level projection identified in the 2011 Final Supplement and the updated 1990 emissions levels identified in the discussion draft of the First Update, achieving the 1990 emissions level in 2020 would require a reduction of 78 $MTCO_2e$ (down from 509 $MTCO_2e$), or approximately 15.3 percent (down from 28.5 percent), from the BAU condition. (CARB, 2018; CARB, 2017)

6. 2017 CARB Scoping Plan

In November 2017, CARB released the Final 2017 Scoping Plan Update (2017 Scoping Plan), which identifies the State's post-2020 reduction strategy and was the applicable Scoping Plan when this EIR's NOP was released for public review in August 2022. The 2017 Scoping Plan reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the LCFS, and much cleaner cars, trucks, and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH_4 emissions from agricultural and other wastes. The 2017 Scoping Plan establishes a new emissions limit of 260 $MTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030. (Urban Crossroads, 2023d, p. 30)

California's climate strategy would require contributions from all sectors of the economy, including the land base, and would include enhanced focus on zero and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (CH_4, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries would further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. (Urban Crossroads, 2023d, p. 30)

Major elements of the 2017 Scoping Plan framework included:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero-emission vehicles (ZEV) buses and trucks.
- LCFS, with an increased stringency (18 percent by 2030).
- Implementing SB 350, which expands the RPS to 50 percent RPS and doubles energy efficiency savings by 2030.

- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing CH_4 and HCF emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
  Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20 percent reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink. (Urban Crossroads, 2023d, pp. 30-31)

Note, however, that the 2017 Scoping Plan acknowledged that:

> *"[a]chieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."* (Urban Crossroads, 2023d, p. 31)

In addition to the statewide strategies listed above, the 2017 Scoping Plan also identified local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommended that local governments achieve a community-wide goal to achieve emissions of no more than six metric tons of CO2e ($MTCO_2e$) or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidence-based bright-line numeric thresholds—consistent with the 2017 Scoping Plan and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and mitigation that avoid or minimize project emissions to the degree feasible; or a performance-based metric using a Climate Action Plan (CAP) or other plan to reduce GHG emissions is appropriate. (Urban Crossroads, 2023d, p. 31)

According to research conducted by the Lawrence Berkeley National Laboratory (LBNL) and supported by CARB, California, under its existing and proposed GHG reduction policies, could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that by 2030, emissions could range from 211 to 428 $MTCO_2e$ per year ($MTCO_2e$ per year), indicating that "even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40 percent below the 1990 level [of SB 32]." CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Although the research indicated that the emissions would

not meet the State's 80 percent reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050. (Urban Crossroads, 2023d, p. 31)

7. 2022 CARB Scoping Plan

On December 15, 2022 (after the NOP for this DEIR was released for public review but before the Draft EIR was released for public review) CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). The 2022 Scoping Plan builds on the 2017 Scoping Plan as well as the requirements set forth by AB 1279, which directs the State to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can reduce GHG emissions by 85 percent below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to "deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor." The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. Unlike the 2017 Scoping Plan, CARB no longer includes a numeric per capita threshold and instead advocates for compliance with a local GHG reduction strategy (CAP) consistent with CEQA Guidelines section 15183.5. (Urban Crossroads, 2023d, p. 33)

The key elements of the 2022 CARB Scoping Plan focus on transportation - the regulations that will impact this sector are adopted and enforced by CARB on vehicle manufacturers and outside the jurisdiction and control of local governments. As stated in the Plan's executive summary:

> *"The major element of this unprecedented transformation is the aggressive reduction of fossil fuels wherever they are currently used in California, building on and accelerating carbon reduction programs that have been in place for a decade and a half. That means rapidly moving to zero-emission transportation; electrifying the cars, buses, trains, and trucks that now constitute California's single largest source of planet-warming pollution."*
>
> *"[A]pproval of this plan catalyzes a number of efforts, including the development of new regulations as well as amendments to strengthen regulations and programs already in place, not just at CARB but across state agencies."*

Under the 2022 Scoping Plan, the State will lead efforts to meet the 2045 carbon neutrality goal through implementation of the following objectives (Urban Crossroads, 2023d, p. 33):

- Reimagine roadway projects that increase VMT in a way that meets community needs and reduces the need to drive.
- Double local transit capacity and service frequencies by 2030.
- Complete the High-Speed Rail (HSR) System and other elements of the inter-city rail network by 2040.
- Expand and complete planned networks of high-quality active transportation infrastructure.
- Increase availability and affordability of bikes, e-bikes, scooters, and other alternatives to light-duty vehicles, prioritizing needs of underserved communities.

- Shift revenue generation for transportation projects away from the gas tax into more durable sources by 2030.
- Authorize and implement roadway pricing strategies and reallocate revenues to equitably improve transit, bicycling, and other sustainable transportation choices.
- Prioritize addressing key transit bottlenecks and other infrastructure investments to improve transit operational efficiency over investments that increase VMT.
- Develop and implement a statewide transportation demand management (TDM) framework with VMT mitigation requirements for large employers and large developments.
- Prevent uncontrolled growth of autonomous vehicle (AV) VMT, particularly zero-passenger miles.
- Channel new mobility services towards pooled use models, transit complementarity, and lower VMT outcomes.
- Establish an integrated statewide system for trip planning, booking, payment, and user accounts that enables efficient and equitable multimodal systems.
- Provide financial support for low-income and disadvantaged Californians' use of transit and new mobility services.
- Expand universal design features for new mobility services.
- Accelerate infill development in existing transportation-efficient places and deploy strategic resources to create more transportation-efficient locations.
- Encourage alignment in land use, housing, transportation, and conservation planning in adopted regional plans (RTP/SCS and RHNA) and local plans (e.g., General Plan, zoning, and local transportation plans).
- Accelerate production of affordable housing in forms and locations that reduce VMT and affirmatively further fair housing policy objectives.
- Reduce or eliminate parking requirements (and/or enact parking maximums, as appropriate) and promote redevelopment of excess parking, especially in infill locations.
- Preserve and protect existing affordable housing stock and protect existing residents and businesses from displacement and climate risk. (Urban Crossroads, 2023d, pp. 33-34)

Included in the 2022 Scoping Plan is a set of Local Actions (Appendix D to the 2022 Scoping Plan) aimed at providing local jurisdictions with tools to reduce GHGs and assist the State in meeting the ambitious targets set forth in the 2022 Scoping Plan. Appendix D to the 2022 Scoping Plan includes a section on evaluating plan-level and project-level alignment with the State's Climate Goals in CEQA GHG analyses. In this section, CARB identifies several recommendations and strategies that should be considered for new development in order to determine consistency with the 2022 Scoping Plan. Notably, this section is focused on Residential and Mixed-Use Projects, in fact CARB states in Appendix D (page 4): "…focuses primarily on climate action plans (CAPs) and local authority over new residential development. It does not address other land use types (e.g., industrial) or air permitting." (Urban Crossroads, 2023d, p. 34)

Additionally on Page 21 in Appendix D, CARB states: "The recommendations outlined in this section apply only to residential and mixed-use development project types. California currently faces both a

housing crisis and a climate crisis, which necessitates prioritizing recommendations for residential projects to address the housing crisis in a manner that simultaneously supports the State's GHG and regional air quality goals. CARB plans to continue to explore new approaches for other land use types in the future." As such, it would be inappropriate to apply the requirements contained in Appendix D of the 2022 Scoping Plan to any land use types other than residential or mixed-use residential development. (Urban Crossroads, 2023d, pp. 34-35)

8. Cap-and-Trade Program

The 2017 Scoping Plan identifies a Cap-and-Trade Program as one of the key strategies for California to reduce GHG emissions. According to CARB, a cap-and-trade program would help put California on the path to meet its goal of achieving a 40 percent reduction in GHG emissions from 1990 levels by 2030. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap would be able to trade permits to emit GHGs within the overall limit. (Urban Crossroads, 2023d, p. 32)

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. The Cap-and-Trade Program is designed to reduce GHG emissions from regulated entities by more than 16 percent between 2013 and 2020, and by an additional 40 percent by 2030. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and would decline over time, achieving GHG emission reductions throughout the program's duration. (Urban Crossroads, 2023d, p. 32)

Covered entities that emit more than 25,000 $MTCO_2e$ per year must comply with the Cap-and-Trade Program. Triggering of the 25,000 $MTCO_2e$ per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of GHG Emissions (Mandatory Reporting Rule or "MRR"). (Urban Crossroads, 2023d, p. 32)

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender "compliance instruments" for each $MTCO_2e$ of GHG they emit. There also are requirements to surrender compliance instruments covering 30 percent of the prior year's compliance obligation by November of each year. (Urban Crossroads, 2023d, p. 32)

The Cap-and-Trade Program provides a firm cap, which provides the highest certainty of achieving the 2030 target. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in the First Update to the Climate Change Scoping Plan: (Urban Crossroads, 2023d, p. 32)

> *"The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative."*

The Cap-and-Trade Program covers approximately 80 percent of California's GHG emissions. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. (Urban Crossroads, 2023d, p. 33)

9. California Senate Bill 1368

In 2006, the State Legislature adopted California Senate Bill 1368 (SB 1368) (Perata, Chapter 598, Statutes of 2006), which directs the California Public Utilities Commission (CPUC) to adopt a GHG emission performance standards (EPS) for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed specified emissions criteria. Accordingly, SB 1368 effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. SB 1368 will lead to dramatically lower GHG emissions associated with California energy demand. (CEC, n.d.)

10. Executive Order S-01-07

Executive Order S-01-07 (EO S-01-07) is effectively known as the Low Carbon Fuel Standard (LCFS). EO S-01-07 seeks to reduce the carbon intensity of California's passenger vehicle fuels by at least 10 percent by 2020. The LCFS requires fuel providers in California to ensure that the mix of fuel they sell into the California market meet, on average, a declining standard for GHG emissions measured in CO2e grams per unit of fuel energy sold. (CA State Library, 2007)

11. Senate Bill 1078

Senate Bill 1078 (SB 1078) established the California RPS Program, which required electric utilities and other entities under the jurisdiction of the CPUC to supply 20 percent of their power by renewables

by December 31, 2017 for the purposes of increasing the diversity, reliability, public health, and environmental benefits of the energy mix. (CA Legislative Info, n.d.)

12. Senate Bill 107

Senate Bill 107 (SB 107) directed CPUC's Renewable Energy Resources Program to increase the amount of renewable electricity (RPS) generated per year, from 17 percent to an amount that equals at least 20 percent of the total electricity sold to retail customers in California per year by December 31, 2010. (CA Legislative Info, n.d.)

13. Executive Order S-14-08

On November 17, 2008, Governor Schwarzenegger signed Executive Order S-14-08 (EO S-14-08), revising California's existing RPS upward to require all retail sellers of electricity to serve 33 percent of their load from renewable energy sources by 2020. In order to meet this new goal, a substantial increase in the development of wind, solar, geothermal, and other "Renewable Portfolio Standard eligible" energy projects would be needed. EO S-14-08 sought to accelerate such development by streamlining the siting, permitting, and procurement processes for renewable energy generation facilities. To this end, EO-S-14-08 issued two directives: 1) the existing Renewable Energy Transmission Initiative will identify renewable energy zones that can be developed as such with little environmental impact, and 2) the California Energy Commission (CEC) and the California Department of Fish and Wildlife (CDFW) will collaborate to expedite the review, permitting, and licensing process for proposed RPS-eligible renewable energy projects. (CA State Library, 2008)

14. Senate Bill 97

Senate Bill 97 (SB 97) was enacted in 2007 to recognize the need to analyze GHGs as a part of the CEQA process. SB 97 required the Governor's Office of Planning and Research (OPR) to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of GHGs. As part of the administrative rulemaking process, the Natural Resources Agency developed a Final Statement of Reasons explaining the legal and factual bases, intent, and purpose of the CEQA Guidelines amendments. The amendments to the CEQA Guidelines implementing SB 97 became effective on March 18, 2010. Of note, the CEQA Guidelines state that a lead agency has discretion to determine whether to use a quantitative model or methodology or rely on a qualitative analysis or performance-based standards to evaluate GHGs. (CA Legislative Info, n.d.)

CEQA emphasizes that GHG effects are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis. (See CEQA Guidelines § 15130(f)). CEQA Guidelines § 15064.4(b) provides direction for lead agencies for assessing the significance of impacts of GHGs:

1. The extent to which the project may increase or reduce GHGs as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; or

3. 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 GHGs. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the incremental contribution of GHGs by a project. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared.

The CEQA Guideline amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a "good-faith effort, based on available information, to describe, calculate or estimate the amount of GHGs resulting from a project." The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies' discretion to make their own determinations based upon substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

15. Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, Senate Bill (SB 375), Chapter 728, Statutes of 2008) supports the State's climate action goals to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities. Under the Sustainable Communities Act, CARB set regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPO). CARB periodically reviews and updates the targets, as needed. (CARB, n.d.)

Each of California's MPOs must prepare a sustainable communities strategy (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate alternative planning strategy (APS) to meet the targets. (CARB, n.d.)

16. Executive Order B-30-15

On April 29, 2015, Governor Brown issued Executive Order B-30-15 (EO B-30-15), which sets a goal to reduce GHG emissions in California to 40 percent below 1990 levels by 2030. The 2030 target serves as a benchmark reduction set by former Governor Schwarzenegger via EO S-3-05 (i.e., 80 percent below 1990 GHG levels by 2050). (CA State Library, 2015)

17. Senate Bill 32

On September 8, 2016, Governor Jerry Brown signed Senate Bill 32 (SB 32) and its companion bill, Assembly Bill 197 (AB 197). SB 32 requires the State to reduce Statewide GHG emissions to 40 percent below 1990 levels by 2030 a reduction target that was first introduced in EO B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving EO S-3-05, which sets a Statewide GHG reduction target of 80 percent below 1990 levels by 2050. (CA Legislative Info, n.d.)

18. California Climate Crisis Act

The California Climate Crisis Act (AB 1279) declares that it is the policy of the State to achieve net zero GHGs as soon as possible, but no later than 2045; to achieve and maintain net negative greenhouse gas emissions thereafter; and to ensure that by 2045, Statewide anthropogenic GHGs are reduced to at least 85 percent below the 1990 levels. AB 1279 requires the CARB to work with relevant State agencies to ensure that updates to the CARB Scoping Plan identify and recommend measures to achieve these policy goals and to identify and implement a variety of policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in California. AB 1279 also requires CARB to submit an annual report evaluating progress toward these policies. (CA Legislative Info, n.d.)

19. Clean Energy, Jobs, and Affordability Act of 2022

The Clean Energy, Jobs, and Affordability Act of 2022 (Senate Bill 1020 (SB 1020)), revised State policy to include interim targets requiring that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to California end-use customers by December 31, 2035, 95 percent of all retail sales of electricity to California end-use customers by December 31, 2040, 100 percent of all retail sales of electricity to California end-use customers by December 31, 2045, and 100 percent of electricity procured to serve all State agencies by December 31, 2035. SB 1020 also requires each State agency to ensure that zero-carbon resources and eligible renewable energy resources supply 100 percent of electricity procured to serve their agency by December 31, 2035. In addition, SB 1020 requires the State Water Project (SWP) to procure eligible renewable energy and zero-carbon resources as necessary to meet the clean energy requirements specified for all State agencies. Finally, SB 1020 requires the CPUC to develop utility affordability metrics for both electricity and gas service. (CA Legislative Info, n.d.)

20. Carbon Sequestration: Carbon Capture, Removal, Utilization, and Storage Program

Senate Bill 905 (SB 905) requires CARB to establish a Carbon Capture, Removal, Utilization, and Storage (CCRUS) Program and adopt regulations for a model unified permit program for the construction and operation of CCRUS projects. SB 905 is intended to accelerate the deployment of carbon management technologies and ensure that they are deployed in a safe and equitable way. SB 905 requires the CCRUS Program to ensure that carbon dioxide capture, removal, and sequestration projects include specified components including, among others, certain monitoring activities. In

addition, SB 905 requires that by January 1, 2025, CARB adopt regulations for a unified permit application for the construction and operation of carbon dioxide capture, removal, or sequestration projects to expedite the issuance of permits or other authorizations for the construction and operation of those projects. SB 905 also requires the establishment of a centralized public database to track the deployment of carbon capture, utilization, or storage (CCUS) technologies and carbon dioxide removal (CDR) technologies. (CA Legislative Info, n.d.)

21. Assembly Bill 1757

Assembly Bill 1758 (AB 1757) directs the California Natural Resources Agency (CNRA) to determine an ambitious range of targets for natural carbon sequestration, and for nature-based climate solutions, that reduce GHG emissions for 2030, 2038, and 2045 to support State goals to achieve carbon neutrality and foster climate adaptation and resilience. Additionally, AB 1757 requires these targets to be integrated into the CARB Scoping Plan and other State policies. It also includes provisions to avoid double counting emission reductions, updates the Natural and Working Lands Climate Smart Strategy, develops GHG tracking protocols, and biennially post progress made in achieving the targets on CNRA's internet website. In addition, AB 1757 requires CARB to develop standard methods for State agencies to consistently track GHG emissions and reductions, carbon sequestration, and, where feasible, additional benefits from natural and working lands over time. (CA Legislative Info, n.d.)

D. Regional and Local Regulations

1. Connect SoCal 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) is a Joint Powers Authority (JPA) under California State law, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. Under federal law, SCAG is designated as a MPO and under State law as a Regional Transportation Planning Agency and a Council of Governments. The SCAG region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura) and 191 cities in an area covering more than 38,000 square miles.

SCAG's 2020-2045 RTP/SCS, also referred to as Connect SoCal, develops long-range regional transportation plans including a sustainable communities strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations and other plans for the region. The RTP/SCS provides objectives for meeting air pollution emissions reduction targets set forth by the CARB; these objectives were provided in direct response to SB 375 which was enacted to reduce GHG emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. The Subregional Sustainable Communities Strategies identifies the Project site as being located in an area with a "Standard Suburban" land use pattern, which is defined as auto-oriented development with a minimal mix of land uses.

The Goods Movement Technical Report of Connect SoCal recognizes that the SCAG region is the premier trade gateway for the United States. Connect SoCal acknowledges that the SCAG region has

witnessed continued growth for warehousing, distribution, cold storage and truck terminal facilities, with most of the growth for national and regional distribution facilities occurring in the Inland Empire. Through Connect SoCal, SCAG is working on various regional strategies to maintain the SCAG region as an important trade gateway while addressing regional transportation efficiency and environmental sustainability.

2. City of Palmdale General Plan

The City has established a series of goals and policies in its General Plan (Palmdale 2045) to reduce GHG emissions and increase sustainability. The Sustainability, Climate, and Resilience Element of Palmdale 2045 serves as the Climate Action Plan (CAP) for the City of Palmdale. The City of Palmdale developed the CAP to reduce emissions and make Palmdale a more sustainable, healthier, and resilient community. Pursuant with CEQA Guidelines Section 15183.5, the CAP would meet the requirements of a qualified CAP and future residential and non-residential projects developed under the Plan would be able to tier from the CAP for analysis purposes. The following strategies are some of the policies included in the CAP that work to reduce the City's emissions in conjunction with the State reduction goals: (Urban Crossroads, 2023d, p. 41)

Maintain and Implement CAP

- Goal SCR-1: Achieve a carbon neutral community by 2045 (EO B-55-18).
    - SCR-1.1 CAP Maintenance. Maintain and regularly update a CAP to reduce GHGs generated within the City.
    - SCR-1.2 GHG Inventory. Conduct community GHG inventories every three to five years to track progress toward achieving the City's GHG reduction goal.
    - SCR-1.3 Funding Sources. Seek funding to support implementation of GHG reduction projects for the City, residents, and businesses.
    - SCR-1.4 Community Engagement. Develop and implement comprehensive community engagement including educational outreach, issue-specific awareness campaigns, and technical assistance. (Urban Crossroads, 2023d, p. 42)

Clean Energy

- Goal SCR-2: Utilize a fossil fuel free energy system (SB 100).
    - SCR-2.1 Carbon Free Energy. Direct EPIC to provide 75 percent carbon-free or renewable electricity to residents and businesses by 2030, achieving 100 percent carbon-free electricity by 2045.
    - SCR-2.2 Community Solar. Explore the development of community solar projects and microgrids.
    - SCR-2.3 Battery Permitting. Establish a streamlined approval process for battery storage systems. (Urban Crossroads, 2023d, p. 42)

Buildings

- Goal SCR-3: Green and decarbonized buildings for new construction and major renovations.
    - SCR-3.1 Energy Efficient New Construction. Integrate CALGreen Tier 1 and Tier 2 green building and energy efficiency standards into new construction and major remodels.
    - SCR-3.2 All-Electric Reach Code. Consider adopting a local reach code to encourage new buildings to be all-electric.
    - SCR-3.3 Solar and Storage. Require installation of photovoltaic panels and battery storage on all residential new construction and nonresidential new construction over 5,000 sf.
    - SCR-3.4 Energy Efficient Existing Buildings. Establish an energy and water efficiency upgrade program for existing buildings, focusing resources on the most underserved populations.
    - SCR-3.4 Benchmarking Energy and Water Use. Register municipal buildings with Energy Star Portfolio Manager and report energy and water use (AB 802). (Urban Crossroads, 2023d, p. 42)

Transportation

- Goal SCR-4: Reduced greenhouse gas emissions from transportation (SB 379, EO N-79-20).
    - SCR-4.1 Bike Facilities. Promote bicycle use with new private development projects through requirements for bicycle parking, lockers and showers, bike share facilities, and when feasible, connections to City bike lanes.
    - SCR-4.2 Public Transit. Expand the public transit system, increase frequency of service, and provide shade at transit stops.
    - SCR-4.3 Public EV Chargers. Install EV chargers at suitable public facilities, including Downtown parking structures, the future multi-modal High Speed Rail station, and community parks.
    - SCR-4.4 EV Reach Code. Adopt EV requirements beyond CALGreen in both number of chargers and charger capacity.
    - SCR-4.5 ZEV Purchasing. When purchasing City vehicles give preference to fuel efficient vehicles, including the use of zero emission vehicles.
    - SCR-4.6 Clean Fuels. Require use of clean fuels for City construction and maintenance vehicles and lawn/garden equipment.
    - SCR-4.7 Pedestrian and Cyclist Safety. Improve bicycle and pedestrian modes of travel by improving pedestrian and cyclist safety. Example techniques include increasing the number of sidewalks, pending connected and protected bike lanes,

and redesigning high incidence intersections. (Urban Crossroads, 2023d, pp. 42-43)

Water and Wastewater

- Goal SCR-6: Safe and secure water supply.
    - SCR-6.1 Recycled Water. Increase availability of local recycled water.
    - SCR-6.2 Water Efficiency Standards. Establish water efficiency standards that are more stringent than CALGreen and MWELO.
    - SCR-6.3 Low-Water Use Plant List. Implement the City's landscape plant list and use of low-water plants in new or renovated landscaped areas.
    - SCR-6.4 Rainwater Capture. Encourage rainwater capture and use of cisterns for outdoor watering purposes.
    - SCR-6.5 Greywater Permitting. Establish a streamlined permitting process for greywater systems. (Urban Crossroads, 2023d, p. 43)

4.7.3 Basis for Determining Significance

According to Section VIII of Appendix G to the CEQA Guidelines, the proposed Project would result in a significant impact due to GHG emissions if the Project or any Project-related component would:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Section 15064.7(c) of the State CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence." The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of the CEQA's requirements for cumulative impact analysis.

CEQA Guidelines Section 15064.4(a) further states, ". . . A lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use . . .; or (2) Rely on a qualitative analysis or performance-based standards."

CEQA Guidelines Section 15064.4 provides that a lead agency should consider the following factors, among others, in assessing the significance of impacts from greenhouse gas emissions:

- Consideration 1: The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.

- Consideration 2: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

- Consideration 3: 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 greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable. (Urban Crossroads, 2023d, pp. 45-46)

Based on the foregoing guidance, the City of Palmdale has elected to rely on compliance with a local air district threshold in the determination of significance of Project-related GHG emissions. Specifically, the City has selected the interim 3,000 $MTCO_2e$ per year threshold recommended by South Coast Air Quality Management District (SCAQMD) staff for residential and commercial sector projects against which to compare Project-related GHG emissions. Although the Project is not located within the SCAQMD's jurisdiction, the SCAQMD's recommended threshold of 3,000 $MTCO_2e$ per year is more restrictive than the AVAQMD's adopted significance threshold for GHGs of 100,000 tpy (90,719 $MTCO_2e$ per year). AVAQMD identifies that 100,000 tpy of GHG emissions from a single facility constitutes major sources that require a federal operating permit. As such, use of the EPA determination of whether a Project is a major source and consequently is used as AVAQMD's threshold. (Urban Crossroads, 2023d, p. 46)

The 3,000 $MTCO_2e$ per year threshold is based on a 90 percent emission "capture" rate methodology. Prior to its use by the SCAQMD, the 90 percent emissions capture approach was one of the options suggested by the California Air Pollution Control Officers Association (CAPCOA) in their CEQA and Climate Change white paper (2008). A 90 percent emission capture rate means that unmitigated GHG emissions from the top 90 percent of all GHG-producing projects within a geographic area – the SCAB in this instance – would be subject to a detailed analysis of potential environmental impacts from GHG emissions, while the bottom 10 percent of all GHG-producing projects would be excluded from detailed analysis. A GHG significance threshold based on a 90 percent emission capture rate is appropriate to address the long-term adverse impacts associated with global climate change because medium and large projects will be required to implement measures to reduce GHG emissions, while small projects, which are generally infill development projects that are not the focus of the State's GHG reduction targets, are allowed to proceed. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial proportion of future development projects and demonstrate that cumulative emissions reductions are being achieved while setting the emission

threshold high enough to exclude small projects that will, in aggregate, contribute approximate 1 percent of projected statewide GHG emissions in the Year 2050. (Urban Crossroads, 2023d, p. 45)

In setting the threshold at 3,000 $MTCO_2e$ per year, SCAQMD researched a database of projects kept by the Governor's Office of Planning and Research (OPR). That database contained 798 projects, 87 of which were removed because they were very large projects and/or outliers that would skew emissions values too high, leaving 711 as the sample population to use in determining the 90th percentile capture rate. The SCAQMD analysis of the 711 projects within the sample population combined commercial, residential, and mixed-use projects. It should be noted that the sample of projects included warehouses and other light industrial land uses but did not include industrial processes (i.e., oil refineries, heavy manufacturing, electric generating stations, mining operations, etc.). Emissions from each of these projects were calculated by SCAQMD to provide a consistent method of emissions calculations across the sample population and from projects within the sample population. In calculating the emissions, the SCAQMD analysis determined that the 90th percentile ranged between 2,983 to 3,143 $MTCO_2e$ per year. The SCAQMD set their significance threshold at the low-end value of the range when rounded to the nearest hundred tons of emissions (i.e., 3,000 $MTCO_2e$ per year) to define small projects that are considered less than significant and do not need to provide further analysis. (Urban Crossroads, 2023d, pp. 46-47)

The City understands that the 3,000 $MTCO_2e$ per year threshold for residential/commercial uses was proposed by SCAQMD a decade ago and was adopted as an interim policy; however, no permanent, superseding policy or threshold has since been adopted. The 3,000 $MTCO_2e$ per year threshold was developed and recommended by SCAQMD, an expert agency, based on substantial evidence as provided in the Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Threshold (2008) document and subsequent Working Group meetings (latest of which occurred in 2010). SCAQMD has not withdrawn its support of the interim threshold and all documentation supporting the interim threshold remains on the SCAQMD website on a page that provides guidance to CEQA practitioners for air quality analysis (and where all SCAQMD significance thresholds for regional and local criteria pollutants and toxic air contaminants also are listed). Further, as stated by SCAQMD, this threshold "uses the Executive Order S-3-05 goal [80 percent below 1990 levels by 2050] as the basis for deriving the screening level" and, thus, remains valid for use in 2022. Lastly, this threshold has been used for hundreds, if not thousands, of GHG analyses performed for projects located within the SCAQMD jurisdiction. (Urban Crossroads, 2023d, p. 47)

Thus, for purposes of analysis in the GHGA prepared for the Project and herein, if Project-related GHG emissions do not exceed the 3,000 $MTCO_2e$ per year threshold, then Project-related GHG emissions would have a less than significant impact pursuant to Threshold (a). On the other hand, if Project-related GHG emissions exceed 3,000 $MTCO_2e$ per year, the Project would be considered a substantial source of GHG emissions. (Urban Crossroads, 2023d, p. 47)

4.7.4 IMPACT ANALYSIS

A. *Greenhouse Gas Emissions Modeling*

In May 2022 the California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including AVAQMD, released the latest version of CalEEMod version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources and quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1 through 3.4 of the GHGA (*Technical Appendix H*) prepared for the Project. (Urban Crossroads, 2023d, p. 47)

Threshold a: ***Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***

A. *Construction Emissions*

Project construction activities would generate CO_2 and CH_4 emissions. Table 3-2 through Table 3-5, *Estimated Construction Schedule (Phase I – Phase IV)* in EIR Section 3.0, provide a summary of the estimated construction schedule for the Project, while the Air Quality Impact Analysis (AQIA) (*Technical Appendix B1*) prepared for the Project contains detailed information about anticipated construction equipment. As discussed in the AQIA, construction-related emissions are expected in Phase I and in Phases II – IV from the following construction activities: 1) site preparation; 2) grading; 3) building construction; 4) paving; and 5) architectural coating. Refer to the GHGA (*Technical Appendix H*) prepared for the Project for a discussion of modeling assumptions used in the analysis. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.4 The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA Guidelines.(Urban Crossroads, 2023d, p. 48)

For construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. The AVAQMD follows the South Coast Air Quality Management District (SCAQMD) recommendation in calculating the total GHG emissions for construction activities by amortizing the emissions over the life of the Project by dividing it by a 30-year project life then adding that number to the annual operational phase GHG emissions. As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. The amortized construction emissions are presented in Table 4.7-3, *Amortized Annual Construction Emissions*. (Urban Crossroads, 2023d, p. 51)

Table 4.7-3 Amortized Annual Construction Emissions

Year	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	Refrigerants	Total CO_2e[1]
Phase I					
2023	1,330.13	0.05	0.06	0.88	1,348.57
2024	2,501.26	0.08	0.17	3.58	2,556.82
Total GHG Emissions	3,831.39	0.13	0.22	4.46	3,905.39
Amortized Construction Emissions	**127.71**	**0.00**	**0.01**	**0.15**	**130.18**
Phases II - IV					
2026	1,344.51	0.05	0.07	1.15	1,367.23
2027	1,951.93	0.06	0.14	2.34	1,996.73
2028	995.83	0.04	0.04	0.53	1,008.93
2029	1,186.27	0.02	0.08	1.08	1,210.33
2030	446.59	0.02	0.01	0.04	449.75
2031	2,938.79	0.04	0.21	2.50	3,004.17
2032	93.12	0.00	0.01	0.07	95.18
Total GHG Emissions	8,957.03	0.22	0.54	7.71	9,132.32
Amortized Construction Emissions	**298.57**	**0.01**	**0.02**	**0.26**	**304.41**
Project Buildout (Phases I-IV)					
Total GHG Emissions	12,788.42	0.35	0.77	12.17	13,037.70
Amortized Construction Emissions	**426.28**	**0.01**	**0.03**	**0.41**	**434.59**

[1] CalEEMod reports the most common GHGs emitted which include CO_2, CH_4, N_2O and R. These GHGs are then converted into the CO_2e by multiplying the individual GHG by the GWP.
CalEEMod annual construction-source emissions are presented in Appendices 3.1 through 3.4 of *Technical Appendix H*.
(Urban Crossroads, 2023d, Table 3-4)

B. Operational Emissions

Project operations would generate CO_2, CH_4, N_2O, and Refrigerant (R) emissions. Primary emissions sources would include area source (landscape and site maintenance activities); energy source (combustion emissions associated with natural gas and electricity); mobile source (vehicles); stationary source emissions (emergency generators/fire pumps), on-site cargo handling equipment emissions; TRU emissions (refrigerated trucks), solid waste; water supply, treatment, and distribution; and refrigerants. (Urban Crossroads, 2023d, p. 52)

1. *Area Source Emissions*

❑ Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. Although as of October 9, 2021, Governor Gavin Newsom signed AB 1346, aiming to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by 2024. For purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod. (Urban Crossroads, 2023d, p. 52)

2. *Energy Source Emissions*

❑ Combustion Emissions Associated with Natural Gas and Electricity

GHGs are emitted from buildings as a result of their electricity and natural gas use. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building's operation.[1] GHGs also are emitted during the generation of electricity from fossil fuels, which occurs before the energy reaches a building for use; these emissions are considered to be indirect emissions associated with the building's operation. Based on information provided by the Project applicant, the industrial portion of the proposed Project would not utilize natural gas. Natural gas emissions associated with the commercial portion of the Project and electricity usage associated with the Project were calculated by CalEEMod using default parameters. (Urban Crossroads, 2023d, p. 52)

❑ Mobile Source Emissions

The Project related GHG emissions are derived primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed use. Trip characteristics available from the Traffic Analysis (refer to EIR *Technical Appendix L1*) prepared for the Project were utilized in the analysis. (Urban Crossroads, 2023d, p. 53)

For passenger vehicles for the proposed commercial uses, the CalEEMod default fleet mix was utilized, along with the trip lengths from the Project's VMT Analysis (*Technical Appendix L2*). For the proposed industrial uses, the Traffic Analysis does not provide a specific breakdown for passenger cars; therefore, the analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1[2] & LDT2[3]), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. In order to account for emissions generated by passenger cars for industrial uses, the

[1] The CalEEMod emissions inventory model does not include indirect emission related to street lighting. Indirect emissions related to street lighting are expected to be negligible and cannot be accurately quantified at this time as there is insufficient information as to the number and type of street lighting that would occur.
[2] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.
[3] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

fleet mix and trip lengths shown in Table 3-5 of the GHGA (*Technical Appendix H*) were utilized. (Urban Crossroads, 2023d, p. 53)

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated trip lengths of 29.1 miles for two-axle (LHDT1, LHDT2) and three-axle (MHDT) trucks, and 91.0 miles for four+-axle (HHDT) trucks and weighting the average trip lengths using traffic trip percentages taken from the Project's Traffic Analysis (*Technical Appendix L1*) with an assumption of 100% primary trips, as shown on Table 3-8 of the Project's GHGA (*Technical Appendix H*). The truck fleet mix is estimated by rationing the trip rates for each truck type based on information provided by the SCAQMD recommended truck mix, by axle type. Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1[4] and LHDT2[5])/two-axle, Medium-Heavy-Duty Trucks (MHDT)/three-axle, and Heavy-Heavy-Duty Trucks (HHDT)/four+-axle. To account for emissions generated by trucks, the fleet mix in Table 3-8 of the GHGA (*Technical Appendix H*) prepared for the Project was utilized. (Urban Crossroads, 2023d, p. 54)

❑ On-Site Cargo Handling Equipment Emissions

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the truck court areas. The following on-site operational equipment modeled for use by the Project includes 200 horsepower (hp), diesel-powered tractors/loaders/backhoes operating for four hours per day for 365 days of the year: (Urban Crossroads, 2023d, p. 55)

- Phase 1 includes eleven (11) pieces of on-site cargo handling equipment
- Phase 2 includes nine (9) pieces of on-site cargo handling equipment
- Phase 3 includes six (6) pieces of on-site cargo handling equipment
- Phase 4 includes ten (10) pieces of on-site cargo handling equipment

❑ Transportation Refrigeration Units (TRU) Emissions

In order to account for the possibility of refrigerated uses, trucks associated with the cold-storage land use are assumed to also have Transportation Refrigeration Units (TRUs). For modeling purposes, 190 two-way truck trips during Phase I, 218 two-way truck trips during Phase III, and 480 two-way truck trips during Phase IV have been estimated to include TRUs (e.g., all truck trips that would be associated with up to 251,057 s.f. of high-cube cold storage use identified for Phase I, up to 289,144 s.f. of high-cube cold storage use identified for Phase III, and up to 638,889 s.f. of high-cube cold storage use identified for Phase IV as summarized in the Project's Traffic Analysis (*Technical Appendix L1*)). TRUs are accounted for during on-site and off-site travel. The TRU calculations are based on

[4] Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.
[5] Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

EMissions FACtor Model version 2021 (EMFAC2021), developed by the CARB. EMFAC2021 does not provide emission rates per hour or mile as with the on-road emission model and only provides emission inventories. Emission results are produced in tons per day while all activity, fuel consumption and horsepower hours were reported at annual levels. The emission inventory is based on specific assumptions including the average horsepower rating of specific types of equipment and the hours of operation annually. These assumptions are not always consistent with assumptions used in the modeling of Project-level emissions. Therefore, the emissions inventory was converted into emission rates to accurately calculate emissions from TRU operation associated with Project level details. This was accomplished by converting the annual horsepower hours to daily operational characteristics and converting the daily emission levels into hourly emission rates based on the total emission of each criteria pollutant by equipment type and the average daily hours of operations. (Urban Crossroads, 2023d, pp. 55-56)

❑ Solid Waste Emissions

Industrial land uses would result in the generation and disposal of solid waste. A percentage of this waste would be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted would be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. GHG emissions associated with the disposal of solid waste associated with the proposed Project were calculated by CalEEMod using default parameters. (Urban Crossroads, 2023d, p. 56)

❑ Water Supply, Treatment, and Distribution

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water as well as the sources of the water. Unless otherwise noted, CalEEMod default parameters were used. (Urban Crossroads, 2023d, p. 56)

❑ Refrigerants

Air conditioning (AC) equipment associated with the conditioned space for the buildings as well as vehicles during construction and operations are anticipated to generate GHG emissions. CalEEMod automatically generates a default AC equipment inventory for each project land use subtype based on industry data from the EPA and mobile source data from Emission FACtor (EMFAC). CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime and then derives average annual emissions from the lifetime estimate. Note that CalEEMod does not quantify emissions from the disposal of refrigeration and AC equipment at the end of its lifetime. Per 17 CCR 95371, new facilities with refrigeration equipment containing more than 50 pounds of refrigerant are prohibited from utilizing refrigerants with a GWP of 150 or greater as of January 1, 2022. As such, it was conservatively assumed that refrigeration systems installed at the supermarket portion of the Project and the cold storage warehouse, would utilize refrigerants with a GWP of 150. GHG emissions associated with refrigerants were calculated by CalEEMod. (Urban Crossroads, 2023d, p. 56)

❑ Stationary Source Emissions

The proposed Project was conservatively assumed to include installation of a 300-horsepower diesel-powered emergency generator/fire pump at each industrial building, for a total of six emergency generators in Phase I, and for the subsequent phases assumes three emergency generators in Phase II, two emergency generators in Phase III, and two emergency generators in Phase IV. Each emergency generator/fire pump was estimated to operate for up to 1 hour per day, 1 day per week for up to 50 hours per year for maintenance and testing purposes. Emissions associated with the stationary emergency diesel-powered emergency generators/fire pumps were calculated using CalEEMod. (Urban Crossroads, 2023d, p. 56)

C. *Emissions Summary*

The estimated Project-related unmitigated GHG emissions are summarized on Table 4.7-4*, Project GHG Emissions Summary (Without Mitigation)*. Detailed operation model outputs for the Project are presented in Appendices 3.1 through 3.4 of the Project's GHGA (*Technical Appendix H*). Operational emissions generated by the proposed Project at full buildout (i.e., 2032) are used to indicate the total amount of GHG emissions for on-going operational emissions. Emissions will be generated when Phase I and Phases II-IV of the Project become operational. Phase I GHG emissions will commence in 2025 when Phase I becomes operational and are calculated to be 40,288.20 $MTCO_2e$/yr. Phases II-IV GHG emissions will commence in 2032 when Phases II-IV become operational and are calculated to be 109,009.41 $MTCO_2e$/yr. Project buildout emissions are calculated to be 149,297.79 $MTCO_2e$/yr beginning in 2032 when the entire Project is completed and becomes operational. (Urban Crossroads, 2023d, p. 57)

Table 4.7-4 Project GHG Emissions Summary (Without Mitigation)

Emission Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	Refrigerants	Total CO_2e
Phase I					
Annual construction-related emissions amortized over 30 years	127.71	0.00	0.01	0.15	130.18
Mobile Source	32,559.02	0.58	3.45	51.04	33,653.17
Area Source	34.65	0.00	0.00	0.00	34.78
Energy Source	2,563.14	0.24	0.03	0.00	2,577.97
Water Usage	679.22	17.90	0.43	0.00	1,254.88
Waste	203.66	20.36	0.00	0.00	712.53
Refrigerants	0.00	0.00	0.00	45.03	45.03
Stationary Source	68.54	0.00	0.00	0.00	68.77
On-Site Equipment Source					305.09
TRU Source					1,505.98
Total CO_2e (All Sources)	**40,288.20**				

Emission Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	Refrigerants	Total CO_2e
Phases II-IV					
Annual construction-related emissions amortized over 30 years	298.57	0.01	0.02	0.26	304.41
Mobile Source	84,746.73	1.15	9.63	103.45	87,749.08
Area Source	86.93	0.00	0.00	0.00	87.24
Energy Source	6,061.74	0.66	0.08	0.00	6,101.69
Water Usage	1,550.85	44.64	1.07	0.00	2,986.53
Waste	510.14	50.99	0.00	0.00	1,784.81
Refrigerants	0.00	0.00	0.00	159.42	159.42
Stationary Source	79.97	0.00	0.00	0.00	80.23
On-Site Equipment Source					693.38
TRU Source					9,062.63
Total CO_2e (All Sources)	**109,009.41**				
Project Buildout (Phases I-IV)					
Annual construction-related emissions amortized over 30 years	426.28	1.17E-02	2.55E-02	4.06E-01	434.59
Mobile Source	117,305.75	1.74	13.08	154.49	121,402.25
Area Source	121.59	0.01	0.00	0.00	122.02
Energy Source	8,624.88	0.90	0.11	0.00	8,679.66
Water Usage	2,230.07	62.55	1.50	0.00	4,241.40
Waste	713.80	71.34	0.00	0.00	2,497.34
Refrigerants	0.00	0.00	0.00	204.45	204.45
Stationary Source	148.51	0.01	0.00	0.00	149.01
On-Site Equipment Source					998.47
TRU Source					10,568.60
Total CO_2e (All Sources)	**149,297.79**				

Source: CalEEMod output, See Appendices 3.1 through 3.4 of the Project's GHGA (*Technical Appendix H*) for detailed model outputs.
(Urban Crossroads, 2023d, Table 3-7)

As shown on Table 4.7-4, construction and operation of the Project would generate a total of approximately 149,297.79 $MTCO_2e$/yr, which would far exceed the significance threshold of 3,000 $MTCO_2e$/yr; therefore, Project-related GHG emissions are considered significant. The majority of the GHG emissions (89%) are associated with non-construction related mobile sources. Emissions of motor vehicles are controlled by State and Federal standards, and the Project applicant and City of Palmdale have no control over these emissions. Accordingly, impacts would be potentially significant. (Urban Crossroads, 2023d, p. 58)

Threshold b: ***Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?***

As previously stated, pursuant to CEQA Guidelines Section 15604.4, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions. As such, the Project's consistency with the CARB 2022 Scoping Plan is discussed below. The Project's consistency with the 2022 Scoping Plan also satisfies consistency with AB 32 since the 2022 Scoping Plan is based on the overall targets established by AB 32 and SB 32. Consistency analyses with the 2008 and 2017 Scoping Plan are not necessary, since both of these plans have been superseded by the 2022 Scoping Plan. (Urban Crossroads, 2023d, p. 62)

In April 2015, Governor Brown signed EO B-30-15, which advocated for a statewide GHG-reduction target of 40 percent below year 1990 levels by 2030 and 80 percent below 1990 levels by 2050. In September 2016, Governor Brown signed the SB 32. SB 32 formally established a statewide goal to reduce GHG emissions to 40 percent below year 1990 levels by 2030. To date, no statues or regulations have been adopted to translate the year 2050 GHG reduction goal into comparable, scientifically-based statewide emission reduction targets.

CARB prepared the 2017 Scoping Plan Update to identify the measures that would achieve the emissions reduction goals of SB 32 (and, thus, also would achieve the emissions reductions goals of AB 32). Research conducted by the Lawrence Berkeley National Laboratory confirmed that California, under its existing GHG reduction policy framework (i.e., Scoping Plan Update), is on track to meet the year 2030 reduction targets established by the SB 32. The Project would not conflict with applicable measures of the 2017 Scoping Plan Update and, therefore, would not interfere with the State's ability to achieve the year GHG-reduction targets established by AB 32 and SB32. Further, recent studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030.

In relation to CARB's 2022 Scoping Plan, the Project would not impede the State's progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The Project would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan. Some of the current transportation sector policies the Project would comply with (through vehicle manufacturer compliance) include: Advanced Clean Cars II, Advanced Clean Trucks, Advanced Clean Fleets, Zero Emission Forklifts, the Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, In-use Off-Road Diesel-Fueled Fleets Regulation, Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, Amendments to the In-use Off-Road Diesel-Fueled Fleets Regulation, carbon pricing through the Cap-and-Trade Program, and the Low Carbon Fuel Standard. Further, the Project would implement Mitigation Measures AIR MM-3 through AIR MM-5, which would also reduce GHG emissions. Additionally, the Project includes design features related to water conservation and solid waste reductions that would further reduce Project GHG emissions. As such, the Project would be consistent with the 2022 Scoping Plan. Lastly, the Project would be required to comply with applicable elements outlined in the City's Sustainability, Climate Action and Resilience section of the General Plan, which serves as the City's

CAP. As such, the Project would be consistent with the 2022 Scoping Plan. (Urban Crossroads, 2023d, pp. 62-63)

As described on the preceding pages, implementation of the Project would not conflict with the State's ability to achieve the State-wide GHG reduction mandates and would be consistent with applicable policies and plans related to GHG emissions reductions. Implementation of the Project would not actively interfere with any future federally-, State-, or locally-mandated retrofit obligations (such as requirements to use new technologies such as diesel particulate filters, emissions upgrades to a higher tier equipment, etc.) enacted or promulgated to legally require development projects to assist in meeting State-adopted GHG emissions reduction targets, including those established under EO S-3-05, EO B-30-15, or SB32. Therefore, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and would result in a less than significant impact.

Based on the foregoing analysis, the Project would not conflict with an applicable plan, policy or regulation adopted to reduce GHG emissions; therefore, impacts would be less than significant; thus, no mitigation is required.

4.7.5 Cumulative Impact Analysis

As discussed in subsection 4.7.3, there is no evidence that would indicate that the emissions from a project the size of the proposed Project would directly or indirectly affect the global climate. As such, Project impacts due to GHG emissions are inherently cumulative in nature.

As discussed under the analysis of Threshold (a), Phase 1 GHG emissions are calculated to be 40,288.20 $MTCO_2e$/yr, Phases II-IV GHG emissions are calculated to be 109,009.41 $MTCO_2e$/yr, and Project buildout emissions are calculated to be 149,297.79 $MTCO_2e$/yr. The level of GHG emissions for the Project would be far above the SCAQMD screening threshold of 3,000 $MTCO_2e$ per year. Other cumulative developments within the region have a similar potential to result in GHG emissions that would exceed the screening threshold. Accordingly, GHG emissions associated with the construction and long-term operation of the Project represent a cumulatively-considerable impact for which mitigation would be required. This cumulatively-considerable impact is addressed in part by Mitigation Measures AIR MM-3 through AIR MM-5 identified in EIR Subsection 4.2, *Air Quality*, however, Project impacts due to direct or indirect GHG emissions are a significant and unavoidable impact of the proposed Project for which additional feasible mitigation measures are not available.

As discussed under the analysis of Threshold (b), the Project would be consistent with or otherwise would not conflict with the CARB Scoping Plan and would not conflict with the GHG reduction goals of the City's General Plan. As such, because the Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases, Project impacts would be less than significant on a cumulatively-considerable basis.

4.7.6 Significance of Impacts Before Mitigation

Threshold a: Significant Cumulatively-Considerable Impact. The Project would generate approximately 40,288.20 $MTCO_2e$/yr from construction and operational activities in Phase I, 109,009.41 $MTCO_2e$/yr from construction and operational activities in Phases II - IV, and 149,297.79 $MTCO_2e$/yr, from construction and operational activities at Project buildout, which is above the SCAQMD screening threshold of 3,000 $MTCO_2e$ per year. Accordingly, prior to mitigation, the Project's GHG emissions represent a significant cumulatively-considerable impact on the environment.

Threshold b: Less than Significant Impact. The Project would not conflict with any of the CARB Scoping Plan elements as any regulations adopted would apply directly or indirectly to the Project. Additionally, the Project would not conflict with the GHG reduction goals of the City's General Plan, and impacts would therefore be less than significant. The Project's mitigation measures, design features, and regulatory requirements specified below in Subsection 4.7.7 and 4.7.8 would further ensure that the Project does not conflict with the GHG reduction policies of the City's General Plan. Impacts would be less than significant.

4.7.7 Mitigation

The mitigation measures identified in EIR Subsection 4.2, *Air Quality*, would also assist in reducing GHG emissions as discussed under Threshold (a); therefore, the air quality mitigation measures listed in EIR Subsection 4.2, *Air Quality* shall also apply to GHG.

4.7.8 Design Features (DF) and Regulatory Requirements (RR)

The Project Applicant has agreed to implement design features and regulatory requirements to further reduce GHG emissions from the Project. The City of Palmdale is required to assure that implementing development complies with the assumptions relied upon herein and applicable regulatory requirements pertaining to the topic of GHG emissions, which include the following regulatory requirements and design features. The Project shall be conditioned to implement the following design features and regulatory requirements as part of the City's Conditions of Approval for the Project.

Refer to the design features and regulatory requirements listed in EIR Subsection 4.2, *Air Quality*, many of which also reduce the Project's GHG emissions. In addition, the following design features and regulatory requirements apply.

GHG DF-1 **Water Conservation**. To reduce water demands and associated energy use, the Project is required to implement a Water Conservation Strategy and demonstrate a minimum 20 percent reduction in indoor and outdoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy). Prior to the issuance of building permits for the Project, the Project applicant shall provide building plans that include the following water conservation measures:

a) Install low-water use appliances and fixtures
b) Restrict the use of water for cleaning outdoor surfaces and prohibit systems that apply water to non-vegetated surfaces
c) Implement water-sensitive urban design practices in new construction
d) Install rainwater collection systems where feasible

GHG DF-2 **Solid Waste Reduction**. To reduce the amount of waste disposed at landfills, a 75 percent waste diversion program shall be implemented during Project construction. Prior to the issuance of building permits, the City shall verify that building plans contain the following solid waste reduction measure requirements:

a) Provide storage areas for recyclables, as well as for green waste and food waste storage, if a pick-up service is available.
b) Compost on site if feasible.

GHG DF-3 Cargo handling equipment shall be non-diesel. If more than one piece of cargo handling equipment is required by the building user, the equipment shall be zero-emission.

GHG RR-1 The Project is required to comply with the PMC Chapter 14.05, Water Efficient Landscape. Efficient water use lowers GHG emissions by reducing the consumption of energy resource required to treat and deliver water.

GHG RR-2 The Project is required to directly or indirectly comply with all applicable GHG reduction mandates imposed by the State of California and the AVAQMD. Those that are applicable to the Project either directly or indirectly and that would reduce GHG emissions are:

a) Pavley Fuel Efficiency Standards (AB 1493). Establishes fuel efficiency ratings for new vehicles.
b) Title 24 California Code of Regulations (California Building Code). Establishes energy efficiency requirements for new construction.
c) Title 20 California Code of Regulations (Appliance Energy Efficiency Standards). Establishes energy efficiency requirements for appliances.
d) Title 17 California Code of Regulations (Low Carbon Fuel Standard). Regulates the carbon content of fuel sold in California.
e) Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions.

f) Renewable Portfolio Standards (SB 1078). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources.

4.7.9 Significance of Impacts after Mitigation

Threshold a: Significant Unavoidable Cumulatively-Considerable Impact. As shown on Table 4.7-5, *Project GHG Emissions Summary (With Mitigation)*, after implementation of feasible mitigation, greenhouse gas (GHG) emissions resulting from Phase I of the Project are calculated to be 39,953.73 $MTCO_2e$/yr and GHG emissions from Phases II - IV of the Project are calculated to be 108,240.42 $MTCO_2e$/yr. Project Buildout emissions are estimated to be 148,194.15 $MTCO_2e$/yr beginning in 2032 when the entire Project is completed and becomes operational. Thus, the proposed Project's GHG emissions would exceed the SCAQMD screening threshold of 3,000 $MTCO_2e$ per year. Because the majority (89 percent) of the Project GHG emissions would be generated by Project-related vehicular sources that are outside of the City's regulatory authority to control and enforce, the Project cannot feasibly achieve the SCAQMD 3,000 $MTCO_2e$ per year threshold. Because responsibility and authority for regulation of vehicular-source emissions resides with the State of California (CARB, et al.), neither the Applicant nor the Lead Agency can affect or mandate substantial reductions in vehicular-source GHG emissions, much less reductions that would achieve the SCAQMD's 3,000 $MTCO_2e$ per year threshold. In effect, all Project traffic would need to be eliminated or be "zero GHG emissions sources" to achieve the SCAQMD's numeric threshold. There are no feasible means to or alternatives to eliminate all Project traffic, or to ensure that Project traffic would be zero GHG emissions sources. In terms of its practical application, this would constitute a "no build" condition. On this basis, even with implementation of applicable Project Design Features and Mitigation Measures AIR MM-1 through AIR MM-5, the Project would generate direct or indirect GHG emissions that would result in a significant impact on the environment. This is a significant and unavoidable impact.

Table 4.7-5 Project GHG Emissions Summary (With Mitigation)

Emission Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	Refrigerants	Total CO_2e
Phase I					
Annual construction-related emissions amortized over 30 years	127.71	0.00	0.01	0.15	130.18
Mobile Source	32,559.02	0.58	3.45	51.04	33,653.17
Area Source	0.00	0.00	0.00	0.00	0.00
Energy Source	2,568.33	0.24	0.03	0.00	2,583.19
Water Usage	679.22	17.90	0.43	0.00	1,254.88
Waste	203.66	20.36	0.00	0.00	712.53
Refrigerants	0.00	0.00	0.00	45.03	45.03
Stationary Source	68.54	0.00	0.00	0.00	68.77
On-Site Equipment Source					0.00
TRU Source					1,505.98
Total CO_2e (All Sources)	**39,953.73**				
Phase II-IV					
Annual construction-related emissions amortized over 30 years	298.57	0.01	0.02	0.26	304.41
Mobile Source	84,746.73	1.15	9.63	103.45	87,749.08
Area Source	0.00	0.00	0.00	0.00	0.00
Energy Source	6,073.30	0.66	0.08	0.00	6,113.32
Water Usage	1,550.85	44.64	1.07	0.00	2,986.53
Waste	510.14	50.99	0.00	0.00	1,784.81
Refrigerants	0.00	0.00	0.00	159.42	159.42
Stationary Source	79.97	0.00	0.00	0.00	80.23
On-Site Equipment Source					0.00
TRU Source					9,062.63
Total CO_2e (All Sources)	**108,240.42**				
Project Buildout (Phases I-IV)					
Annual construction-related emissions amortized over 30 years	426.28	1.17E-02	2.55E-02	4.06E-01	434.59
Mobile Source	117,305.75	1.74	13.08	154.49	121,402.25
Area Source	0.00	0.00	0.00	0.00	0.00
Energy Source	8,641.63	0.90	0.11	0.00	8,696.51
Water Usage	2,230.07	62.55	1.50	0.00	4,241.40
Waste	713.80	71.34	0.00	0.00	2,497.34
Refrigerants	0.00	0.00	0.00	204.45	204.45

Emission Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	Refrigerants	Total CO_2e
Stationary Source	148.51	0.01	0.00	0.00	149.01
On-Site Equipment Source					0.00
TRU Source					10,568.60
Total CO_2e (All Sources)	**148,194.15**				

Source: CalEEMod output, See Appendices 3.1 through 3.4 of the Project's GHGA (*Technical Appendix H*) for detailed model outputs.
(Urban Crossroads, 2023d, Table 3-8)

4.8 HAZARDS AND HAZARDOUS MATERIALS

The information and analysis presented in this subsection is based in part on a technical study that was prepared to determine the presence or absence of hazardous materials on the Project site under existing conditions. This report is titled, "Phase I Environmental Site Assessment" (herein, "Phase I ESA"), prepared by Advanced Environmental Concepts, Inc. (herein, "AEC"), dated February 18, 2022, and included as *Technical Appendix I* to this EIR (AEC, 2022). All references used in this subsection are included in EIR Section 7.0, *References*.

4.8.1 EXISTING CONDITIONS

A. Definition of Toxic Substances and Hazardous Waste

For purposes of this EIR, the term "toxic substance" is defined as a substance which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may present an unreasonable risk of injury to human health or the environment. Toxic substances include chemical, biological, flammable, explosive, and radioactive substances.

"Hazardous material" is defined as a substance which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may: 1) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, disposed of, or otherwise mismanaged; or 2) cause or contribute to an increase in mortality or an increase in irreversible or incapacitating illness.

Hazardous waste is defined in the California Code of Regulations (CCR) Title 22, § 66261.3. The defining characteristics of hazardous waste are ignitability (oxidizers, compressed gases, and extremely flammable liquids and solids), corrosivity (strong acids and bases), reactivity (explosives or generates toxic fumes when exposed to air or water), and toxicity (materials listed by the United States (US) Environmental Protection Agency [EPA] as capable of inducing systemic damage to humans or animals).

Certain wastes are called "Listed Wastes" and are found in the CCR Title 22, §§ 66261.30 through 66261.35. Wastes appear on the lists because of their known hazardous nature or because the processes that generate them are known to produce hazardous wastes (which are often complex mixtures).

A historical recognized environmental condition (HREC) is defined under American Society for Testing and Materials (ASTM) E1527-13 as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls." (BLM, 2017, pp. 5-6)

A controlled recognized environmental condition (CREC) is defined under ASTM E1527-13 as "a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with

hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls." (BLM, 2017, p. 4)

A recognized environmental condition (REC) is defined under ASTM E1527-13 as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to release to the environment; 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment." (BLM, 2017, p. 8)

A business environmental risk (BER) is defined under ATSM E1527-13 as "a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice." (BLM, 2017, p. 3)

B. Historical Review, Prior Investigations, Regulatory Review, and Field Reconnaissance

As part of the Project's Phase I ESA (*Technical Appendix I*), AEC conducted an inspection of the Project site and a reconnaissance of the surrounding area; a review of a regulatory databases; a review of historic aerial photographs, topographic maps, and interviews with City/County officials and other individuals familiar with the history of the subject property. The results of the assessment are summarized below.

Review of historic aerial photographs indicates that the Project site has consisted of undeveloped native desert since prior to 1928. No environmental on-site concerns associated with the historic use of the subject property were identified on the Project site by AEC. (AEC, 2022, pp. 9-12)

During the site inspection, AEC observed numerous hard-packed dirt roads traversing the Project site and a small concrete pad in the southeast portion of the Project site. There were multiple locations where household-related and construction debris had been illegally dumped. One item of environmental concern identified in a debris pile was a railroad tie stockpile because the wood has most likely been treated with creosote, a wood preservative. AEC did not observe any other indications of the presence of hazardous materials on the Project site. (AEC, 2022, p. 6)

The Project's Phase I ESA did not identify any evidence of HRECs, CRECs, or RECs on the Project site; however, two *de minimis* (of little importance) conditions were identified. The first, as discussed above, was the multiple piles of debris that had been illegally dumped at the Project site and the railroad tie stockpile that had likely been treated with creosote.

The second *de minimis* condition was the presence of the USAF Plant 42 release sites located approximately 0.75-mile to 1 mile east and south of the Project site. USAF Plant 42 has been identified as having numerous Areas of Concern (AOCs) that are being regulated by the RWQCB, the Department of Toxic Substances Control (DTSC), and the USAF. The nearest location of an environmental release to soil and groundwater consists of Installation Restoration Program (IRP) Site

29 which is primarily located at Plant 1. Plant 1 is located approximately 0.75-mile east-southeast of the Project site and there are numerous groundwater monitoring wells trending north-south along the east side of 15th Street East. The contaminant of concern identified in groundwater at Plant Site 1 is Trichloroethylene (TCE). Due to the presence of TCE in the soil and groundwater, vapor extraction of the soil at Plant 1 has been conducted since May 10, 2006. The Groundwater Treatment System (GWTS) consists of a treatment compound and a network of extraction wells and injection wells. (AEC, 2022, pp. 19-20)

C. *Airport-Related Hazards*

As discussed in Section 2.0 *Environmental Setting*, located to the south and southeast of the Project site are runways associated with the United States Air Force (USAF) Plant 42 and the inactive Palmdale Regional Airport. The Palmdale Regional Airport is a 9,000-square foot commercial airport within the City limits owned by the City of Los Angeles Department of Airports and operated under a joint agreement with USAF Plant 42. Under the City's General Plan, there is potential that residential, commercial, and industrial uses could be constructed in proximity to the Palmdale Regional Airport and future development of the airport. However, the General Plan does not change the height limits that currently apply to both existing and new uses in these areas. According to the Federal Code of Regulations (CFR), 14 CFR 77 would require the proponent of any planned development to file notice with the Federal Aviation Administration (FAA) for any construction or alteration that exceeds an imaginary surface extending outward and upward at a slope of 25 to one (25:1) for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of a heliport described in 14 CFR 77.9(d). However, if future development in the vicinity of the Palmdale Regional Airport were "shielded by existing structures of a permanent and substantial nature of equal or greater height," a notice to the FAA under 14 CFR 77 would not be required. (City of Palmdale, 2022a, p. 4.9-23) Additionally, according to 14 CFR Part 77, for any construction or alteration within 20,000 ft of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 feet, FAA notification is required. (FAA, 2023) The Project site is located approximately 0.25-mile (1,305 feet) north of Runway 7 of Palmdale Regional Airport/USAF Plant 42. Because the Project is located within 20,000 feet of a public use or military airport, FAA notification is required for the Project.

1. *Los Angeles County Airport Land Use Plan*

The Los Angeles County ALUC is responsible for establishing land use policy to mitigate potential noise and safety hazards regarding the fifteen airports in its jurisdiction (Los Angeles ALUC, 2004, p. 15). According to the Los Angeles County ALUC's Airport Land Use Plan's (ALUP) Palmdale Airport/USAF Plant 42 Airport Influence Area map, the Project site occurs within the Planning Boundary/AIA of the Palmdale Airport/USAF. An AIA is an airport planning area boundary that consists of all areas in which current or future airport-related noise, over flight, safety, and/or airspace protection factors may significantly affect land uses or necessitate restrictions on those areas. According to the ALUP AIA map, the Project site is not located within a runway protection zone (RPZ). (Los Angeles County ALUC, 2004, Palmdale Airport/USAF Plant 42 Airport Influence Area map)

2. *USAF Plant 42 Air Installation Compatible use Zone (AICUZ) Final Report*

The Department of the Air Force's USAF Plant 42 Air Installation Compatible Use Zone (AICUZ) Final Report (December 2011) documents aircraft operations at USAF Plant 42 and reaffirms the Air Force's policy of assisting Federal, state, regional, and local officials in planning for the areas surrounding military installations. The AICUZ Final Report promotes compatible development within the AICUZ area of influence with the goal of protecting community health and Air Force operational capacity from the negative effects of incompatible land uses. The AICUZ Final Report provides compatible use guidelines for land use areas surrounding the installation as well as identifies noise contours. (City of Palmdale, 2023, p. 203)

According to the AICUZ Final Report, the Project site occurs within the USAF Plant 42 AICUZ area of influence. The area of influence for airfield planning is concerned with three primary aircraft operational/land use determinants: 1) accident potential to occupants on the ground; 2) aircraft noise; and 3) hazards to flight operations from land uses (height obstructions, increased potential for bird-aircraft strike hazards, operations such as factories that emit smoke, dust, or light that adversely affect flight operations) (Department of the Air Force, 2011, p. 2-17).

As shown in the AICUZ Final Report's Figure 3-6, Plant 42 CZs and APZs, the Project site is not located within an Accident Potential Zone (APZ) or Clear Zone (CZ). APZs and CZs are areas that are designated to promote and maintain clear airspace for safe flight operations near the airfield (Department of the Air Force, 2011, pp. 3-20 to 3-23) As shown in the AICUZ's Final Report's Figure 3-3, Air Force Plant 42 – Community Noise Equivalent Level (CNEL), the commercial land use within the northern portion of the Project site is located well outside the 60-65 dBA CNEL noise level contour boundary. The southern half of the Project site consisting of industrial land uses is located within the 65-70 dBA CNEL aircraft noise level contour boundaries with a small portion of the southeastern portion of the Project site located within the 70-75 dBA dBA CNEL noise level contour boundary. Therefore, according to the City of Palmdale General Plan Noise Element Noise Land Use Compatibility Criteria, the Project's land uses are considered *normally acceptable*. (Urban Crossroads, 2023e)

4.8.2 Regulatory Setting

The following is a brief description of the federal, State, and local environmental laws and regulations related to hazards and hazardous materials.

A. *Federal Regulations*

1. *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA)*

The Comprehensive Environmental Response, Compensation, and Liability Act, also known as CERCLA or Superfund, provides a Federal "Superfund" to clean up uncontrolled or abandoned hazardous-waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Through CERCLA, the EPA was given power to seek out those

parties responsible for any release and assure their cooperation in the cleanup. EPA cleans up orphan sites when potentially responsible parties cannot be identified or located, or when responsible parties fail to act. Through various enforcement tools, EPA obtains private party cleanup through orders, consent decrees, and other small party settlements. EPA also recovers costs from financially viable individuals and companies once a response action has been completed. (EPA, 2023g)

The EPA is authorized to implement the Act in all 50 states and U.S. territories. Superfund site identification, monitoring, and response activities in states are coordinated through the state environmental protection or waste management agencies. The Superfund Amendments and Reauthorization Act (SARA) of 1986 reauthorized CERCLA to continue cleanup activities around the country. Several site-specific amendments, definitions clarifications, and technical requirements were added to the legislation, including additional enforcement authorities. Also, Title III of SARA authorized the Emergency Planning and Community Right-to-Know Act (EPCRA). (EPA, 2023g)

2. Resource Conservation and Recovery Act (RCRA)

The Resource Conservation and Recovery Act (RCRA) gives the EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to the RCRA enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to the RCRA that 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 underground storage tank program. (EPA, 2023h)

3. Hazardous Materials Transportation Act (HMTA)

The Hazardous Materials Transportation Act of 1975 (HMTA) empowered the Secretary of Transportation to designate as hazardous material any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property." (OSHA, n.d.)

Hazardous materials regulations are subdivided by function into four basic areas:

- Procedures and/or Policies 49 CFR Parts 101, 106, and 107
- Material Designations 49 CFR Part 172
- Packaging Requirements 49 CFR Parts 173, 178, 179, and 180
- Operational Rules 49 CFR Parts 171, 173, 174, 175, 176, and 177 (OSHA, n.d.)

The HMTA is enforced by use of compliance orders [49 U.S.C. 1808(a)], civil penalties [49 U.S.C. 1809(b)], and injunctive relief (49 U.S.C. 1810). The HMTA (Section 112, 40 U.S.C. 1811) preempts state and local government requirements that are inconsistent with the statute, unless that requirement affords an equal or greater level of protection to the public than the HMTA requirement. (OSHA, n.d.)

4. Hazardous Materials Transportation Uniform Safety Act of 1990

In 1990, Congress enacted the Hazardous Materials Transportation Uniform Safety Act (HMTUSA) to clarify the maze of conflicting state, local, and federal regulations. Like the HMTA, the HMTUSA requires the Secretary of Transportation to promulgate regulations for the safe transport of hazardous material in intrastate, interstate, and foreign commerce. The Secretary also retains authority to designate materials as hazardous when they pose unreasonable risks to health, safety, or property. (OSHA, n.d.)

The statute includes provisions to encourage uniformity among different state and local highway routing regulations, to develop criteria for the issuance of federal permits to motor carriers of hazardous materials, and to regulate the transport of radioactive materials. (OSHA, n.d.)

5. Occupational Safety and Health Act (OSHA)

Congress passed the Occupational and Safety Health Act (OSHA) to ensure worker and workplace safety. The goal was to make sure employers provide workers with 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. (EPA, 2022i)

In order to establish standards for workplace health and safety, the OSHA also created the National Institute for Occupational Safety and Health (NIOSH) as the research institution for OSHA. OSHA is a division of the U.S. Department of Labor that oversees the administration of the OSHA and enforces standards in all 50 states. (EPA, 2022i)

6. Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 provides the EPA with the authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from the TSCA, including, among others, food, drugs, cosmetics, and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint. (EPA, 2022j)

Various sections of the TSCA provide authority to:

- Require, under Section 5, pre-manufacture notification for "new chemical substances" before manufacture;
- Require, under Section 4, testing of chemicals by manufacturers, importers, and processors where risks or exposures of concern are found;
- Issue Significant New Use Rules (SNURs), under Section 5, when it identifies a "significant new use" that could result in exposures to, or releases of, a substance of concern;
- Maintain the TSCA Inventory, under Section 8, which contains more than 83,000 chemicals. As new chemicals are commercially manufactured or imported, they are placed on the list;

- Require those importing or exporting chemicals, under Sections 12(b) and 13, to comply with certification reporting and/or other requirements;
- Require, under Section 8, reporting and record-keeping by persons who manufacture, import, process, and/or distribute chemical substances in commerce; and
- Require, under Section 8(e), that any person who manufactures (including imports), processes, or distributes in commerce a chemical substance or mixture and who obtains information which reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment to immediately inform the EPA, except where the EPA has been adequately informed of such information. The EPA screens all TSCA b§8(e) submissions as well as voluntary "For Your Information" (FYI) submissions. The latter are not required by law, but are submitted by industry and public interest groups for a variety of reasons. (EPA, 2022j)

7. Federal Aviation Administration (FAA) and Federal Regulation Title 14 Part 77

The primary role of the Federal Aviation Administration (FAA) is to promote aviation safety and control the use of airspace. Public use airports that are subject to the FAA's grant assurances must comply with specific FAA design criteria, standards, and regulations. Land use safety compatibility guidance from the FAA is limited to the immediate vicinity of the runway, the runway protection zones at each end of the runway, and the protection of navigable airspace. Federal Code of Regulations Title 14 Part 77, Safe Efficient Use and Preservation of the Navigable Airspace, establishes the federal review process for determining whether proposed development activities in the vicinity of an airport have the potential to result in a hazard to air navigation. Federal Code of Regulations Title 14 Part 77 identifies standards for determining whether a proposed project would represent an obstruction "that may affect safe and efficient use of navigable airspace and the operation of planned or existing air navigation and communication facilities." Objects that are identified as obstructions based on these standards are presumed to be hazards until an aeronautical study conducted by the FAA determines otherwise. (City of Palmdale, 2022a, p. 4.9-9)

According to Federal Code of Regulations Title 14 Part 77, any person/organization who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA:

- Any construction or alteration exceeding 200 ft above ground level;
- Any construction or alteration:
    - within 20,000 ft of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 ft;
    - within 10,000 ft of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 ft; or
    - within 5,000 ft of a public use heliport which exceeds a 25:1 surface;
- Any highway, railroad, or other traverse way whose prescribed adjusted height would exceed that above noted standards;
- When requested by the FAA; or

- Any construction or alteration located on a public use airport or heliport regardless of height or location. (FAA, 2023)

Persons failing to comply with the provisions of Federal Code of Regulations Title 14 Part 77 are subject to Civil Penalty under Section 902 of the Federal Aviation Act of 1958, as amended and pursuant to 49 U.S.C. Section 46301(a). (FAA, 2023)

B. State Regulations

1. Cal/OSHA and the California State Plan

Under an agreement with the OSHA, since 1973 California has operated an occupational safety and health program in accordance with Section 18 of the federal OSHA. The State of California's Department of Industrial Relations administers the California Occupational Safety and Health Program, commonly referred to as Cal/OSHA. The State of California's Division of Occupational Safety and Health (DOSH) is the principal agency that oversees plan enforcement and consultation. In addition, the California State program has an independent Standards Board responsible for promulgating State safety and health standards, and reviewing variances. It also has an Appeals Board to adjudicate contested citations and the Division of Labor Standards Enforcement to investigate complaints of discriminatory retaliation in the workplace. (OSHA, n.d.)

Pursuant to 29 CFR 1952.172, the California State Plan applies to all public and private sector places of employment in the State, with the exception of federal employees, the United States Postal Service, private sector employers on Native American lands, maritime activities on the navigable waterways of the United States, private contractors working on land designated as exclusively under federal jurisdiction and employers that require federal security clearances. Cal/OSHA is the only agency in the State authorized to adopt, amend, or repeal occupational safety and health standards or orders. In addition, the Standards Board maintains standards for certain things not covered by federal standards or enforcement, including: elevators, aerial passenger tramways, amusement rides, pressure vessels and mine safety training. The Cal/OSHA enforcement unit conducts inspections of California workplaces in response to a report of an industrial accident, a complaint about an occupational safety and health hazard, or as part of an inspection program targeting industries with high rates of occupational hazards, fatalities, injuries, or illnesses. (OSHA, n.d.)

2. California Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) (Health and Safety Code [HSC], Division 20, Chapter 6.5, Section 25100, et seq.) is the primary hazardous waste statute in California. The HWCL implements RCRA as a "cradle-to-grave" waste management system in the State. It specifies that generators have the primary duty to determine whether wastes created are hazardous and to ensure proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous wastes used or reuse as raw materials. The HWCL exceeds federal requirements by mandating source reduction planning and broadening requirements for permitting facilities that treat hazardous waste. It

also regulates a number of waste types and waste management activities not covered by federal law (RCRA). (CA Legislative Info, n.d.)

3. *California Code of Regulations (CCR), Titles 22 and 26*

A variety of California Code of Regulation (CCR) titles address regulations and requirements for generators of hazardous waste. Title 22 contains detailed compliance requirements for hazardous waste generators, transporters, and facilities for treatment, storage, and disposal. Because California is a fully-authorized State according to RCRA, most regulations (i.e., 40 CFR 260, et seq.) have been duplicated and integrated into Title 22. However, because the Department of Toxic Substances Control (DTSC) regulates hazardous waste more stringently than the EPA, the integration of State and federal hazardous waste regulations that make up Title 22 do not contain as many exemptions or exclusions as does 40 CFR 260. As with the HSC, Title 22 also regulates a wider range of waste types and waste management activities than does RCRA. To aid the regulated community, California has compiled hazardous materials, waste, and toxics-related regulations from CCR, Titles 3, 8, 13, 17, 19, 22, 23, 24 and 27 into one consolidated listing: CCR Title 26 (Toxics). However, the hazardous waste regulations are still commonly referred to collectively as "Title 22." (DTSC, n.d.)

4. *Safe Drinking Water and Toxic Enforcement Act*

Proposition 65, officially known as the Safe Drinking Water and Toxic Enforcement Act of 1986 (Health and Safety Code, Division 20, Chapter 6.6, Section 25249.5, et seq), protects the State's drinking water sources from being contaminated with chemicals known to cause cancer, birth defects, or other reproductive harm, and requires businesses to inform Californians about exposures to such chemicals. Proposition 65 requires the State to maintain and update a list of chemicals known to the State to cause cancer or reproductive toxicity. (CA Legislative Info, n.d.)

5. *California Water Code*

The California Water Code is the principal State law regulating water quality in California. Water quality provisions must be complied with as contained in numerous code sections including: 1) the Health and Safety Code for the protection of ground and surface waters from hazardous waste and other toxic substances; 2) the Fish and Game Code for the prevention of unauthorized diversions of any surface water and discharge of any substance that may be deleterious to fish, plant, animal, or bird life; 3) the Harbors and Navigation Code for the prevention of the unauthorized discharge of waste from vessels into surface waters; and 4) the Food and Agriculture Code for the protection of groundwater which may be used for drinking water supplies. The California Department of Fish and Wildlife (CDFW), through provisions of the Fish & Game Code (§§ 1601 - 1603) is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW. (CA Legislative Info, n.d.)

Surface water quality is the responsibility of the Regional Water Quality Control Board (RWQCB), water supply and wastewater treatment agencies, and city and county governments. The principal

means of enforcement by the RWQCB is through the development, adoption, and issuance of water discharge permits. RWQCB basin plans establish water quality objectives that are defined as the limits or levels of water quality constituents or characteristics for the reasonable protection of beneficial uses of water. (CA Legislative Info, n.d.)

6. Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

California's Unified Program, overseen by the California Environmental Protection Agency (CalEPA), protects Californians from hazardous waste and hazardous materials by ensuring local regulatory agencies consistently apply statewide standards when they issue permits, conduct inspections, and engage in enforcement activities. The Unified Program is a consolidation of multiple environmental and emergency management programs, including the following:

- Aboveground Petroleum Storage Act (APSA) Program;
- Area Plans for Hazardous Materials Emergencies;
- California Accidental Release Prevention (CalARP) Program;
- Hazardous Materials Release Response Plans and Inventories (Business Plans);
- Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory Statements (HMIS) (California Code);
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs; and,
- Underground Storage Tank Program.

State agency partners involved in the implementation of the Unified Program are responsible for setting program element standards, working with CalEPA to ensure program consistency, and providing technical assistance to the California Unified Program Agencies (CUPAs) and Program Agencies (PAs). The State agencies involved with the Unified Program include CalEPA, DTSC, the Governor's Office of Emergency Services (Cal OES), California Department of Forestry and Fire Protection (CalFire) – Office of the State Fire Marshall, and the State Water Resources Control Board (State Water Board). (CalEPA, n.d.)

7. Uniform Fire Code

The Uniform Fire Code, Article 80 (Section 80.103 of the Uniform Fire Code as adopted by the State Fire Marshal pursuant to HSC Section 13143.9), includes specific requirements for the safe storage and handling of hazardous materials. These requirements are intended to reduce the potential for a release of hazardous materials and for mixing of incompatible chemicals, and specify the following specific design features to reduce the potential for a release of hazardous materials that could affect public health or the environment:

- Separation of incompatible materials with a noncombustible partition;
- Spill control in all storage, handling, and dispensing areas; and

- Separate secondary containment for each chemical storage system. The secondary containment must hold the entire contents of the tank, plus the volume of water needed to supply the fire suppression system for a period of 20 minutes in the event of catastrophic spill. (CCR, n.d.)

8. License to Transport Hazardous Materials

Caltrans regulates hazardous materials transportation on all interstate roads (California Vehicle Code, Section 32000.5, et seq). Within California, the State agencies with primary responsibility for enforcing federal and State regulations and for responding to transportation emergencies are the California Highway Patrol and Caltrans. Together, federal and State agencies determine driver-training requirements, load labeling procedures, and container specifications for vehicles transporting hazardous materials. (CCR, n.d.)

9. California Hazardous Materials Release Response Plan and Inventory Law of 1985

The Business Plan Act requires preparation of Hazardous Materials Business Plans and disclosure of hazardous materials inventories, including an inventory of hazardous materials handled, plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures for businesses that handle, store, or transport hazardous materials in amounts exceeding specified minimums (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the State. Local agencies are responsible for administering these regulations.

Several State agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety, including CalEPA and the California Emergency Management Agency. The California Highway Patrol and California Department of Transportation (Caltrans) enforce regulations specifically related to the transport of hazardous materials. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roadways. (CA Legislative Info, n.d.)

C. Local Regulations

1. General Plan Safety Element

The Palmdale 2045 General Plan Safety Element outlines the goals and policies related to hazards and safety in Palmdale. Per California Government Code section 65302, a Safety Element provides protection of the community from any unreasonable risks associated with the effects of a wide variety of hazards. Safety Element Goal SE-3 is aimed at minimizing risks associated with the transport, storage, use, and disposal of hazardous materials. (City of Palmdale, 2023)

2. *Palmdale Municipal Code*

Palmdale Municipal Code (PMC) Chapter 15.28, Floodplain Management, enforces regulations to minimize the loss of life and property within the City. PMC Chapter 17.100, Hillside Management, implements goals and policies of the City's General Plan that relate to development and resource management on hillside areas in Palmdale. PMC Chapter 17.96, Hazardous Materials Facilities establishes a Conditional Use Permit application and review process that is consistent with Los Angeles County Hazardous Waste Management Plan to ensure health and safety for the community members and natural environment in Palmdale. (City of Palmdale, 2022a, pp. 4.9-16 and -17)

3. *City of Palmdale Emergency Operations Plan*

The Palmdale Emergency Operations Plan (EOP) was developed in 2012 to serve as a guiding document for emergency/disaster response in the City. The Plan assigns responsibility to organizations and individuals for carrying out specific actions at projected times and places in an emergency that exceeds the capability or routine responsibility of any one agency; sets forth lines of authority and organizational relationships and shows how all actions will be coordinated; describes how people and property will be protected in emergencies and disasters; and identifies personnel, equipment, facilities, supplies, and other resources available within the jurisdiction or by agreement with other jurisdictions for use during response and recovery operations. (City of Palmdale, 2022a, p. 4.9-17)

4. *City of Palmdale Local Hazard Mitigation Plan 2021-2026 Update*

To help ensure that the City can protect its residents and businesses from natural and manmade hazards. The City has adopted a Local Hazard Mitigation Plan (LHMP). The LHMP covers a wide range of hazards affecting Palmdale including, earthquakes; floods, dams and inundation, wildfires and brush fires, transportation accidents and hazardous materials spills, drought, severe weather, and power/utility failure. The LHMP describes these hazards and lays out how the City and other local partners can work to either reduce hazards or to help address their impacts when disasters occur. Having an LHMP in place helps direct City resources appropriately and qualifies the City for federal disaster relief. (City of Palmdale Public Works Department, 2021)

4.8.3 Basis for Determining Significance

Based on Section IX of Appendix G to the State CEQA Guidelines, the Project would result in a significant impact to hazards and hazardous materials if the Project or any Project-related component would:

a. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;*

b. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;*

c. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;*

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area;

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

4.8.4 IMPACT ANALYSIS

Threshold a: Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Threshold b: Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The analysis below evaluates the potential for the Project to result in a substantial hazard to people or the environment due to existing site conditions, construction activities, and long-term operation.

A. *Impact Analysis for Existing Site Conditions*

As indicated above under Subsection 4.8.1, and based on the results of the Project's Phase I ESA, the Project site does not contain any evidence of recognized environmental conditions (RECs), historical recognized environmental conditions (HRECs), or controlled recognized environmental conditions (CRECs); however, two *de minimis* (of little importance) conditions were identified. The first was the multiple piles of debris that had been illegally dumped at the Project site and the railroad tie stockpile that had likely been treated with creosote. As recommended in the Phase I ESA prepared for the Project, prior to development, the debris would be removed and the solid waste deposited at an appropriate off-site facility in accordance with all applicable laws and regulations. Any special handling that is required prior to the disposal of the railroad ties would be implemented. (AEC, 2022, p. 19)

As described above under Subsection 4.8.1, the second *de minimis* condition was the presence of the USAF Plant 42 release sites located approximately 0.75-mile to 1 mile east and south of the Project site. As determined by the Phase 1 ESA prepared for the Project, the contaminants of concern are known to have affected the soil and groundwater; however, these locations have been investigated and evaluated to be a sufficient distance from the Project site as to not present an environmental impact. The Trichloroethylene (TCE) plume within Installation Restoration Program (IRP) 29 has remained east of 15th Street East (approximately 1,500 feet east of the Project site's eastern boundary) and the monitoring wells indicate non-detectable concentrations of TCE. Additionally, the groundwater flow direction is to the north in the general area, placing the Project site as "cross-gradient." Therefore, it was determined that no further investigation is warranted for the Project site regarding these off-site

environmental concerns emanating from USAF Plant 42. (AEC, 2022, pp. 19-20) As such, there are no conditions associated with the existing condition of the Project site or surroundings that would create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials. Accordingly, no impact would occur associated with the existing conditions of the Project site.

B. *Impact Analysis for Temporary Construction-Related Activities*

Heavy equipment such as dozers, excavators, and tractors would be operated on the Project site during construction of the Project. This heavy equipment likely would be fueled and maintained by petroleum-based substances such as diesel fuel, gasoline, oil, and hydraulic fluid, which are considered hazardous if improperly stored or handled. In addition, materials such as paints, adhesives, solvents, and other substances typically used in building construction would be used on the Project site during construction. Improper use, storage, or transportation of hazardous materials can result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment. This is a standard risk on all construction sites, and there would be no greater risk for improper handling, transportation, or spills associated with the Project than would occur on any other similar construction site. Construction contractors would be required to comply with all applicable federal, State, and local laws and regulations regarding the transport, use, and storage of hazardous construction-related materials, including, but not limited to, requirements imposed by the United States (US) Environmental Protection Agency EPA and the Department of Toxic Substances Control (DTSC), as well as the Lahontan Regional Water Quality Control Board (RWQCB) pertaining to water quality as discussed in Subsection 4.9, *Hydrology and Water Quality*. With mandatory compliance with applicable hazardous materials regulations, the Project would not create significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials during the construction phase. Accordingly, impacts would be less than significant during temporary construction-related activities.

Impact Analysis for Long-Term Operation

The future occupants of the proposed warehouse buildings are not yet known. However, the Project Applicant expects industrial and commercial uses. It is possible that hazardous materials could be used during the course of daily operations for future building user(s). State and federal Community-Right-to-Know laws allow public access to information about the amounts and types of chemicals in use at local businesses. Laws also are in place that require businesses to plan and prepare for possible chemical emergencies. Any business that occupies the proposed building on the Project site and that handles hazardous materials (as defined in Section 25500 of California Health and Safety Code, Division 20, Chapter 6.95) would require a permit from the Los Angeles County Fire Department, Health Hazardous Materials Division (HHMD) in order to register the business as a hazardous materials handler. Such businesses also are required to comply with California's Hazardous Materials Release Response Plans and Inventory Law, which requires immediate reporting to the Los Angeles County Fire Department and the State Office of Emergency Services regarding any release or threatened release of a hazardous material, regardless of the amount handled by the business. In addition, any business handling at any one time, greater than 500 pounds of solid, 55 gallons of liquid,

or 200 cubic feet of gaseous hazardous material, is required, under Assembly Bill 2185 (AB 2185), to file a Hazardous Materials Business Emergency Plan (HMBEP). A HMBEP is a written set of procedures and information created to help minimize the effects and extent of a release or threatened release of a hazardous material. The intent of the HMBEP is to satisfy federal and State Community Right-To-Know laws and to provide detailed information for use by emergency responders.

If businesses that use or store hazardous materials occupy the future building on the Project site, the business owners and operators would be required to comply with all applicable federal, State, and local regulations to ensure proper use, storage, use, emission, and disposal of hazardous substances (as described above). With mandatory regulatory compliance, the Project is not expected to pose a significant hazard to the public or the environment through the routine transport, use, storage, emission, or disposal of hazardous materials, nor would the Project increase the potential for accident conditions which could result in the release of hazardous materials into the environment. In addition, the Project would be required to comply with PMC Chapter 8.04, Adoption of Health, Safety and Technical Construction Codes, which establishes specific requirements for the storage of hazardous materials.

With mandatory regulatory compliance, potential hazardous materials impacts associated with long-term operation of the Project would be less than significant.

C. *Summary*

Under existing conditions, during temporary constriction-related activities, and under long-term operation of the Project, with mandatory compliance with Federal, State and local regulations, impacts would be less than significant; thus no mitigation is required.

Threshold c: 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?

There are no existing schools located within 0.25-mile of the Project site. The nearest school is Adventureland Preschool, located approximately 1.27 miles southwest of the Project site. (Google Earth, n.d.) As described above under the analysis of Thresholds (a) and (b), the use of and transport of hazardous substances or materials to and from the Project site during temporary construction and long-term operational activities would be required to comply with applicable federal, State, and local regulations that would preclude substantial public safety hazards.

Because there are no existing schools located within 0.25-mile of the Project site, there is no potential for the Project to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Therefore, no impact would occur.

Threshold d: Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

Based on the results of the Project's Phase I ESA (*Technical Appendix I*), the Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (AEC, 2022, p. 13). Accordingly, no impact would occur.

Threshold e: 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?

The closest active airport is USAF Plant 42 located approximately 0.25-mile northwest of Runway 7. Hazards associated with airports are generally related to construction of tall structures within a flight zone that could interfere with flight paths, increasing the number of people working or residing in areas subject to crash hazards and noise hazards to sensitive receptors within the vicinity of a flight path.

The FAA conducted an aeronautical study for the Project site and determined that the proposed structures do not exceed obstruction standards and would not be a hazard to air navigation. "Determination of No Hazard to Air Navigation" letters were issued on June 10, 2024 and are included in *Technical Appendix O* to this EIR (FAA, 2024). Furthermore, as discussed in EIR Section 3.0, *Project Description*, the Project's proposed buildings would have variable rooflines with a maximum height of 49.6 feet and as such, the Project would not be constructed at a height exceeding 200 feet above ground level (AGL). Because the height of the Project's structures would not exceed 200 feet AGL, and based on the FAA's determination that the Project would not be a hazard to air navigation, implementation of the Project would not result in a safety hazard for people residing or working in the Project area.

In summary, and as discussed in Subsection 4.8.1 above, because the Project site is not located within the ALUP's runway protection zone (RPZ), or the AICUZ Final Report's Accident Potential Zone (APZ) or Clear Zone (CZ), and the FAA determined that the Project would result in no hazard to air navigation, the Project would not result in a safety hazard for people residing or working in the Project area. Therefore, for a project located within an airport land use plan or within two miles of a public airport or public use airport, impacts would be less than significant.

As shown in the AICUZ's Final Report's Figure 3-3, Air Force Plant 42 – Community Noise Equivalent Level (CNEL), the commercial land use within the northern portion of the Project site is located well outside the 60-65 dBA CNEL noise level contour boundary. The southern half of the Project site consisting of industrial land uses is located within the 65-70 dBA CNEL aircraft noise level contour boundaries with a small portion of the southeastern portion of the Project site located within the 70-75 dBA dBA CNEL noise level contour boundary. Therefore, according to the City of Palmdale General Plan Noise Element Noise Land Use Compatibility Criteria, the Project's land uses are considered normally acceptable. (Urban Crossroads, 2024e, pp. 16, 18). Therefore, as disclosed in EIR

Subsection 4.10, *Noise*, the Project would be consistent with the noise contours and would therefore not result in excessive noise for a project 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.

In summary, because the Project's would be consistent with the FAA, ALUC, and the AICUZ Final Report, implementation of the Project would not result in a safety hazard or excessive noise for people residing or working in the Project area; therefore, impacts would be less than significant.

Threshold f: Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

As previously indicated, the Palmdale Emergency Operations Plan (EOP) was developed in 2012 to serve as a guiding document for emergency/disaster response in the City. The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. During construction and long-term operation of the Project, adequate emergency access for emergency vehicles would be required to be maintained along public streets that abut the Project site. Furthermore, improvements planned as part of the Project are not anticipated to adversely affect traffic operations in the local area, including along the portions of Columbia Way / East Avenue M, Sierra Highway, or proposed Public Streets A, B, and C along the frontage of the Project site. As part of the City's discretionary review process, the City reviewed the Project's application materials to ensure that appropriate emergency ingress and egress would be available to and from the Project site and that circulation on the Project site was adequate for emergency vehicles. Furthermore, there are no components of the proposed Project that would interfere with the City's EOP. Accordingly, implementation of the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan. Therefore, impacts would be less than significant and no mitigation is required.

Threshold g: Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The Project site is not located within a state responsibility area (SRA); the nearest area subject to an SRA occurs approximately 5.28 miles south of the Project site. According to mapping information available from the BFFP, the Project site is located within a Local Responsibility Area (LRA) (BFFP, n.d.) Local Responsibility Areas (LRA) are incorporated cities, urban regions, agriculture lands, and portions of the desert where the local government is responsible for wildfire protection. This is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract. (CalFire, 2023). According to Palmdale 2045 General Plan Final Environmental Impact Report (SCH #2021060494) Figure 4.20-1, Palmdale Fire Hazard Severity Zones, the Project site and immediately surrounding areas are not located within a Very High Fire Hazards Zone. Therefore, the Project site is not located in an area of the City that is subject to wildland fire hazards; the nearest such area occurs approximately 5.02 miles southwest of the Project site. Furthermore, the proposed buildings would be required to be in compliance with all applicable Building and Fire Codes and include installation of on-site and off-site improvements to provide fire access. As such, the Project

would not expose people or structures, directly or indirectly, to significant risk of loss, injury or death involving wildland fires. Therefore, no impact would occur as a result of implementation of the Project; thus no mitigation is required.

The Project's potential impacts due to wildland fire hazards is further discussed in EIR Subsection 4.15, *Wildfire*.

4.8.5 Cumulative Impact Analysis

Because the issue of hazards and hazardous materials tends to be site-specific in nature, the cumulative study area includes existing and planned developments within a one-mile radius of the Project site. A one-mile radius is appropriate for most of the thresholds identified herein because that is the standard distance used in regulatory database searches of properties that may generate or store toxic materials. With respect to cumulatively considerable impacts to public airport facilities, the cumulative study area would include the Project site and surroundings, as well as other properties located within the AIA for the Palmdale Regional Airport.

Routine Transport, Use or Disposal of Hazardous Materials / Releasee of Hazardous Materials into the Environment

As discussed under the analysis of Thresholds (a) and (b), the Project site does not contain any RECs under existing conditions. As such, the Project would not result in any cumulatively considerable impacts due to existing site contamination. With respect to construction activities, the Project would be subject to compliance with all applicable federal, State, and local laws and regulations regarding the transport, use, and storage of hazardous construction-related materials, including but not limited to requirements imposed by the EPA and DTSC, as well as the Lahontan RWQCB pertaining to water quality. Other cumulative developments similarly would be subject to applicable federal, State, and local laws and regulations regarding the transport, use, and storage of hazardous construction-related materials. As such, cumulatively considerable impacts would be less than significant. Similarly, under long-term operating conditions, future businesses on site that involve the storage or use of hazardous materials or substances would be subject to applicable federal, State, and local requirements related to hazardous materials. Other businesses within the cumulative study area of the Project would similarly be required to comply with applicable federal, State, and local requirements related to hazardous materials. With mandatory regulatory compliance, potential hazardous materials impacts associated with long-term operation of the Project are determined to be less than cumulatively considerable.

Hazardous Emissions within 0.25-Mile of an Existing or Proposed School

There are no existing schools located within 0.25-mile of the Project site. The use of and transport of hazardous substances or materials to and from the Project site during construction and long-term operational activities would be required to comply with applicable federal, State, and local regulations that would preclude substantial public safety hazards. Other cumulative developments similarly would be required to comply with applicable federal, State, and local regulations. Accordingly, no cumulatively considerable impact would occur as a result of implementation of the Project.

Hazardous Materials Site Compiled Pursuant to Environmental Code Section 65962.5

The Project site is not located on the list of hazardous materials sites compiled pursuant to Government Code § 65962.5; therefore, the Project has no potential to contribute to substantial, cumulatively considerable effects related to the development of contaminated sites listed on regulatory databases.

Airport Land Use Plan or Airports

As discussed under Threshold (e). the Project is consistent with the Los Angeles County ALUP and the USAF AICUZ; therefore, implementation of the Project would not result in a safety hazard or excessive noise for people residing or working in the Project area. All other development projects proposed by others in the area, would also be required to be consistent with the ALUP and the AICUZ zone. Therefore, the Project's impacts are less than cumulatively considerable and no impact would occur.

Emergency Response or Emergency Evacuation Plans

As discussed under the analysis of Threshold (f), the Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. Additionally, Project construction activities are not anticipated to adversely affect operations of existing local roadways in the area. Therefore, there is no potential for the Project to contribute to any cumulatively-considerable impacts associated with an adopted emergency response plan or emergency evacuation plan. Therefore, cumulatively-considerable impacts would not occur.

Wildland Fires

As discussed under the analysis of Threshold (g), because the Project site is not located within or in close proximity to areas identified as being subject to wildland fire hazards, and proposed buildings would be constructed in compliance with all applicable Building and Fire Codes, the Project has no potential to contribute to adverse, cumulative wildland fire hazards.

4.8.6 Significance of Impacts Before Mitigation

Thresholds a and b: Less than Significant Impact. With mandatory compliance with applicable hazardous materials regulations, the Project would result in less than significant impacts due to the creation of a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials during the construction phase. Additionally, with mandatory regulatory compliance, potential hazardous materials impacts associated with long-term operation of the Project would be less than significant; thus no mitigation is required.

Threshold c: No Impact. Because there are no existing schools located within 0.25-mile of the Project site, there is no potential for 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. Therefore, no impact would occur.

Threshold d: No Impact. Because the Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, no impact would occur and no mitigation is required.

Threshold e: Less than Significant Impact. Because the Project's would be consistent with the FAA, the ALUC, and the AICUZ Final Report, implementation of the Project would not result in a safety hazard or excessive noise for people residing or working in the Project area; therefore, impacts would be less than significant.

Threshold f: Less than Significant Impact. The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route, and there are no components of the Project with the potential to conflict with or interfere with the City's Emergency Operation Plan (EOP). Accordingly, implementation of the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan. Therefore, impacts would be less than significant and no mitigation is required.

Threshold g: No Impact. Because the Project site is not located in close proximity to wildlands or areas with high fire hazards, development of the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires significant wildfire risk.

4.8.7 Mitigation

Impacts would be less than significant; therefore, no mitigation is required.

4.8.8 Design Features (DF) and Regulatory Requirements (RR)

The City of Palmdale is required to assure that implementing development complies with the assumptions relied upon herein and applicable regulatory requirements pertaining to the topic of Hazards and Hazardous Materials, which include the following regulatory requirements and design features. The Project shall be conditioned to implement the following design features and regulatory requirements as part of the City's Conditions of Approval for the Project.

HAZ RR 4-1 All construction contractors are required to comply with all applicable regulations and requirements promulgated by the federal Occupational Safety and Health Administration (OSHA).

HAZ RR 4-2 The Project is required to comply with Title 22, Division 4.5 of the California Code of Regulations, which requires residents and employees to dispose of household hazardous waste, including pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals, at a Household Hazardous Waste Collection Facility.

HAZ RR 4-3 The Project is required to comply with Title 22, Division 4.5, Chapter 11 of the California Code of Regulations which requires fluorescent lamps, batteries, and mercury thermostats be recycled or taken to a Household Hazardous Waste Collection Facility.

HAZ RR 4-4 In accordance with the California Accidental Release Prevention (CalARP) program, if any businesses occupies the Project site that handles more than a specific threshold quantity of a regulated substance listed in the CalARP regulations, the business is required to prepare a Risk Management Plan (RMP) detailing the potential accident factors present and the measures that will be implemented to reduce accident potential. The RMP must include, but not be limited to, safety information, a hazard review, operating procedures, training requirements, maintenance requirements, compliance audits, and incident investigation procedures. The CalARP program requirements are implemented and enforced at the local government level by Unified Program Agencies (UPAs), such as the Los Angeles County Fire Department. The UPAs determine the level of detail needed in the RMPs, review the RMPs, conduct facility inspections, and provide public access to most of the relevant information.

4.9 HYDROLOGY AND WATER QUALITY

The analysis in this subsection is based on a technical study prepared by JLC Engineering & Consulting, Inc. (herein, "JLC") titled, "Preliminary Drainage Report for Antelope Valley Commerce Center," is dated October 12, 2023, and is included as EIR *Technical Appendix J* (JLC, 2023). All references used in this subsection are included in EIR Section 7.0, *References*.

4.9.1 EXISTING CONDITIONS

A. *Regional Hydrology*

The Project site is located within the southern portion of the Antelope Valley Watershed, which is a part of the Antelope Valley Groundwater Basin. The Antelope Valley Watershed is unique in that it does not drain into the Pacific Ocean. The watershed straddles the Los Angeles-Kern County Line and encompasses approximately 1,220 square miles within Los Angeles County, 2,006 square miles in Kern County, and 143 square miles in San Bernardino County. Numerous streams originating in the mountains and foothills flow across the valley floor and eventually pond in the dry lakes (Edwards Air Force Base) adjacent to the northern County line. The valley lacks defined natural and improved channels outside of the foothills and is subject to unpredictable sheet flow patterns. (City of Palmdale, 2022a, p. 4.10-1; LADPW, n.d.)

B. *Site Hydrology*

The existing hydrologic conditions of the Project site were previously depicted on Figure 2-8, *Existing Conditions Hydrology*. As shown in Figure 2-8, under existing conditions, runoff emanating from the Project site is divided into three areas. Area 1 is located in the central and southwestern portion of the Project site; Area 2 is located in the eastern, south-central, and southeastern portion of the Project site; and Area 3 is located in the northwest corner of the Project site. Area 1 and Area 2 both flow in a northeastern direction across the Project site on to Columbia Way / East Avenue M. Area 3 flows in a northern direction toward an existing culvert system just east of the intersection of Columbia Way / East Avenue M and Sierra Highway. The existing Columbia Way / East Avenue M terrain is very flat and has several low points where runoff accumulates. Along the northern boundary of the Project site, Columbia Way / East Avenue M, does not have any storm drain infrastructure to collect runoff that accumulates at these low points, which act as outlet points for runoff from Area 1 and Area 2. When runoff accumulation exceeds the natural storage volume of the existing low points and the capacity of the existing culvert, flows will overtop Columbia Way / East Avenue M. (JLC, 2023, p. 5)

Runoff from the 400 acres located to the southwest of the Project site, sheet flows in a northeasterly direction towards Sierra Highway and the Project site. A concrete channel, located on the east side of Sierra Highway, directs runoff to flow under the railroad bridge to an existing reinforced concrete box that crosses Columbia Way / East Avenue M to the north. This prevents any runoff from the southwest from flowing onto the Project site. (JLC, 2023, pp. 1-3)

Table 4.9-1, *Peak Flow Rates Under Existing Conditions*, shows the peak flow rates for each of the drainage areas under existing conditions.

Table 4.9-1 Peak Flow Rates Under Existing Conditions

Drainage Area	Node	Peak Flow Rate (Q_{50} [ft^3/s])
Area 1	2526	14.4
Area 2	2489	11.9
Area 3	2526	1.6

Source: (JLC, 2023, p. 5)

C. *Flood Hazards*

As shown on Figure 4.9-1, *FEMA Flood Insurance Rate Map*, according to the Federal Emergency Management Agency (FEMA) the Project site is located within two Flood Insurance Rate Maps (FIRMs). The majority of the Project site is located within FIRM No. 06037C0450F, mapped within Zone X (Unshaded), which are areas determined to be outside the 0.2 percent annual chance floodplain. The eastern side of the Project site is located within FIRM No. 06037C0420F. In this portion of the Project site, the majority of the area is mapped within Zone X (Unshaded); however, a small portion in the northwestern corner of the Project site, near the unnamed sandy wash, is located within a Letter of Map Revision (LOMR) area No. 08-09-1758P. This area is mapped as Zone X, which are areas of 0.2 percent annual flood chance; areas of one percent annual chance flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from one percent annual chance flood. (FEMA, 2008)

D. *Water Quality*

The Project site is within the jurisdiction of the Lahontan Regional Water Quality Control Board (RWQCB), and the Water Quality Control Plan for the Lahontan Region (Basin Plan) is the governing water quality plan for the region. As noted in the Basin Plan, although high quality water supplies are available near streams in desert areas of the Lahontan Region, many desert waters have naturally poor quality (e.g., high concentrations of salts, and minerals such as arsenic and selenium). Water quality problems in the Lahontan Region are largely related to nonpoint sources (including erosion from construction, timber harvesting, and livestock grazing), stormwater, acid drainage from inactive mines, and individual wastewater disposal systems. There are relatively few point source discharges; these include several wastewater treatment plants, fish hatcheries operated by the California Department of Fish and Wildlife (CDFW), and some geothermal discharges. (Lahontan RWQCB, 2021, p. 1-4)

E. *Groundwater Supplies*

The Lahontan Region includes over 1,581 square miles of groundwater basins. Groundwater in the region supplies high quality drinking water and irrigation water, as well as industrial service supply, wildlife habitat supply, and aquaculture supply waters. Groundwaters in the region also provide a source of freshwater for the replenishment of inland lakes and streams of varying salinity. (Lahontan RWQCB, 2021, p. 4.6-1)

The Project site is located within the Antelope Valley Groundwater Basin. The Antelope Valley Groundwater Basin encompasses 1,580 square miles of Los Angeles County, Kern County, and, less

prominently, San Bernardino County, and has a storage capacity of approximately 70,000,000 acre-feet. The Antelope Valley Groundwater Basin is composed of two primary aquifers: the upper (principal) aquifer and the lower (deep) aquifer. (City of Palmdale, 2022a, p. 4.10-2; LADWP, 2014, Figure 2-1)

The U.S. Geological Survey (USGS) has identified a series of subbasins in the Antelope Valley Groundwater Basin. The Project site is located within the Lancaster groundwater subbasin. The Lancaster subbasin is in the center of the Antelope Valley Groundwater Basin with its southernmost portions lying within the Palmdale Water District (PWD) service area. PWD operates 10 wells in the Lancaster subbasin, with a pumping capability of approximately 12,500 gallons per minute (gpm). (City of Palmdale, 2022a, p. 4.10-2)

PWD and Los Angeles County Waterworks District No. 40 (LACWD 40) are involved in the adjudication of groundwater rights for the Antelope Valley Groundwater Basin that began in 2004. The adjudication allows groundwater banking between entities and allows PWD and LACWD 40 to take any additional groundwater banked. In late 2015, PWD and LACWD 40, as well as the majority of parties involved, agreed to a stipulated judgment for the adjudication of the Antelope Valley Groundwater Basin. Per the judgment, PWD is receiving a groundwater production right of 2,770 acre-feet per year (AFY). Prior to the judgment, PWD had an unquantified right to pump water for beneficial use and assumed projected pumping volumes of up to 12,000 AFY based on pumping capacity. In addition to its groundwater production right, PWD is entitled to a share of the unused federal reserved right. Currently, the average amount of PWD's share of unused Federal Reserved Water Right Production is 1,450 AFY. PWD is also entitled to a pumping allocation for return flow credit of imported water used. Based on the analyses conducted in planning reports, return flow credits are projected to range between approximately 4,900 AFY and 6,000 AFY through 2040. LACWD 40 was given the right to pump 6,789 AFY, use approximately 3,500 AFY of unused federal reserve rights, and return flows equivalent to 39 percent of LACWD 40's five-year average of purchased SWP water supply (39 percent of 26,657 AFY or 10,400 AFY). LACWD 40 also has the right to lease 2,600 AFY of groundwater rights from Antelope Valley-East Kern Water Agency (AVEK). Overall, LACWD 40's groundwater rights total of 23,289 AFY. (City of Palmdale, 2022a, pp. 4.10-2 and 4.10-3)

Because of the adjudication of groundwater rights as discussed above, the Antelope Valley Groundwater Basin is exempt from the requirements of the Sustainable Groundwater Management Act (SGMA), which was passed by the State of California in 2014 and sets forth a Statewide framework to help protect groundwater resources over the long-term. The PWD has not adopted a groundwater management plan, and no regional groundwater management plan currently exists for the Antelope Valley Groundwater Basin. The DWR's Bulletin 118 California's Groundwater (2019) does not characterize the groundwater basin as overdrafted; however, it was deemed a 'low-priority' basin by DWR. (City of Palmdale, 2022a, p. 4.10-3)

4.9.2 REGULATORY SETTING

The following is a brief description of the federal, State, and local environmental laws and related regulations related to hydrology and water quality.

A. Federal Regulations

1. Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was substantially reorganized and expanded in 1972. The Clean Water Act became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also water quality standards for all contaminants in surface waters. A specific provision of the CWA is CWA Section 402, which authorizes the National Pollutant Discharge Elimination System (NPDES) permit program that covers point source pollution discharging to a water body. Point sources are discrete conveyances such as pipes or man-made ditches. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2023e)

The NPDES program requires operators of a construction site one acre or larger to obtain authorization to discharge storm water under an NPDES construction storm water permit. Compliance with the NPDES Permit is required for projects that result in more than one acre of ground disturbance, including through clearing, grading, grubbing, excavating, stockpiling, and removing or replacing existing facilities. The NPDES Permit requires the landowner and/or contractor to file permit registration documents prior to commencing construction and pay a fee annually throughout the duration of construction. These documents include a notice of intent, risk assessment, site map, SWPPP, and signed certification statement. The SWPPP is required to specify the minimum Best Management Practices (BMPs) that the Project would be required to implement during construction activities to ensure that all potential pollutants of concern are prevented, minimized, and/or otherwise appropriately treated prior to being discharged from the subject property. The SWPPP must include measures to ensure the following: all pollutants and their sources are controlled; non-stormwater discharges are identified and eliminated, controlled, or treated; site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges; and BMPs are installed to reduce or eliminate pollutants post-construction are completed and maintained. (City of Palmdale, 2022a, p. 4.10-8).

2. Federal Flood Insurance Program

The U.S. Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968. The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the Federal Government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the Federal Government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. The Federal Insurance and Mitigation Administration (FIMA) within the FEMA is responsible for administering the NFIP and administering programs that provide assistance for mitigating future damages from natural hazards. (FEMA, 2023)

3. Executive Order 11988 – Floodplain Management

Executive Order 11988 requires federal agencies to avoid to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains. (FEMA, 2021)

B. State Regulations

1. Porter-Cologne Water Control Act

The Porter-Cologne Act (California Water Code § 130000 et. seq.) is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, groundwater and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code § 13000 et seq.), the policy of the State is as follows: (SWRCB, 2014)

- The quality of all the waters of the State shall be protected;
- All activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and,
- The State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation.

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Resources Control Board (SWRCB), which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews decisions made by each Regional Water Board. In addition, the State Water Board allocates rights to the use of surface

water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of the nine hydrologic regions. The State Water Board and Regional Water Boards have numerous non-point source related responsibilities, including monitoring and assessment, planning, financial assistance, and management. (SWRCB, 2014)

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The SWRCB and the RWQCBs can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act (CWA), such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. In addition, basin plans have been adopted by each of the RWQCBs and are updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. (SWRCB, 2014) The Project site is located in the Antelope Valley Watershed, which is within the purview of the Lahontan RWQCB. The Basin Plan is the governing water quality plan for the region.

2. California Water Code

The California Water Code is the principal State law regulating water quality in California. Water quality provisions must be complied with as contained in numerous code sections including:

- The Health and Safety Code for the protection of ground and surface waters from hazardous waste and other toxic substances;
- The Fish and Game Code for the prevention of unauthorized diversions of any surface water and discharge of any substance that may be deleterious to fish, plant, animal, or bird life;
- The Harbors and Navigation Code for the prevention of the unauthorized discharge of waste from vessels into surface waters; and,
- The Food and Agriculture Code for the protection of groundwater which may be used for drinking water supplies.

The California Department of Fish and Wildlife (CDFW), through provisions of the Fish & Game Code (§§ 1601 - 1603) is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. CDFW regulates wetland areas only to the

extent that those wetlands are part of a river, stream, or lake as defined by CDFW. (CA Legislative Info, n.d.)

Surface water quality is the responsibility of the RWQCB, water supply and wastewater treatment agencies, and city and county governments. The principal means of enforcement by the RWQCB is through the development, adoption, and issuance of water discharge permits. RWQCB basin plans establish water quality objectives that are defined as the limits or levels of water quality constituents or characteristics for the reasonable protection of beneficial uses of water. (CA Legislative Info, n.d.)

3. California Toxics Rule

The California Toxics Rule (CTR) fills gaps in California's water quality standards necessary to protect human health and beneficial uses of aquatic life. The CTR criteria are similar to those published in the National Recommended Water Quality Criteria. The CTR supplements, and does not change or supersede, the criteria that EPA promulgated for California waters in the National Toxics Rule (NTR). The human health NTR and CTR criteria that apply to drinking water sources (those water bodies designated in the Basin Plans as municipal and domestic supply) consider chemical exposure through consumption of both water and aquatic organisms (fish and shellfish) harvested from the water. For waters that are not drinking water sources (e.g., enclosed bays and estuaries), human health NTR and CTR criteria only consider the consumption of contaminated aquatic organisms. The CTR and NTR criteria, along with the beneficial use designations in the Basin Plans and the related implementation policies, are the applicable water quality standards for toxic priority pollutants in California waters. (SWRCB, 2016, pp. 14-15)

4. Watershed Management Initiative

The State and RWQCBs are currently focused on looking at entire watersheds when addressing water pollution. The RWQCBs adopted the Watershed Management Initiative (WMI) to further their goals. The WMI establishes a broad framework overlying the numerous federal and State mandated priorities. As such, the WMI helps the RWQCBs achieve water resource protection, enhancement and restoration while balancing economic and environmental impacts. (SWRCB, 2017) The integrated approach of the WMI involves three main ideas:

- Use water quality to identify and prioritize water resource problems within individual watersheds. Involve stakeholders to develop solutions;
- Better coordinate point source and nonpoint source regulatory efforts. Establish working relationships between staff from different programs; and,
- Better coordinate local, State, and federal activities and programs, especially those relating to regulations and funding, to assist local watershed groups. (SWRCB, 2017)

5. Sustainable Groundwater Management Act

The 2014 Sustainable Groundwater Management Act (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 the SGMA, these basins should reach sustainability within 20 years of implementing sustainability plans. The DWR categorizes the priority of groundwater basins. For critically over-drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline. The SGMA also requires local public agencies and Groundwater Sustainability Agencies (GSAs) in high- and medium-priority basins to develop and implement Groundwater Sustainability Plans (GSPs) or Alternatives to GSPs. GSPs are detailed road maps for how groundwater basins will reach long term sustainability. (DWR, n.d.) (DWR, 2020)

C. *Local Regulations*

1. *Palmdale Municipal Code, Chapter 14.05 Water Efficient Landscape*

The Palmdale Municipal Code (PMC), Chapter 14.05, Water Efficient Landscape, establishes provisions for water management practices. It encourages stormwater best management practices to minimize run off and maximize infiltration to recharge groundwater. PMC Chapter 14.05 regulates landscape design, Chapter 14.05 contains irrigation design criteria, specifications, and requirements. PMC Section 14.05 regulates grading design plans including recommendations for preventing excessive erosion and runoff. PMC Chapter 14.05 regulates stormwater management practices to minimize runoff and increase infiltration which recharges groundwater and improves water quality. PMC Chapter 14.05 requires project applicants to complete a soil management report in order to reduce runoff. This requires a project applicant to submit soil samples to a laboratory for analysis and recommendations. Soil would be tested for pH, total soluble salts, sodium, percent organic matter, and other physical or chemical properties. (City of Palmdale, 2022a, p. 4.10-10)

2. *Palmdale Municipal Code, Chapter 15.28 Floodplain Management*

PMC Chapter 15.28, Floodplain Management, minimizes public and private losses due to flood conditions in specific areas by legally enforceable regulations applied uniformly throughout the community to all publicly and privately owned land within flood prone mudslide (i.e., mudflow) or flood related erosion areas. This chapter of the PMC contains the basis for obtaining a development permit in flood prone areas and construction standards intended to minimize impacts of flooding. (City of Palmdale, 2022a, p. 4.10-10)

3. *City of Palmdale Storm Water Management Plan*

The Palmdale Storm Water Management Plan (SWMP) was adopted in 2003. The SWMP was prepared by the City of Palmdale Department of Public Works with the objective to preserve the quality of City waters, including storm water conveyances such as closed conduits, open channels, drainage basins, and dry wells. The City was issued a "small" Municipal Separate Storm Sewer System (MS4) permit by the Lahontan RWQCB which authorizes the City to legally discharge stormwater into local waterways. The California State Water Resources Control Board (SWRCB) designated the City of Palmdale MS4 as a "small" MS4 because it is located within an urbanized area defined by the US Census Bureau. As part of the MS4 permit requirements, the City was required to develop and submit a SWMP to the Lahontan RWQCB. The goal of the City's SWMP is to reduce the discharge of pollutants to the MS4 to the Maximum Extent Practicable (MEP). A requirement of the SWMP is that

each development attenuate post-developed flows to 85 percent of pre-developed flows with the objective of protecting downstream properties. Additional requirements of the SWMP include employing BMPs for on-site detention/retention of stormwater runoff erosion events and tracking. (City of Palmdale, 2023, p. 329)

4.9.3 Basis for Determining Significance

Based on Section X of Appendix G to the State CEQA Guidelines, the Project would result in a significant impact to hydrology and/or water quality if the Project or any Project-related component would:

a. *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;*
b. *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;*
c. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*
    i. *result in substantial erosion or siltation on- or off-site;*
    ii. *substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;*
    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;*
d. *In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or,*
e. *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.*

4.9.4 Impact Analysis

Threshold a: Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

The California Porter-Cologne Water Quality Control Act (Section 1300 [Water Quality] et seq., of the CWC), and the Federal Water Pollution Control Act Amendment of 1972 (also referred to as the CWA) require the preparation of comprehensive water quality control plans for all waters within the State of California. As previously noted, the Project site is within the jurisdiction of the Lahontan Region of the State RWQCB. The Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. (Plan effective March 31, 1995, including amendments effective August 1995 through September 22, 2021). Specifically, the Basin Plan:

- Designates beneficial uses for surface and ground waters;
- Sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's anti-degradation policy; and,
- Describes implementation programs to protect all waters in the Region.

In addition, the Basin Plan incorporates all applicable State and RWQCB plans and policies and other pertinent water quality policies and regulations. (Lahontan RWQCB, 2021)

Because the proposed Project is industrial and commercial uses, certain pollutants are anticipated to be generated based on the Los Angeles County Low Impact Development (LID) Manual. Per Table 7-3 within the LID manual, the development of the Project would potentially produce the following pollutants: suspended solids, phosphorous, nitrogen, kjeldahl nitrogen, copper, lead, and zinc. (LADPW, 2014b, Table 7-3)

The CWA requires all states to conduct water quality assessments of water resources to identify water bodies that do not meet water quality standards. Water bodies that do not meet water quality standards are placed on a list of impaired waters pursuant to the requirements of Section 303(d) of the CWA. The Project site is located within the Antelope Valley Watershed. However, the Project site is not tributary to any waters identified as being impaired due to Section 303(d) of the CWA. The nearest impaired water body is Palmdale Lake, located approximately 5.4 miles south of the Project site; however, the Project site is not tributary to Palmdale Lake, as Palmdale Lake is located at an elevation of approximately 2,840 feet above mean sea level (amsl), while the elevations on the Project site range from 2,489 feet amsl to 2,553 feet amsl. Accordingly, the Project has no potential to contribute to any existing water quality impairments in any receiving waters. (SWRCB, 2022a; Google Earth, n.d.)

A specific provision of the CWA applicable to the Project is CWA Section 402, which authorizes the NPDES permit program that covers point source pollution discharging to a water body. The NPDES program requires operators of a construction site one acre or larger to obtain authorization to discharge storm water under an NPDES construction storm water permit. A discussion of the potential for the Project to result in water quality impacts during construction and long-term operation is presented below.

The Project site is tributary to the Amargosa Creek. According to the California RWQCB, the U.S. Army Corp of Engineers has determined that Amargosa Creek is not defined as a waters of the United States because it flows to a closed internal dry lake basin (Rosamond Dry Lake). Therefore, stormwater discharge into the Amargosa Creek would not subject to regulation under the NPDES program. This is consistent with the California's 2016 Water Quality Integrated Report (CWA Section 303(d) List) as Rosamond Dry Lake is not listed as impaired. However, the California RWQCB encourages implementation of best management practices (BMPs) for new development in order to protect the waters of the State. (USACE, 2014)

A. *Temporary Construction Activities*

Construction of the Project would involve clearing, grading, paving, utility installation, building construction, and landscaping activities. Construction activities would result in the generation of potential water quality pollution such as silt, debris, chemicals, paints, solvents, and other chemicals with the potential to adversely affect water quality. As such, short-term water quality impacts have the potential to occur during construction of the Project in the absence of any protective or avoidance measures.

Pursuant to the requirements of the Lahontan RWQCB, the Project Applicant is required to obtain a NPDES Permit, discussed previously in subsection 4.9.2. Mandatory compliance with the SWPPP (prepared as part of the NPDES permit) would ensure that the Project does not violate any water quality standards or waste discharge requirements during construction activities. In addition, the Project would be required to comply with the Lahontan RWQCB's Basin Plan and the requirements of the City's SWMP prepared as part of the MS4 permit compliance. Therefore, water quality impacts associated with construction activities would be less than significant.

Mandatory compliance with the CWA, the NPDES permit, LID standards, the City's SWMP, and the goals and policies of the General Plan would reduce the potential for water quality degradation.

B. *Post-Development Water Quality Impacts*

With implementation of the Project, the site would be designed to perpetuate the existing drainage patterns, to provide storm drain infrastructure that is consistent with the City of Palmdale and City of Lancaster Master Drainage Plans, and to not adversely impact downstream property owners. Two areas were examined during the hydrology analysis: Area 1, which includes the Project site, and Area 2 which is located to the west and southwest of the Project. (JLC, 2023, pp. 5-6)

As previously described in EIR Section 3.0, *Project Description*, with development of the Project site as proposed, on-site stormwater would be conveyed through a storm drain system to an on-site infiltration basin located in the northern portion of the Project site, directly east of Challenger Way. The on-site basin would be designed to function as an infiltration basin that would mitigate water quality, reduce downstream flows to be less than or equal to existing conditions, and to promote groundwater infiltration. The basin would be sized to mitigate the increased runoff and fully retain the 50-yr storm event. The drainage area of the post-development site, would be tributary to an existing culvert located east of Challenger way, which is the same outlet point as pre-project conditions. (JLC, 2023, pp. 5-6)

The Project's storm drain system would locate storm drains beneath the drive aisle north of proposed Buildings 1 and 2; beneath the Private Drive proposed south of proposed Buildings 1 and 2; beneath the parking area between proposed Buildings 4 and 5; beneath the drive aisle south of proposed Buildings 4 and 5; and beneath Public Street B between proposed Buildings 5 and 6. These storm drains would drain to the proposed infiltration basin located in the northeast portion of the Project site.

The pre-Project conditions result in a peak flow rate of 14.3 cubic feet per second (cfs) and Total Volume of 6.1 ac-ft that are tributary to the existing culvert east of Challenger Way from the pre-Project Area 1 watershed area of 290.4 acres. The post-Project conditions would result in 280.4 cfs delivered to the existing culvert east of Challenger Way. The post-Project outlet/existing culvert would collect a total volume of 86.0 ac-ft for the 447 acres of overall watershed area. (JLC, 2023, p. 6)

The on-site infiltration basin would mitigate the increased runoff at the Project outlet by attenuating the 288.4 cfs peak inflow. Due to the increased runoff, the infiltration basin would be needed for approximately 86 ac-ft of storage, to retain the 50-year storm event and 18.5 acre-feet of volume. This storage would be required to attenuate the post-Project flowrate to the pre-Project flowrate. The proposed infiltration basin has been designed to provide approximately 100 ac-ft of storage within the proposed retention basin area, which is greater than the 86 ac-ft of runoff volume generated by Area 1. Post-Project Area 2 would not be disturbed and the existing ground cover would match the existing condition land cover. Since Area 2 would reduce the pre-Project watershed 326.1-acre area to 188.9 acres, the Project would reduce the peak flow rate by 60 percent to Columbia Way / East Avenue M and 15th Street, located to the east of the Project site. (JLC, 2023, p. 6)

Because the proposed aboveground infiltration basin would mitigate the increased runoff and retain stormwater runoff captured from the Project site, the Project has no potential to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality. Impacts would be less than significant.

With respect to groundwater quality, all first-flush runoff generated on the Project site would be conveyed to the aboveground infiltration basin and then allowed to infiltrate into the groundwater table within the proposed infiltration basin. Catch basin inserts would be provided for pre-treatment in order to capture trash and debris prior to discharging into the infiltration basins. The proposed infiltration basin and catch basin inserts would ensure that runoff generated on the Project site would not substantially degrade groundwater quality, thereby resulting in less than significant impacts to groundwater quality.

Threshold b: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Potable water service to the Project site would be provided by LACWD District 40, and the Project would not involve direct groundwater extraction via existing or proposed groundwater wells. According to the 2020 Urban Water Management Plan (UWMP) during a normal year water scenario, it is anticipated that LACWD would have enough water supply on its own without the need to use the Antelope Valley East Kern Water District (AVEK)'s banked groundwater supplies; therefore, no supply deficit is anticipated. In the single dry and multiple dry year scenarios, AVEK would assist with meeting the LACWD's anticipated water demands by pumping groundwater from its banked supplies; therefore, no supply deficit is anticipated. (LACWD, 2021, p. 7-3 to 7-8) Based on the foregoing analysis, it is anticipated that existing water supply in combination with identified future and potential

water supply opportunities and demand reduction responses will enable LACWD to meet all future water demands under all hydrologic conditions through 2045. (LACWD, 2021, p. 7-3 to 7-8) Accordingly, because the Project's proposed land uses are accounted for by the LACWD 2020 UWMP, and because the UWMP demonstrates that the LACWD would have sufficient supply to meet projected demand through 2045, it is concluded that LACWD would have sufficient water supply available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years.

Based on the information in the adopted 2020 UWMP for the LACWD No. 40, the District has documented and is prepared to serve its existing customers, including the proposed Project, potable water demands through 2045. Furthermore, LACWD 40 in collaboration with the AVEK has secured contingency plans to deliver uninterruptable water supply to the proposed Project. According to the Project's WSA and documented communications with the LACWD therein, the LACWD has stated that a 3 million gallon (MG) water storage tank, including construction of new transmission and distribution pipelines to serve development in the area, including the proposed Project, would be necessary. The location of the new water storage tank and the length and alignment of the new transmission and distribution pipelines will be determined after the formal development review process with the LACWD 40. Accordingly, the Project's WSA concluded that in accordance with the standards set forth by Senate Bill (SB) 610, the total projected water supplies available to LACWD No. 40 during normal, single-dry, and multiple-dry water years over the next 20 years would be sufficient to meet the projected water demands of the proposed Project. (KEC Engineers, 2022, pp. 25-26) As such, the Project would not result in a substantial decrease in groundwater supplies and would not otherwise impede sustainable groundwater management of the basin, and impacts would be less than significant.

On-site captured stormwater would be conveyed to an aboveground infiltration basin that would have sufficient storage volume to mitigate the full 50-year storm runoff volume, which would retain and fully infiltrate water quality volume on-site and no runoff from the developed portions of the site would discharge off-site. Because all runoff generated on the Project site would infiltrate into the groundwater table, the Project would not interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. Impacts would be less than significant and no mitigation is required.

Threshold c: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. result in substantial erosion or siltation on- or off-site?

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

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?

The grading associated with the proposed Project would not significantly alter the existing topography of the site. As previously mentioned, the site is relatively flat and any necessary change in topography would accommodate proper drainage and sewer flows. Development of the site would, however, result in the introduction of impervious surfaces on site. Provided below is an evaluation of the potential of the Project to result in erosion or siltation; result in flood hazards on- or off-site; exceed the capacity of stormwater drainage systems; result in substantial additional sources of polluted runoff; and, result in impediments to or redirection of flood flows. Figure 4.9-2, *Proposed Hydrology*, illustrates the post-development drainage conditions on the Project site. Please refer to the discussion and analysis of Thresholds (a) and (e) for a discussion of water quality impacts, which would be less than significant.

A. Erosion and Siltation

1. Construction-Related Erosion Impacts

Construction of the Project would involve substantial ground disturbance during clearing and grading of the site. The proposed grading activities would generate silt which could be carried off-site during a heavy rainfall event. Should such an event occur in the absence of any preventative measures to contain silt and other soils on-site, erosion and/or siltation downstream could result. However, in compliance with the CWA, the Project Applicant would be required to obtain a NPDES permit for construction activities on-site. Compliance with the NPDES permit involves the preparation and implementation of a SWPPP which would specify BMPs to minimize the potential for erosion and siltation to occur and would include specific Project site measures to address the potential for the caving in of temporary excavations. Typical BMPs that are implemented at construction sites to protect water quality include the implementation of straw bale barriers, plastic sheeting/erosion control blankets, and outlet protection measures. With mandatory adherence to the SWPPP requirements, impacts associated with erosion during temporary construction activities would be less than significant.

2. Post-Development Erosion Impacts

Following development of the Project site as proposed, all runoff generated on site would be conveyed to the proposed infiltration basin that is sized to accommodate a design storm event over the entire Project area following development of the site. Therefore, because all runoff generated on the Project

site would be routed to the proposed infiltration basin, with no runoff leaving the Project site, the Project has no potential to contribute runoff to off-site areas that may increase erosion hazards off site.

Based on the foregoing analysis, with the design of the Project's infiltration basin and implementation of a SWPPP during construction activities, Project impacts to water quality, including erosion and siltation, during both construction and long-term operation, would be less than significant; thus, no mitigation is required.

B. Flooding

The Project is designed to capture all runoff generated on the Project site and would infiltrate into the groundwater table. Additionally, no development is proposed in the northwestern corner of the Project site near the unnamed sandy wash, which is mapped by FEMA as occurring within Zone X. As such, the Project has no potential to substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; therefore no impact would occur.

C. Stormwater Drainage Capacity

The Project is designed to capture all runoff generated on the Project site and would infiltrate into the groundwater table. The drainage facilities proposed on-site have been designed with sufficient capacity to accommodate runoff generated on site. As such, the Project has no potential to exceed the capacity of any existing or proposed stormwater drainage systems; thus, no impact would occur.

D. Impede or Redirect Flood Flows

As previously indicated, according to the FEMA, the Project site is located within two Flood Insurance Rate Maps (FIRMs). The majority of the Project site is located within FIRM No. 06037C0450F, mapped within Zone X (Unshaded), which are areas determined to be outside the 0.2 percent annual chance floodplain. The eastern side of the Project site is located within FIRM No. 06037C0420F. In this portion of the Project site, the majority of the area is mapped within Zone X (Unshaded); however, a small portion in the northwestern corner of the Project site, near the unnamed sandy wash, is located within a Letter of Map Revision (LOMR) area No. 08-09-1758P. This area is mapped as Zone X, which are areas of 0.2 percent annual flood chance; areas of one percent annual chance flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from one percent annual chance flood (FEMA, 2008). However, no development is proposed within the portions of the site that are in Zone X near the unnamed sandy wash. In addition, the Project would not contribute to an increase in runoff from the Project site as compared to existing conditions, as all runoff generated from the Project site would be conveyed to the infiltration basin, with no runoff being discharged from the developed portions of the Project site. Therefore, the Project would not result in any substantial increase in flood boundaries, levels, or frequencies from the Project site or within the Amargosa Creek. As such, the Project would not impede or redirect flood flows; therefore, impacts would be less than significant and no mitigation is required.

Threshold d: In flood hazard, tsunami, or seiche zones, would the Project risk release of pollutants due to project inundation?

As previously indicated under the analysis of Threshold (c), according to the FEMA, the Project site is located within two Flood Insurance Rate Maps (FIRMs). The majority of the Project site is located within FIRM No. 06037C0450F, mapped within Zone X (Unshaded), which are areas determined to be outside the 0.2 percent annual chance floodplain. The eastern side of the Project site is located within FIRM No. 06037C0420F. In this portion of the Project site, the majority of the area is mapped within Zone X (Unshaded); however, a small portion in the northwestern corner of the Project site, near the unnamed sandy wash, is located within a Letter of Map Revision (LOMR) area No. 08-09-1758P. This area is mapped as Zone X, which are areas of 0.2 percent annual flood chance; areas of one percent annual chance flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from one percent annual chance flood (FEMA, 2008). However, no development is proposed within the portions of the site that are in Zone X near the unnamed sandy wash. In addition, the Project would not contribute to an increase in runoff from the Project site as compared to existing conditions, as all runoff generated from the Project site would be conveyed to the infiltration basin, with no runoff being discharged from the developed portions of the Project site. As such, the Project would not risk release of pollutants due to inundation from floods; therefore, no impact would occur.

The Project site is located approximately 48 miles northeast of the Pacific Ocean. As such, the Project has no potential to be affected by tsunamis; therefore, no impact would occur. (Google Earth, n.d.)

A seiche is an underwater wave that oscillates through a body of water, which may be triggered by earthquakes or landslides. In general, seiches are small (generally a few inches) and are present in larger lakes as a result of the depth, temperature, and contours of the body of water. Due to the lack of an on-site body of water or other bodies of water within close proximity to the site that have the potential to result in site inundation, the potential for the subject site to be impacted by seiches is considered low. Although a seismic event could cause a seiche to occur at Lake Palmdale, which could potentially overtop the dam, the design report for the dam considers a reflection of the wave on return unlikely. Also, wave volume above the dam would not be substantial and would not result in damaging floods. Accordingly, the Project site would not be subject to inundation due to seiches; therefore, no impact would occur. (City of Palmdale, 2022a, p. 4.10-16)

Threshold e: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As previously indicated in Section 4.9.1, the Project site is located within the Antelope Valley Groundwater Basin. The Antelope Valley Groundwater Basin is exempt from the requirements of the SGMA, LACWD has not adopted a groundwater management plan, and no regional groundwater management plan currently exists for the Antelope Valley Groundwater Basin. The Antelope Valley Groundwater Basin was deemed a low-priority basin by DWR. As such, the Project has no potential to

conflict with or obstruct implementation of a sustainable groundwater management plan, and no impact would occur.

As indicated under the analysis of Threshold (a), the Project site is located within the jurisdiction of the Lahontan RWQCB. Water quality information for the Antelope Valley Watershed is contained in the Basin Plan. As previously indicated under the analysis of Threshold (a), Project construction activities would be subject to the NPDES permit, requiring the preparation and implementation of a SWPPP during construction activities. The Project's construction contractors would be required to comply with the SWPPP, which would ensure that the Project does not violate any water quality standards or waste discharge requirements during construction activities. In addition, the Project site has been designed to capture all runoff generated on the Project site. Runoff generated on the Project site would be conveyed to an aboveground infiltration basin and then allowed to infiltrate into the groundwater table. The Project would not result in any surface runoff from the Project site. As such, the Project has no potential to conflict with or obstruct implementation of a water quality control plan. No impact would occur as a result of implementation of the Project.

4.9.5 Cumulative Impact Analysis

The cumulative impact analysis considers construction and operation of the proposed Project in conjunction with other development projects in the vicinity of the Project site and resulting from full buildout of the City's General Plan and the general plans of local jurisdictions that are located within the Antelope Valley Watershed.

Surface and Groundwater Quality

As discussed under the analysis of Threshold (a), the Project would result in less than significant impacts to surface and groundwater quality during construction because the Project Applicant would be required to obtain a NPDES Permit for construction activities. Compliance with the NPDES permit involves the preparation and implementation of a SWPPP for construction-related activities. The SWPPP is required to specify the BMPs that the Project would be required to implement during construction activities to ensure that all potential pollutants of concern are prevented, minimized, and/or otherwise appropriately treated prior to being discharged from the subject property. Additionally, the Project would comply with the requirements of the City's SWMP prepared as part of the City's MS4 permit compliance. Other cumulative developments within the cumulative study area also would be required to obtain an NPDES Permit and would be required to implement BMPs during construction activities to preclude water quality impacts that could impair downstream waters or groundwater. Additionally, other developments would be required to comply with the City's SWMP. As such, construction-related surface water and groundwater quality impacts, would be less than cumulatively considerable. With respect to long-term impacts to water quality, the Project would not discharge any surface waters from the Project site and would capture all runoff generated from the Project in the on-site infiltration basin. Other cumulative developments would similarly be required to incorporate measures to treat water quality pollutants of concern. Accordingly, cumulatively considerable impacts to surface and groundwater quality would not occur.

Sustainable Groundwater Management

As indicated under the analysis of Threshold (b), the Project would be served with potable water by LACWD District 40 and the Project would not entail any direct groundwater extraction. Additionally, because the Project's proposed land uses are accounted for by the LACWD 2020 UWMP, and because the UWMP demonstrates that the LACWD to meet projected demand through 2045, it is concluded that LACWD would have sufficient water supply available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years. As such, the Project would not result in a substantial decrease in groundwater supplies and would not otherwise impede sustainable groundwater management of the basin. The Project also would not interfere with groundwater recharge, as all runoff generated on-site would be allowed to infiltrate directly into the ground. Accordingly, cumulatively considerable impacts to groundwater quality and supplies would not occur.

Drainage Patterns

As discussed under the analysis of Threshold (c), the Project generally would maintain the existing topography of the Project site, except as necessary to facilitate proper drainage and sewer flows. Development of the site would; however introduce impervious surfaces on the site. The Project Applicant would be required to comply with the Basin Plan and obtain a NPDES Permit for construction activities. Compliance with the NPDES permit involves the preparation and implementation of a SWPPP, which would ensure that Project construction activities do not result in impacts associated with erosion or siltation. As other cumulative developments similarly would be subject to the NPDES permit requirements and would be required to prepare and implement a SWPPP, Project erosion impacts during construction would be less than significant on a cumulatively-considerable basis. Additionally, the Project, along with other future developments, would be required to comply with the City's SWMP. Under long-term operational conditions, large portions of the Project site would consist of impervious surfaces, with areas of pervious surfaces largely confined to landscaped areas. Thus, the potential for erosion hazards on-site would be substantially decreased as compared to existing conditions. Furthermore, runoff from the Project site would infiltrate into on-site soils and would not discharge off-site; thus, the Project has no potential to contribute to erosion or siltation hazards under long-term operating conditions.

As also discussed under the analysis of Threshold (c), the Project has no potential to substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite, create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems, or impede or redirect flood flows. As such, cumulatively considerable impacts would not occur.

Flood Hazard, Tsunami, or Seiche Zones

As indicated under the analysis of Threshold (d), the Project would not be subject to inundation by floods, tsunamis, or seiches. As such, cumulatively considerable impacts associated with the release of pollutants due to site inundation would not occur.

Water Quality Control Plan or Sustainable Groundwater Management Plan

As discussed under the analysis of Threshold (e), there is no adopted groundwater management plan in the Project area, and as such the Project has no potential to result in cumulatively-considerable impacts due to a conflict with or obstruction of a sustainable groundwater management plan. Additionally, and as more fully discussed under the analysis of Threshold (a), the Project would result in less than significant impacts to surface and groundwater quality during construction because the Project Applicant would be required to comply with the Basin Plan and obtain a NPDES Permit for construction activities. Compliance with the NPDES permit involves the preparation and implementation of a SWPPP, which would ensure that Project construction activities do not result in impacts associated with erosion or siltation. Other cumulative developments within the cumulative study area also would be required to comply with the NPDES Permit and would be required to implement BMPs during construction activities to preclude water quality impacts that could conflict with the Basin Plan. As such, construction-related surface water and groundwater quality impacts, would be less than cumulatively considerable. Additionally, the Project, along with other future developments, would be required to comply with the City's SWMP. With respect to long-term impacts to water quality, the Project would not discharge any surface waters from the Project site and the proposed aboveground infiltration basin would address erosion and other water quality pollutants of concern. Other cumulative developments would similarly be required to incorporate measures to treat water quality pollutants of concern. Accordingly, the impacts of the Project due to a conflict with the Basin Plan would be less than cumulatively considerable.

4.9.6 Significance of Impacts

Threshold a: Less than Significant Impact. As required by the National Pollutant Discharge Elimination System (NPDES) permit, an approved Stormwater Pollution Prevention Plan (SWPPP) would be implemented during construction activities; therefore, impacts to water quality during construction would be less than significant. Under long-term operation, the Project would not discharge any surface waters from the Project site, and the proposed aboveground infiltration basin would address erosion and other water quality pollutants of concern. As such, the Project has no potential to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality under long-term operational conditions. Impacts would be less than significant.

Threshold b: Less than Significant Impact. The Project would be served with potable water by Los Angeles County Waterworks District (LACWD) District 40, and the Project would not involve direct groundwater extraction via existing or proposed groundwater wells. Because the Project's proposed land uses are accounted for by the LACWD 2020 Urban Water Management Plan (UWMP), and because the UWMP demonstrates that the LACWD would have sufficient supply to meet projected demand through 2045, it is concluded that the LACWD would have sufficient water supply available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years. Thus, the Project would not result in a decrease in groundwater supplies that may impede sustainable groundwater management of the basin. In addition, because all runoff generated on the Project site would infiltrate into the groundwater table, the Project would not interfere substantially

with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. Impacts would be less than significant.

Threshold c: Less than Significant Impact. The Project Applicant would be required to obtain an NPDES permit, which involves the preparation and implementation of a SWPPP to address erosion and siltation hazards during Project construction. The potential for erosion hazards on site would be substantially decreased as compared to existing conditions with build-out of the Project site. The Project has no potential to contribute runoff to off-site areas that may increase erosion hazards off-site. The Project has no potential to substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site, and no impact would occur. Additionally, the Project has no potential to exceed the capacity of any existing or proposed stormwater drainage systems, and no impact would occur. Furthermore, the Project would not impede or redirect flood flows, and impacts would be less than significant.

Threshold d: No Impact. The Project site is not subject to inundation by flood hazards, seiches, or tsunamis. As such, the Project has no potential to risk release of pollutants due to site inundation. Therefore, no impact would occur as result of implementation of the Project.

Threshold e: No Impact. The Antelope Valley Groundwater Basin is exempt from the requirements of the Sustainable Groundwater Management Act (SGMA), Los Angeles County Water District (LACWD) District 40 has not adopted a groundwater management plan, and no regional groundwater management plan currently exists for the Antelope Valley Groundwater Basin. As such, the Project has no potential to conflict with or obstruct implementation of a sustainable groundwater management plan, and no impact would occur. Furthermore, the Project has no potential to conflict with or obstruct implementation of a water quality control plan. Therefore, no impact would occur as result of implementation of the Project.

4.9.7 Mitigation

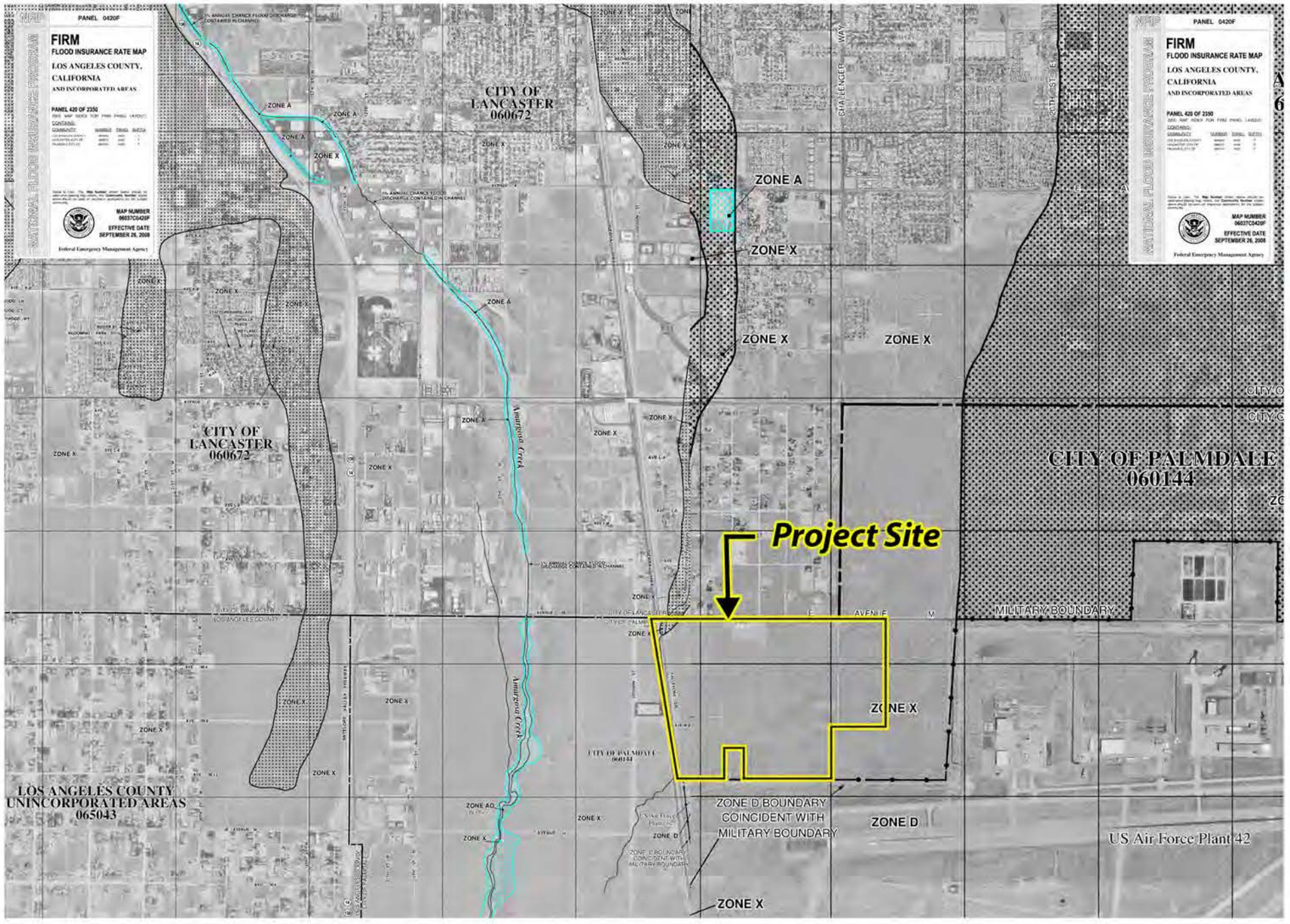
Project impacts to hydrology and water quality would be less than significant; therefore, no mitigation is required.

4.9.8 Design Features (DF) and Regulatory Requirements (RR)

The City of Palmdale is required to assure that implementing development complies with the assumptions relied upon herein and applicable regulatory requirements pertaining to the topic of Hydrology and Water Quality, which include the following regulatory requirements and design features. The Project shall be conditioned to implement the following design features and regulatory requirements as part of the City's Conditions of Approval for the Project.

HYDRO RR-1 As required by the provisions of the NPDES permit, the Project Applicant would be required to obtain an NPDES permit for construction activities, which includes the preparation and implementation of a Stormwater Pollution Prevention Plan. The Project's construction contractors will be required to

follow the requirements outlined in the SWPPP. Compliance with the NPDES permit and the SWPPP would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from storm water and non-stormwater discharges during construction activities.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** No Base Flood Elevations determined.
- **ZONE AE** Base Flood Elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 (EL 987) Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- Cross section line
- Transect line
- 97°07'30", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4279000mN 1000-meter Universal Transverse Mercator grid values, zone 11
- 6000000 FT 5000-foot grid ticks: California State Plane coordinate system, V zone (FIPSZONE 0405), Lambert Conformal Conic
- DX5510 Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 26, 2008
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum.** For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242,** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was derived from U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from photography dated 1994 or later and from National Geospatial Intelligence Agency imagery produced at a scale of 1:4,000 from photography dated 2003 or later.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables *in the Flood Insurance Study report (which contains authoritative hydraulic data)* may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, *a Flood Insurance Study report*, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

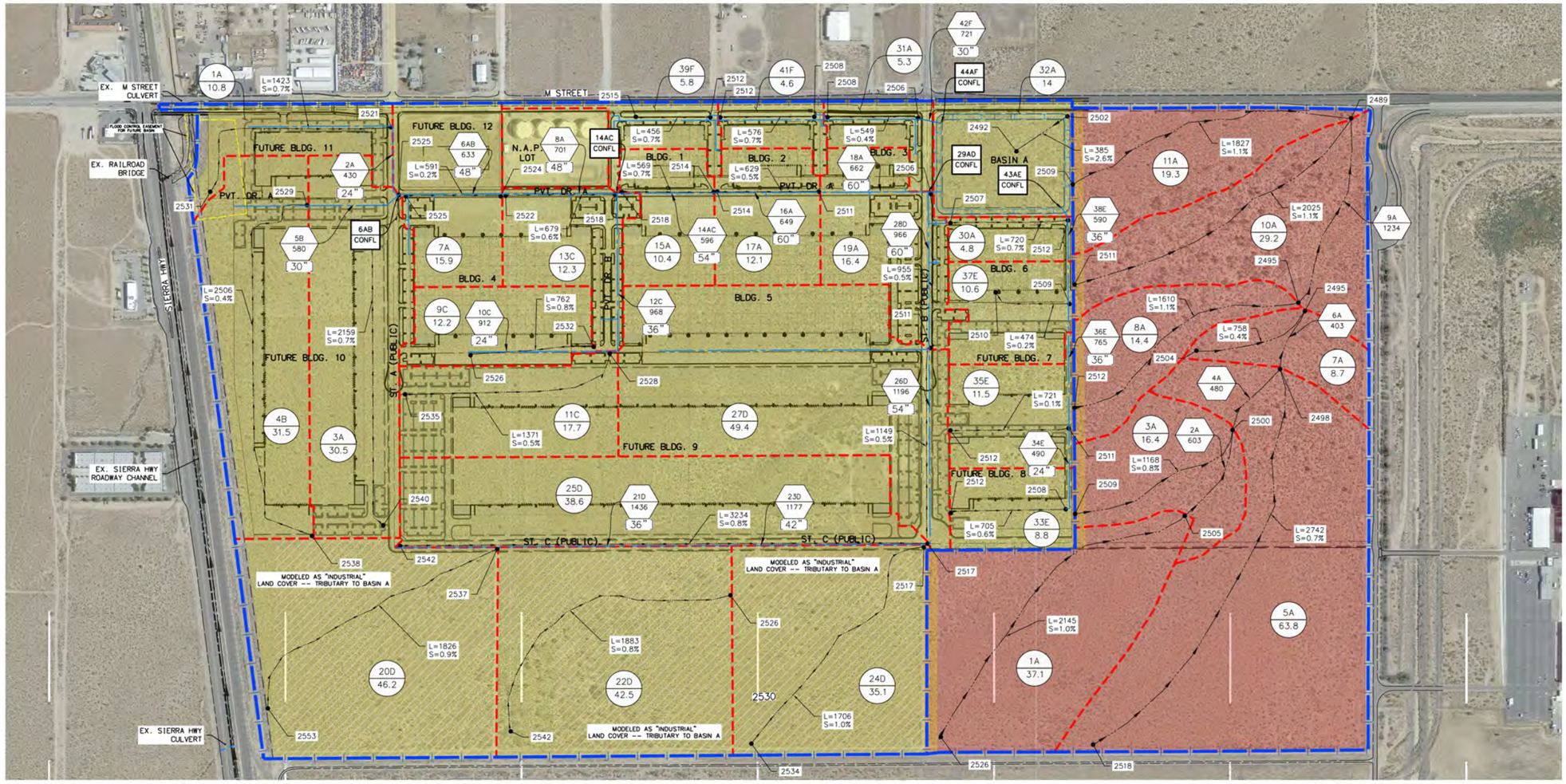
If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.

Source(s): FEMA (September 2008)

Figure 4.9-1

Not to Scale

FEMA Flood Insurance Rate Map



Source(s): JLC Engineering & Consulting, Inc. (10-12-2023)

Not to Scale

Figure 4.9-2

Proposed Hydrology

4.10 LAND USE AND PLANNING

This Subsection discusses the Project's consistency with applicable land use and planning policies adopted by the City of Palmdale and other governing agencies for the purpose of reducing adverse effect on the physical environment. This subsection also addresses present and future land uses, zoning, and the physical environment arrangement of uses on the land. This subsection also is based in part on information and policies contained in the City of Palmdale General Plan (Palmdale 2045) (City of Palmdale, 2023) and the City of Palmdale Municipal Code (PMC) (PMC, 2023). All references used in this subsection are included in EIR Section 7.0, *References*.

4.10.1 EXISTING CONDITIONS

A. Project Site

The Project site is located directly south of Columbia Way / East Avenue M, approximately 0.03-mile east of Sierra Highway and approximately 0.02-mile east of the active Union Pacific Railroad (UPRR) mainline tracks located adjacent to Sierra Highway, and directly north of Avenue M-12. The Project site is located approximately 0.25-mile (1,305 feet) north of Runway 7 of USAF Plant 42.

As previously shown on Figure 2-6, the Project site is vacant and undeveloped. An unpaved portion of Challenger Way runs north to south through the eastern portion of the Project site. A graded dirt access road runs around the perimeter of the Project site and two graded dirt roads run east-west and north-south in the southern portion of the Project site. An unnamed sandy wash occurs in the extreme northwest corner of the Project site.

B. Surrounding Land Uses

As previously disclosed in EIR Section 2.0, *Environmental Setting*, land uses in the immediate vicinity of the Project site are illustrated on Figure 2-3 and described below.

- North: Columbia Way / East Avenue M forms the northern boundary of the Project site. To the immediate south of Columbia Way / East Avenue M and north of the central portion of the Project site is a parcel containing four water storage tanks and groundwater wells operated by the Antelope Valley – East Kern Water Agency. Columbia Way / East Avenue M is the jurisdictional boundary between the City of Palmdale and the City of Lancaster. To the north of Columbia Way / East Avenue M are lands located within the City of Lancaster that include a restaurant (Ruben's Bar and Grill), a storage facility (Small Town Storage), an automobile salvage yard, Lancaster Adult Day Healthcare facility, an auto repair center (Affordable Transmission and Auto Repair Center), a construction yard and vacant land.

- East: An unpaved portion of Challenger Way runs north to south through the eastern portion of the Project site. Offsite and to the east of Challenger Way is vacant land, beyond which is 15th Street East, beyond which is the United States Air Force (USAF) Plant 42 facility and the inactive Palmdale Regional Airport.

- South: Avenue M-12 forms the southern boundary of the Project site. Beyond Avenue M-12 is vacant land, and runways associated with the USAF Plant 42 and the inactive Palmdale Regional Airport.

- West: To the west of the Project site is the Union Pacific Railroad (UPRR) mainline tracks and easement, west of which is the Sierra Highway Bike Trail, which is adjacent to Sierra Highway. West of Sierra Highway is an ARCO gas station, Northrop Grumman Federal Credit Union, a commercial plaza (Sierra Highway Plaza) and vacant land.

C. *City of Palmdale General Plan (Palmdale 2045)*

The City of Palmdale adopted an update to its General Plan (Palmdale 2045) on October 22, 2022; amended on March 23, 2023. As previously shown on Figure 2-4, under existing conditions, the General Plan designates the Project site for Employment Flex (EMPFX) land uses. The Employment Flex (EMPFX) land use designation is a transition zone intended to permit mixed development of lighter industrial uses and more intensive service, retail, and commercial uses, with a floor area ratio (FAR) of up to 1.0 (City of Palmdale, 2023, Table 5.4 and Figure 5.5) The Project Applicant filed an application with the City for a General Plan Amendment (GPA 22-001) to amend the site's General Plan land use designation to Specific Plan (SP). The proposed GPA 22-001 would require future development on the Project site to comply with the applicable development standards and design guidelines of the Antelope Valley Commerce Center Specific Plan (SP 22-001) and, where applicable, the PMC.

As also shown previously on Figure 2-4, where not bounded by roadway, surrounding the Project site is land on the east that is designated EMPFX and land on the south that is designated Aerospace Industrial (AI).

D. *Zoning*

Title 17 of the PMC establishes zoning classifications within the City. The City updated its Zoning Ordinance and zoning map in 2023 to be consistent with the City's newly adopted General Plan (Palmdale 2045). Pursuant to the PMC, as shown previously on Figure 2-5, under existing conditions, the Project site is zoned Office Flex (OFX). The Office Flex (OFX) zone is intended to allow mixed-use development of office/flex uses and supportive service, retail, and commercial uses. It allows a mix of businesses that provide a wide variety of employment-generating activities, including office, medical, research and development (R&D), and flex/makerspaces. Office uses may be standalone, or part of a large business/office park development. These areas are typically situated close to regional roadways or freeways. This zone implements the Industrial and Employment Flex General Plan land use designations. (City of Palmdale, 2023) (PMC, 2023) The Project Applicant filed an application with the City for a Zone Change (ZC 22-001) to change the zoning classification to Specific Plan (SP). The proposed ZC 22-001 would require future development on the Project site to comply with the applicable development standards and design guidelines of the SP 22-001 and, where applicable, the PMC.

As also shown previously on Figure 2-5, where not bounded by roadway, surrounding the Project site is land on the east that is designated OFX and Aerospace Industrial (AI) and land on the south that is designated Light Industrial (LI).

4.10.2 Regulatory Setting

The following is a brief description of the federal, State, and local environmental laws and related regulations governing land use and planning.

A. Federal Regulations

1. Federal Aviation Administration (FAA) and Federal Regulation Title 14 Part 77

The primary role of the Federal Aviation Administration (FAA) is to promote aviation safety and control the use of airspace. Public use airports that are subject to the FAA's grant assurances must comply with specific FAA design criteria, standards, and regulations. Land use safety compatibility guidance from the FAA is limited to the immediate vicinity of the runway, the runway protection zones at each end of the runway, and the protection of navigable airspace. Federal Code of Regulations Title 14 Part 77, Safe Efficient Use and Preservation of the Navigable Airspace, establishes the federal review process for determining whether proposed development activities in the vicinity of an airport have the potential to result in a hazard to air navigation. Federal Code of Regulations Title 14 Part 77 identifies standards for determining whether a proposed project would represent an obstruction "that may affect safe and efficient use of navigable airspace and the operation of planned or existing air navigation and communication facilities." Objects that are identified as obstructions based on these standards are presumed to be hazards until an aeronautical study conducted by the FAA determines otherwise. (City of Palmdale, 2022a, p. 4.9-9)

According to Federal Code of Regulations Title 14 Part 77, any person/organization who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA:

- Any construction or alteration exceeding 200 ft above ground level;
- Any construction or alteration:
    - within 20,000 ft of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 ft;
    - within 10,000 ft of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 ft; or
    - within 5,000 ft of a public use heliport which exceeds a 25:1 surface;
- Any highway, railroad, or other traverse way whose prescribed adjusted height would exceed that above noted standards;
- When requested by the FAA; or
- Any construction or alteration located on a public use airport or heliport regardless of height or location (FAA, 2023).

Persons failing to comply with the provisions of Federal Code of Regulations Title 14 Part 77 are subject to Civil Penalty under Section 902 of the Federal Aviation Act of 1958, as amended and pursuant to 49 U.S.C. Section 46301(a). (FAA, 2023)

B. State Regulations

1. Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

The Southern California Association of Governments (SCAG), founded in 1965, it is the nation's largest metropolitan planning organization and council of governments, encompassing six counties and 191 cities. In addition to conducting research and developing long-range transportation plans, SCAG convenes local governments and agencies to address regional transportation, land use and other issues of mutual concern. (SCAG, 2024a, p. n.p.) The Project site is within SCAG's regional authority.

SCAGs Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is required by federal and State regulations. The most recent RTP/SCS was approved by SCAGs Regional Council in April 2024. According to the most recent RTP/SCS, " As the Metropolitan Planning Organization (MPO) for the region, SCAG is required by federal law (23 U.S.C. Section 134 et seq.) to prepare and update a long-range Regional Transportation Plan (RTP) every four years. The Plan must provide for the development, integrated management and operation of transportation systems and facilities that will function as an intermodal transportation network for the SCAG metropolitan planning area. The process for development of the Plan takes into account all modes of transportation, federal planning factors and goals and objectives of the California Transportation Plan (CTP 2050)—and is accomplished by a "continuing, cooperative and comprehensive" planning approach, which is also performance-driven and outcome-based. In addition, because most areas within the SCAG region have been designated as nonattainment or maintenance areas for one or more transportation-related criteria pollutants under the federal Clean Air Act (42 U.S.C. Section 7401 et seq.), the Plan must conform to the applicable State Implementation Plan (SIP). The passage of California Senate Bill 375 (SB 375) in 2008 requires that SCAG prepare and adopt a Sustainable Communities Strategy (SCS) that sets forth a forecasted regional development pattern which, when integrated with the transportation network, measures and policies, will reduce greenhouse gas (GHG) emissions from automobiles and light-duty trucks and achieve the GHG emissions reduction target for the region set by the California Air Resources Board (Govt. Code Section 65080(b)(2)(B)). In addition, the focus on equity in this Plan supports compliance with Title VI of the Civil Rights Act of 1964 and Environmental Justice guidance at the state and federal levels". (SCAG, 2024a, p. 7)

According to the RTP/SCS, the goals for Connect SoCal fall into the following four core categories: 1) Mobility: Build and maintain an integrated multimodal transportation network; 2) Communities: Develop, connect and sustain communities that are livable and thriving; 3) Environment: Create a healthy region for the people of today and tomorrow; 4) Economy: Support a sustainable, efficient and productive regional economic environment that provides opportunities for all residents. (SCAG, 2024a, p. 12)

Additionally, SCAG reviews environmental impact reports for projects having regional significance to ensure they are in line with approved regional plans. As identified in Section 15206 of the CEQA Guidelines, regionally significant industrial projects include "A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or encompassing more than 650,000 square feet of floor area."

As the region's MPO, SCAG seeks to optimize the goods movement network (FreightWorks) through increases in economic efficiency, congestion mitigation, safety and air quality improvements, and enhancements to system security. There are numerous SCAG studies related to the goods movement in Southern California that provided input to the RTP/SCS. A few include the Industrial Warehousing Study, the Comprehensive Regional Goods Movement Plan and Implementation Strategy, and the Regional Warehousing Needs Assessment. (SCAG, 2024b)

Connect SoCal includes a Technical Appendix entitled "Goods Movement" that is applicable to the Project because the Project entails development within the SCAG region that would support a variety of industrial and commercial users, and relies directly on the goods movement system (e.g., manufacturing, construction, retail trade, wholesale trade and transportation, and warehousing). The "Goods Movement" appendix offers a broad overview of goods movement in Southern California by defining what the goods movement system is, including its most critical components; highlighting its importance and connections to the economy and local industry sectors; summarizing international and domestic trade flows and their relations to the region; addressing environmental and air quality issues; articulating a regional vision and how it can be achieved; and illustrating the path to 2045 by promoting an effective set of regional strategies. (SCAG, 2024a)

In April 2018, SCAG published *Industrial Warehousing in the SCAG Region*. According to the document, the SCAG region is a vibrant hub for international and domestic trade because of its large transportation base and extensive multimodal transportation system. The SCAG region's freight transportation system includes warehouses and distribution centers; the Ports of Los Angeles, Long Beach, and Hueneme; airports; rail intermodal terminals; rail lines, and local streets, State highways and interstates. Together the system enables the movement of goods from source to market, facilitating uninterrupted global commerce. The region is home to approximately 34,000 warehouses with 1.17 billion square feet (sf) of warehouse building space, and undeveloped land that could accommodate an additional 338 million sf of new warehouse building space. These regions attract robust logistics activities and are a major reason the region is a critical mode in the global supply chain. (SCAG, 2018, p. ES-1)

2. Airport Land Use Plans

❑ Los Angeles County Airport Land Use Plan (ALUP)

The Los Angeles County Airport Land Use Commission (ALUC) is responsible for establishing land use policy to mitigate potential noise and safety hazards regarding the fifteen airports in its jurisdiction (Los Angeles ALUC, 2004, p. 15). According to the Los Angeles County ALUC's Airport Land Use

Plan's (ALUP) Palmdale Airport/USAF Plant 42 Airport Influence Area map, the Project site occurs within the Planning Boundary/AIA of the Palmdale Airport/USAF. An AIA is an airport planning area boundary that consists of all areas in which current or future airport-related noise, over flight, safety, and/or airspace protection factors may significantly affect land uses or necessitate restrictions on those areas. According to the ALUP AIA map, the Project site is not located within a runway protection zone (RPZ). As also identified on the ALUP AIA map, the Project site is located within the 65 Community Noise Equivalent Level (CNEL) ALUP noise contour. (Los Angeles County ALUC, 2004, Palmdale Airport/USAF Plant 42 Airport Influence Area map)

The Palmdale Regional Airport is a 9,000-square foot commercial airport within the City limits owned by the City of Los Angeles Department of Airports and operated under a joint agreement with USAF Plant 42.

- **USAF Plant 42 Air Installation Compatible Use Zone (AICUZ) Final Report**

The Department of the Air Force's USAF Plant 42 Air Installation Compatible Use Zone (AICUZ) Final Report (December 2011) documents aircraft operations at USAF Plant 42 and reaffirms the Air Force's policy of assisting Federal, state, regional, and local officials in planning for the areas surrounding military installations. The AICUZ Final Report promotes compatible development within the AICUZ area of influence with the goal of protecting community health and Air Force operational capacity from the negative effects of incompatible land uses. The AICUZ Final Report provides compatible use guidelines for land use areas surrounding the installation as well as identifies noise contours. (City of Palmdale, 2023, p. 203)

According to the AICUZ Final Report, the Project site occurs within the USAF Plant 42 AICUZ area of influence. The area of influence for airfield planning is concerned with three primary aircraft operational/land use determinants: 1) accident potential to occupants on the ground; 2) aircraft noise; and 3) hazards to flight operations from land uses (height obstructions, increased potential for bird-aircraft strike hazards, operations such as factories that emit smoke, dust, or light that adversely affect flight operations) (Department of the Air Force, 2011, p. 2-17).

As shown in the AICUZ Final Report's Figure 3-6, Plant 42 CZs and APZs, the Project site is not located within an Accident Potential Zone (APZ) or Clear Zone (CZ). As shown in the AICUZ's Final Report's Figure 3-3, Air Force Plant 42 – Community Noise Equivalent Level (CNEL), the southern portion of the Project site is located within the 60 to 65 decibel (dB) CNEL noise contour boundary, and a small portion in the very southeastern corner of the Project site is located within the 65 to 70 CNEL noise contour boundary. (Department of the Air Force, 2011, pp. 3-20 to 3-23)

3. West Mojave Coordinated Management Plan

The West Mojave Coordinated Management Plan (Conservation Plan) is a habitat conservation plan (HCP) that acts as a comprehensive strategy to conserve the desert tortoise, Mohave ground squirrel, and over 100 sensitive plants, animals, and natural communities. The Plan provides for a streamlined

program for complying with the requirements of the California and federal Endangered Species Acts. It encompasses a 9,357,929-acre planning area (14,621 square miles) located to the north of the Los Angeles metropolitan area and applies to public and private land. (City of Palmdale, 2022a, p. 4.4-17) While the U.S. Fish and Wildlife Service (USFWS) issued a Biological Opinion for the federal portion of the Conservation Plan in 2006, the State portion of the plan has not been permitted. Until the State portion of the Plan is passed, it cannot be used by State or private entities. (Psomas, 2022a, p. 8)

As disclosed in EIR Section 4.3, *Biological Resources,* although the Project site is located within the geographic boundaries of the West Mojave Plan, the Project would not be processed under the West Mojave Plan because it is a private project and the West Mojave Plan can only be used for projects on federal land. Even though the Project's construction and operational activities are not required to comply with the West Mojave Plan, it is noted that the Project would not interfere with any conservation areas designed by the West Mojave Plan including Habitat Conservation Areas, Special Review Areas, critical habitat on Military Lands, existing Area of Critical Environmental Concern, or BLM Wilderness Area. (Psomas, 2023a, p. 53)

C. *Local Regulations*

1. *City of Palmdale General Plan (Palmdale 2045)*

The City of Palmdale General Plan (Palmdale 2045) is a policy document that reflects the City's vision for the future. The City of Palmdale adopted an update to its General Plan (Palmdale 2045) on October 22, 2022; amended on March 23, 2023. Palmdale 2045 is organized into 12 elements including 1) Land Use and Community Design; 2) Circulation and Mobility; 3) Economic Development; 4) Military Compatibility; 5) Equitable and Healthy Communities; 6) Parks, Recreation, and Open Space; 7) Conservation; 8) Public Facilities, Services, and Infrastructure; 9) Safety; 10) Sustainability, Climate Action, and Resilience; 11) Air Quality; and 12) Noise. Each General Plan element is instrumental to achieving the City's long-term development goals. Each element contains a series of policies that guide the course of action the City must take to achieve the City's vision for future development. Provided below is a summary of each General Plan Element.

- **Land Use and Community Design.** The Land Use and Community Design Element provides a long-term vision, goals, and policies for the City over the next 20 to 30 years. The overall focus is on how to accommodate change and growth in the City, while preserving and enhancing the City's features and attributes. The element focuses on the mix of residential, commercial, employment, and industrial uses to provide the foundation for a fiscally healthy community. Furthermore, the element provides design and quality of buildings, streets, and public spaces policies to provide an attractive and highly livable place for its residents.
- **Circulation and Mobility.** The Circulation and Mobility Element presents the approach to transportation, addressing access and mobility within the City. The element provides a roadway classification system, corresponding cross-sections, and recommended future networks for motor vehicles, walking, biking, riding transit, and the movement of freight. Additionally,

goals, policies, and actions for advancing health and safety, access to services and opportunities, sustainability, and economic vitality through transportation are provided.

- **Economic Development.** The Economic Development Element establishes policies essential to the economic success of the City and its residents. The element provides policy direction and metrics to grow and diversify the City's economy and promote fiscal sustainability by attracting new businesses and residents, retaining, and nurturing existing industries, and expanding workforce development opportunities. The Economic Development Element also discusses jobs and workforce development, housing and community amenities, transportation and infrastructure investment, and fiscal health.
- **Military Compatibility.** The Military Compatibility Element seeks to balance and protect the needs of US Air Force (USAF) Plant 42 and the overall community to promote a sustainable environment where both coexist successfully.
- **Equitable and Healthy Communities.** The Equitable and Healthy Communities Element outlines the goals and policies related to public health, equity, and environmental justice in Palmdale.
- **Parks, Recreation, and Open Space.** The Parks, Recreation, and Open Space Element sets goals, policies, and actions related to the acquisition, management, and maintenance of parks and open space, and planning of recreational facilities and programs.
- **Conservation.** The Conservation Elements outlines the goals and policies related to conservation of natural and cultural resources in Palmdale.
- **Public Facilities, Services, and Infrastructure.** The Public Facilities, Services, and Infrastructure Element outlines the goals and policies related to public facilities, services, and infrastructure in Palmdale.
- **Safety.** The Safety Element outlines the goals and policies related to hazards and safety in Palmdale.
- **Sustainability, Climate Action, and Resilience.** The Sustainability, Climate Action, and Resilience Element serves as the Climate Action Plan for the City and outlines the City's greenhouse gas reduction and sustainability strategies.
- **Air Quality.** The Air Quality Element establishes goals and policies related to protecting, maintaining, and enhancing air quality within Palmdale.
- **Noise.** The Noise Element outlines the goals and policies related to the noise environment in the Palmdale community.

2. City of Palmdale Title 17 (Zoning Ordinance)

Title 17 of the PMC establishes zoning classifications within the City. The purpose of the zoning ordinance is to promote public health, safety, and general welfare and to preserve and enhance the

quality of life within the City by establishing standards to ensure that an appropriate mix of land uses is developed in an orderly manner. To achieve this purpose, the City desires to achieve a pattern and distribution of land uses which generally meets the following objectives:

- To implement the goals, objectives, and policies of the City of Palmdale General Plan;
- To retain and enhance established residential neighborhoods, commercial and industrial districts, public facilities, recreation, open space, and other amenities;
- To allow for the infill and redevelopment of areas at similar scale and character;
- To accommodate expansion of development into vacant and underutilized lands, while considering environmental and infrastructural constraints;
- To provide a diversity of areas throughout the community characterized by differing land use activity, scale, and intensity;
- To maintain and enhance significant environmental and visual resources;
- To provide opportunities for economic development, including business creation and expansion in a variety of manufacturing, service, and marketing industries; and
- To establish Palmdale as a distinctive community with a high quality of life and a visually pleasing, secure environment for the City's residents and businesses. (PMC, 2023)

As also shown on Figure 2-5, where not bounded by roadway, surrounding the Project site is land on the east that is designated OFX and Aerospace Industrial (AI) and land on the south that is designated Light Industrial (LI).

4.10.3 Basis for Determining Significance

Section XI of Appendix G to the CEQA Guidelines addresses typical adverse effects to land use and planning resources, and includes the following threshold questions to evaluate the Project's impacts on land use and planning resources:

a. *Physically divide an established community;*

b. *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

4.10.4 Impact Analysis

Threshold a: ***Would the Project physically divide an established community?***

Under existing conditions, the Project site is vacant and undeveloped. An unpaved portion of Challenger Way runs north to south through the eastern portion of the Project site. A graded dirt access road runs around the perimeter of the Project site and two graded dirt roads run east-west and north-south in the southern portion of the Project site. An unnamed sandy wash occurs in the extreme northwest corner of the Project site. Land uses in the immediate vicinity of the Project site are

illustrated on Figure 2-3, and described above. In summary, Columbia Way / East Avenue M forms the northern boundary of the Project site. To the north of Columbia Way / East Avenue M are lands located within the City of Lancaster that include a restaurant (Ruben's Bar and Grill), a storage facility (Small Town Storage), an automobile salvage yard, Lancaster Adult Day Healthcare facility, an auto repair center (Affordable Transmission and Auto Repair Center), a construction yard and vacant land. East of the Project site is Challenger Way is vacant land, beyond which is 15th Street East, beyond which is the United States Air Force (USAF) Plant 42 facility and the inactive Palmdale Regional Airport. South of the Project site is Avenue M-12, beyond which is vacant land and runways associated with the USAF Plant 42 and the inactive Palmdale Regional Airport. To the west of the Project site is the Union Pacific Railroad (UPRR) mainline tracks and easement, west of which is the Sierra Highway Bike Trail, which is adjacent to Sierra Highway.

As demonstrated herein, the Project site does not occur within or adjacent to an established community nor is it located near an existing established community. Because the Project site is already physically separated from neighboring developed properties under existing conditions, development of the Project site as proposed would not physically divide any established community. In addition, the Project would connect to the existing roadway system and other infrastructure and would not involve the reconfiguration of streets that could have the potential to alter the surrounding pattern of future development and affect the connectivity of existing nearby residential uses. Because the Project would not physically divide an established community, no impact would occur as a result of implementation of the Project and no mitigation is required.

Threshold b:	***Would the Project cause a significant environmental impact due to a conflict with any land plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?***

The Project Applicant filed an application with the City for a General Plan Amendment (GPA 22-001) to amend the site's General Plan land use designation to Specific Plan (SP). The proposed GPA 22-001 would require future development on the Project site to comply with the applicable development standards and design guidelines of the Antelope Valley Commerce Center Specific Plan (SP 22-001) and, where applicable, the Palmdale Municipal Code (PMC). Additionally, the Project Applicant filed an application with the City for a Zone Change (ZC 22-001) to change the zoning classification to Specific Plan (SP). The proposed ZC 22-001 would require future development on the Project site to comply with the applicable development standards and design guidelines of the SP 22-001 and, where applicable, the PMC.

The Project's consistency with land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect is described below.

1. Federal Aviation Administration (FAA) and Federal Regulation Title 14 Part 77 Regulations Part 77

As discussed in EIR Section 3.0, *Project Description*, the Project's proposed buildings would have variable rooflines with a maximum height of approximately 49.6 feet, which would not interfere with operations at the inactive Palmdale Regional Airport and USAF Plant 42. The Project would not be constructed at a height exceeding 200 feet AGL. According to 14 CFR Part 77, because the Project is located within 20,000 feet of a public use or military airport, FAA notification is required for the Project. The FAA conducted an aeronautical study for the Project site and determined that the proposed structures do not exceed obstruction standards and would not be a hazard to air navigation. "Determination of No Hazard to Air Navigation" letters were issued to the Project Applicant on June 10, 2024. The FAA determination letters are provided in *Technical Appendix O* to this EIR. Because the height of the Project's structures would not exceed 200 feet AGL, and based on the FAA's determination that the Project would not be a hazard to air navigation, implementation of the Project would be consistent with FAA regulations.

2. Airport Land Use Plans Consistency

- **Los Angeles County Airport Land Use Plan (ALUP)**

The FAA issued letters of "No Determination of Hazard to Air Navigation" for the structures to be built for the Project. As discussed further in EIR Section 4.8, *Hazards and Hazardous Materials* and EIR Section 4.11, *Noise*, the Project would be consistent with the ALUP. As such, the Project's proposed land uses would be consistent with the ALUP and no impact would occur.

- **USAF Plant 42 Air Installation Compatible Use Zone (AICUZ) Final Report**

The FAA issued letters of "No Determination of Hazard to Air Navigation" for the structures to be built for the Project. As discussed further in EIR Section 4.8, *Hazards and Hazardous Materials* and EIR Section 4.11, *Noise*, the Project would be consistent with the ALUP. As such, the Project's proposed land uses would be consistent with the AICUZ Compatibility Zone and no impact would occur.

3. City of Palmdale General Plan (Palmdale 2045)

As previously discussed, the General Plan designates the Project site for Employment Flex (EMPFX). The Employment Flex (EMPFX) land use designation is a transition zone intended to permit mixed development of lighter industrial uses and more intensive service, retail, and commercial uses, with a floor area ratio (FAR) of up to 1.0. The Project Applicant filed an application with the City for a General Plan Amendment (GPA 22-001) to amend the site's General Plan land use designation to Specific Plan (SP). The proposed GPA 22-001 would require future development on the Project site to comply with the applicable development standards and design guidelines of the Antelope Valley Commerce Center Specific Plan (SP 22-001) and, where applicable, the Palmdale Municipal Code (PMC).

With approval of GPA 22-001 and SP 22-001, the Project would be consistent with the City's General Plan. Moreover, impacts associated with the proposed land uses have been evaluated throughout this EIR. Where significant impacts are identified, mitigation measures are identified to reduce impacts to the maximum feasible extent. Although the Project would result in a change to the General Plan land use designation for the Project site to allow for implementation of the Specific Plan, based on the foregoing analysis, the proposed Project would not result in a significant environmental impact due to a conflict with any land use plan adopted for the purpose of avoiding or mitigating an environmental effect, and impacts would be less than significant.

Table 4.10-1, *General Plan Consistency Analysis*, provides an analysis of the proposed Project with respect to the relevant goals, objectives, and policies of the General Plan. As shown in Table 4.10-1, the Project is consistent with the goals, policies, and objectives of Palmdale 2045 and has no potential to result in significant land use and planning conflicts in the context of compliance with applicable environmental plans, policies, and regulations beyond those identified in other sections of this EIR. There are no other land use plans, land use policies, or land use regulations applicable to the Project site. Therefore, the Project would not 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; thus, no impact would occur and no mitigation is required.

Table 4.10-1 General Plan Consistency Analysis

General Plan Goals and Policies	Consistency Analysis
Land Use and Community Design Element	
Goal LUD-4. High-quality architecture and site design in the renovation and construction of all buildings.	
Policy LUD-4.1 Quality Construction. Use simple, urban building forms made with permanent materials with high-quality detailing that stands the test of time.	**Consistent.** The SP 22-001 document sets forth standards and guidance for the development and phasing of industrial, commercial, and open space uses with supporting infrastructure on the Project site. The SP 22-001 document describes the quality and character of the Project area's proposed built environment, including criteria addressing architecture, lighting, signage, and landscape design. The proposed Project would be designed according to the SP 22-001 document development standards and guidelines.
Policy LUD-4.5 Attractive Building Entrances. Use visual and physical design cues within the design of a building and within building entries to emphasize the building entrance and connections to public spaces and public pathways/networks.	**Consistent.** The SP 22-001 document establishes development standards and guidelines for building entries that visually emphasize the building entrance and connections to public spaces and public pathways while ensuring the buildings and surrounding spaces are attractively designed. The proposed Project would be designed according to the SP 22-001 document development standards and guidelines.
Policy LUD-4.9 Public Streetscapes. Create pedestrian-oriented streetscapes by establishing unified street tree planting, sidewalk dimensions and	**Consistent.** The SP 22-001 document provides landscape guidelines for streetscapes within the Project site. Development of the Project would encourage

Table 4.10-1 General Plan Consistency Analysis

General Plan Goals and Policies	Consistency Analysis
maintenance, pedestrian amenities, and high-quality building frontages in all new development.	access and circulation within and surrounding the Project site via non-motorized means. The Project proposes a Class 1 Trail for pedestrian and bike access along the Project site's frontage with Columbia Way / East Avenue M. In addition to the Class 1 Trail, sidewalks would be located along both sides of Public Street A, Public Street B, and Public Street C for non-automobile connectivity.
Goal LUD-8 A place that encourages and supports its local arts and community culture.	
Policy LUD-8.1 Arts and Cultural Program. Expand arts and cultural programming in public spaces, building off the existing Public Art Master Plan.	**Consistent.** The Project would incorporate public art elements within the Project site and/or contribute to the City's Public Arts Fund. Any public art proposed would be placed at the entrances of the Project site to provide maximum visibility for public viewing. Public art would be provided in compliance with PMC Chapter 15.01, Public Art Commission and Public Art in Private and Municipal Development.
Goal LUD-14 Facilitate employment growth through expanded operations onsite and by preserving the buffer between Air Force Plant 42 and the rest of the city.	
Policy LUD-14.1 Safeguarding Plant Operations. Support continued growth of Plant 42 operations in the Aerospace Industrial land use district. Maintain sufficient land to accommodate a wide variety of industrial uses to meet military and community needs.	**Consistent.** The SP 22-001 document provides a list of permitted uses that support continued growth of USAF Plant 42 operations. The Project proposes industrial land use that could accommodate a wide variety of industrial activities as well as military and community needs.
Policy LUD-14.2 Adjacent Use Compatibility. Continue to buffer this area from adjacent, non-compatible residential and commercial uses.	**Consistent.** The Project proposes a master-planned commerce center containing industrial, commercial, and open space land uses, as well as roadways. The acreage provided for commercial land use would comply with acceptable uses permitted near USAF Plant 42 and as such, the Project would provide a buffer between USAF Plant 42 and non-compatible residential and commercial uses.
Policy LUD-14.3 Limited Non-Industrial Uses. Prevent non-industrial uses from locating in the Aerospace Industrial area (aside from uses that directly support Plant 42 or airport operations).	**Consistent.** The Project proposes industrial and commercial land use. The commercial land use is intended to directly support users of the Project site and the surrounding Aerospace Industrial area. The SP 22-001 document provides a list of commercial land uses that will directly support the surrounding aerospace industrial operations.
Policy LUD-14.5 Circulation and Access. Maintain vehicular infrastructure and improve circulation to accommodate the unique demands of aerospace workplaces.	**Consistent.** The Project includes improvements to Columbia Way / East Avenue M along the Project frontage and to the portion of Columbia Way / East Avenue M south of its centerline. Additionally, three public streets (Public Street A, Public Street B, and Public Street C) would be constructed internal to the

Table 4.10-1 General Plan Consistency Analysis

General Plan Goals and Policies	Consistency Analysis
	Project site. The proposed improvements would improve circulation to accommodate the demands of the industrial and aerospace workplaces.
Goal LUD-16 Increased job opportunities in Palmdale through expanded flex, light industrial, production/ distribution/repair (PDR), and creative/flex land uses.	
Policy LUD-16.2 Employment Diversity. Support a diverse mix of light industrial, information, film, makerspace, boutique food/wine/beer processing, local food, and technology uses to provide jobs and tax revenues for the community by allowing emerging economic uses and industries within the Mixed-Use and Employment designations.	**Consistent.** The SP 22-001 document provides a diverse mix of uses proposed within the industrial and commercial land uses. The mix of uses proposed within the Project site would provide job and tax revenues for the community by allowing emerging economic uses and industries.
Policy LUD-16.7 Industrial Incentives. Promote establishment of incentives for new light industrial development in Palmdale including the use of local, state, and federal programs.	**Consistent.** The Project proposes industrial land use, which is consistent with the City's vision of promoting opportunity for new light industrial development within the City.
Goal LUD-17 Facilitation of industrial areas that support and buffer Plant 42 while maintaining compatibility with adjacent non-industrial uses.	
Policy LUD-17.2 Infrastructure Master Planning. Encourage master planning and infrastructure funding districts within industrial areas to ensure adequate and comprehensive provision of infrastructure and efficient, attractive designs, through cohesive planning of larger development projects.	**Consistent.** The Project proposes a master planned commerce center that would ensure sufficient funding is secured for infrastructure improvements necessary to adequately serve the Project site. The SP 22-001 document provides further information regarding how infrastructure improvements within the Project site would be funded and developed.
Policy LUD-17.3 Industrial Development Standards. Adopt development standards for industrial uses near residential uses, to ensure compatibility and aesthetically pleasing views from adjacent rights of way, including but not limited to standards for screening of outdoor storage, locations of loading and refuse disposal areas, height, bulk, impervious surface area, architectural enhancement, landscaping, and other measures as deemed appropriate.	**Consistent.** The SP 22-001 document provides development standards and design guidelines to ensure that the industrial and commercial buildings proposed as part of the Project are aesthetically pleasing. The Project site would include the appropriate screening necessary to properly shield outdoor storage and other industrial activities from adjacent rights-of-way.
Goal LUD-18 Attraction and stimulation of new employment uses through flexible land use regulations and supportive policies/actions.	
Policy LUD-18.2 Middle-Income Employment. Expand a core area of light industrial and service uses that provide middle-income jobs for Palmdale residents.	**Consistent.** The Project proposes a master planned commerce center with industrial and commercial land use. In total, the Project is expected to generate approximately 9,888.83 jobs, some of which would include middle-income jobs.
Circulation and Mobility Element	
Goal CM-1 Build and maintain a transportation system that is safe and comfortable for travelers of all modes regardless of age or ability.	

Table 4.10-1 General Plan Consistency Analysis

General Plan Goals and Policies	Consistency Analysis
Policy CM-1.1 Roadway Design. Design and maintain the public right-of-way through a complete streets approach that facilitates safe, comfortable, and efficient travel for all roadway users.	**Consistent.** The Project includes improvements to Columbia Way / East Avenue M along the Project frontage and to the portion of Columbia Way / East Avenue M south of its centerline. Additionally, three public streets (Public Street A, Public Street B, and Public Street C) would be constructed internal to the Project site. The proposed improvements would improve circulation to accommodate the demands of the future workplaces**.**
Goal CM-2 Build and maintain a transportation system that accommodates future growth and maintains transportation networks for all modes.	
Policy CM-2.5 Multimodal Comfort. Prioritize quality of multimodal facilities with respect to a user's experience of stress, connectivity, and safety for streets with a non-automobile priority, and ensure the appropriate balance with vehicular operations.	**Consistent.** The Project proposes a Class 1 Trail for pedestrian and bike access along the Project site's frontage with Columbia Way / East Avenue M. In addition to the Class 1 Trail, sidewalks would be located along both sides of Public Street A, Public Street B, and Public Street C for non-automobile connectivity.
Economic Development Element	
Goal ED-1 Preserve the existing economic base of high-quality jobs in the City.	
Policy ED-1.1 Attract Manufacturing Employers. Attract supply chain employers for the manufacturing and defense industries to strengthen Palmdale's economic viability and competitiveness within these sectors.	**Consistent.** The Project proposes industrial and commercial land use. The Project site is designed to attract supply chain employers, including manufacturing and defense industries, to strengthen Palmdale's economic viability and competitiveness within these sectors.
Policy ED-1.2 Employee Serving Amenities. Encourage the development of business and employee serving amenities (i.e., retail, dining, hospitality) proximate to existing districts.	**Consistent.** The Project proposes industrial and commercial land use. The commercial land use is designed to primarily serve the businesses and employees within the Project site and surrounding industrial areas.
Military Compatibility Element	
Goal MC-1 Compatible adjacent land uses that support continued operation of Plant 42.	
Policy MC-1.1 Aerospace Compatible Land. Maintain appropriate land use designations surrounding Plant 42 to limit incompatible uses and to ensure continued safe operation of airport activities.	**Consistent.** The Project site proposes industrial and commercial land use. The acreage provided for commercial land use would comply with acceptable uses permitted near USAF Plant 42.
Policy MC-1.2 Land Use Buffers. Continue to buffer Plant 42 from adjacent, non-compatible residential and commercial uses by reviewing development applications in the Military Influence Area for potential conflicts.	**Consistent.** The Project proposes a master-planned commerce center containing industrial, commercial, and open space land uses, as well as roadways. The acreage provided for commercial land use would comply with acceptable uses permitted near USAF Plant 42 and as such, the Project would provide a buffer between USAF Plant 42 and non-compatible residential and commercial uses.

Table 4.10-1 General Plan Consistency Analysis

General Plan Goals and Policies	Consistency Analysis
Policy MC-1.3 Non-Industrial Land. Limit non-industrial uses from locating in the Aerospace Industrial area (aside from uses that directly support Plant 42 or airport operations).	**Consistent.** The Project site proposes industrial and commercial land use. The commercial land use is designed to serve businesses and employees within the Project site as well as the surrounding Aerospace Industrial areas. The commercial land use would not conflict with USAF Plant 42 operations.
Policy MC-1.4 Evaluate Existing and Future Land Uses. Use overlay maps of the Air Installation Compatibility Use Zones (AICUZ) noise contours and Air Force Land Use Compatibility Guidelines to evaluate existing and future land use proposals.	**Consistent.** Uses within the Project site would be compatible with the AICUZ noise contours and the Air Force Land Use Compatibility Guidelines. The SP 22-001 document provides standards to ensure the Project site's compatibility with the USAF Plant 42 area.
Goal MC-2 Mitigate and/or avoid encroachment of incompatible development into space utilized by Plant 42 air operations.	
Policy MC-2.2 AICUZ Consistency. Require all development to be consistent with DoD regulations as outlined in the Plant 42 AICUZ Report and comply with regulations which affect development in the Clear Zones/Accident Potential Zones.	**Consistent.** The Project site is not within the USAF Plant 42 AICUZ Clear Zones/Accident Potential Zones. Additionally, uses within the Project site are compatible with the AICUZ noise contours and the Air Force Land Use Compatibility Guidelines.
Goal MC-3 Protect residents from excessive noise and protect Plant 42 from noise complaints by preventing incompatible land uses from encroaching upon the site.	
Policy MC-3.1 Noise and Overflight Compliance. Ensure that all new land use proposals comply with the noise and overflight policies of the most recent AICUZ for Plant 42.	**Consistent.** Uses within the Project site are compatible with the AICUZ noise contours and the Air Force Land Use Compatibility Guidelines.
Policy MC-3.8 Non-noise Sensitive Land Uses. Designate and permit land uses within the 65 CNEL contour that are primarily industrial, business park, commercial and recreational uses that are not noise sensitive; permit other uses only when it is found that no adverse noise impacts will result.	**Consistent.** The Project site is located outside of the 65 CNEL contour for USAF Plant 42. According to the AICUZ, the very southern portion of the Project site is located within the 60 to 65 CNEL noise contour boundary of the USAF Plant 42 facility. The Project proposes a master-planned commerce center containing industrial, commercial, and open space land uses, as well as roadways. According to the AICUZ Final Report, most industrial/manufacturing noise uses are compatible within the airfield area of influence and the commercial/retail trade and personal and business services categories are compatible without restriction up to DNL (day-night average A-weighted sound level) 70 dBA Because these land uses are considered compatible within the airfield area of influence, the Project would not conflict with this General Plan policy.
Equitable and Healthy Communities Element	
Goal EHC-12 A City designed to improve air quality and reduce disparate health impacts.	
Policy EHC-12.7 Toxic Air Emissions. Coordinate with regional, state, and federal agencies, including the U.S. Environmental Protection Agency, as well as large	**Consistent.** As discussed in EIR Section 4.2, *Air Quality*, the Project Applicant would coordinate with regional, state, and federal agencies to decrease

Table 4.10-1 General Plan Consistency Analysis

General Plan Goals and Policies	Consistency Analysis
aerospace and industrial employers to decrease toxic chemical emissions. Proactively explore potential partnerships and interventions to decrease potential exposure of residents to these chemicals.	potential exposure of residents to air pollution and toxic chemicals.
Goal EHC-16 A City that improves public safety for all residents by reducing crime and injuries.	
Policy EHC-16.1 Pedestrian and Bicyclist Safety. Strive for a safe transportation system by making transportation improvements in areas with a high incidence of collisions, injuries, and death, especially for pedestrians and bicyclists. Street improvements may include the following: • Marked crosswalks • Bicycle lanes • Traffic calming	**Consistent.** The Project proposes a Class 1 Trail for pedestrian and bike access along the Project site's frontage with Columbia Way / East Avenue M. In addition to the Class 1 Trail, sidewalks would be located along both sides of Public Street A, Public Street B, and Public Street C for non-automobile connectivity. Shade trees are proposed along the trail and sidewalks to encourage non-vehicular transportation. The proposed infrastructure improvements would be designed for and intended to provide a safe traveling environment for pedestrians and bicyclists.
Parks, Recreation, and Open Space Element	
Goal PR-2 Promote bicycling as an important mode of transportation and recreation in the City of Palmdale.	
Policy PR-2.1 Bikeway Network. Encourage bicycle use by developing a comprehensive bikeway network for the city that meets access needs of all bicyclists.	**Consistent.** The Project proposes a Class 1 Trail for pedestrian and bike access along the Project site's frontage with Columbia Way / East Avenue M. In addition to the Class 1 Trail, sidewalks would be located along both sides of Public Street A, Public Street B, and Public Street C for non-automobile connectivity.. The Class 1 Trail proposed along Columbia Way / East Avenue M would provide connection to the existing off-site 7.1-mile-long Sierra Highway Bike Trail which is a commuter and recreational all-weather surface trail running along Sierra Highway and the UPRR, located west of the Project site.
Conservation Element	
Goal CON-1 Protect Significant Ecological Areas in and around the City, including, but not limited to, sensitive flora and fauna habitat areas.	
Policy CON-1.1 Endangered Species Protection. Ensure local compliance with the California Endangered Species Act and the Federal Endangered Species Act (ESA).	**Consistent.** As further discussed in EIR Section 4.3, *Biological Resources*, the Project would comply with the California Endangered Species Act and the Federal ESA. Additionally, EIR Section 4.3 discusses the proposed mitigation measures to address potential impacts to endangered species should they be encountered at the Project site.
Policy CON-1.2 Joshua and Juniper Trees. Continue enforcing the City's Native Vegetation Ordinance to protect western Joshua trees and Juniper trees.	**Consistent.** As further discussed in EIR Section 4.3, *Biological Resources*, the Project Applicant would obtain the appropriate permits necessary for impacts to the western Joshua trees. Additionally, EIR Section 4.3

Table 4.10-1 General Plan Consistency Analysis

General Plan Goals and Policies	Consistency Analysis
	discusses the proposed mitigation measures to address impacts to the western Joshua trees..
Policy CON-1.3 West Mojave Plan. Comply with the required implementation of the West Mojave Plan for protection of desert tortoise and Mohave ground squirrel.	**Consistent.** Although the Project site is located within the geographic boundaries of the West Mojave Plan, the Project would not be processed under the West Mojave Plan because it is a private project and the West Mojave Plan can only be used for projects on federal land. Even though the Project's construction and operational activities are not required to comply with the West Mojave Plan, it is noted that the Project would not interfere with any conservation areas designed by the West Mojave Plan including Habitat Conservation Areas, Special Review Areas, critical habitat on Military Lands, existing Area of Critical Environmental Concern, or BLM Wilderness Area.
Goal CON-6 Minimize the impacts of urban development on groundwater supplies.	
Policy CON-6.2 Reduce Landscaping Irrigation Needs. Require the use of water conserving native or drought resistant plants and drip irrigation systems where feasible.	**Consistent.** The Project's Conceptual Landscape Plan is provided in EIR Section 3.0, *Project Description*. The species proposed are drought tolerant and are classified as either low or moderate water need in the Water Use Classification of Landscape Species (WUCOLS). Additionally, drip design irrigation systems are proposed within the Project site.
Policy CON-6.3 Reduce Street Runoff. Design streets to incorporate vegetation, soil, and engineered systems to slow, filter, and cleanse stormwater runoff.	**Consistent.** As further discussed in EIR Section 3.0, *Project Description*, the Project would construct a storm drain line within a portion of Public Street A; a storm drain line within Private Drive D extending east towards the drainage basin in the northeastern portion of the Project site; and a storm drain line within a portion of Public Street B. The proposed drainage basin would be adequately sized to serve the Project site's stormwater needs. In the event that the maximum basin capacity is reached, an emergency overflow system would direct storm water to Columbia Way / East Avenue M allowing it to follow the historical storm water flow pattern..
Goal CON-8 Protect historical and culturally significant resources, which contribute to the community's sense of history.	
Policy CON-8.5 Tribal Consultation. Conduct Native American consultation consistent with the applicable regulations when new development is proposed in potentially culturally sensitive areas.	**Consistent.** As further discussed in EIR Sections 4.4, *Cultural Resources*, and 4.14, *Tribal Cultural Resources,* the City conducted Native American consultation for potentially culturally sensitive areas within the Project site.
Policy CON-8.6 Discovery Coordination with Tribal Groups. When human remains suspected to be of	**Consistent.** As further discussed in EIR Sections 4.4, *Cultural Resources*, and 4.14, *Tribal Cultural*

Table 4.10-1 General Plan Consistency Analysis

General Plan Goals and Policies	Consistency Analysis
Native American origin are discovered, coordinate with the Native American Heritage Commission and any local Native American groups to determine the most appropriate course of action.	*Resources*, if human remains are unearthed during Project construction, the Native American Heritage Commission and any local Native American groups would be notified to determine the appropriate course of action.
Policy CON-8.7 Cooperation with Preservation Entities. Cooperate with private and public entities whose goals are to protect and preserve historic landmarks and important cultural resources.	**Consistent.** As discussed in EIR Section 4.4, *Cultural Resources*, mitigation measures are provided which require that a qualified professional that meets the Secretary of Interior's Professional Qualification Standards and a qualified Native American Tribal monitor are retained to monitor the Project site during earthmoving activities and implement mitigation to the satisfaction of the City in the event that any significant archaeological or tribal cultural resources are unearthed during excavation and grading activities.
Public Facilities, Services, and Infrastructure Element	
Goal PSFI-3 Ensure that all development in Palmdale is served by adequate water distribution and sewage facilities.	
Policy PSFI-3.1 Local Drainage Detection Basins. Make use of interim local drainage detention basins to slow stormwater runoff until such time as permanent drainage facilities are constructed.	**Consistent.** The Project includes installation of a proposed drainage basin positioned in the northeast portion of the Project site. The proposed drainage basin would be adequately sized to serve the Project site's stormwater needs.
Policy PSFI-3.3 Retention Facilities. Where feasible, plan for detention or retention facilities in areas where groundwater recharge can be accomplished.	**Consistent.** The Project includes installation of a proposed drainage basin positioned in the northeast portion of the Project site. The proposed drainage basin would be adequately sized to serve the Project site's stormwater needs.
Policy PSFI-3.4 Drainage Facilities. Through the development review process, reserve land in appropriate locations for construction of drainage facilities.	**Consistent.** A master storm drainage system for the Project site is proposed which includes the installation of a drainage basin positioned in the northeast portion of the Project site; a storm drain line within a portion of Public Street A; a storm drain line within Private Drive D extending east towards the drainage basin in the northeastern portion of the Project site; and a storm drain line within a portion of Public Street B. . Drainage facilities for the Project site are further discussed in EIR Section 3.0, *Project Description,* and EIR Section 4.9, *Hydrology and Water Quality.*
Policy PSFI-3.7 Public Sewer System Prioritization. Require that all commercial, industrial, institutional, and multiple family uses be connected to a public sewer system with only limited use of private sewage disposal systems.	**Consistent.** This Project site's sewer infrastructure will connect to the existing public sewer system along Columbia Way / East Avenue M. Refer to EIR Section 3.0, *Project Description* and EIR Section 4.15, *Utilities and Service Systems,* for details of the sanitary sewer system.

Table 4.10-1 General Plan Consistency Analysis

General Plan Goals and Policies	Consistency Analysis
Policy PSFI-3.11 New Development Fees. Require new development to pay necessary fees for expansion and ongoing maintenance of the sewage disposal system to the appropriate agencies, to handle the increased load, which it will generate.	**Consistent.** The Project would adhere to PMC Chapter 3.45, which requires development applicants to pay Development Impact Fees (DIF) to address usage demands from new development on the City's existing facilities. Payment of the required DIF would ensure that the Project provides fair share funds for the provision of public facilities.
Policy PSFI-3.16 Service Levels. Provide sufficient levels of water, sewer, and storm drain services throughout the City.	**Consistent.** The proposed utility infrastructure would be sufficient to serve the Project site. Refer to EIR Section 3.0, *Project Description* and EIR Section 4.15, *Utilities and Service Systems*, for details of the proposed utility infrastructure system.
Goal PSFI-4 Maximize the use of infrastructure facilities through appropriate land use strategies.	
Policy PFSI-4.5 Planning Documents. Require comprehensive planning documents such as area plans, specific plans, and development agreements, to specify the nature, timing and financing of both capital improvements and ongoing operations/maintenance of public improvements and services.	**Consistent.** The Project site would provide the necessary funding for its proposed infrastructure and public improvements. The SP 22-001 document provides detail regarding how the infrastructure within the Project site would be installed and funded.
Goal PSFI-5 Ensure that adequate public utilities are available to support development in an efficient and orderly manner.	
Policy PSFI-5.2 On-site Infrastructure. Require all new development, including major modifications to existing development, to construct required on-site infrastructure improvements pursuant to City standards.	**Consistent.** All infrastructure necessary to serve the proposed Project would be constructed pursuant to all applicable City standards. Refer to EIR Section 3.0, *Project Description* and EIR Section 4.15, *Utilities and Service Systems*, for details of the utility proposed infrastructure system.
Policy PSFI-5.3 Off-Site Fair Share Contribution. Require all new development, including major modifications to existing development, to construct or provide a fair share contribution toward construction of required off-site improvements needed to support the project. This includes a fair share contribution toward development of regional master facility plans for roads, sewer, water, drainage, schools, libraries, parks, fire, and other community facilities, prior to granting approval of development applications.	**Consistent.** The Project Applicant would provide a fair share contribution toward construction of the off-site improvements needed to support the Project.
Goal PSFI-6 Coordinate with utility providers to support adequate provision of critical utilities.	
Policy PSFI-5.6 Land Use Changes. When reviewing applications for land use designation changes (i.e., zone change, General Plan Amendment, specific plan amendment), conduct a thorough analysis of the impacts of the proposed change on all elements of the City's infrastructure systems, and require mitigation as deemed appropriate.	**Consistent.** The Project includes applications for a General Plan Amendment (GPA 22-001) to change the site's General Plan land use designation from Employment Flex (EMPFX) to Specific Plan (SP) and Zone Change (ZC 22-001) to change the site's zoning classification from Office Flex (OFX) to Specific Plan (SP). Potential impacts of the proposed change to

Table 4.10-1 General Plan Consistency Analysis

General Plan Goals and Policies	Consistency Analysis
	elements of the City's infrastructure systems have been analyzed throughout the sections of this EIR, and mitigation is proposed where appropriate.
Policy PSFI-6.3 New Utility Development. When feasible, require new utility lines to be constructed underground and along existing utility corridors.	**Consistent.** The Project's proposed utility infrastructure improvements would utilize existing corridors where feasible and would be primarily installed within the public street rights-of-way. Refer to EIR Section 3.0, *Project Description* and EIR Section 4.15, *Utilities and Service Systems*, for details of the proposed utility infrastructure system.
Safety Element	
Goal SE-1 A city with minimal public health, safety, and welfare impacts resulting from seismic hazards.	
Policy SE-1.1 Geological Review. Review development within or adjacent to geologic hazard zones and provide copies of geotechnical reports and studies to be reviewed by a qualified geologist and implement recommendations to ensure adequate provisions for public safety.	**Consistent.** A geological investigation has been completed for the Project site, which includes site-specific recommendations to attenuate seismic-related hazards. As further discussed in EIR Section 4.6, *Geology and Soils*, the Project would comply with the recommendations of the Project's Geotechnical Investigation, provided as EIR *Technical Appendix F1*
Policy SE-1.2 California Building Code. Require appropriate structural setbacks from active fault rupture traces in accordance with Alquist-Priolo standards and continue to follow California Building Code.	**Consistent.** The Project site is not located within an Alquist-Priolo Earthquake Fault Zone or within a fault zone depicted on the City's Fault Map and the risk of fault rupture to occur on the site is considered low. The Project would be constructed in accordance with the California Building Standards Code (CBSC) and the City Building Code.
Goal SE-2 Minimize public health, safety, and welfare impacts resulting from wildfire hazards.	
Policy SE-2.9 Development Requirements. As part of the city's development review process, require that all new buildings and facilities comply with Los Angeles County, state, and federal regulatory standards such as the California Building and Fire Codes as well as other applicable fire safety standards and work with the Fire Department to ensure the provision of adequate fire stations, personnel, and equipment to meet the City's needs over time.	**Consistent.** The Project would be constructed in compliance with Los Angeles County, state, and federal regulatory standards such as the California Building and Fire Codes as well as other applicable fire safety standards. Additionally, 28-foot wide fire lanes are proposed around the perimeter of each building.
Policy SE-2.10 Water system requirements. Require all new development to be served by a water system that meets applicable fire flow requirements.	**Consistent.** Water lines for fire service lines and fire hydrants would be constructed around all proposed buildings. Refer to EIR Section 3.0, *Project Description* and EIR Section 4.15, *Utilities and Service Systems*, for additional information regarding the construction the proposed water lines for the Project.
Goal SE-4 Minimize impacts to public safety and/or property as a result of flooding.	

Table 4.10-1 General Plan Consistency Analysis

General Plan Goals and Policies	Consistency Analysis
Policy SE-4.3 National Pollutant Discharge Elimination System and Low Impact Development. Ensure that new development meets National Pollutant Discharge Elimination System (NPDES) and associated Low Impact Development (LID) standards that limit peak runoff to pre-development rates.	**Consistent.** As further discussed in EIR Section 4.9, *Hydrology and Water Quality,* the Project Applicant would be required to obtain a NPDES Permit for construction activities and would comply with the requirements of the permit. Additionally, the Project would comply with LID standards.
Goal SE-6 Minimize impacts to public safety and property resulting from aircraft accidents.	
Policy SE-6.1 Consistent Development with Department of Defense. Require all development to be consistent with Department of Defense regulations as outlined in the Air Force Plant 42 Air Installation Compatibility Use Zone (AICUZ) Report and comply with applicable FAA regulations that affect development in the Accident Potential Zones.	**Consistent.** The Project would be consistent with the Plant 42 AICUZ Final Report and applicable FAA regulations. Furthermore, future development at the Project site would be required to comply with the development standards and design guidelines established in the SP 22-001 document, as well as the applicable requirements from the City.
Sustainability, Climate Action, and Resilience Element	
Goal SCR-3 Green and decarbonized buildings for new construction and major renovations.	
Policy SCR-3.3 Solar and Storage. Require installation of photovoltaic panels and battery storage on all residential new construction and nonresidential new construction over 5,000 sq. ft.	**Consistent.** As proposed by the Project, building roofs would be solar-ready and the Project Applicant is proposing to cover the roofs with solar panels to a maximum 2,000 amps in compliance with applicable Building Code requirements, clearance requirements around roof-mounted equipment, utility company interconnection regulations, transformer capacity, and other code compliance constraints.
Goal SCR-4 Reduced greenhouse gas emissions from transportation (SB 379, EO N-79-20).	
Policy SCR-4.1 Bike Facilities. Promote bicycle use with new private development projects through requirements for bicycle parking, lockers and showers, bike share facilities, and when feasible, connections to City bike lanes.	**Consistent.** The Project proposes a Class 1 Trail for pedestrian and bike access along the Project site's frontage with Columbia Way / East Avenue M. In addition to the Class 1 Trail, sidewalks would be located along both sides of Public Street A, Public Street B, and Public Street C for non-automobile connectivity.. The Class 1 Trail proposed along Columbia Way / East Avenue M would provide connection to the existing off-site 7.1-mile-long Sierra Highway Bike Trail located west of the Project site. Additionally, bike racks are proposed outside of the office locations at each building.
Goal SCR-5 Increased resource capture and reduced waste sent to landfills (SB 1383).	
Policy SCR-5.2 Organic Waste Diversion. Establish programs to comply with State-established requirements for organics and food waste diversion.	**Consistent.** As further discussed in EIR Section 4.7, *Greenhouse Gas Emissions*, a waste diversion program would be implemented during Project construction where applicable.
Goal SCR-6 Safe and secure water supply.	

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General Plan Goals and Policies	Consistency Analysis
Policy SCR-6.3 Low-Water Use Plant List. Implement the City's landscape plant list and use of low-water plants in new or renovated landscaped areas.	**Consistent.** The Project's Conceptual Landscape Plan is provided in EIR Section 3.0, *Project Description*. The species proposed are drought tolerant and are classified as either low or moderate water need in the WUCOLS.
Air Quality Element	
Goal AQ-1 Minimize local air pollution caused by motor vehicles.	
Policy AQ-1.1 Reduced Work-Related Trips. Reduce the number and length of work-related trips through such means as providing a balance of jobs and housing in the community, promoting alternate work schedules, telecommuting, tele-conferencing, company-sponsored ride-share and alternative fuel vehicle programs, use of commuter trains and other alternative modes of transportation to the workplace, creation of additional park and ride facilities, and improving the fiber optic network and connectivity.	**Consistent.** The Project site would improve the job/housing balance by providing new employment opportunities within the City, which would allow residents to work locally, rather than commuting outside of the Palmdale area.
Policy AQ-1.8 Environmentally Review New Development. Use the environmental review process for new development applications to assess and, as necessary, mitigate the impacts of new development related to increased vehicle miles traveled.	**Consistent.** Appropriate traffic analyses have been prepared for the Project to assess potential impacts of the Project in relation to vehicle miles traveled. Refer to EIR Section 4.13, *Transportation,* for further discussion regarding vehicle miles traveled.
Goal AQ-2 Minimize particulates less than 10 microns in size (PM10) and minimizes activities that generate dust.	
Policy AQ-2.2 Construction Site Requirements. Require measures at construction sites to prevent deposition of soil onto public right-of-way.	**Consistent.** Appropriate dust control measures would be in place during construction of the Project as required by AVAQMD Rule 403, Fugitive Dust.
Policy AQ-2-3 Natural Contours. Encourage developers to maintain natural contours to the greatest degree possible, to eliminate the need for extensive land clearing, blasting, ground excavation, grading and cut and fill operations.	**Consistent.** The natural topography of the Project site is relatively flat. The Project site would be graded in a manner that is generally lower than the existing grade. No import or export of soils is anticipated.
Policy AQ-2-4 Erosion and Control Measures. Require erosion and dust control measures for new construction, including covering soil with straw mats or use of chemical soil and dust binders during site grading, followed by hydroseeding and watering disturbed construction areas as soon as possible after grading to prevent fugitive dust.	**Consistent.** The Project Applicant is required to obtain an NPDES permit for construction activities. Compliance with the NPDES permit involves the preparation and implementation of a SWPPP for construction-related activities. The SWPPP is required to specify the BMPs that the Project would be required to implement during construction activities to ensure that all potential pollutants of concern are prevented, minimized, and/or otherwise appropriately treated prior to being discharged from the subject property. Additionally, the Project would comply with the requirements of the City's SWMP prepared as part of the City's MS4 permit. In addition, proposed

Table 4.10-1 General Plan Consistency Analysis

General Plan Goals and Policies	Consistency Analysis
	construction activities would be required to comply with AVAQMD Rule 403, which would reduce the amount of particulate matter in the air and minimize the potential for wind erosion.
Goal AQ-3 Reduction and/or elimination of unnecessary sources of air pollution.	
Policy AQ-3.3 Complete Streets. Design a more effective street system by emphasizing complete streets which accommodate all modes of transportation.	**Consistent.** The proposed streets within the Project site would accommodate various modes of transportation. The Project proposes a Class 1 Trail for pedestrian and bike access along the Project site's frontage with Columbia Way / East Avenue M. In addition to the Class 1 Trail, sidewalks would be located along both sides of Public Street A, Public Street B, and Public Street C for non-automobile connectivity.
Policy AQ-3-7 Environmentally Review New Development Applications. Through the environmental review process for new development applications, ensure that emissions of toxic air contaminants are minimized and that any significant health effects associated with such contaminants are appropriately mitigated.	**Consistent.** Appropriate air quality analyses have been prepared for the Project to assess potential impacts of the Project in relation to emissions of toxic air contaminants. Refer to EIR Section 4.2, *Air Quality*, for further discussion regarding air quality.
Goal AQ-4 Reduce air pollution caused by energy consumption.	
Policy AQ-4-3 Recycling. Require local government, Palmdale citizens, and local businesses and industries to recycle, as mandated by state law, and to otherwise recycle to the maximum extent possible in accordance with the requirements of the Palmdale Municipal Code.	**Consistent.** The Project would be required to comply with the County of Los Angeles Countywide Integrated Waste Management Plan (CIWMP)'s requirement to divert up to 65 percent of its solid waste from area landfills. In conformance with the CIWMP, the Project applicant is required to work with future contract refuse haulers to implement recycling and waste reduction programs for solid wastes. Additionally, the Project would be required to comply with all applicable solid waste statutes and regulations.
Noise Element	
Goal N-2 Maintain acceptable noise environments throughout the City.	
Policy N-2.2 Restrict Construction Activities. Restrict construction activities in the vicinity of sensitive receptors during the evening, early morning, and weekends and holidays.	**Consistent.** The Project would comply with appropriate standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Refer to EIR Section 4.11, *Noise*, for further discussion on the Project's potential impacts regarding noise.
Policy N-2.4 Acoustical Analysis for Noise Sensitive Land Uses. Where deemed appropriate based upon available information, require acoustical analysis and appropriate mitigation for noise-sensitive land uses proposed in areas that may be adversely impacted by significant intermittent noise sources. Such noise	**Consistent.** A noise analysis has been prepared for the Project to assess potential impacts of the Project in relation to noise and is included as *Technical Appendix K* to this EIR. Refer to EIR Section 4.11, *Noise*, for further discussion regarding noise.

Table 4.10-1 General Plan Consistency Analysis

General Plan Goals and Policies	Consistency Analysis
sources may include but not be limited to railroads, racetracks, stadiums, aircraft overflights and similar uses.	
Goal N-3 Promote noise compatible land uses within the 65 dBA CNEL contour and the Frequent Overflight Area of Air Force Plant 42.	
Policy N-3.1 Frequent Overflight Area. Designate and permit employment flex, industrial, aerospace industrial, and similar uses within the 65 dBA CNEL contour and the Frequent Overflight Area.	**Consistent.** The Project proposes a master-planned commerce center containing industrial, commercial, and open space land uses, as well as roadways.. The Project site is located outside of the 65 CNEL contour for USAF Plant 42. According to the AICUZ, the very southern portion of the Project site is located within the 60 to 65 CNEL noise contour boundary of the USAF Plant 42 facility. According to the AICUZ Final Report, most industrial/manufacturing noise uses are compatible within the airfield area of influence and the commercial/retail trade and personal and business services categories are compatible without restriction up to DNL (day-night average A-weighted sound level) 70 dBA Because these land uses are considered compatible within the airfield area of influence, the Project would not conflict with this General Plan policy.

4. City of Palmdale Title 17 (Zoning Ordinance)

As previously discussed, Title 17 of the PMC establishes zoning classifications within the City. Under existing conditions, the Project site is zoned Office Flex (OFX). The Project Applicant filed an application with the City for a Zone Change (ZC 22-001) to change the zoning classification to Specific Plan (SP). The proposed ZC 22-001 would require future development on the Project site to comply with the applicable development standards and design guidelines of the SP 22-001 and, where applicable, the PMC. The Specific Plan serves as the regulatory document for land use, development standards, and design guidelines and standards within the Specific Plan Area. In topics where the Specific Plan is silent, the PMC serves as the governing document for any decision on land use, development standards, and design guidelines and standards. Development of the proposed Project would be consistent with the requirements set forth in the Specific Plan and with all other applicable City regulations. As such, the Project would not conflict with the PMC and no impact would occur.

4.10.5 Cumulative Impact Analysis

This cumulative impact analysis for land use and planning considers development of the Project site in conjunction with other development projects in the vicinity of the Project site as well as full General Plan buildout in the City of Palmdale and other jurisdictions in the region.

Divide an Established Community

As indicated under the analysis of Threshold (a), because the Project site is already physically separated from neighboring developed properties under existing conditions, development of the Project site as proposed would not physically divide any established community. Accordingly, there is no potential for the Project to cause or contribute to the division of an established community and Project impacts would be less than cumulatively considerable.

Conflict with any Land Plan, Policy, or Regulation

As indicated under the analysis of Threshold (b), the Project Applicant filed an application with the City for a General Plan Amendment (GPA 22-001) to amend the site's General Plan land use designation to Specific Plan (SP). The proposed GPA 22-001 would require future development on the Project site to comply with the applicable development standards and design guidelines of the Antelope Valley Commerce Center Specific Plan (SP 22-001) and, where applicable, the Palmdale Municipal Code (PMC). With approval of GPA 22-001 and SP 22-001, the Project would be fully consistent with the General Plan. Additionally, the Project Applicant filed an application with the City for a Zone Change (ZC 22-001) to change the zoning classification to Specific Plan (SP). The proposed ZC 22-001 would require future development on the Project site to comply with the applicable development standards and design guidelines of the SP 22-001 and, where applicable, the PMC. Development of the Project would be consistent with requirements set forth in SP 22-001.

Implementation of the Project would be consistent with Federal Aviation Administration (FAA) regulations. The Project's proposed land uses would be consistent with the Los Angeles County Airport Land Use Plan (ALUP) and would be consistent with the Department of the Air Force's USAF Plant 42 Air Installation Compatible Use Zone (AICUZ) Final Report. With approval of General Plan Amendment (GPA) 22-001 and Specific Plan (SP) 22-001, the Project would be fully consistent with the City's General Plan. Finally, the Project would not conflict with the Palmdale Municipal Code (PMC) or any other land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Other developments within the City similarly would be required to demonstrate compliance with the General Plan, PMC and other land use plans, policies, or regulations. Thus, significant direct and cumulatively-considerable impacts would occur due to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.10.6 Significance of Impacts Before Mitigation

Threshold a: Less than Significant Impact. The Project would not disrupt or divide the physical arrangement of an established community. Impacts would be less than significant.

Threshold b: Less than Significant Impact Implementation of the Project would be consistent with Federal Aviation Administration (FAA) regulations, the Los Angeles County Airport Land Use Plan (ALUP), and the USAF Plant 42 Air Installation Compatible Use Zone (AICUZ) Final Report. With

approval of General Plan Amendment (GPA) 22-001 and Specific Plan (SP) 22-001, the Project would be fully consistent with the City's General Plan. Finally, the Project would not conflict with the Palmdale Municipal Code (PMC) or any other land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Additionally, there are no impacts due to land use incompatibility that have not already been evaluated and mitigated to the maximum feasible extent in other relevant sections of this EIR.

4.10.7 MITIGATION

Impacts to land use and planning would be less than significant; therefore, mitigation measures are not required.

4.11 NOISE

The information and analysis in this subsection is based primarily on a technical study titled, "Antelope Valley Commerce Center Noise and Vibration Analysis," dated November 15, 2023, prepared by Urban Crossroads, Inc. (Urban Crossroads), and included as *Technical Appendix K* to this EIR (Urban Crossroads, 2024e). All references used in this subsection are included in EIR Section 7.0, *References*.

4.11.1 NOISE FUNDAMENTALS

A. *Noise Definitions*

Noise is simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes physical harm, or when it has adverse effects on health. Because the range of sound that the human ear can detect is large, the logarithmic scale is used to measure sound intensity. The scale for measuring intensity is the decibel (dB) scale. A sound increase of 10 dB represents a tenfold increase in sound energy and is perceived by the human ear as being roughly twice as loud. The most common sounds vary between 40 A-weighted decibels (dBA) (very quiet) to 100 dBA (very loud). Normal conversation at a distance of three feet is roughly 60 dBA, while a jet engine at approximately 1,000 feet is 110 dBA, which can cause serious discomfort. Another important aspect of noise is the duration of the sound and the way it is described and distributed in time. (Urban Crossroads, 2024e, pp. 7-8).

It is noted that the term "receptor" is defined in *Technical Appendix K* and herein, as a single dwelling unit or the equivalent of a single dwelling unit. A receiver is defined as a single point in a noise model that can represent one receptor or multiple receptors.

B. *Noise Descriptors*

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used metric is the equivalent continuous noise level (L_{eq}). L_{eq} values are not measured directly but are calculated from sound pressure levels typically measured in dBA. The L_{eq} represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the average noise levels within the environment. (Urban Crossroads, 2024e, p. 8)

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour levels may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 dB to L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 dB to L_{eq} sound levels at night from 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and nighttime hours when noise can become more intrusive. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City relies on

the 24-hour CNEL level to assess land use compatibility with transportation-related noise sources. (Urban Crossroads, 2024e, p. 8)

C. *Sound Propagation*

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

1. Geometric Spreading

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source (Urban Crossroads, 2024e, p. 8).

2. Ground Absorption Noise

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (Urban Crossroads, 2024e, pp. 8-9)

3. Atmospheric Effects

Receivers located downwind from a noise source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors that may affect noise levels include air temperature, humidity, and turbulence (Urban Crossroads, 2024e, p. 9).

4. Shielding

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation

typically only has an "out of sight, out of mind" effect. That is, the perception of a noise impact tends to decrease when vegetation blocks the line-of-sight to nearby residents; however, for vegetation to provide a substantial, or even noticeable noise reduction, the vegetation area must be at least 15 feet high, 100 feet wide and dense enough to completely obstruct the line-of-sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The Federal Highway Administration (FHWA) does not consider the planting of vegetation to be a noise abatement measure. (Urban Crossroads, 2024e, p. 9).

D. Response to Noise

Approximately 16 percent of the population has a very low tolerance for noise and will object to any noise not of their own making. Consequently, even in the quietest environment, some complaints will occur. Twenty to thirty percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. Despite this variability in behavior on an individual level, the population as a whole can be expected to exhibit the following responses to changes in noise levels: a change of 3 dBA is considered "barely perceptible;" and changes of 5 dBA are considered "readily perceptible" (Urban Crossroads, 2024e, p. 10; Exhibit 2-B).

E. Vibration

Vibration is the periodic oscillation of a medium or object. Sources of ground-borne vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency. Vibration is often described in units of velocity (inches per second) and decibels (dB) and is denoted as VdB (Urban Crossroads, 2024e, p. 11).

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings (Urban Crossroads, 2024e, p. 11).

4.11.2 Existing Noise Conditions

A. Existing Study Area Ambient Noise Conditions

On Thursday, October 27, 2023, Urban Crossroads recorded 24-hour noise readings at six locations near the Project site. The noise measurement locations are identified in Figure 4.11-1, *Noise Measurement Locations.* The long-term noise level measurements were positioned as close to the

nearest receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the Federal Transit Administration (FTA) recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. Thus, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. Collecting reference ambient noise level measurements at the nearby receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess potential noise impacts due to the contribution of the Project to the ambient noise levels (Urban Crossroads, 2024e, pp. 23-24).

The noise measurements shown in Table 4.11-1, *24-Hour Ambient Noise Level Measurements,* focus on the average or L_{eq}. The L_{eq} represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 4.11-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Table 4.11-1 also provides the energy average noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 of *Technical Appendix K* provides summary worksheets of the noise levels for each of the daytime and nighttime hours (Urban Crossroads, 2024e, p. 24).

Table 4.11-1 24-Hour Ambient Noise Level Measurements

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]	
		Daytime	Nighttime
L1	Located north of the Project site near vacant commercial retail site at 42020 4th Street East.	68.4	65.8
L2	Located north of the Project site near single-family residence at 42057 5th Street East.	56.9	56.5
L3	Located north of the Project site near single-family residence at 42104 6th Street East.	51.8	51.8
L4	Located north of the Project site near silo at 461 East Columbia Way.	71.8	70.1
L5	Located northwest of the Project site near the gas station at 42011 Sierra Highway.	69.2	67.3
L6	Located west of the Project site near commercial retail land use within the Sierra Highway Plaza at 190 Sierra Court.	66.4	63.6

[1]See Figure 4.11-1 for the noise level measurement locations.
[2] Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2 of *Technical Appendix K.*
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.
(Urban Crossroads, 2024e, Table 5-1)

B. Receiver Locations

To assess the potential for long-term operational and short-term construction noise impacts, receiver locations, as shown on Figure 4.11-2, *Receiver Locations,* were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, outpatient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals (Urban Crossroads, 2024e, p. 45).

To describe the potential off-site Project-generated noise levels, five receiver locations in the vicinity of the Project site were identified. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described. Due to the additional attenuation from distance and the shielding of intervening structures, other sensitive land uses in the Project study area that are located at greater distances than those identified in the Noise and Vibration Analysis (*Technical Appendix K)* prepared for the Project, and herein, would experience lower noise levels than those presented. Distance is measured in a straight line from the Project boundary to each receiver location. (Urban Crossroads, 2024e, p. 45)

Receiver locations are described below:

- **R1: Location R1** represents the vacant commercial retail site at 42020 4th Street East, approximately 127 feet north the Project site and north of Columbia Way / East Avenue M. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R1 is placed at the building façade. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment. (Urban Crossroads, 2024e, p. 45)

- **R2: Location R2** represents the existing noise sensitive residence at 42057 5th Street East, approximately 607 feet north of the Project site. R2 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment. (Urban Crossroads, 2024e, p. 45)

- **R3: Location R3** represents the existing noise sensitive residence at 42104 6th Street East, approximately 746 feet north of the Project site. R3 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this

location, L3, to describe the existing ambient noise environment. (Urban Crossroads, 2024e, p. 45)

- **R4: Location R4** represents the gas station at 42011 Sierra Highway, approximately 612 feet northwest of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R4 is placed at the building façade. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment. (Urban Crossroads, 2024e, p. 45)

- **R5: Location R5** represents the commercial retail land use within the Sierra Highway Plaza at 190 Sierra Court, approximately 379 feet west of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R5 is placed at the building façade. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment. (Urban Crossroads, 2024e, pp. 45-46)

C. *Existing Airports*

The Project site is located approximately 0.25 miles (1,350 feet) north of Runway 7 of the United States Air Force (USAF) Plant 42. This places the Project site within the Airport Influence Area (AIA) according to the Los Angeles County Airport Land Use Commission (ALUC) . The ALUC is a county-level agency required by the State to develop a plan for promoting compatibility between local airports and surrounding land uses. The ALUC is responsible for designating an AIA for every airport within its jurisdiction. An AIA is an airport planning area boundary that consists of all areas in which current or future airport-related noise, over flight, safety, and/or airspace protection factors may significantly affect land uses or necessitate restrictions on those areas. While the ALUC identifies the AIA planning area boundary, the noise level contours can be found on Figure 3-3 of the United States Air Force Plant 42 California Air Installation Compatible Use Zone (AICUZ) Study. The AICUZ noise contours boundaries shown on Figure 4.11-3, *Palmdale Airport/USAF Plant 42 Noise Contours*, are used to describe the Project airport noise level impacts. As shown, the commercial land use within the northern portion of the Project site is located well outside the 60-65 dBA CNEL noise level contour boundary. The southern half of the Project site consisting of industrial land uses is located within the 65-70 dBA CNEL aircraft noise level contour boundaries with a small portion of the southeastern portion of the Project site located within the 70-75 dBA dBA CNEL noise level contour boundary. Therefore, according to the City of Palmdale General Plan Noise Element Noise Land Use Compatibility Criteria (see Table 4.11-2), the Project's land uses are considered *normally acceptable*. (Urban Crossroads, 2024e, pp. 16, 18)

4.11.3 Regulatory Setting

The following is a brief description of the federal, State, and local environmental laws and regulations related to noise that are applicable to the Project, the Project site, and/or the surrounding area.

A. Federal Plans, Policies, ad Regulations

1. Noise Control Act of 1972

The Noise Control Act of 1972 establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. The Act also serves to 1) establish a means for effective coordination of federal research and activities in noise control; 2) authorize the establishment of federal noise emission standards for products distributed in commerce; and 3) provide information to the public respecting the noise emission and noise reduction characteristics of such products. While primary responsibility for control of noise rests with State and local governments, federal action is essential to deal with major noise sources in commerce, control of which require national uniformity of treatment. The Environmental Protection Agency (EPA) is directed by Congress to coordinate the programs of all federal agencies relating to noise research and noise control (EPA, 2023i).

2. Federal Transit Administration

The Federal Transit Administration (FTA) has published a Noise and Vibration Impact Assessment (NVIA), which provides guidance for preparing and reviewing the noise and vibration sections of environmental documents (FTA, 2006, p. 1-1). In the interest of promoting quality and uniformity in assessments, the manual is used by project sponsors and consultants in performing noise and vibration analyses for inclusion in environmental documents. The manual sets forth the methods and procedures for determining the level of noise and vibration impact resulting from most federally-funded transit projects and for determining what can be done to mitigate such impact.

3. Federal Highway Administration

The Federal Highway Administration (FHWA) is the agency responsible for administering the federal-aid highway program in accordance with Federal statutes and regulations. The FHWA developed the noise regulations as required by the Federal-Aid Highway Act of 1970 (Public Law 91-605, 84 Stat. 1713). The regulation, 23 CFR 772 *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, applies to highway construction projects where a state department of transportation has requested funding for participation in a project. The regulation requires the highway agency to investigate traffic noise impacts in areas adjacent to federally aided highways for proposed construction of a highway in a new location or the reconstruction of an existing highway to either significantly change the horizontal or vertical alignment or increase the number of through-traffic lanes. If the highway agency identifies impacts, it must consider abatement. The highway agency must incorporate all feasible and reasonable noise abatement into the design of a project.

The FHWA regulations for mitigation of highway traffic noise in the planning and design of federally aided highways are contained in Title 23 of the United States Code of Federal Regulations (CFR) Part 772. The regulations contain noise abatement criteria, which represent the upper limit of acceptable highway traffic noise for different types of land uses and human activities. The regulations do not require meeting the abatement criteria in every instance. Rather, they require that highway agencies make every reasonable and feasible effort to provide noise mitigation when the criteria are approached

or exceeded. Compliance with the noise regulations is a prerequisite for the granting of Federal-aid highway funds for construction or reconstruction of a highway (FHWA, 2022).

4. Construction-Related Hearing Conservation

The Occupational Safety and Health Administration (OSHA) hearing conservation program is designed to protect workers with significant occupational noise exposures from hearing impairment even if they are subject to such noise exposures over their entire working lifetimes. Standard 29 CFR, Part 1910 indicates the noise levels under which a hearing conservation program is required to be provided to workers exposed to high noise levels (OSHA, 2002). Periodic exposure to high noise levels in short duration is typically considered an annoyance and not impactful to human health. It would take several years of exposure for high noise levels to result in hearing impairment.

B. State Plans, Policies, and Regulations

1. State of California Noise Requirements

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research (OPR). OPR identifies suggested land use noise compatibility levels as part of its General Plan Guidelines. The suggested guidelines provide planners with a tool to gauge the compatibility of land uses relative to existing and future noise levels. The guidelines identify normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses. The land use compatibility guidelines are intended to be an advisory resource when considering changes in land use and policies, such as zoning modifications. In addition, the State through the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts. (Urban Crossroads, 2024e, p. 13)

2. Building Standards Code

The State of California's noise insulation standards are codified in the California Code of Regulations (CCR), Title 24, Building Standards Administrative Code, Part 2, and the California Building Standards Code. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL (BSC, n.d.).

3. California Noise Insulation Standards

The California Noise Insulation Standards (CCR Title 25 Section 1092) establish uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartments, and dwellings other than detached single-family dwellings. Specifically, Title 25 specifies that interior noise levels attributable to exterior sources must not exceed 45 dBA Ldn/CNEL (i.e., the same levels that the EPA recommends for residential interiors) in any habitable room of a new dwelling. An acoustical study must be prepared for proposed multiple unit residential and hotel/motel structures where outdoor Ldn/CNEL is 60 dBA or greater. The study must demonstrate that the design of the building would reduce interior noise to 45 dBA Ldn/CNEL or lower. Because noise levels can increase over time in developing areas, Title 25 also specifies that dwellings are to be designed so that interior noise levels will meet this standard for at least ten years from the time of building permit application (CCR, n.d.).

C. Regional and Local Regulations

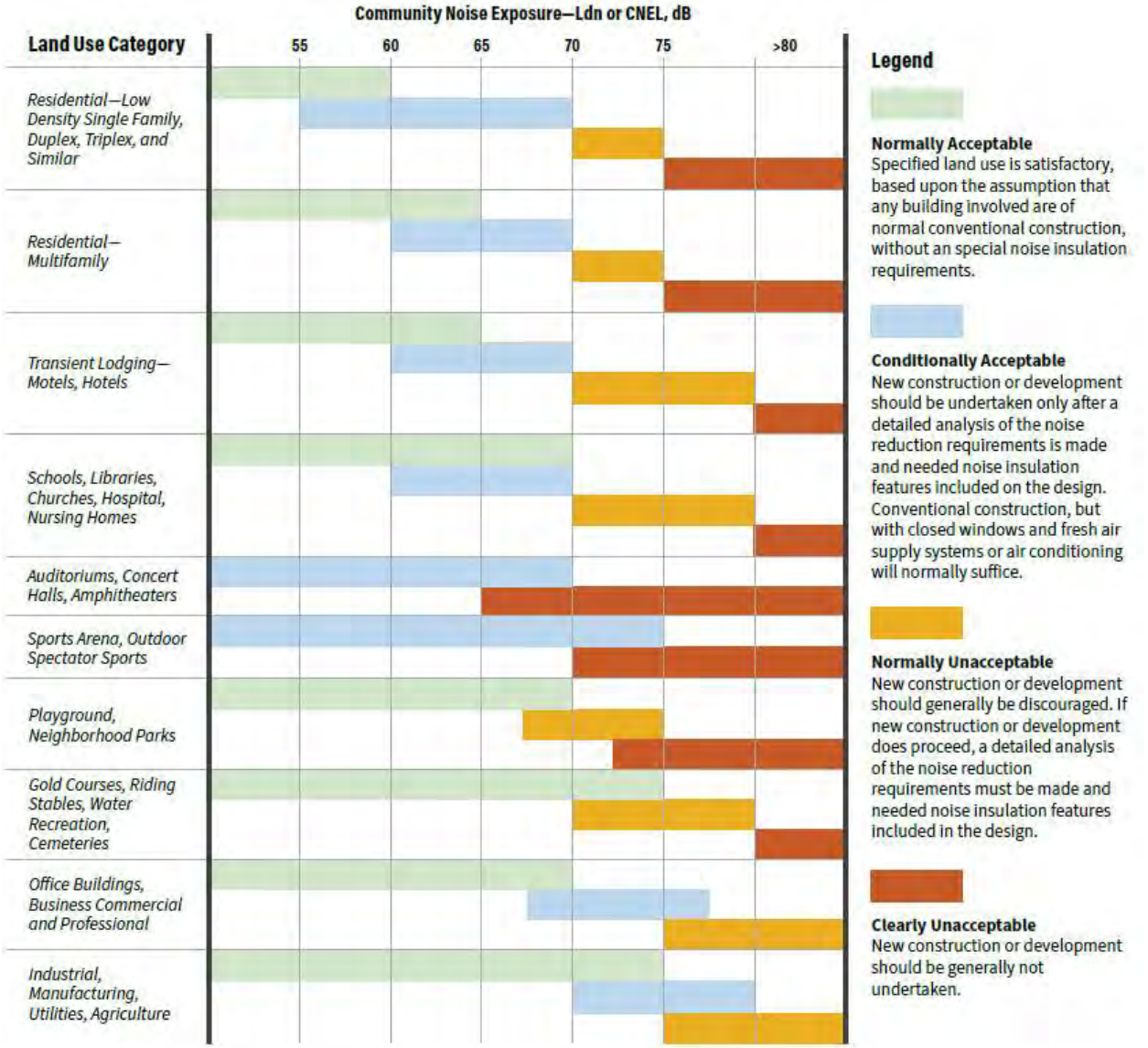
1. General Plan Noise Element

The City's Palmdale 2045 General Plan Noise Element outlines the goals and policies related to the noise environment in the City of and its sphere of influence. The purpose of the Noise Element is to reduce and limit the exposure of the public to excessive noise levels. The Noise Element sets the goals and policy direction for implementation. To limit the exposure of sensitive receptors to excessive noise, the Noise Element contains the following goals:

- Goal N-1: Minimize resident exposure to excessive noise
- Goal N-2: Maintain acceptable noise environments throughout the City
- Goal N-3: Promote noise compatible land uses within the 65 dBA CNEL contour and the Frequent Overflight Area of Air Force Plant 42
- Goal N-4: Minimize adverse noise impacts associated with transportation (City of Palmdale, 2023, pp. 416-418)

The City's General Plan Noise Element includes the *California Land Use and Noise Compatibility Guide* that outlines the noise levels allowable for new developments impacted by transportation noise sources. The City's compatibility criteria identify the criteria for industrial land uses such as the Project. As shown in Table 4.11-2, *Land Use Noise Compatibility Criteria,* when the unmitigated exterior noise levels approach 75 dBA CNEL, industrial land use is considered *normally acceptable*. With exterior noise levels ranging from 70 to 80 dBA CNEL, industrial land uses are considered *conditionally acceptable*, and with exterior noise levels greater than 75 dBA CNEL, they are considered *normally unacceptable*. For *normally unacceptable* land use, new construction or development should generally be discouraged. If new construction or development does proceed, as a condition of Project approval, a detailed analysis of the noise reduction requirements must be made and required noise insulation features shall be included in the design. (Urban Crossroads, 2024e, pp. 13-14, Exhibit 3-A) (City of Palmdale, 2023, Figure 16.1).

Table 4.11-2 Land Use Noise Compatibility Criteria



(City of Palmdale, 2023, Figure 16.1)
(Urban Crossroads, 2024e, Exhibit 3-A)

2. Palmdale Municipal Code

To analyze noise impacts originating from a designated fixed location or private property such as the proposed Project, stationary-source (operational) noise such as the expected loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, truck movements and drive-through speakerphone activity, are typically evaluated against standards established under a jurisdiction's municipal code. (Urban Crossroads, 2024e, p. 15)

Palmdale Municipal Code (PMC) Section 9.18.010 makes it unlawful for any person to willfully make or continue, or cause or permit to be made or continued, any loud, unnecessary, or unusual noise which unreasonably disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.

Pursuant to PMC Section 8.28.30, except as provided in Section 8.28, no person shall perform any construction or repair work on any Sunday, or any other day after 8:00 p.m. or before 6:30 a.m., in any residential zone or within 500 feet of any residence, hotel, motel or recreational vehicle park. As described in Section 2.0 *Existing Conditions,* under existing conditions, the Project site is zoned for Office Flex (OFX) land uses, and has an Employment Flex (EMPFX) General Plan land use designation. (City of Palmdale, 2023) (PMC, 2023) The Project's General Plan Amendment 22-001 proposes to amend the Employment Flex (EMPFX) General Plan land use designation of the site to Specific Plan (SP) which would allow for the establishment and implementation of the proposed Project. Zone Change No. 22-001 proposes to modify the existing zoning classification of the site from Office Flex (OFX) to Specific Plan (SP), which would allow for the establishment and implementation of the proposed Project.

The Project site is not located in a residential zone or within 500 feet of a residential zone. The PMC does not identify specific exterior noise level standards for non-residential zones. Therefore, the County of Los Angeles exterior noise level standards are used in the Noise and Vibration Analysis (*Technical Appendix K*) prepared for the Project to assess the potential impacts at adjacent sensitive receiver locations. (Urban Crossroads, 2024e, p. 15)

3. Los Angeles County Code

The Los Angeles County Code (LACC) Section 12.08.390[A] establishes the noise level standards for stationary noise sources. Because the Project's industrial land use could potentially impact noise-sensitive uses in the Project study area, the Noise and Vibration Analysis (*Technical Appendix K*) prepared for the Project relies on the more conservative residential noise level standards to describe potential operational noise impacts. Exterior noise levels in residential areas, must not exceed 50 dBA L_{eq} during the daytime hours of 7:00 a.m. to 10:00 p.m. and 45 dBA L_{eq} during the nighttime hours of 10:00 p.m. to 7:00 a.m. As such Section 12.08.390(B) indicates that if the existing ambient noise level already exceeds any of the exterior noise level limit categories, then the standard must be adjusted to reflect the ambient conditions. (Urban Crossroads, 2024e, p. 15)

4.11.4 Basis for Determining Significance

According to Section XIII. of the CEQA Guidelines, the proposed Project would result in a significant noise impact if the Project or any Project-related component would result in:

a. *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;*

b. Generation of excessive ground borne vibration or ground borne noise levels;

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

Table 4.11-3, *Significance Criteria Summary*, shows the significance criteria used to evaluate the Project's potential impacts of the Project due to increases in noise levels. Refer to the Project's Noise and Vibration Analysis (*Technical Appendix K*) prepared for the Project for a discussion of the significance criteria. The methodologies used to determine the significance criteria for noise level and ground-borne vibration impacts related to construction, long-term on-site operations, and long-term off-site traffic for the Project are explained below.

Table 4.11-3 Significance Criteria Summary

Analysis	Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site	Noise-Sensitive[1]	if ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase	
		if ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
	Non-Noise Sensitive[2]	if ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
		if ambient is > 75 dBA CNEL	≥ 3 dBA CNEL Project increase	
Operational	Residential	Exterior Noise Level Limit[3]	50 dBA L_{eq}	45 dBA L_{eq}
	Noise-Sensitive[1]	if ambient is < 60 dBA L_{eq}	≥ 5 dBA L_{eq} Project increase	
		if ambient is 60 - 65 dBA L_{eq}	≥ 3 dBA L_{eq} Project increase	
		if ambient is > 65 dBA L_{eq}	≥ 1.5 dBA L_{eq} Project increase	
Construction	Noise-Sensitive	Noise Level Threshold[4]	80 dBA L_{eq}	70 dBA L_{eq}
		Vibration Level Threshold[5]	0.3 PPV in/sec	n/a
Rail	Noise-Sensitive	Noise Compatibility Threshold[2]	75 dBA CNEL	
		Vibration Level Threshold[2]	84 Vdb	

[1] FICON, 1992.
[2] The City of Los Angeles General Plan Noise Element, Figure 16.1 (Table 4.11-2)
[3] Los Angeles County Code, Chapter 12.08 Noise Control, Section 12.08.390[A] (Appendix 3.2 of the Project's Noise and Vibration Analysis (NVA) *Technical Appendix K*).
[4] FTA, Transit Noise and Vibration Impact Assessment Manual.
[5] Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Table 19.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m. "n/a" = construction activities are not planned during the nighttime hours; "PPV" = peak particle velocity.
(Urban Crossroads, 2024e, Table 4-1)

A. Construction Noise Standards

To control noise impacts associated with the construction of the proposed Project, the City has established limits to the hours of operation. PMC Section 8.28.030 addresses construction-related noise by prohibiting earth excavating and similar activities between 8:00 p.m. and 6:30 a.m. and on Sundays and holidays in any residential zone or within 500 feet of any residence, hotel, motel, or recreational vehicle park. However, neither the City's General Plan Noise Element nor the PMC establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a substantial temporary or permanent increase in ambient noise levels. Therefore, a numerical construction threshold based on the FTA's *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts, as discussed below. According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. Local noise ordinances usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessment. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} and a nighttime exterior construction noise level of 70 dBA L_{eq} as a reasonable threshold for noise sensitive residential land uses (Urban Crossroads, 2024e, pp. 15-16).

B. Construction Vibration Standards

Construction activity can result in varying degrees of ground-borne vibration depending on the equipment and methods used, distance to the affected structures, and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. To analyze vibration impacts originating from the operation and construction of the proposed Project, vibration-generating activities are appropriately evaluated against standards established under a city's municipal code, if such standards exist. However, the City of Palmdale and the County of Los Angeles do not identify specific vibration level limits. Therefore, for analysis purposes, the Caltrans *Transportation and Construction Vibration Guidance Manual*, for vibration damage is used in the Noise and Vibration Analysis (*Technical Appendix K)* prepared for the Project to assess potential temporary construction-related impacts at nearby building locations. Therefore, pursuant to the Caltrans Transportation and Construction Vibration Guidance Manual, a maximum acceptable continuous vibration threshold of 0.3 peak particle velocity (PPV) (in/sec) is used to describe vibration damage to the nearby building structures. (Urban Crossroads, 2024e, p. 16)

C. Operational Noise Standards

Following is a summary of the methodology used to evaluate Project-related operational noise impacts. Refer to the Noise and Vibration Analysis (*Technical Appendix K)* prepared for the Project, for a complete discussion of the methodology and modeling inputs and assumptions.

1. Reference Noise Levels

To analyze noise impacts originating from a designated fixed location or private property such as the proposed Project, stationary-source (operational) noise, such as the expected loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, truck movements, and drive-through speakerphone activity, are typically evaluated against standards established under a jurisdiction's municipal code. PMC Section 9.18.010 makes it unlawful for any person to willfully make or continue, or cause or permit to be made or continued, any loud, unnecessary, or unusual noise which unreasonably disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. However, the PMC does not identify specific exterior noise level standards. Therefore, the County of Los Angeles exterior noise level standards are used in the Noise and Vibration Analysis (*Technical Appendix K)* prepared for the Project to assess the potential impacts at adjacent sensitive receiver locations. The operational noise level standards are summarized in the Noise and Vibration Analysis (*Technical Appendix K*) for the Project. (Urban Crossroads, 2024e, p. 15)

The Los Angeles County Code (LACC), Section 12.08.390[A] establishes the noise level standards for stationary noise sources. Because the Project's industrial land use may potentially impact adjacent noise-sensitive uses, the Noise and Vibration Analysis (*Technical Appendix K)* prepared for the Project relies on the more conservative residential noise level standards to describe potential operational noise impacts. Exterior noise levels in residential areas, must not exceed 50 dBA L_{eq} during the daytime hours of 7:00 a.m. to 10:00 p.m. and 45 dBA L_{eq} during the nighttime hours of 10:00 p.m. to 7:00 a.m. As such, LACC Section 12.08.390[B] indicates that if the existing ambient noise level already exceeds any of the exterior noise level limit categories, then the standard must be adjusted to reflect the ambient conditions. (Urban Crossroads, 2024e, p. 15)

4.11.5 Impact Analysis

Threshold a: Would the Project generate 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?

As described in Section 3.0, *Project Description*, the proposed Project would be constructed in four phases. Therefore the Noise and Vibration Analysis (*Technical Appendix K*) prepared for the Project and the analysis below evaluates the full buildout of the Project (Phases I through IV). As discussed, below, for full buildout conditions, the impacts were determined to be less than significant. Therefore, it follows that impacts from only Phase 1 of Project construction would also be less than significant.

The three components of the Project that would generate noise are the construction process, on-site operational activities, and off-site traffic, as evaluated below.

A. Construction Noise

Project related construction noise would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction. Noise generated by the Project's

construction equipment would include a combination of trucks, power tools, concrete mixers, and portable generators that, when combined, can reach high levels.

PMC Section 8.28.030 addresses construction-related noise by prohibiting earth excavating and similar activities between 8:00 p.m. and 6:30 a.m. and on Sundays in any residential zone or within 500 feet of any residence, hotel, motel, or recreational vehicle park. However, none of the nearest noise sensitive receivers are located within 500 feet of the Project site. In addition, since neither the City's General Plan or the PMC establish numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes, a numerical construction threshold based on the FTA *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} as a reasonable threshold for noise sensitive residential land use with a nighttime exterior construction noise level of 70 dBA L_{eq} The FTA Transit Noise and Vibration Impact Assessment *Manual* recognizes that construction projects are accomplished in several different stages and outlines the procedures for assessing noise impacts during construction. Each stage has a specific equipment mix, depending on the work to be completed during that stage. The number and mix of construction equipment are expected to occur in the following stages: 1) site preparation, 2) grading, 3) building construction, 4) paving, and 5) architectural coating (Urban Crossroads, 2024e, p. 55). See Section 3.0, *Project Description*, for more detail about the construction characteristics of the Project.

1. Construction Reference Noise Levels – Daytime Activities

To describe construction noise activities, the construction noise analysis was prepared using reference construction equipment noise levels from the FHWA-published *Roadway Construction Noise Model* (RCNM), which includes a national database of construction equipment reference noise emission levels. The RCNM equipment database provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation. (Urban Crossroads, 2024e, p. 55)

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby receiver locations were completed. Consistent with FTA guidance for general construction noise assessment, Table 4.11-4, *Construction Reference Noise Levels* presents the combined noise levels for the loudest construction equipment, assuming all equipment operates at the same time. As shown on Table 4.11-5, *Construction Equipment Noise Level Summary*, the construction noise levels are expected to range from 40.8 to 60.7 dBA L_{eq} at the nearby receiver locations. (Urban Crossroads, 2024e, p. 58)

Table 4.11-4 Construction Reference Noise Levels

Construction Stage	Reference Construction Activity	Reference Noise Level @ 50 Feet (dBA L_{eq})[1]	Combined Noise Level (dBA L_{eq})[2]	Combined Sound Power Level (PWL)[3]
Site Preparation	Tractor	80	84.0	115.6
	Backhoe	74		
	Grader	81		
Grading	Scraper	80	83.3	114.9
	Excavator	77		
	Dozer	78		
Building Construction	Crane	73	80.6	112.2
	Generator	78		
	Front End Loader	75		
Paving	Paver	74	77.8	109.5
	Dump Truck	72		
	Roller	73		
Architectural Coating	Man Lift	68	76.2	107.8
	Compressor (air)	74		
	Generator (<25kVA)	70		

[1] FHWA Roadway Construction Noise Model (RCNM).
[2] Represents the combined noise level for all equipment assuming they operate at the same time consistent with *FTA Transit Noise and Vibration Impact Assessment* guidance.
[3] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings.
(Urban Crossroads, 2024e, Table 10-1)

Table 4.11-5 Construction Equipment Noise Level Summary

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	57.8	57.1	54.4	51.7	50.0	57.8
R2	54.0	53.3	50.6	47.9	46.2	54.0
R3	53.5	52.8	50.1	47.4	45.7	53.5
R4	51.2	50.5	47.8	45.1	43.4	51.2
R5	54.9	54.2	51.5	48.8	47.1	54.9

[1] Construction noise source and receiver locations are shown on Exhibit 10-A of the Project's NVA.
[2] Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1 of the Project's NVA.
(Urban Crossroads, 2024e, Table 10-2)

2. Construction Noise Analysis - Daytime

As shown on Table 4.11-6, *Construction Noise Level Compliance*, Project-related construction noise levels are expected to range from 51.2 to 57.8 dBA L_{eq}. To evaluate whether the Project would generate potentially significant short-term noise levels at the nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA L_{eq} is used as a reasonable threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest receiver locations would be below the reasonable daytime 80 dBA L_{eq} significance threshold during Project construction activities as shown on Table 4.11-6. Therefore, the noise impacts due to Project construction noise are considered less than significant at all receiver locations. (Urban Crossroads, 2024e, p. 58)

Table 4.11-6 Construction Noise Level Compliance

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels[2]	Threshold[3]	Threshold Exceeded?[4]
R1	57.8	80	No
R2	54.0	80	No
R3	53.5	80	No
R4	51.2	80	No
R5	54.9	80	No

[1] Construction noise source and receiver locations are shown on Exhibit 10-A of the Project's NVA.
[2] Highest construction noise level calculations based on distance from the construction noise source activity to the nearest receiver locations as shown on Table 4.11-5.
[3] Construction noise level thresholds as shown on Table 4.11-3.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?
(Urban Crossroads, 2024e, Table 10-3)

3. Construction Noise Analysis - Nighttime Pour Activities

Nighttime concrete pouring activities may occur as a part of the Project's building construction activities. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours, and are generally limited to the actual building pad and loading dock areas. Because the nighttime concrete pours would take place outside the hours permitted by PMC Section 8.28.030, as a condition of Project approval, the Project Applicant would be required to obtain authorization for nighttime work from the City of Palmdale. Any nighttime construction noise activity would need to be within the FTA residential 70 dBA L_{eq} noise limit. (Urban Crossroads, 2024e, p. 60)

To estimate the noise levels due to nighttime concrete pour activities, sample reference noise level measurements were taken during a nighttime concrete pour at an unrelated construction site. Urban Crossroads collected short-term nighttime concrete pour reference noise level measurements during the noise-sensitive nighttime hours between 1:00 a.m. to 2:00 a.m. at 27334 San Bernardino Avenue in the City of Redlands. The reference noise levels describe the expected concrete pour noise sources that may

include concrete mixer truck movements and pouring activities, concrete paving equipment, rear mounted concrete mixer truck backup alarms, engine idling, air brakes, generators, and workers communicating/whistling. To describe the nighttime concrete pour noise levels associated with the construction of the proposed Project, this analysis relies on reference sound pressure level of 67.7 dBA L_{eq} at 50 feet represented by a sound power level (Lw) of 100.3 dBA Lw. While the Project noise levels would depend on the actual duration of activities and specific equipment fleet in use at the time of construction, the reference sound power level of 100.3 dBA Lw is used to describe the expected Project nighttime concrete pour noise activities. (Urban Crossroads, 2024e, p. 60)

As shown on Table 4.11-7, *Nighttime Concrete Pour Noise Level Compliance*, using the reference noise levels described above, the noise levels associated with the nighttime concrete pour activities are estimated to range from 35.9 to 42.5 dBA L_{eq} and would satisfy the City's stationary-source nighttime exterior hourly average L_{eq} residential noise level threshold at all the receiver locations. Based on the results of this analysis, all the nearest noise receiver locations would experience less than significant impacts due to Project related nighttime concrete pour activities. (Urban Crossroads, 2024e, p. 60)

Table 4.11-7 Nighttime Concrete Pour Noise Level Compliance

Receiver Location[1]	Concrete Pour Construction Noise Levels (dBA L_{eq})		
	Exterior Noise Levels[2]	Nighttime Threshold[3]	Threshold Exceeded?[4]
R1	42.5	70	No
R2	38.7	70	No
R3	38.2	70	No
R4	35.9	70	No
R5	39.6	70	No

[1] Construction noise source and receiver locations are shown on 10-A of the Project's NVA.
[2] Nighttime Concrete Pour noise model inputs are included in Appendix 10.2 of the Project's NVA.
[3] Construction noise level thresholds as shown on Table 4.11-3.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?
(Urban Crossroads, 2024e, Table 10-4)

B. On-Site Operational Noise

The operational noise analysis is intended to describe noise level impacts associated with the expected typical daytime and nighttime activities at the Project site. The on-site Project-related noise sources are expected to include, but not be limited to, loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, truck movements, and drive-through speakerphone activity (Urban Crossroads, 2024e, p. 47).

1. Reference Noise Levels

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the

proposed Project. The projected noise levels shown in Table 4.11-8, *Reference Noise Level Measurements*, assume the reasonable worst-case noise environment with typical noise sources operating at the same time. These sources of noise activity would likely vary throughout the day. (Urban Crossroads, 2024e, p. 47).

Table 4.11-8 Reference Noise Level Measurements

Noise Source[1]	Noise Source Height (Feet)	Min./ Hour[2]		Reference Noise Level (dBA L_{eq}) @ 50 Feet	Sound Power Level (dBA)[3]
		Day	Night		
Loading Dock Activity	8'	60	60	65.7	111.5
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9
Trash Enclosure Activity	5'	60	30	57.3	89.0
Parking Lot Vehicle Movements	5'	60	60	52.6	81.1
Truck Movements	8'	60	60	59.8	93.2
Drive-Through Speakerphone Activity	3’	60	60	50.0	84.0

[1] As measured by Urban Crossroads.
[2] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site.
"Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.
[3] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.
(Urban Crossroads, 2024e, Table 9-1)

2. CadnaA Noise Prediction Model

To fully describe the exterior operational noise levels expected from the proposed Project, Urban Crossroads developed a noise prediction model using the Computer Aided Noise Abatement (CadnaA) computer program. Using the ISO 9613-2 protocol, CadnaA calculates the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source. The operational noise level calculations provided in the Project’s Noise and Vibration Analysis (*Technical Appendix K)* account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the CadnaA noise analysis to account for mixed ground representing a combination of hard and soft surfaces. The Noise and Vibration Analysis (*Technical Appendix K)* prepared for the Project includes the detailed noise model inputs used to estimate the Project operational noise levels. (Urban Crossroads, 2024e, pp. 32-33)

3. *Operational Noise Impact Analysis - Stationary Noise*

Using the reference noise levels to represent the Project's operational activity that includes loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, truck movements, and drive-through speakerphone activity, Urban Crossroads calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the receiver locations. (Urban Crossroads, 2024e, p. 51)

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds adjusted to reflect the ambient noise levels at the nearest receiver locations. As shown on Table 4.11-9, *Operational Noise Level Compliance* the operational noise levels associated with the proposed Project would not exceed the daytime or nighttime exterior noise level standards. Therefore, the operational noise impacts are considered less than significant at the nearby noise-sensitive receiver locations (Urban Crossroads, 2024e, p. 52).

Table 4.11-9 Operational Noise Level Compliance

Receiver Location[1]	Project Operational Noise Levels (dBA Leq)[2]		Noise Level Standards (dBA Leq)[3]		Noise Level Standards Exceeded?[4]	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	51.9	51.4	68.4	65.8	No	No
R2	50.8	50.7	56.9	56.5	No	No
R3	50.1	50.0	51.8	51.8	No	No
R4	48.8	48.8	69.2	67.3	No	No
R5	55.1	55.1	66.4	63.6	No	No

[1] See Figure 4.11-2 for the receiver locations.
[2] Proposed Project operational noise level calculations are included in Appendix 9-1 of the Project's NVA.
[3] Exterior noise level standards adjusted to reflect the ambient noise levels (see Table 5-1) per the County of Los Angeles County Code, Chapter 12.08 Noise Control, Section 12.08.390[B] (Appendix 3.2 of the Project's NVA)
[4] Do the estimated Project operational noise source activities exceed the noise level standards? "Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.
(Urban Crossroads, 2024e Table 9-4)

4. *Operational Noise Level Increases*

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations that may be potentially impacted by Project operational noise sources. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project source noise is added to the daytime and nighttime ambient conditions are presented on Table 4.11-10, *Daytime Project Operational Noise Level Increases* and Table 4.11-11, *Nighttime Operational Noise Level Increases*. (Urban Crossroads, 2024e, pp. 52-53)

As indicated in Table 4.11-10, the Project would generate daytime operational noise level increases ranging from 0.0 to 2.2 dBA L_{eq} at the nearest receiver locations. As indicated in Table 4.11-11, *Nighttime Operational Noise Level Increases*, the Project would generate nighttime operational noise level increases ranging from 0.1 to 2.2 dBA L_{eq} at the nearest receiver locations. Because the Project-related operational noise level increases would not exceed the operational noise level increase significance criteria presented in Table 4.11-3, the increases at the sensitive receiver locations would be less than significant (Urban Crossroads, 2024e, pp. 52-53).

Table 4.11-10 Daytime Project Operational Noise Level Increases

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	51.9	L1	68.4	68.5	0.1	1.5	No
R2	50.8	L2	56.9	57.9	1.0	5.0	No
R3	50.1	L3	51.8	54.0	2.2	5.0	No
R4	48.8	L5	69.2	69.2	0.0	1.5	No
R5	55.1	L6	66.4	66.7	0.3	1.5	No

[1] See Figure 4.11-2 for the receiver locations.
[2] Total Project daytime operational noise as shown on Table 9.2 in the Project's NVA.
[3] Reference noise level measurement locations as shown on Figure 4.11-1
[4] Observed daytime ambient noise levels as shown on Table 4.11-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance increase criteria as shown on Table 4.11-3.
(Urban Crossroads, 2024e, Table 9-5)

Table 4.11-11 Nighttime Operational Noise Level Increases

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	51.4	L1	65.8	66.0	0.2	1.5	No
R2	50.7	L2	56.5	57.5	1.0	5.0	No
R3	50.0	L3	51.8	54.0	2.2	5.0	No
R4	48.8	L5	67.3	67.4	0.1	1.5	No
R5	55.1	L6	63.6	64.2	0.6	5.0	No

[1] See Figure 4.11-2 for the receiver locations.
[2] Total Project nighttime operational noise levels as shown on Table 9-3 in the Project's NVA.
[3] Reference noise level measurement locations as shown on Figure 4.11-1.
[4] Observed nighttime ambient noise levels as shown on Table 4.11-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance increase criteria as shown on Table 4.11-3.
(Urban Crossroads, 2024e, Table 9-6)

C. *Off-Site Traffic Noise Analysis*

1. *FHWA Traffic Noise Prediction Model*

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the FHWA Traffic Noise Prediction Model- FHWA-RD-77-108. The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (Urban Crossroads, 2024e, p. 27)

2. *Traffic Noise Contours*

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the Project's Traffic Study (*Technical Appendix L1*). Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were used to assess the Project's incremental 24- hour dBA CNEL traffic-related noise impacts at receiving land uses adjacent to roadways conveying

Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA CNEL noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. A summary of the exterior traffic noise levels without barrier attenuation for each traffic condition are included in Tables 7-1 through 7-6 of *Technical Appendix K* and traffic noise level contours worksheets are included in Appendix 7.1 of *Technical Appendix K*. (Urban Crossroads, 2024e, p. 35)

3. Existing Project Traffic Noise Level Increases

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project was included in the Project's NVA (*Technical Appendix K*) for informational purposes and to fully analyze all the existing traffic scenarios identified in the Traffic Analysis (*Technical Appendix L1*) prepared by Urban Crossroads, Inc. However, the analysis of existing off-site traffic noise levels plus traffic noise generated by the proposed Project scenario will not actually occur since the Project would not be fully constructed and operational until Year 2032 conditions. As shown on Table 7-1 of the Project's NVA, the Existing without Project exterior noise levels range from 68.8 to 74.9 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. As shown in Table 7-2 of the Project's NVA, the Existing with Project conditions ranging from 69.1 to 79.1 dBA CNEL. As shown in Table 4.11-12, *Existing With Project Traffic Noise Level Increases*, with the addition of Project traffic to existing traffic levels, Project off-site traffic noise level increases would range from 0.0 to 5.5 dBA CNEL on the study area roadway segments. Based on the significance criteria for off-site traffic noise presented previously in Table 4.11-3, land uses adjacent to the study area roadway segments would experience less than significant noise level increases on receiving land uses due to the Project-related traffic. As such, Project-related traffic noise impacts under Existing with Project conditions would be less than significant (Urban Crossroads, 2023c, p. 40).

Table 4.11-12 Existing With Project Traffic Noise Level Increases

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]			Incremental Noise Level Increase Threshold[3]	
				No Project	With Project	Project Increment	Limit	Exceeded?
1	10th St. W	n/o Avenue M	Non-Sensitive	72.9	72.9	0.0	n/a	No
2	10th St. W	s/o Avenue M	Non-Sensitive	72.1	72.2	0.1	n/a	No
3	Sierra Hwy.	n/o Avenue L	Non-Sensitive	72.7	74.2	1.5	n/a	No
4	Sierra Hwy.	s/o Avenue L	Non-Sensitive	73.4	74.7	1.3	n/a	No
5	Sierra Hwy.	s/o Avenue M	Non-Sensitive	73.9	75.3	1.4	n/a	No
6	Sierra Hwy.	s/o Avenue N	Non-Sensitive	74.9	75.8	0.9	n/a	No
7	Challenger Wy.	n/o Avenue L	Sensitive	73.2	73.4	0.2	1.5	No
8	Challenger Wy.	s/o Avenue L	Sensitive	70.7	71.1	0.4	1.5	No
9	20th St.	n/o Avenue M	Sensitive	68.8	69.1	0.3	1.5	No
10	Avenue M	w/o SR-14 SB Ramps	Non-Sensitive	70.5	70.6	0.1	n/a	No
11	Avenue M	e/o SR-14 NB Ramps	Non-Sensitive	72.8	77.2	4.4	n/a	No
12	Avenue M	w/o Sierra Hwy.	Non-Sensitive	72.7	77.7	5.0	n/a	No
13	Avenue M	e/o Sierra Hwy.	Non-Sensitive	73.6	79.1	5.5	n/a	No
14	Avenue M	e/o 4th St.	Non-Sensitive	73.8	74.9	1.1	n/a	No
15	Avenue M	e/o Challenger Wy.	Non-Sensitive	74.1	74.2	0.1	n/a	No
16	Avenue M	e/o Site 2 Rd.	Non-Sensitive	73.6	73.7	0.1	n/a	No
17	Avenue N	w/o SR-14 SB Ramps	Sensitive	73.3	73.3	0.0	1.5	No
18	Avenue N	w/o SR-14 NB Ramps	Non-Sensitive	72.7	73.2	0.5	n/a	No
19	Avenue N	e/o 10th St. W	Non-Sensitive	70.1	71.2	1.1	n/a	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4.11-3)? "n/a" Per the City of Palmdale General Plan Noise Element Figure 16-1, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the ambient non-noise sensitive noise level is greater than the normally acceptable 75 dBA CNEL land use compatibility criteria. (Urban Crossroads, 2023c, Table 7-7)

4. EC (2025) Traffic Noise Level Increases

Table 7-3 of the NVA for the Project shows the Existing plus Cumulative (EC) (2025) without Project conditions CNEL noise levels. The EC (2025) without Project exterior noise levels range from 68.8 to 75.6 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 of the NVA for the Project shows that the EC (2025) with Project conditions would range from 68.9 to 75.9 dBA CNEL. As shown in Table 4.11-13, *EC (2025) with Project Traffic Noise Level Increases,* the Project's off-site traffic noise level increases would range from 0.0 to 2.2 dBA CNEL under existing with project traffic conditions. Based on the significance criteria for off-site traffic noise presented in Table 4.11-3, land uses adjacent to the study area roadway segments would experience less than significant noise level increases on receiving land uses due to the Project-related traffic under EC (2025) traffic conditions. As such, Project-related traffic noise impacts under EC (2025) traffic conditions would be less than significant (Urban Crossroads, 2024e, p. 41)

Table 4.11-13 EC (2025) with Project Traffic Noise Level Increases

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]			Incremental Noise Level Increase Threshold[3]	
				No Project	With Project	Project Increment	Limit	Exceeded?
1	10th St. W	n/o Avenue M	Non-Sensitive	73.0	73.1	0.1	n/a	No
2	10th St. W	s/o Avenue M	Non-Sensitive	74.1	74.1	0.0	n/a	No
3	Sierra Hwy.	n/o Avenue L	Non-Sensitive	73.8	74.2	0.4	n/a	No
4	Sierra Hwy.	s/o Avenue L	Non-Sensitive	74.4	74.7	0.3	n/a	No
5	Sierra Hwy.	s/o Avenue M	Non-Sensitive	74.8	75.1	0.3	n/a	No
6	Sierra Hwy.	s/o Avenue N	Non-Sensitive	75.6	75.8	0.2	3.0	No
7	Challenger Wy.	n/o Avenue L	Sensitive	73.3	73.3	0.0	1.5	No
8	Challenger Wy.	s/o Avenue L	Sensitive	70.7	70.8	0.1	1.5	No
9	20th St.	n/o Avenue M	Sensitive	68.8	68.9	0.1	1.5	No
10	Avenue M	w/o SR-14 SB Ramps	Non-Sensitive	70.7	70.7	0.0	n/a	No
11	Avenue M	e/o SR-14 NB Ramps	Non-Sensitive	73.9	75.3	1.4	n/a	No
12	Avenue M	w/o Sierra Hwy.	Non-Sensitive	73.2	75.0	1.8	n/a	No
13	Avenue M	e/o Sierra Hwy.	Non-Sensitive	73.7	75.9	2.2	n/a	No
14	Avenue M	e/o 4th St.	Non-Sensitive	73.9	74.3	0.4	n/a	No

15	Avenue M	e/o Challenger Wy.	Non-Sensitive	74.2	74.2	0.0	n/a	No
16	Avenue M	e/o Site 2 Rd.	Non-Sensitive	73.7	73.7	0.0	n/a	No
17	Avenue N	w/o SR-14 SB Ramps	Sensitive	73.3	73.3	0.0	1.5	No
18	Avenue N	w/o SR-14 NB Ramps	Non-Sensitive	73.4	73.5	0.1	n/a	No
19	Avenue N	e/o 10th St. W	Non-Sensitive	70.6	70.9	0.3	n/a	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4.11-3)?
"n/a" Per the City of Palmdale General Plan Noise Element Figure 16-1, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the ambient non-noise sensitive noise level is greater than the normally acceptable 75 dBA CNEL land use compatibility criteria. (Urban Crossroads, 2023b, Table 7-8)

5. EC (2032) Traffic Noise Level Increases

Table 7-5 of the Project's NVA, presents the EC (2032) without Project exterior noise levels, which range from 68.8 to 76.1 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 of the Project's NVA, shows that the EC (2032) with Project conditions would range from 69.1 to 79.1 dBA CNEL. Table 4.11-14, *EC (2032) with Project Traffic Noise Increases*, shows that the Project off-site traffic noise level increases range from 0.0 to 5.3 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4.11-3, land uses adjacent to the study area roadway segments would experience less than significant noise level increases on receiving land uses due to the Project-related traffic under EC (2032) traffic conditions. As such, Project-related traffic noise impacts under EC (2032) traffic conditions would be less than significant (Urban Crossroads, 2024e, p. 42)

Table 4.11-14 EC (2032) with Project Traffic Noise Increases

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]			Incremental Noise Level Increase Threshold[3]	
				No Project	With Project	Project Increment	Limit	Exceeded?
1	10th St. W	n/o Avenue M	Non-Sensitive	73.1	73.2	0.1	n/a	No
2	10th St. W	s/o Avenue M	Non-Sensitive	75.1	75.1	0.0	3.0	No
3	Sierra Hwy.	n/o Avenue L	Non-Sensitive	74.5	75.5	1.0	n/a	No
4	Sierra Hwy.	s/o Avenue L	Non-Sensitive	75.0	76.0	1.0	n/a	No
5	Sierra Hwy.	s/o Avenue M	Non-Sensitive	75.3	76.3	1.0	3.0	No
6	Sierra Hwy.	s/o Avenue N	Non-Sensitive	76.1	76.8	0.7	3.0	No
7	Challenger Wy.	n/o Avenue L	Sensitive	73.3	73.5	0.2	1.5	No

8	Challenger Wy.	s/o Avenue L	Sensitive	70.8	71.2	0.4	1.5	No
9	20th St.	n/o Avenue M	Sensitive	68.8	69.1	0.3	1.5	No
10	Avenue M	w/o SR-14 SB Ramps	Non-Sensitive	70.8	70.9	0.1	n/a	No
11	Avenue M	e/o SR-14 NB Ramps	Non-Sensitive	74.6	77.9	3.3	n/a	No
12	Avenue M	w/o Sierra Hwy.	Non-Sensitive	73.5	78.0	4.5	n/a	No
13	Avenue M	e/o Sierra Hwy.	Non-Sensitive	73.8	79.1	5.3	n/a	No
14	Avenue M	e/o 4th St.	Non-Sensitive	73.9	75.0	1.1	n/a	No
15	Avenue M	e/o Challenger Wy.	Non-Sensitive	74.2	74.4	0.2	n/a	No
16	Avenue M	e/o Site 2 Rd.	Non-Sensitive	73.8	73.9	0.1	n/a	No
17	Avenue N	w/o SR-14 SB Ramps	Sensitive	73.3	73.3	0.0	1.5	No
18	Avenue N	w/o SR-14 NB Ramps	Non-Sensitive	73.8	74.2	0.4	n/a	No
19	Avenue N	e/o 10th St. W	Non-Sensitive	70.9	71.8	0.9	n/a	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4.11-3)? "n/a" Per the City of Palmdale General Plan Noise Element Figure 16-1, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the ambient non-noise sensitive noise level is greater than the normally acceptable 75 dBA CNEL land use compatibility criteria.
(Urban Crossroads, 2024e, Table 7-9)

D. Rail Noise

1. On-Site Rail Noise Prediction Model From Off-Site Rail Activities

The estimated railroad noise impacts from the offsite UPRR mainline tracks located west of the Project site were calculated using the FTA General Transit Noise Assessment Model. The FTA Model calculates the predicted noise level based on the type of train, distance to receiver, number of trains per hour, speed, number of cars per train, and type of railroad tracks. The train volumes and speeds for the Metrolink and freight operations were obtained from the current Metrolink schedule, and the existing data provided in the U.S. Department of Transportation Crossing Inventory Form (750642H) for Columbia Way/Avenue M, as shown on Table 4.11-15, *On-Site Railroad Parameters*, and included in Appendix 11.1 of the Project's NVA (*Technical Appendix K*). (Urban Crossroads, 2024e, p. 63)

Table 4.11-15 On-Site Railroad Parameters

Railroad Activities	Modeled Train/ Engine Type	Speed (mph)	Daily Train Volumes/Events	
			Daytime	Nighttime
Metrolink[1]	Diesel	79	7	4
Freight[2]	Diesel	60	17	5

[1] Metrolink Antelope Valley Line Schedule.
[2] Based on the U.S. Department of Transportation Crossing Inventory Form 750642H at Columbia Way/Avenue M.
(Urban Crossroads, 2024e, Table 11-1)

2. On-Site Exterior Noise Levels

Using the FTA railroad noise prediction model and the parameters outlined on Table 4.11-15, the expected exterior noise levels at the nearest industrial Project building façade facing the UPRR were calculated. The on-site FTA model results indicates that the unmitigated exterior noise level resulting from off-site rail noise activities would approach 55.0 dBA CNEL at the western building facade, as shown on Table 4.11-16, *Exterior Railroad Noise Levels*. Based on the City of Palmdale General Plan Noise Element, Figure 16.1 land use compatibility criteria, the on-site exterior noise level of 55.0 dBA CNEL from off-site rial noise will not exceed the *normally acceptable* 75 dBA CNEL exterior noise criteria for the industrial uses of the Project, and therefore, represents a less than significant impact. The on-site railroad noise analysis calculations from off-site rail activities are provided in Appendix 11.2 of the Project's NVA (*Technical Appendix K*). (Urban Crossroads, 2024e, p. 63)

Table 4.11-16 Exterior Railroad Noise Levels

Receiver Location	Noise Source	Unmitigated Noise Levels (dBA CNEL)	Threshold (dBA CNEL)[1]	Threshold Exceeded?
Western Façade (Building 10)	Railroad	55.0	70	No

[1] Normally acceptable land use noise compatibility criteria for industrial use such as the Project (Table 4.11-2).
(Urban Crossroads, 2024e, Table 11-2)

E. Summary

Based on the foregoing analysis, the three components of the Project that would generate noise 1) construction activities, 2) on-site operational activities, and 3) off-site traffic, would not generate 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. Therefore, impacts would be less than significant and no mitigation is required.

Threshold b: Would the Project generate excessive groundborne vibration or groundborne noise levels?

A. Construction and Operational Vibration Analysis

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized in

Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using vibration assessment methods defined by the FTA. (Urban Crossroads, 2024e, p. 61).

Table 4.11-17 Vibration Source Levels for Construction Equipment

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089
Vibratory Roller	0.210

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual
(Urban Crossroads, 2024e, Table 10-5)

Using the vibration source level of construction equipment provided in Table 4.11-17, *Vibration Source Levels for Construction Equipment* and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 4.11-18, *Project Construction Vibration Levels*, presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 127 to 746 feet from Project construction activities, construction vibration velocity levels are estimated to range from 0.001 to 0.018 PPV in/sec. Based on the maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec), typical Project construction vibration levels would fall below the building damage thresholds at all of the noise receiver locations. Therefore, the Project related vibration impacts are considered less than significant during typical construction activities at the Project site. (Urban Crossroads, 2024e, pp. 61-62).

Based on the foregoing analysis, the Project would not generate excessive groundborne vibration groundborne noise levels; therefore, impacts would be less than significant and no mitigation is required.

Table 4.11-18 Project Construction Vibration Levels

Receiver[1]	Distance to Const. Activity (Feet)[2]	Typical Construction Vibration Levels PPV (in/sec)[3]						Thresholds PPV (in/sec)[4]	Thresholds Exceeded?[5]
		Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Vibratory Roller	Highest Vibration Level		
R1	127'	0.000	0.003	0.007	0.008	0.018	0.018	0.3	No
R2	607'	0.000	0.000	0.001	0.001	0.002	0.002	0.3	No
R3	746'	0.000	0.000	0.000	0.001	0.001	0.001	0.3	No
R4	612'	0.000	0.000	0.001	0.001	0.002	0.002	0.3	No
R5	379'	0.000	0.001	0.001	0.002	0.004	0.004	0.3	No

[1] Receiver locations are shown on Figure 4.11-2.
[2] Distance from receiver location to Project construction boundary (Project site boundary).
[3] Based on the Vibration Source Levels of Construction Equipment, Table 4.11-17.
[4] Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Table 19, p. 38.
[5] Does the peak vibration exceed the acceptable vibration thresholds?
"PPV" = Peak Particle Velocity
(Urban Crossroads, 2024es, Table 10-6)

B. Vibration Analysis from Off-Site Rail Activities

This section focuses on the potential ground-borne vibration associated with off-site rail transportation activities on the Project.. The estimated railroad vibration impacts from offsite Metrolink and freight trains traveling on the railroad tracks offsite and west of the Project site are calculated using the FTA *Transit Noise and Vibration Impact Assessment* General Vibration Assessment methodology. The FTA General Vibration Assessment calculates the predicted vibration level based on generalized ground surface vibration curves which were developed using actual measurements of representative North American transit systems. Figure 6-4 of the FTA *Transit Noise and Vibration Impact Assessment* shows the generalized ground surface vibration curves for three types of transit sources. The generalized reference curves are used to identify the appropriate reference vibration level, before any adjustments, for the Project based on the type of train, speed, and distance to receiver locations. The FTA reference curves are provided in VdB to describe the human response to vibration levels. (Urban Crossroads, 2024e, p. 64)

Based on the reference curve for a locomotive powered passenger or freight train traveling at 50 mph, the reference vibration level at the Project's Building 10 is estimated to be 73 VdB at roughly 270 feet. As previously shown on Table 4.11-15, the passenger trains passing the Project site are expected to travel at a higher speed of up to 79 mph, and therefore, the reference level is adjusted at 270 feet to reflect the change from 50 to 79 mph. In addition, the FTA provides vibration source and propagation adjustments to the reference vibration curve levels based on the characteristics of the trains and rail lines in the study area. Using the speed adjustments provided by the FTA, the vibration levels at the nearest Project building facade (Building 10) facing the offsite railroad are estimated at 78 VdB. Therefore, vibration levels from offsite rail activities are shown to remain below the FTA vibration threshold of 84 VdB for office uses and impacts would be less than significant. (Urban Crossroads, 2024e, p. 64)

Threshold c: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels?

CEQA Guidelines Threshold (c) applies when there are nearby public and private airports and/or airstrips and focuses on land use compatibility of the Project to nearby airports and airstrips. The closest e airport which could require additional noise analysis under CEQA Guidelines Threshold (c) is the Palmdale Airport/USAF Plant 42 located approximately 0.25-mile northwest of Runway 7. Although the Project site is located within the AIA, as shown on Figure 4.11-3, the commercial land use within the northern portion of the Project site is located well outside the 60-65 dBA CNEL noise level contour boundary. The southern half of the Project site consisting of industrial land uses is located within the 65-70 dBA CNEL aircraft noise level contour boundaries with a small portion of the southeastern portion of the Project site located within the 70-75 dBA dBA CNEL noise level contour boundary. Therefore, according to the City of Palmdale General Plan Noise Element Noise Land Use Compatibility Criteria (see Table 4.11-2), the Project's land uses are considered normally acceptable. Therefore, impacts would be less than significant and no further noise analysis is required under CEQA Guidelines Threshold (c) regarding airport noise.

4.11.6 Cumulative Impact Analysis

The cumulative study area for the issue of noise includes the Project site vicinity as well as areas adjacent to roadways evaluated by the Project's Traffic Scoping Agreement (*Technical Appendix L1*) prepared for the Project. Also, the California High Speed Rail Authority's planned Bakersfield to Palmdale high speed rail segment was considered. A cumulative impact is a potential impact that could be created from Project related noise combined together with noise from other planned projects.

Construction Noise

The analysis under Threshold (a), indicates that the proposed Project would not generate substantial amounts of construction-related noise that could adversely affect nearby sensitive receptors. Construction activities associated with the proposed Project and other construction projects in the area may overlap, resulting in cumulative periodic noise increases in the local area. However, construction noise impacts primarily affect the areas immediately adjacent to a construction site.

Although there are other projects in the area that may be under construction at the same time as the proposed Project, short-term noise resulting from simultaneous construction on the Project site and other sites would not be cumulatively considerable in consideration of the less than significant noise levels generated from Project-related construction activities. It is not reasonably foreseeable that combined cumulative construction noise levels of multiple concurrent projects would exceed the reasonable daytime 80 dBA L_{eq} significance threshold at the nearby receiver locations.

In addition, PMC Section 8.28.030 addresses construction-related noise by prohibiting earth excavating and similar activities between 8:00 p.m. and 6:30 a.m. and on Sundays and holidays in any residential zone or within 500 feet of any residence, hotel, motel, or recreational vehicle park. However, none of

the nearest noise sensitive receivers are located within 500 feet of the Project site. (Urban Crossroads, 2024e, pp. 45-46) Because construction activities are typically limited to weekdays, during daylight hours, the direct and cumulative construction noise impacts are considered a nuisance or annoying, rather than a significant impact upon surrounding land uses.

Stationary Noise

The analysis presented for Threshold (a), addresses the Project's contribution of noise to existing cumulative noise sources (i.e., ambient noise) in the Project area. The Project's noise contribution would not be perceptible to noise-sensitive receptors in the Project area during daytime or nighttime hours. Additionally, none of the nearest noise sensitive receptors are located within 500 feet of the Project site. The EIR/EIS prepared for the nearby, planned California High Speed Rail Authority's high speed rail project concluded that operational noise impacts from high speed rail operations would be significant and unavoidable even after mitigation. The Project's permanent stationary noise levels, however, would not be cumulatively-considerable because the Project's noise contribution would not be perceptible to noise-sensitive receptors.

Traffic Noise

The analysis presented under Threshold (a) evaluates the Project's traffic noise contribution in surrounding off-site areas and at the Project site. As previously shown in Table 4.11-10 and Table 4.11-11, the Project's noise contribution would not be perceptible to noise-sensitive receptors in the Project area during daytime or nighttime hours. Additionally, none of the nearest noise sensitive receptors are located within 500 feet of the Project site. (Urban Crossroads, 2024e, pp. 45-46)

Groundborne Vibration and Noise

During construction, the Project's peak vibration impacts would occur during the grading phase when large pieces of equipment, like bulldozers, are operating on-site. During the non-grading phases of Project construction, when smaller pieces of equipment are used on-site, vibration from the Project would be minimal. Typical Project construction vibration levels would fall below the building damage thresholds at all of the noise receiver locations. Therefore, the Project-related vibration impacts are considered less than significant during typical construction activities at the Project site. As such, the vibration levels reported at the receiver locations are unlikely to be sustained during the entire construction period but would occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter. Although there are other projects in the area that may be under construction at the same time as the proposed Project, short-term vibration resulting from simultaneous construction on the Project site and other sites would not be cumulatively considerable in consideration of the less than significant vibration levels generated from Project-related construction activities. It is not reasonably foreseeable that combined cumulative vibration levels of multiple concurrent projects would exceed the vibration significance threshold at the nearby receiver locations. During long-term operation of the Project, the Project would not include or require equipment or activities that would result in perceptible groundborne vibration beyond the Project site. Trucks would travel to and from the Project site along local roadways; however, vibration levels for heavy trucks

operating at the posted speed limits on paved surfaces would not be perceptible beyond the roadway. The Project would not cumulatively contribute to the exposure of persons to excessive groundborne vibration or noise levels during long-term operation. The Project would thus have no reasonable potential to contribute to cumulative vibration including any vibration effects potentially produced by the California High Speed Rail Authority's planned high speed rail project. The EIR/EIS prepared for the high speed rail project concluded that no significant vibration impacts from construction or operation of HSR would occur. (CA High Speed Rail Authority, 2021).

Airport Noise

The Project would not involve the construction, operation, or use of any public airports or public use airports and there are no conditions associated with implementation of the Project that would contribute to airport noise or exposure of additional people to unacceptable levels of airport noise. Accordingly, the Project would have no potential to cumulatively contribute to impacts associated with noise from a public airport, public use airport, or private airstrip.

4.11.7 Significance of Impacts Before Mitigation

Threshold a: Less than Significant Impact. Noise levels generated by short-term construction of the Project would be less than significant at the nearest receptors. On-site operational noise levels would be less than significant at the nearest receptors. In addition, the off-site traffic noise levels generated by the Project would be less than significant. Therefore, the Project would not generate 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. Impacts would be less than significant and no mitigation is required.

Threshold b: Less than Significant Impact. The vibration impacts of the Project are considered less than significant during typical construction activities at the Project site. Vibration levels reported at the receiver locations are unlikely to be sustained during the entire construction period but would occur only during the times that heavy construction equipment is operating adjacent to the Project site perimeter. Therefore, the construction and operational activities of the Project would not result in a perceptible groundborne vibration or noise that exceeds thresholds of significance. Impacts would be less than significant and no mitigation is required.

Threshold c: Less than Significant Impact. Although the Project site is located within the AIA, the Project's industrial and commercial land uses are considered *normally acceptable* within the AIA; therefore, because the Project would not expose people residing or working in the Project area to excessive noise levels related to a private airstrip, airport land use plan or public airport our public use airport, impacts would be less than significant and no mitigation is required.

4.11.8 Mitigation

Impacts would be less than significant; therefore, no mitigation is required.

4.11.9 Design Features (DF) and Regulatory Requirements (RR)

Although noise impacts from the Project would be less than significant, the Project Applicant has agreed to implement the following design features and regulatory requirements in order to further reduce noise from the Project. The City of Palmdale is required to assure that implementing development complies with the assumptions relied upon herein and applicable regulatory requirements pertaining to the topic of noise, which include the following regulatory requirements and design features. The Project shall be conditioned to implement the following design features and regulatory requirements as part of the City's Conditions of Approval for the Project.

NOI RR-1 All construction activities shall adhere to PMC Section 8.28.030, limiting construction-activities to the hours of 6:00 AM and 6:00 PM, prohibiting earth excavating and similar activities between 8:00 PM and 6:30 AM and on Sundays in any residential zone or within 500 feet of any residence, hotel, motel, or recreational vehicle park. This requirement shall be noted on all grading and building plans and in bid documents issued to construction contractors.

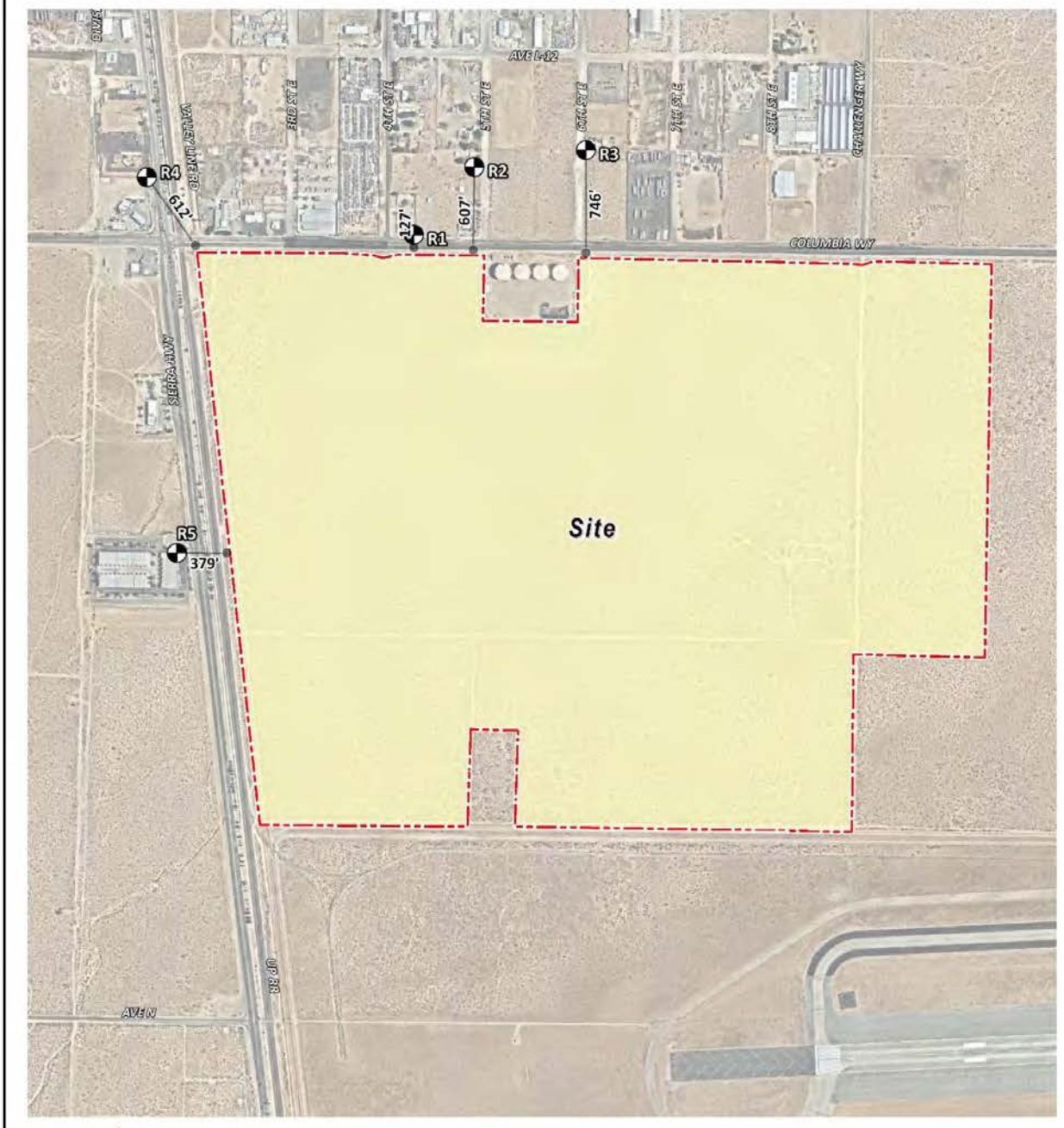


Source(s): Urban Crossroads (01-12-2024)

Figure 4.11-1

Not to Scale

Noise Measurement Locations

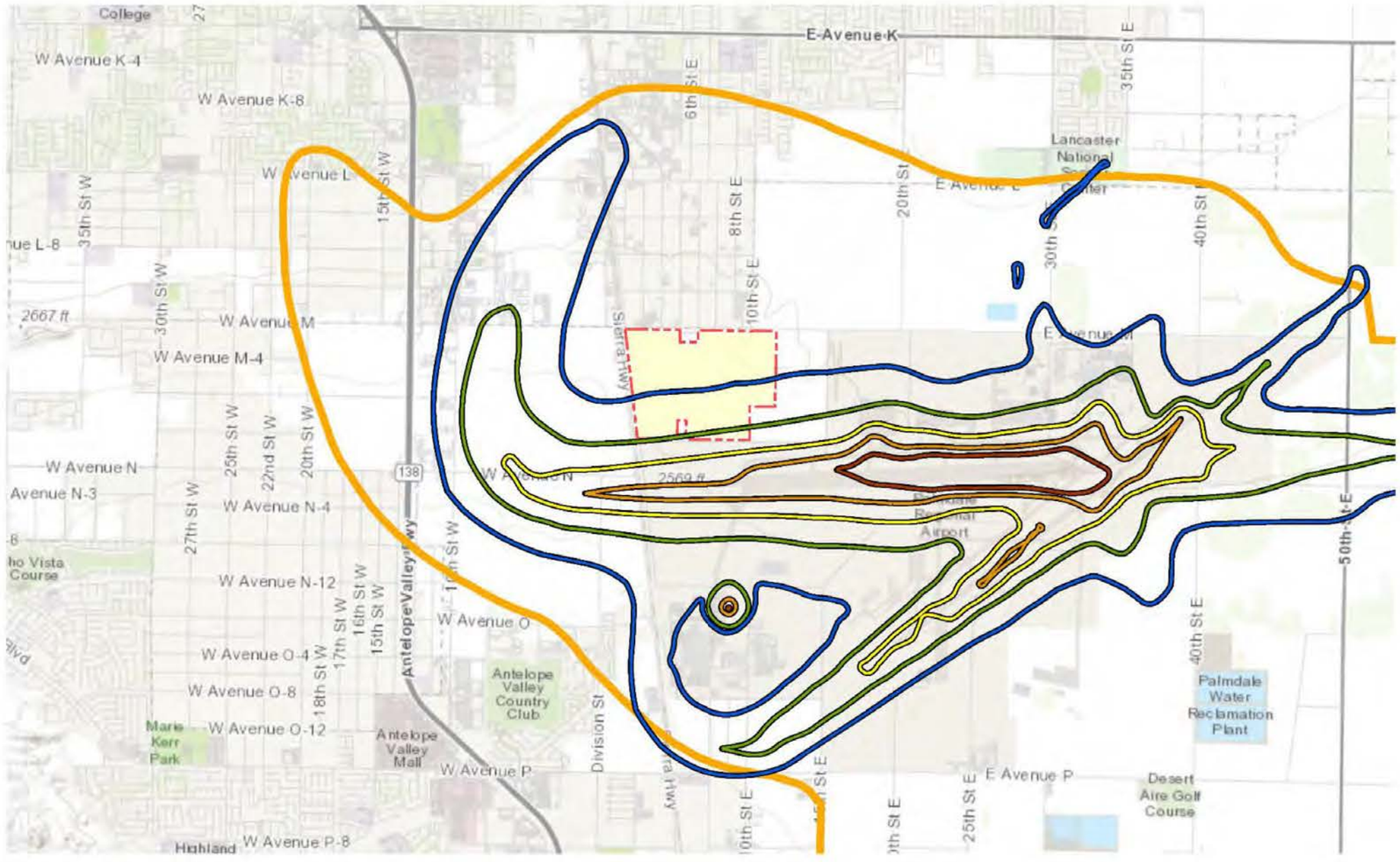


Source(s): Urban Crossroads (01-12-2024)

Figure 4.11-2

Not to Scale

Receiver Locations



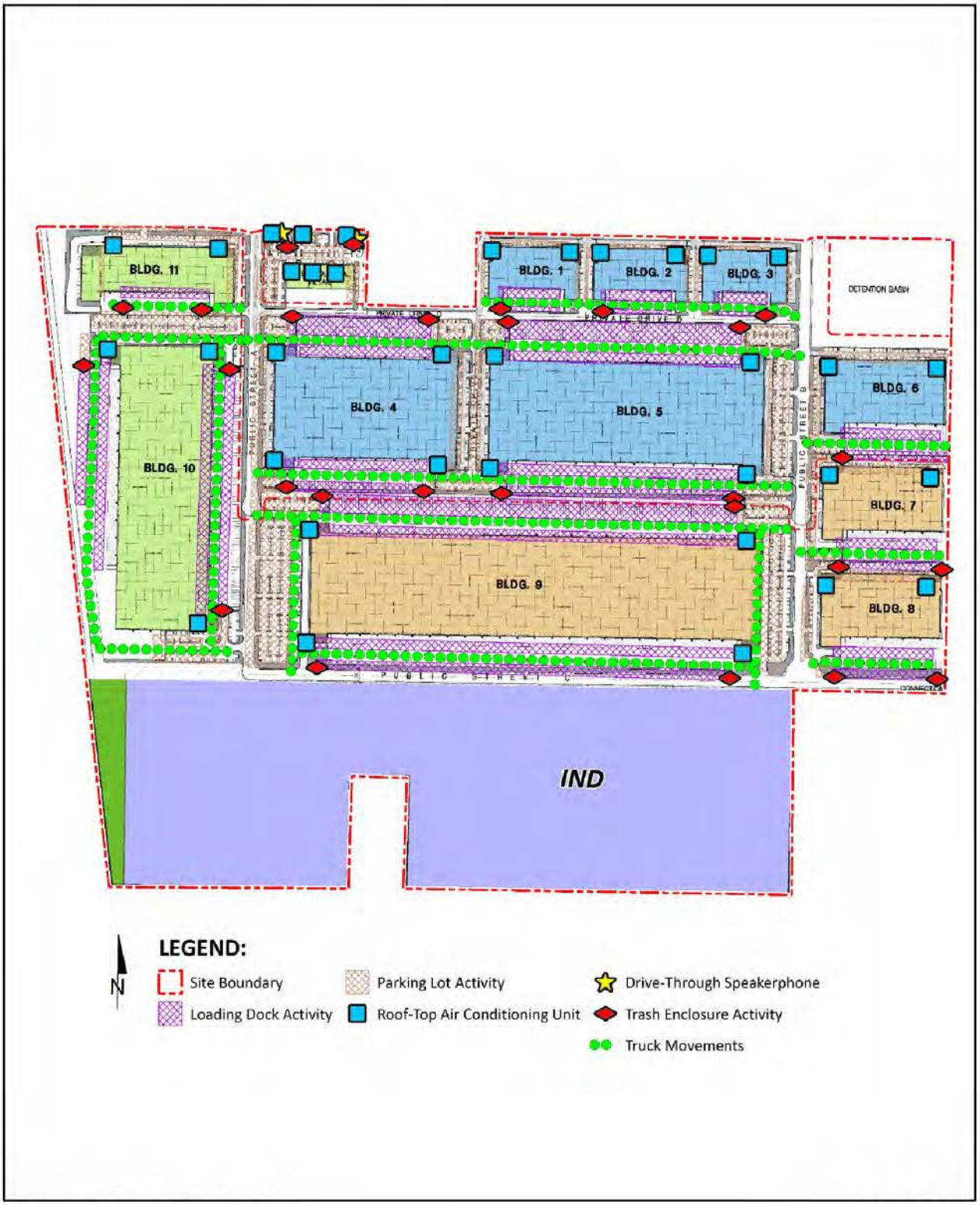
Source: Figure 3-3 US Air Force Plant 42 California Air Installation Compatible Use Zone (AICUZ) Study.

Source(s): Urban Crossroads (01-12-2024)

Not to Scale

Figure 4.11-3

Palmdale Regional Airport/USAF Plant 42 Noise Contours



Source(s): Urban Crossroads (01-12-2024)

Figure 4.11-4

Not to Scale

Operational Noise Source Locations

4.12 PUBLIC SERVICES

This subsection provides information on existing public services and service levels for fire protection, police protection, schools, parks, and other public facilities, and evaluates impacts to the environment that may result from the demand the Project may have on such services. All references used in this subsection are included in EIR Section 7.0, *References*.

4.12.1 EXISTING CONDITIONS

A. Fire Protection/Emergency Medical Services

The City of Palmdale contracts fire protection, first response emergency, and medical services through the Los Angeles County Fire Department (LACFD). According to the City of Palmdale 2045 General Plan Update Draft Environmental Impact Report (SCH# 2021060494), there are seven fire stations that are part of the LACFD within the City's Planning Area: Station 24, Station 37, Station 93, Station 114, Station 131, Station 136, Station 140, and two stations as part of the Plant 42 Fire Department (City of Palmdale, 2022a, p. 4.9-25). Other than the Plant 42 Fire Department that is nearby adjacent to the Project site, as discussed in Section 2.0, *Environmental Setting*, the nearest LACFD fire station within the City's Planning Area is LACFD Station No. 37, located approximately 5.0 miles to the south of the Project site. (Google Earth, n.d.) LACFD maintains a response time for emergency fire protection services of four to six minutes (City of Palmdale, 2022a, p. 4.15-1). LACFD also dedicates its staff and resources to back up the fire stations located in the City. Fire protection needs in the City's Planning Area will be met by the entire LACFD's resources, if needed, regardless of the number of firefighters and equipment stationed in the City. (City of Palmdale Public Works Department, 2021, p. 22) To ensure compliance with the California Fire Code, LACFD conducts site inspections of new construction as well as annual inspections of existing structures and reviews Project Applicant Site Plans for compliance with applicable fire codes.

Although there are portions of the City classified as Very High Fire Hazard Zones, High Fire Hazard Zones, and Moderate Fire Hazard Zones, according to mapping information from the California Department of Forestry and Fire Protection (CAL FIRE), the Project site is not located within any of the fire hazard zones. (City of Palmdale, 2022a, pp. 4.15-1 and -2; CalFire, n.d.; Google Earth, n.d.)

B. Police Protection

The City of Palmdale contracts with Los Angeles County for police services. The Los Angeles County Sheriff's Department (LACSD) patrols 770 square miles and a population of approximately 200,000 people in and around the City of Palmdale. The LACSD operates the Palmdale Sheriff's Station located at 750 East Avenue Q that serves the City of Palmdale and surrounding communities, including the Project site. The Palmdale Sheriff's Station was constructed in 2006, replacing a previous neighborhood sub-station. The Palmdale Sheriff's Station includes a 47,000 s.f. main building, a 7,800 s.f. jail, and an 8,400 s.f. motor pool and storage building. (City of Palmdale, 2022a, p. 4.15-2) The Palmdale Sheriff's Station has approximately 200 sworn staff members consisting of lieutenants, sergeants, detectives, and patrol deputies along with one captain. (LA County Sheriff's Department, 2022, p. 19)

C. Schools

The nearest school is Adventureland Preschool, located approximately 1.27 miles southwest of the Project site. (Google Earth, n.d.) The Project site is located within the service area of the Palmdale School District (PSD) and the Lancaster School District (LSD) for elementary and middle school services and is within the Antelope Valley Union High School District (AVUHSD) for high school services. Jack Northrop Elementary School for K-5 school services is located approximately 2.4 miles north of the Project site, New Vista Middle School for grades 6-8 is located approximately 2.7 miles north of the Project site, and Eastside High School is located approximately 3.2 miles northeast of the Project site. (Google Earth, n.d.) (AVSD, n.d.) (Lancaster School District, n.d.)

D. Parks

The existing park facility located within approximately two miles of the Project site is the Sergeant Steve Owen Memorial Park, located approximately 1.65 miles northwest of the Project site. This park comprises approximately 63 acres and includes a variety of recreational uses including the Stanley Kleiner activity center, eight lighted tennis courts, basketball and volleyball courts, a softball complex, a covered group picnic shelter and a tot lot (Google Earth, n.d.) (City of Lancaster, n.d.).

E. Other Public Facilities

The City's main governmental offices are located at the intersection of Palmdale Boulevard and Sierra Highway. Facilities include the City Hall, located at 38300 Sierra Highway. City Hall contains the offices of the City Manager and elected officials, City Council chambers, and government offices include City Attorney, City Manager Clerk, and Administrative Services. Development Services are located at 38250 Sierra Highway and include Building and Safety, Planning, Public Works, Business License, Economic Development, and Neighborhood Services; Human Resources & Community Programs are located at 823 East Avenue Q-9, and Chimbole Cultural Center is located at 38350 Sierra Hwy. (City of Palmdale, 2022a, p. 4.15-5)

The closest library to the Project site is the Lancaster Library, located at 601 West Lancaster Boulevard, approximately 3.63 miles northwest of the Project site. The library is typically open Tuesday through Saturday. (LA County Library, n.d.) The Palmdale City Library is located at 700 East Palmdale Boulevard, approximately 3.93 miles south of the Project site. The library is typically open Monday through Saturday, with limited hours on Sunday. Other facilities include the Palmdale Playhouse, Recreation & Culture Offices, Legacy Commons, and Courson Park (which features a recreation pool), located off 10th Street East. The City's Maintenance Yard is located at 39110 3rd Street East, across from Desert Sands Park. (Google Earth, n.d.; City of Palmdale, 2022a, p. 4.15-5)

4.12.2 Regulatory Setting

The following is a brief description of the State and local environmental laws and related regulations related to public services.

A. *State Regulations*

1. *Fire Protection Services Regulations and Plans*

❑ Public Resources Code Sections 4290-4299

Public Resources Code (PRC) Sections 4290-4299 establish minimum statewide fire safety provisions pertaining to the following: 1) roads for fire equipment access; 2) signs identifying streets, roads, and buildings; 3) minimum private water supply reserves for emergency fire use; and 4) fire fuel breaks and greenbelts.

With certain exceptions, all new construction after July 1, 1991, in potential wildland fire areas, is required to meet these statewide standards. The state requirements, however, do not supersede more restrictive local regulations. As defined by CAL FIRE, wildland areas defined as State Responsibility Areas (SRAs) may contain substantial wildfire risks and hazards consisting of lands exclusive of cities, and federal lands regardless of ownership. The primary financial responsibility for preventing and suppressing fires within wildlands belongs to the State of California. However, it is not the State of California's responsibility to provide fire protection services to buildings or structures located within the wildlands unless CAL FIRE has entered into a cooperative agreement with a local agency for those purposes pursuant to Public Resources Code (PRC) Section 4142. As such, wildland areas require disclosure of these fire hazards in real estate transactions, and owners of properties in wildland areas are subject to PRC Section 4291 maintenance requirements. The law requires CAL FIRE to provide maps identifying the boundaries of lands classified as SRAs to the appropriate County Assessor every five years (1991, 1996, 2001, etc.). (CA Legislative Info, n.d.) As discussed in further detail in EIR Section 4.15. *Wildfire*, the Project site is not located in or near SRAs or lands classified as very high fire hazard severity zones.

❑ Public Resources Code Sections 4102 and 4127 - State Responsibility Areas

PRC Section 4102 specifies that SRA means areas of the State in which the financial responsibility of preventing and suppressing fires has been determined by the [State Fire] Board pursuant to Section 4125, to be primarily the responsibility of the state." These areas may contain state or privately-owned forest, watershed, and rangeland. PRC §§ 4126-4127 further specify the standards that define what does and does not constitute an SRA. (CA Legislative Info, n.d.) As discussed in further detail in EIR Section 4.15. *Wildfire*, the Project site is not located in or near SRAs or lands classified as very high fire hazard severity zones.

❑ California Code of Regulations Title 24, Parts 2 and 9 – Fire Codes

Part 2 of Title 24 of the California Code of Regulations (CCR) refers to the California Building Code (CBC) which contains complete regulations and general construction building standards of State adopting agencies, including administrative, fire and life safety and field inspection provisions. Part 2 was updated in 2008 to reflect changes in the base document from the Uniform Building Code to the International Building Code. Part 9 refers to the California Fire Code, which contains other fire safety-related building standards. Chapter 7A, "*Materials and Construction Methods for Exterior Wildfire*

Exposure," in the 2010 California Building Code addresses fire safety standards for new construction. In addition, Section 701A.3.2, "*New Buildings Located in Any Fire Hazard Severity Zone*," states: (CBSC, 2022)

> *"New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter."*

As discussed in further detail in EIR Section 4.15. *Wildfire*, the Project site is not located in or near SRAs or lands classified as very high fire hazard severity zones.

2. Police Services

❑ California Constitution Article XIII, Section 35

Section 35 of Article XIII of the California Constitution was adopted by the voters in 1993 under Proposition 172. Proposition 172 directed the proceeds of a one-half percent sales tax to be expended exclusively for local public safety services, including police protection. California Government Code Sections 30051-30056 provide rules to implement Proposition 172. Section 30056 provides that cities are not allowed to spend less of their own financial resources on their combined public safety services in any given year compared to the 1992-93 fiscal year. Therefore, an agency is required to use Proposition 172 to supplement its local funds used on police protection, as well as other public safety services. Subdivision (a)(2) of Section 35 provides: "The protection of public safety is the first responsibility of local government and local officials have an obligation to give priority to the provision of adequate public safety services." In *City of Hayward v. Board of Trustees of California State University* (2015) 242 Cal. App. 4th 833, the court found that Section 35 of Article XIII of the California Constitution requires local agencies to provide public safety services, including police protection, and that it is reasonable to conclude that the city will comply with that provision to ensure that public safety services are provided. (City of Palmdale, 2022a, p. 4.15-6)

3. School Services Regulations and Plans

❑ Assembly Bill 16

In 2002, Assembly Bill No. 16 (AB 16) created the Critically Overcrowded School Facilities program, which supplemented the new construction provisions within the School Facilities Program (SFP). The SFP provides State of California funding assistance for new facility construction projects and modernization projects. The Critically Overcrowded School Facilities program allows school districts with critically overcrowded school facilities, as determined by the California Department of Education (CDE), to apply for new construction projects in advance of meeting all SFP new construction program requirements. Districts with SFP new construction eligibility and school sites included on a CDE list of source schools may apply. (CA Legislative Info, n.d.)

The Project proposed is a master-planned commerce center with commercial and industrial uses that would not directly generate any additional school children or the need for additional schools or the physical alteration of schools.

- ❑ Leroy F. Greene School Facilities Act of 1998 (Senate Bill 50)

Senate Bill No. 50 (SB50), also known as the Leroy F. Greene School Facilities Act, was enacted by the State Legislature in 1998, which amended existing State law governing school fees. SB 50 amended California Government Code Section 65995(a) to prohibit state or local agencies from imposing school impact mitigation fees, dedications, or other requirements in excess of those provided in the statute in connection with "any legislative or adjudicative act...by any state or local agency involving...the planning, use, or development of real property...." (CA Legislative Info, n.d.)

The legislation also amended California Government Code Section 65996(b) to prohibit local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "legislative or adjudicative act involving the planning, use or development of real property." As such, SB 50 established the base amount of allowable developer fees as $1.93 per square foot for residential and $0.31 per square foot for commercial construction. These base amounts are commonly referred to as "Level 1 fees" and are the same caps that were in place at the time SB 50 was enacted. Level 1 fees are subject to inflation adjustment every two years. (CA Legislative Info, n.d.)

In certain circumstances, for residential construction, school districts can impose fees that are higher than Level 1 fees. School districts can impose Level 2 fees, which are equal to 50 percent of land and construction costs if they prepare and adopt a school needs analysis for facilities, are determined by the State Allocation Board to be eligible to impose these fees, and meet at least two of the following four conditions: (CA Legislative Info, n.d.)

- At least 30 percent of the district's students are on a multi-track year-round schedule;
- The district has placed on the ballot within the previous four years a local school bond that received at least 50 percent of the votes cast;
- The district has passed bonds equal to 30 percent of its bonding capacity; or,
- At least 20 percent of the district's teaching stations are relocatable classrooms.

Additionally, if the State of California's bond funds are exhausted, a school district that is eligible to impose Level 2 fees is authorized to impose even higher fees. Commonly referred to as "Level 3 fees," these fees are equal to 100 percent of land and construction costs of new schools required as a result of new developments. (CA Legislative Info, n.d.)

The Project proposed is a master-planned commerce center with commercial and industrial uses that would not directly generate any additional school children or the need for additional schools or the physical alteration of schools.

4. Recreation

❑ Quimby Act, California Government Code § 66477

The State of California's Quimby Act was established by the California Legislature for the purpose of preserving open space and providing park facilities for California's growing communities. The Quimby Act allows local agencies to establish ordinances requiring residential subdivisions to provide land or "in-lieu-of" fees for park and recreation purposes. This State Act requires the dedication of land and/or imposes a requirement of fees for park and recreational purposes as a condition of approval of a tentative tract or parcel map. (CA Legislative Info, n.d.)

The Project proposed is a master-planned commerce center with commercial and industrial uses and does not involve a residential proponent; therefore, the Quimby Act is not applicable to the proposed Project.

B. Local Regulations

1. Palmdale Fire Code

As part of Palmdale Municipal Code (PMC) Chapter 8.04, Adoption of Health, Safety, and Technical Construction Codes, as amended, Title 32, Fire Code, of the Los Angeles County Code, adopting with certain changes and amendments the 2019 Edition of the California Fire Code and 2018 Edition of the International Fire Code, was adopted and is referred to as the Palmdale Fire Code. Relevant to the proposed Project, the Fire Code sets requirements for fire flow to buildings (City of Palmdale, 2022a, p. 4.15-7) (PMC, 2022)

2. Palmdale Municipal Code Chapter 3.45

Pursuant to PMC Chapter 3.45, Public Facility Development Impact Fee Requirements, the City collects Development Impact Fees for public facilities in order to mitigate environmental impacts derived from projects. The fees are required on applicable residential and non-residential developments, and funds collected via these fees are used to construct, expand, or rehabilitate public facilities within the City. (City of Palmdale, 2022a, p. 4.15-7) (PMC, 2022)

4.12.3 Basis for Determining Significance

Based on Section XV of Appendix G to the State CEQA Guidelines, the Project would result in a significant impact to public services if the Project or any Project-related component would:

a. *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:*

   i. *Fire protection?*

   ii. *Police protection?*

iii. Schools?

iv. Parks?

v. Other public facilities?

4.12.4 IMPACT ANALYSIS

Threshold a:	***Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:***
i.	***Fire protection?***

The LACFD provides fire protection, first response emergency, and medical services within the City. Although fire protection services are available to the Project site under existing conditions, the Project site is vacant and undeveloped. Therefore, implementation of the Project and the introduction of a master-planned commerce center to the Project site would place an additional demand on existing LACFD resources.

The Project would be conditioned by the City to conform to all mandatory local, State, and federal laws, ordinances, and standards relating to fire safety. Based on the building type, the buildings would be equipped with an Early Suppression, Fast Response (ESFR) fire sprinkler system. ESFR systems incorporate high volume, high-pressure sprinkler heads to provide necessary fire protection. While most other sprinkler systems are intended to control the growth of a fire, an ESFR sprinkler system is designed to suppress a fire. To suppress a fire does not necessarily mean that the system will extinguish the fire but rather it is meant to "knock" the fire back down to its point of origin. ESFR systems provide buildings with a high margin of fire safety and also allow more time for emergency responders to reach a fire incident before a fire spreads from its point of origin.

In addition, access routes to the Project site are required to be maintained throughout construction and buildout of the Project. As required by the PMC and the Fire Code, the Project site is designed to accommodate fire truck access by providing a 28-foot-wide fire lanes surrounding the proposed buildings.

Development of the proposed Project would nonetheless place an additional demand on existing LACFD resources and personnel by adding combustible materials to the site as part of Project implementation. As discussed in EIR Section 3.0, *Project Description*, the Project entails the construction of a master-planned commerce center with commercial and industrial uses. The Project could result in an increased number of emergency and public service calls due to the presence of new structures, and associated traffic, employees, and visitors. However, demand on services is not considered an impact under CEQA unless such demand causes physical changes in the environment, such as the need to construct a new or physically altered fire station. Although new fire protection facilities ultimately may be needed in the LACFD service area to serve full buildout of the City of

Palmdale, the Project would not in and of itself, trigger the need for a new fire station or physical alternations to existing fire stations. As such, no impacts would occur associated with fire protection facilities as a direct result of implementation of the Project.

The Project is required to adhere to PMC Chapter 3.45, which requires development applicants to pay public facility fees to address service demands of new development on the City's existing fire protection facilities. As of August 2022, the City assesses impact fees for fire protection facilities at $0.95 per square foot of new building area. Payment of the required Public Facility Development Impact Fee would ensure that the Project provides fair share funds for the provision of additional public services, including fire protection services, which may be applied to fire facilities and/or equipment to offset the incremental increase in the demand for fire protection services that would be created by the Project. Any new or physically altered facilities that could possibly be implemented using this funding is speculative and beyond the scope of analysis required to be conducted in this EIR for proposed Project.

Although implementation of the Project would place demand on fire protection services, it would not result in the need for new or physically altered fire protection facilities. Because implementation of the Project would not result in environmental impacts associated with fire protection facilities, no impact would occur.

Threshold a:	***Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:***
ii.	***Police protection?***

As previously indicated, the LACSD provides police protection services within the Project area. Implementation of the Project and the introduction of a master-planned commerce center to the Project site could result in an incremental increase in demands on service to address potential criminal activity such as burglaries, thefts, vandalism, etc. However, police protection services are not "facility-driven," meaning that the provision of such services are not heavily reliant on facilities in order to effectively patrol a beat. An expansion of, or intensification of development within a patrol beat does not necessarily result in the need for additional facilities if police officers and patrol vehicles are equipped with adequate telecommunications equipment in order to communicate with police headquarters. Thus, the Project would not directly result in the need for any new or expanded facilities for police protection services. (City of Palmdale, 2022a, p. 4.15-10)

Although the Project would not directly result in the need for new or expanded police protection facilities, the Project would result in an incremental increase in demand for police protection services. The Project is required to adhere to PMC Chapter 3.45, which requires development applicants to pay Development Impact Fees to address the impacts of new development on the City's existing services and facilities, including police protection. Payment of the required fee would ensure that the Project

provides fair share funds for the provision of additional police protection services, which may be applied to police facilities and/or equipment to offset the incremental increase in the demand for police protection services that would be created by the Project. Any new or physically altered facilities that could possibly be implemented using this funding is speculative and beyond the scope of analysis required to be conducted in this EIR for the Project.

Although implementation of the Project would place demand on police protection services, it would not result in the need for new or physically altered police protection facilities. Because implementation of the Project would not result in environmental impacts associated with police protection facilities, no impact would occur.

Threshold a:	***Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:***
iii.	***Schools?***

The Project does not propose any type of residential use or other land use that may directly generate a school-aged population. As previously indicated, the Project site is located within the service area of the PSD and the LSD for elementary and middle school services and the AVUHSD for high school services. However, because no residential uses are proposed as part of the Project, the Project would not result in a direct demand for new or expanded school services in the local area; thus, no impact would occur.

Notwithstanding, it is a reasonable assumption that the Project's buildings user(s) would employ residents living in the area, which could potentially place additional demand on public educational services and school facilities if households with school-aged children choose to reside in the school district due to the availability of these jobs. Although the PSD, LSD and/or AVUHSD may need to construct new school facilities to meet growing public education demands within their attendance boundaries, the Project would not directly or measurably cause or contribute to the need for new or expanded school facilities.

Although the Project would not result in a direct increase in the demand for school services, the Project Applicant would be required to contribute fees to the PSD, LSD and the AVUHSD pursuant to SB 50. Pursuant to SB 50, payment of school impact fees constitutes full and complete mitigation for any Project-related indirect effects to school services. Accordingly, no physical environmental impacts associated with school services would occur as a result of implementation of the Project. Any new or physically altered school facilities that could possibly be implemented using this funding is speculative and beyond the scope of analysis required to be conducted in this EIR for the proposed Project.

Although implementation of the Project may place an indirect demand on school services, it would not result in the need for new or physically altered school facilities. Because implementation of the Project would not result in environmental impacts associated with school facilities, no impact would occur.

Threshold a:	***Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:***
iv.	***Parks?***

The Project does not propose any type of residential use or other land use that may directly generate a population that would result in a demand for parkland resources, and no recreational facilities such as parks are proposed as part of the Project. While the Project would create economic opportunities by introducing new job opportunities to the Project site, it is anticipated that the employment base for both the construction and operational phases of the Project would come from the existing population in the City of Palmdale and surrounding area.

A 10-foot-wide Class I Trail to provide bicycle and pedestrian access is proposed along the Project site's frontage with Columbia Way / East Avenue M. This segment of the Class I Trail would provide a direct connection to the existing Sierra Highway Bike Trail located west of the Project site. Additionally, a five-foot-wide bike lane on both sides of proposed Public Streets A, B and C is proposed as part of the Project. As such, the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered recreational facilities, or due to the need for new or physically altered recreational facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks and recreational resources.

Threshold a:	***Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:***
v.	***Other public facilities?***

The Project would not directly substantially increase the residential population in the City and therefore is not expected to result in a demand for other public facilities/services, including libraries, community recreation centers, post offices, and animal shelters. As such, implementation of the proposed Project would not adversely affect other public facilities or require the construction of new or modified public facilities and no impact would occur.

The Project is required to adhere to PMC Chapter 3.45, which requires development applicants to pay Development Impact Fees to address usage demands from new development on the City's existing facilities. Payment of the required development impact fees would ensure that the Project provides fair share funds for the provision of other public facilities. Accordingly, no physical environmental impacts associated with the other public facilities would occur from Project implementation. Any new or physically altered public facilities that could possibly be implemented using development impact fee funding is speculative and beyond the scope of analysis required to be conducted in this EIR for the proposed Project.

4.12.5 Cumulative Impact Analysis

The cumulative impact analysis considers construction and operation of the proposed Project in conjunction with other development projects in the service areas for the LACFD, LACSD, PSD, LSD, AVUHSD for fire protection, police protection, and school services, as land uses outside the service area for these agencies would have no potential to contribute to Project-related cumulatively-considerable impacts. The cumulative study area for park facilities is a radius of two miles from the Project site, which is a reasonable distance to travel for park use from origin to destination. The cumulative study area for library services is the buildout of the City of Palmdale, as the Palmdale City Library is intended to serve residents within the City of Palmdale.

Fire Protection Services

Although new fire protection facilities ultimately may be needed in the LACFD service area to serve full buildout of the City of Palmdale, the proposed Project in and of itself would not trigger the need for a new fire station or physical alterations to existing fire stations. Additionally, the Project would result in an incremental increase in requests for service, which would affect the ability of the Fire Department to provide acceptable levels of service. These effects include an increased number of emergency and public service calls due to the development of a master-planned commerce center, increased traffic volumes, and an incremental increase in the local workforce. However, the proposed Project and all cumulative developments within the City of Palmdale or surrounding areas would be required to contribute Development Impact Fees to address the impacts of each development on the City's existing fire protection facilities. Mandatory fee contributions by the Project Applicant and cumulative developments would ensure that adequate funding is provided to the LACFD for the acquisition of additional facilities, equipment, and personnel, as needed.

It is not possible to identify environmental impacts that may be associated with the development of any new or physically altered fire protection facilities until a specific proposal and design for the facility is prepared by the LACFD. Accordingly, cumulative impacts due to the construction of new or expanded fire protection facilities are too speculative for evaluation in this EIR (CEQA Guidelines § 15145). Environmental effects of such fire protection facilities and any associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded fire protection facilities put forth by the LACFD. Accordingly, impacts would be less than cumulatively considerable.

Sheriff Protection Services

Although the Project site would be adequately served by sheriff facilities, the additional demand for services generated by the Project, when considered in conjunction with other on-going development throughout the City of Palmdale, has the potential to adversely affect service response times. However, the proposed Project and all cumulative developments within the City of Palmdale or surrounding areas would be required to contribute Development Impact Fees to address the impacts of each development on the City's existing sheriff protection facilities. Mandatory fee contributions by the Project Applicant and cumulative developments would ensure that adequate funding is provided to the LACSD for the acquisition of additional sheriff protection facilities, equipment, and personnel, as needed.

It is not possible to identify environmental impacts that may be associated with the development of any new or physically altered sheriff's station facilities until a specific proposal and design for the facility is prepared by the LACSD. Accordingly, cumulative impacts due to the construction of new or expanded sheriff's stations are too speculative for evaluation in this EIR (CEQA Guidelines § 15145). Environmental effects of such police protection facilities and any associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded fire protection facilities put forth by the LACSD. Accordingly, impacts would be less than cumulatively considerable.

School Services

The proposed Project would entail development of the site with a master-planned commerce center, which is not a land use that involves residential development; therefore, the Project would not result in a direct demand for school services or new or expanded school facilities. Although the Project may indirectly result in an increase in school-aged children within the PSD, LSD and/or the AVUHSD, the Project Applicant would be required to contribute fees as required by SB 50. Other cumulative developments, including both residential and non-residential developments, would similarly be required to contribute fees pursuant to SB 50. Pursuant to SB 50, payment of school impact fees constitutes full and complete mitigation for Project-related impacts to school services. As such, and with mandatory fee payment, the Project's impacts to school services and facilities would be less than cumulatively considerable.

Other Public Facilities

The Project would not directly substantially increase the residential population in the City and therefore is not expected to result in a demand for other public facilities/services.

The proposed Project and all cumulative developments within the City of Palmdale or surrounding areas would be required to contribute Development Impact Fees to address the impacts of each development on the City's existing public facilities. Mandatory fee contributions by the Project Applicant and cumulative developments would ensure that adequate funding is provided. In addition, the Project and all cumulative developments in the City would contribute property taxes.

Accordingly, cumulative impacts due to the construction of new or expanded other public facilities are too speculative for evaluation in this EIR (CEQA Guidelines § 15145). Environmental effects of such facilities and any associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded facilities. Accordingly, impacts would be less than cumulatively considerable.

4.12.6 Significance of Impacts

Threshold a.i: No Impact. The Project would place demand on fire protection services but would not result in the need for new or physically altered fire protection facilities. No impact would occur.

Threshold a.ii: No Impact. The Project would place demand on sheriff's services but would not result in the need for new or physically altered sheriff station facilities. No impact would occur.

Threshold a.iii: No Impact. The Project would not directly generate a residential population, and thus would not directly or indirectly impact school services in the local area or cause the need for new or physically altered school facilities. No impact would occur.

Threshold a.iv: Less than Significant Impact. The Project does not propose any residential uses or other land use that may directly or indirectly generate a population that would increase the use of existing neighborhood and regional parks or other recreational facilities such that they would experience physical change or cause the need to construct or physically alter a park or other recreation facility. However, the Project's workforce may utilize park facilities during their lunch hour or workday breaks, therefore, although the Project as well as other development projects in the area would be required to pay Development Impact fees, impacts are deemed to be less than significant.

Threshold a.v: No Impact. The Project would not directly generate a residential population, and thus would not directly or indirectly impact other public facilities in the local area such that they would experience physical change or cause the need to construct or physically alter a public facility. No impact would occur.

4.12.7 Mitigation

Project impacts to public services would be less than significant; therefore, no mitigation is required.

4.12.8 Design Features (DF) and Regulatory Requirements (RR)

The City of Palmdale is required to assure that implementing development complies with the assumptions relied upon herein and applicable regulatory requirements pertaining to the topic of Public Services, which include the following regulatory requirements and design features. The Project shall be conditioned to implement the following design features and regulatory requirements as part of the City's Conditions of Approval for the Project.

PS RR-1 As a condition of Project approval, the proposed Project shall conform to all mandatory local, State, and federal laws, ordinances, and standards relating to fire safety. Among other items, these requirements include conformance with the Uniform Building Code Section 1503, which requires that all buildings be constructed with fire retardant roofing material. Access routes in the Project area would be required to be maintained throughout construction and buildout of the proposed Project.

PS RR- 2 The Project shall adhere to PMC Chapter 3.45, Public Facility Development Impact Fee Requirements, which requires payment of a Development Impact Fee to assist the City in providing for fire protection facilities, including fire stations; providing for police protection facilities; and providing for other public services and facilities. Payment of the Development Impact Fees would ensure that funds are available for capital improvements, such as land/equipment purchases and fire station construction.

PS RR-3 Prior to issuance of occupancy permits, the Project Applicant shall contribute appropriate school impact fees to the Palmdale School District (PSD), the Lancaster School District (LSD), and the Antelope Valley Unified School District (AVUHSD) at the rates established by the PSD, the LSD, and the AVUHSD, as required by Public Education Code § 17072.10-18.

4.13 TRANSPORTATION

The analysis and information in this Subsection is based on the "Antelope Valley Commerce Center Traffic Analysis," dated November 10, 2023, prepared by Urban Crossroads, Inc. (Urban Crossroads), attached to this EIR as *Technical Appendix L1,* and the "Antelope Valley Commerce Center Vehicle Miles Traveled (VMT) Analysis," dated October 5, 2023, and attached to this EIR as *Technical Appendix L2*. All references used in this Subsection are included in EIR Section 7.0, *References*.

Changes to the California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which requires all lead agencies to adopt Vehicle Miles Traveled (VMT) as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. Pursuant to CEQA Guidelines Section 15064.3(a), "…a project's effect on automobile delay shall not constitute a significant environmental impact." This statewide mandate went into effect July 1, 2020, consistent with Senate Bill 743 (SB 743). At the time of this analysis, the City of Palmdale has not formally adopted its own guidelines and impact thresholds, and instead utilizes the County of Los Angeles' Transportation Impact Analysis Guidelines as the City's guidelines and thresholds for evaluating VMT and transportation-related environmental effects. (Urban Crossroads, 2023g, p. 2)

4.13.1 EXISTING CONDITIONS

A. *Existing Vehicle Miles Traveled*

The County Guidelines identify the Southern California Association of Governments (SCAG) model as the appropriate tool for conducting VMT analysis for land use projects in Los Angeles County. The SCAG 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) trip-based model is a useful tool to estimate VMT as it considers interaction between different land uses based on socio-economic data such as population, households, and employment. The current SCAG model has a base year of 2012 and a forecast year of 2040 and can be used to estimate VMT for Phase I of the proposed Project and for Project Buildout (Phases II through IV). The 2040 model contains the planned transportation improvements in the RTP and growth projections in the SCS. (Urban Crossroads, 2023g, p. 3)

For commercial and industrial projects in the City of Palmdale and consistent with County Guidelines, Baseline VMT is defined as a measurement of Home-Based Work (HBW) VMT per employee, which reflects all commute trips for places of employment in Los Angeles County. All HBW auto vehicle VMT attracted by the project is divided by the total employment to get the efficiency metric of HBW VMT per employee. (Urban Crossroads, 2023g, p. 4)

Based on County Guidelines, the City of Palmdale utilizes the following impact threshold:

- The project's employment VMT per employee exceeding 16.8 percent below the Baseline employment VMT per employee for the Los Angeles County area are considered to have a significant VMT impact.

For purposes of VMT analyses, the County Guidelines identifies the Baseline condition as the year the analysis is conducted, in this case 2022.[1] Using the SCAG model base year (2016) and cumulative year (2040), the Los Angeles County Baseline (2022)[2] VMT was calculated using straight line linear interpolation as to be 16.3 VMT per employee. The threshold of 16.8 percent below existing Countywide VMT per employee is 13.6 VMT per employee. (Urban Crossroads, 2023g, p. 4)

B. Study Area Description

The roadway classifications and planned, ultimate roadway cross-sections of the major roadways within the Project's transportation study area, as identified in the City of Palmdale General Plan Circulation and Mobility Element are identified on Figure 4.13-1, *Palmdale Roadway Classification Map*. The 29 study area intersections listed in Table 4.13-1, *Intersection Analysis Locations*, were selected for evaluation as the Project's study area based on the City of Palmdale's judgement representing intersections with a reasonable potential to be affected by the Project's vehicular traffic. At a minimum, the study area includes intersections where the proposed Project is anticipated to contribute 50 or more peak hour trips per the County's traffic study guidelines. The "50 peak hour trip" criteria represent a minimum number of trips at which a typical intersection would have the potential to be substantively affected by a given development proposal. The 50 peak hour trip criterion is a traffic engineering rule of thumb that is accepted and widely used within Los Angeles County for estimating a potential area of influence (i.e., study area). (Urban Crossroads, 2023f, p. 6)

Table 4.13-1 Intersection Analysis Locations

#	Intersection	Jurisdiction	CMP?
1	SR-14 SB Ramps & Avenue M	County, Lancaster, Caltrans	No
2	SR-14 NB Ramps & Avenue M	Palmdale, Lancaster, Caltrans	No
3	10th St. West & Avenue M	Palmdale, Lancaster	No
4	Sierra Hwy. & Avenue L West	Lancaster	No
5	Sierra Hwy. & Avenue L East	Lancaster	No
6	Sierra Hwy. & Avenue M	Palmdale, Lancaster	No
7	4th St. & Avenue M/Columbia Wy.	Palmdale, Lancaster	No
8	Street A and Private Drive D	Palmdale	No
9	Street A & Driveway 1	Palmdale	No
10	Street A & Driveway 2	Palmdale	No
11	Street A & Driveway 3	Palmdale	No
12	Street A & Driveway 4	Palmdale	No
13	6th St./Driveway 5 & Avenue M	Palmdale, Lancaster	No
14	7th St./Driveway 6 & Avenue M	Palmdale, Lancaster	No
15	8th St./Driveway 7 & Avenue M	Palmdale, Lancaster	No
16	Challenger Wy./10th St. East & Avenue L	Palmdale, Lancaster	No

[1] 2022 is the baseline year because the NOP for this EIR was released in 2022 and the NOP date establishes the existing condition.

[2] Although the adopted County Guidelines state North County baseline, it has been recommended through consultation with the County's Traffic Consultant that the entire County baseline be used as this will be consistent with an update to the County Guidelines currently in process.

#	Intersection	Jurisdiction	CMP?
17	Challenger Wy./10th St. East & Avenue M	Palmdale, Lancaster	No
18	Street B & Driveway 8	Palmdale	No
19	Street B & Driveway 9	Palmdale	No
20	Street B & Driveway 10	Palmdale	No
21	Street B & Driveway 11	Palmdale	No
22	Street B & Driveway 12	Palmdale	No
23	Street B & Driveway 13	Palmdale	No
24	20th St. & Avenue M	Palmdale	No
25	Site 2 Rd. & Avenue M	Palmdale	No
26	SR-14 SB Ramps & Avenue N	County, Caltrans	No
27	SR-14 NB Ramps & Avenue N	Palmdale, Caltrans	No
28	10th St. West & Avenue N	Palmdale	No
29	Sierra Hwy. & Avenue N	Palmdale	No

(Urban Crossroads, 2023f, Table 1-1)

C. *Goods Movement and City of Palmdale's Truck Route*

According to the City's General Plan, goods within and passing through Palmdale move via truck and the Union Pacific Railroad (UPRR). Designated truck routes prioritize automobile and heavy vehicle usage. Commercial vehicles with a manufacturer's gross vehicle weight rating of 10,000 or more must use designated truck routes within City limits, as designated by the PMC, unless they are making pickups or deliveries of goods, wares, or merchandize to or from a building, or for delivering materials to support construction. (City of Palmdale, 2023, p. 147)

The City's General Plan Circulation and Mobility Element identifies truck routes to accommodate the regional circulation needs of large trucks. Vehicles that weigh more 10,000 pounds must use the following truck routes in the City as shown on Figure 4.13-2, *Designated Truck Route Network* (City of Palmdale, 2023, p. 166). As shown on Figure 4.13-2, Avenue M and Sierra Highway are the closest truck routes to the Project site.

- 10th Street West from Rancho Vista Boulevard / Avenue P to West Columbia Way (Avenue M)
- Sierra Highway from SR-14 to West Columbia Way (Avenue M)
- 50th Street East from Palmdale Boulevard to Avenue L
- West Columbia Way (Avenue M) from 70th Street West to 90th Street East
- Rancho Vista Boulevard / Avenue P from 10th Street West to 90th Street East
- City Ranch Road, Rayburn Road, and Avenue R from the Palmdale Landfill to Sierra Highway
- Avenue S from Tierra Subida Avenue to Sierra Highway
- Pearblossom Highway from Sierra Highway to Fort Tejon Road (SR-138)
- Avenue T from Fort Tejon Road (SR-138) to 90th Street East
- Palmdale Boulevard from SR-14 to 90th Street East
- SR-14 through City limits
- Tierra Subida Avenue from Avenue S to Rayburn Road

- Fort Tejon Road (SR-138) from 75th Street East to 47th Street East
- 47th Street East (SR-138) from Fort Tejon Road to Palmdale Boulevard
- 90th Street East from Avenue T to Avenue L

D. Existing Transit Service

According to the City's General Plan, public transit is designed to serve intra-county and local travel needs. The existing transit system mostly caters to regional commute patterns (City of Palmdale, 2023, p. 146). The City of Palmdale is currently served by the Antelope Valley Transit Authority (AVTA), a public transit agency serving various jurisdictions within Los Angeles County. Based on a review of the existing transit routes within the vicinity of the Project site, AVTA Routes 4, 5, 785 and 786 run along Avenue M and Sierra Highway within the vicinity of the Project site. Transit service is reviewed and updated by AVTA periodically to address ridership, budget, and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate. Existing AVTA transit routes and the planned priority transit network are shown on Figure 4.13-3, *Existing and Planned Transit Network Map*.

E. Future Transportation Projects

Following is a description of future transportation projects planned for the area.

1. California High Speed Rail

The California High-Speed Rail Authority (CHSRA) is responsible for planning, designing, building and operation of a high-speed rail system that will connect the mega-regions of the State. At this time, no schedule has been established for completing construction of the high-speed rail line sections between Bakersfield and Palmdale or between Palmdale and Los Angeles Union Station. Due to Palmdale's location along the corridor, linking the Central Valley and Los Angeles basin, accommodation of future high-speed rail is a consideration of the City's Circulation and Mobility Element. To accommodate the HSR station, the Palmdale Transportation Center would be relocated south of the existing location to between Avenue Q and Palmdale Boulevard. (City of Palmdale, 2023, p. 143)

2. High Desert Corridor

The High Desert Corridor (HDC) is a proposed project to create a high-capacity connection between SR-14 in Palmdale and Interstate 15 (I -15) in Victorville, continuing as an expressway to join with SR-18 in Apple Valley, which would be implemented after the General Plan horizon year. The HDC project would also include bicycle facilities, extending 36 miles along the corridor from US 395 in Adelanto to 20th Street East, providing a bike route connection to the Palmdale Transportation Center. Some of the right-of-way required for the project may also accommodate an HOV lane in each direction, plus a high- speed passenger rail line. (City of Palmdale, 2023, p. 143)

3. *Brightline West Connection to Las Vegas*

The proposed high-speed rail feeder service would be modeled on the Brightline service currently operating in Florida between Fort Lauderdale and Miami. The high-speed rail feeder may be built within the HDC right-of-way, primarily within the highway median. The stop serving Brightline West would be at the Palmdale Multimodal Rail Station to be located south of the existing Palmdale Transportation Center between Avenue Q and Palmdale Boulevard. The initial Southern California station is proposed to be in Victorville and intends to add stations and provide connections to Metrolink and future California High-Speed Rail. (City of Palmdale, 2023, p. 143)

4. *Antelope Valley Line Study*

The Los Angeles County Metropolitan Transportation Authority (Metro) is a member agency of the Southern California Regional Rail Authority (SCRRA). Metro, in collaboration with SCRRA, is studying potential opportunities to add more rail service from Lancaster and Palmdale to Los Angeles. The Antelope Valley Line Study has two objectives: to look at increasing the frequency of the Metrolink service; and to develop a phased and prioritized approach for capital improvements based on benefits, costs and impacts in Los Angeles County. The average speed for this line is approximately 40 miles per hour, and passenger rail travel time between Palmdale and Los Angeles Union Station is approximately two hours. The Antelope Valley Line is currently Metrolink's third busiest line with approximately 7,000 passengers per weekday. The line is facing a variety of service challenges due to its aging infrastructure, which was constructed through mountainous terrain with single track in many areas. The final report identifies rail infrastructure projects needed to deliver the track capacity necessary for increased service levels, including potential double-tracking of portions of the line that are currently single track, extension of passing sidings, additional platforms at stations, and improved signaling systems. Adding late night train service, more frequent service and bidirectional service are some of the recommendations likely to move forward toward implementation. (City of Palmdale, 2023, p. 144)

F. ***Existing Bicycle and Pedestrian Facilities***

According to the City's General Plan, the City's bicycle network is anchored by a 4.7-mile Class I bicycle path located along Sierra Highway from Technology Drive, continuing north into the City of Lancaster. Class I bike paths are multi-use paths physically separated from motor vehicle traffic. While the path provides a regional link, the facility is disconnected from communities outside of central Palmdale. (City of Palmdale, 2023, p. 145)

As shown on Figure 4.13-3, the Sierra Highway Trail is located west of the Project site, adjacent to the UPRR mainline tracks and easement and adjacent to Sierra Highway. As shown on Figure 4.13-4, *Existing and Planned Bicycle Network Map*, there are limited pedestrian facilities in the vicinity of the Project site.

4.13.2 REGULATORY SETTING

A. *State Regulations*

1. *Assembly Bill 1358 – Complete Streets Act*

In September 2008, Governor Schwarzenegger signed into law Assembly Bill 1358 (AB 1358), the Complete Streets Act. AB 1358 requires that the legislative body of a city or county, upon any substantive revision of the circulation element of the general plan, modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban, or urban context of the general plan. By requiring new duties of local officials, AB 1358 imposes a State-mandated local program. AB 1358 required the Office of Planning and Research (OPR) to prepare or amend guidelines for a legislative body to accommodate the safe and convenient travel of users of streets, roads, and highways in a manner that is suitable to the rural, suburban, or urban context of the general plan, and in doing so to consider how appropriate accommodation varies depending on its transportation and land use context. AB 1358 authorized OPR, in developing these guidelines, to consult with leading transportation experts, including, but not limited to, bicycle transportation planners, pedestrian planners, public transportation planners, local air quality management districts, and disability and senior mobility planners (CA Legislative Info, n.d.).

2. *Statewide Transportation Improvement Program*

The Statewide Transportation Improvement Program (STIP) is a multi-year capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the Transportation Investment Fund and other funding sources. STIP programming generally occurs every two years. The programming cycle begins with the release of a proposed fund estimate in July of odd-numbered years, followed by California Transportation Commission (CTC) adoption of the fund estimate in August (odd years). The fund estimate serves to identify the amount of new funds available for the programming of transportation projects. Once the fund estimate is adopted, Caltrans and the regional planning agencies prepare transportation improvement plans for submittal by December 15th (odd years). Caltrans prepares the Interregional Transportation Improvement Plan (ITIP) and regional agencies prepare Regional Transportation Improvement Plans (RTIPs). Public hearings are held in January (even years) in both northern and southern California. The STIP is adopted by the CTC by April (even years) (Caltrans, n.d.).

3. *Senate Bill 743*

Senate Bill 743 (SB 743, Steinberg, 2013), which was codified in Public Resources Code Section 21099, required changes to the implementing State CEQA Guidelines regarding the analysis of transportation impacts. As one appellate court explained: "During the last 10 years, the Legislature has charted a course of long-term sustainability based on denser infill development, reduced reliance on individual vehicles and improved mass transit, all with the goal of reducing greenhouse gas emissions. Section 21099 is part of that strategy…" (*Covina Residents for Responsible Development v. City of*

Covina (2018) 21 Cal.App.5th 712, 729.) Pursuant to Section 21099, the criteria for determining the significance of transportation impacts must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." (*Id*., subd. (b)(1); see generally, adopted State CEQA Guidelines, § 15064.3, subd. (b) [Criteria for Analyzing Transportation Impacts].) To that end, in developing the criteria, OPR has proposed, and the California Natural Resources Agency (CRNA) has certified and adopted, changes to the State CEQA Guidelines that identify VMT as the most appropriate metric to evaluate a project's transportation impacts. With the CRNA's certification and adoption of the changes to the State CEQA Guidelines, automobile delay, as measured by LOS and other similar metrics, generally no longer constitutes a significant environmental effect under CEQA as of July 1, 2020. (Public Resources Code § 21099, subd. (b)(3)) (OPR, 2018b).

4. Senate Bill 325 - Transportation Development Act (TDA, Mills-Alquist-Deddeh Act)

The Mills-Alquist-Deddeh Act (Senate Bill 325 (SB325)) was enacted by the California Legislature to improve existing public transportation services and encourage regional transportation coordination. Known as the Transportation Development Act (TDA) of 1971, this law provides funding to be allocated to transit and non-transit related purposes that comply with regional transportation plans. TDA established two funding sources; the Local Transportation Fund (LTF), and the State Transit Assistance (STA) fund. Providing certain conditions are met, counties with a population under 500,000 (according to the 1970 federal census) may also use the LTF for local streets and roads, construction, and maintenance. The STA funding can only be used for transportation planning and mass transportation purposes (Caltrans, n.d.).

5. Road Repair and Accountability Act of 2017

On April 28, 2017, Governor Brown signed Senate Bill 1 (SB 1) (Chapter 5, Statutes of 2017), known as the Road Repair and Accountability Act of 2017. SB 1 augments the base of the State Transit Assistance program essentially doubling the funding for this program. To provide for SB 1 reporting and transparency, transit agencies are asked to work with Caltrans to report on planned expenditures for these augmented funds (Caltrans, n.d.).

B. Regional and Local Regulations

1. SCAG Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal)

The SCAG is a regional agency established pursuant to California Government Code § 6500, also referred to as the Joint Powers Authority law. SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). The Project site is within SCAG's regional authority. On September 3, 2020, SCAG adopted the 2020-2045 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) ("RTP/SCS"); also referred to herein as "Connect SoCal") with goals to: 1) Encourage regional economic prosperity and global competitiveness; 2) Improve mobility, accessibility, reliability, and travel safety for people and goods; 3) Enhance the preservation, security, and resilience of the regional

transportation system; 4) Increase person and goods movement and travel choices within the transportation system; 5) Reduce greenhouse gas emissions and improve air quality; 6) Support healthy and equitable communities; 7) Adapt to a changing climate and support an integrated regional development pattern and transportation network; 8) Leverage new transportation technologies and data-driven solutions that result in more efficient travel; 9) Encourage development of diverse housing types in areas that are supported by multiple transportation options; and 10) Promote conservation of natural and agricultural lands and restoration of habitats (SCAG, 2020, p. 9). Performance measures and funding strategies also are included to ensure that the adopted goals are achieved through implementation of the RTP.

Connect SoCal includes long-range regional transportation plans, regional transportation improvement programs, regional housing needs allocations, and other plans for the region. Connect SoCal also provides objectives for meeting emissions reduction targets set forth by the California Air Resources Board (CARB); these objectives were provided in a direct response to Senate Bill 375 (SB 375) which was enacted to reduce greenhouse gas emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning (SCAG, 2020) Connect SoCal is updated periodically to allow for the consideration and inclusion of new transportation strategies and methods. The Goods Movement Technical Report of Connect SoCal is applicable to the Project because the Project entails a use that is closely associated with, and relies directly on, the goods movement system (e.g., manufacturing, construction, retail trade, wholesale trade and transportation, and warehousing). In April 2018, SCAG published a document entitled, "Industrial Warehousing in the SCAG Region". According to the document, the SCAG region is a vibrant hub for international and domestic trade because of its large transportation base and extensive multimodal transportation system. The SCAG region's freight transportation system includes warehouses and distribution centers; the Ports of Los Angeles, Long Beach, and Hueneme; airports; rail intermodal terminals; rail lines, and local streets, State highways, and interstates. Together the system enables the movement of goods from source to market, facilitating uninterrupted global commerce. The region is home to approximately 34,000 warehouses with 1.17 billion square feet (s.f.) of warehouse building space, and undeveloped land that could accommodate an additional 338 million s.f. of new warehouse building space. These regions attract robust logistics activities and are a major reason the region is a critical mode in the global supply chain. (SCAG, 2018, ES-1)

2. City of Palmdale General Plan

The Palmdale 2045 General Plan's Circulation and Mobility Element presents the City's long-range approach to transportation, addressing access and mobility within the City. The Circulation and Mobility Element provides a roadway classification system. Corresponding cross-sections, and recommended future networks are provided for motor vehicles, walking, biking, riding transport, and the movement of freight. Goals, policies, and actions provide a framework for advancing health and safety, access to services and opportunities, sustainability, and economic vitality through transportation. Circulation and Mobility Element goals are listed below. (City of Palmdale, 2023, p. 139)

- Goal CM-1. Build and maintain a transportation system that is safe and comfortable for travelers of all modes regardless of age or ability.
- Goal CM-2. Build and maintain a transportation system that accommodates future growth and maintains transportation networks for all modes.
- Goal CM-3. Build and maintain a transportation system that provides affordable, equitable, and efficient access to employment centers and essential services.
- Goal CM-4. Build and maintain a transportation system that enhances quality of life and public health.
- Goal CM-5. Build and maintain a transportation system that fosters a more active and vibrant downtown.
- Goal CM-6. Build and maintain a transportation system that leverages the City's natural setting and reduces impacts to the environment.
- Goal CM-7. Proactively prepare for the future, ensuring that implementation of transportation innovations and regional projects align with the City's vision.
- Goal CM-8. Maintain the purpose and need of the essential functions of the City's transportation system.

3. City of Palmdale Municipal Code

❑ Chapter 17.101 Transportation Demand Management

Palmdale Municipal Code (PMC) Chapter 17.101 discusses the development standards for any development project as it relates to traffic demands. Prior to approval of any development project, the applicant must make provisions for all applicable transportation demand management and trip reduction measures. All facilities and improvements constructed or otherwise shall be maintained in a state of good repair. The property owner shall be responsible for complying with the provisions of this Chapter either directly or by delegating such responsibility as may be appropriate to a tenant or to an agent. (City of Palmdale, 2022b, p. 4.17-11)

❑ Chapter 17.87 Off-Street Parking

PMC Chapter 17.87 discusses the amount, location, and design of parking and loading access for motor vehicles and bicycles. It also serves to ensure the provision of adequate, accessible, secure, properly lighted, and well maintained and screened off-street parking facilities. Properly provided and designed parking will facilitate the intended use of the property; reduce traffic congestion and safety concerns; protect the neighborhoods from the effects of vehicular noise and traffic generated by adjacent nonresidential land use district; assure maneuverability of emergency vehicles; and provide a positive visual experience. (City of Palmdale, 2022b, p. 4.17-11)

4.13.3 Basis for Determining Significance

According to Section XVII of Appendix G to the CEQA Guidelines, the proposed Project would result in a significant impact to transportation and traffic if the Project or any Project-related component would:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b);

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or,

d) Result in inadequate emergency access.

Regarding Threshold (b), which relates to VMT, based on County Guidelines, the City utilizes the following impact threshold:

- The project's employment VMT per employee exceeding 16.8 percent below the existing employment VMT per employee for the Los Angeles County area are considered to have a significant VMT impact. (Urban Crossroads, 2023g, p. 4)

4.13.4 IMPACT ANALYSIS

County Guidelines assume local serving retail use to have a less than significant impact on VMT, provided the retail development does not include stores larger than 50,000 square feet. The Project's retail (commercial) component is conceptual at this time and is analyzed to include up to 60,984 total square feet of local serving retail uses such as fast-food users with and without drive-thru window service, a coffee shop, and other local serving retail uses. Given the overall total square footage, it is reasonable to expect that a single store would not occupy a space greater than 50,000 s.f. The commercial component of the Project is therefore presumed to meet the Retail Project Site screening criteria, thus a full VMT analysis is not required for the Commercial (retail) component of the proposed Project. (Urban Crossroads, 2023g, pp. 2-3)

As discussed above in Subsection 4.13.1, the County Guidelines identifies that the Baseline VMT applied in the VMT analysis should be consistent with the year of the analysis, or in this case 2022. Using the SCAG model base year (2016) and cumulative year (2040), the Los Angeles County baseline (2022) VMT was calculated using straight line linear interpolation to be 16.3 VMT per employee. The threshold of 16.8% below existing Countywide VMT per employee is 13.6 VMT per employee. (Urban Crossroads, 2023g, p. 4)

To estimate Project generated VMT, standard land use information such as total building square footage must first be converted into a SCAG travel demand forecasting model compatible dataset. The SCAG model utilizes socio-economic data (SED) (e.g., population, households and employment) instead of land use information for the purposes of vehicle trip estimation. Industrial land use information for the Project has been converted to SED and input into the Project's Traffic Analysis Zone (TAZ) to calculate Project generated HBW VMT. Table 4.13-2, *Phase I Employee Estimates* and

Table 4.13-3, *Project Buildout Employee Estimates*, summarize the SED inputs used to reflect the Phase I and the Project Buildout conditions, respectively. (Urban Crossroads, 2023g, p. 4)

Table 4.13-2 Phase I Employee Estimates

Land Use	Quantity	Employment Factor[3]	Employees
Industrial	2,373,226 s.f.	1 employee per 1,000 s.f.	2,373

(Urban Crossroads, 2023g, Table 2)

Table 4.13-3 Project Buildout Employee Estimates

Land Use	Quantity	Employment Factor	Employees
Industrial	8,265,510 s.f	1 employee per 1,000 s.f.	8,266

(Urban Crossroads, 2023g, Table 3)

In order to develop the traffic characteristics of the proposed Project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) were used to estimate the trip generation for actual vehicles. The proposed Project is anticipated to generate a total of 26,214 daily vehicle trips, far exceeding the 110 daily vehicle trip VMT screening threshold (see Attachment B, Tables B-1, B-2, and B-3 of the VMT Analysis for the Project included as *Technical Appendix L2*). (Urban Crossroads, 2023g, p. 2)

B. Project Trip Generation

Trip generation represents the amount of traffic that is attracted and produced by a development and is based upon the specific land uses for a given project. At the time this EIR was prepared, the future user(s)/occupant(s) of the proposed buildings were unknown. Based on the design of the buildings in Phase I, the building users are expected to operate with the use characteristics described in EIR Subsection 3.6.2, *Operational Characteristics*. For future development in Phases II, III, and IV, reasonable assumptions have been made regarding the types of building users and their operational characteristics, as also described in Subsection 3.6.2. The reasonably assumed use characteristics were used to calculate vehicle trip generation.

As shown in Table 4.13-4, *Project Trip Generation Summary (PCE)*, Phase I of the proposed Project is anticipated to generate 8,006 two-way trip-ends per day in actual vehicles, with 941 actual AM peak hour trips and 1,178 actual PM peak hour trips. Phases II – IV of the Project are anticipated to generate 18,208 two-way trip-ends per day in actual vehicles, with 2,017 actual AM peak hour trips and 1,946 actual PM peak hour trips. Project buildout is anticipated to generate 26,214 two-way trip-ends per day in actual vehicles, with 2,958 actual AM peak hour trips and 3,124 actual PM peak hour trips. (Urban Crossroads, 2023f, p. 55) Phase I of the Project is anticipated to generate 9,296 two-way passenger car equivalent (PCE) trip-ends per day with 1,017 PCE AM peak hour trips and 1,249 PM peak hour trips.

[3] The Project's VMT Analysis uses the employment ratio for Light Industrial from LC City VMT Calculator. https://ladot.lacity.org/sites/default/files/documents/vmt_calculator_documentation-2020.05.18.pdf

Phases II - IV of the Project are anticipated to generate 22,086 two-way passenger car equivalent (PCE) trip-ends per day with 2,390 PCE AM peak hour trips and 2,206 PM peak hour trips. Project buildout is anticipated to generate 31,382 two-way passenger car equivalent (PCE) trip-ends per day with 3,407 PCE AM peak hour trips and 3,455 PM peak hour trips. (Urban Crossroads, 2023f, Tables 4-2 through 4-5)

Table 4.13-4 Project Trip Generation Summary (PCE)

Land Use	Quantity Units	AM Peak Hour			PM Peak Hour			
		In	Out	Total	In	Out	Total	Daily
Phase I (2025)								
General Light Industrial	103.418 TSF							
-Passenger Cars:		67	9	76	9	57	66	478
- Total Truck Trips (PCE)		1	1	2	1	1	2	68
Warehousing	516,396 TSF							
-Passenger Cars		62	15	77	18	60	78	574
-Total Truck Trips (PCE)		15	11	26	20	18	38	792
High-Cube Fulfillment (Sort)	680.469							
-Passenger Cars		473	105	578	312	491	803	4,254
-Total Truck Trips (PCE)		17	17	34	17	17	34	330
High-Cube Cold Storage	251.057 TSF							
-Passenger Cars		19	1	20	5	18	23	344
-Total Truck Trips (PCE)		6	13	19	9	9	18	448
High-Cube Fulfillment (Non-Sort)	753.171							
-Passenger Cars		84	14	98	43	70	113	1,190
-Total Truck Trips (PCE)		19	20	39	10	10	20	442
Manufacturing	68.715							
-Passenger Cars		34	10	44	15	34	49	296
-Total Truck Trips (PCE)		2	2	4	2	3	5	80
Industrial Component Passenger Cars		739	154	893	402	730	1,132	7,136
Industrial Component Trucks		60	64	124	59	58	117	2,160
Phase I (2025) Total Trips (PCE)[2]		**799**	**218**	**1,017**	**461**	**788**	**1,249**	**9,296**
Phases II through IV (2030)								
High-Cube Parcel Hub	1,630.362 TSF							
-Passenger Cars		497	497	995	642	303	946	6,604
-Total Truck Trips (PCE)		186	187	373	170	78	248	2,406
Manufacturing	137.448							
-Passenger Cars		69	21	90	30	68	98	592
-Total Truck Trips (PCE)		7	4	11	4	7	11	158

Land Use	Quantity Units	AM Peak Hour			PM Peak Hour			
		In	Out	Total	In	Out	Total	Daily
Warehousing	412.342							
-Passenger Cars		49	12	61	14	48	62	458
-Total Truck Trips (PCE)		12	10	22	16	15	31	630
High-Cube Storage	928.033							
-Passenger Cars		71	4	75	17	66	83	1,272
-Total Truck Trips (PCE)		20	46	66	33	33	66	1,654
High-Cube Fulfillment (Non-Sort)	2,784.099 TSF							
-Passenger Cars		312	51	363	158	259	417	4,400
-Total Truck Trips (PCE)		71	72	143	35	36	71	1,632
Commercial Retail	53.984	58	35	93	137	143	280	3,646
-Internal Capture		-5	-5	-10	-47	-34	-81	-1,056
-Pass-by Reduction (50% AM; 55% PM/Daily)		-31	-31	-62	-14	-14	-28	-422
Fast-Food Restaurant without Drive-Thru	2.500 TSF	63	45	108	42	42	84	1,126
-Internal Capture		-2	-2	-4	-12	-16	-28	-360
-Pass-by Reduction (50% AM; 55% PM/Daily)		-31	-31	-62	-14	-14	-28	-422
Fast-Food Restaurant with Drive-Thru	2.500 TSF	57	55	112	43	40	83	1,170
-Internal Capture		-2	-2	-4	-11	-16	-27	-350
-Pass-by Reduction (50% AM; 55% PM/Daily)		-28	-28	-56	-13	-13	-26	-452
Coffee/Donut Shop with Drive-Thru	2.000 TSF	88	84	172	39	39	78	1,068
-Internal Capture		-1	-1	-2	-11	-15	-26	-346
-Pass-by Reduction (90% AM; 98% PM/Daily)		-78	-78	-156	-24	-24	-48	-708
Commercial Component Total		119	72	191	85	88	173	2,208
Industrial Component Passenger Cars		998	585	1,584	861	744	1,606	13,326
Industrial Component Trucks		296	319	615	258	168	427	6,480
Phase I through IV Total Trips (PCE)[2]		**1,413**	**976**	**2,390**	**1,204**	**1,001**	**2,206**	**22,086**
Commercial Component Passenger Cars		119	72	191	85	88	173	2,280
Industrial Component Passenger Cars		1,737	739	2,477	1,263	1,474	2,738	20,462
Industrial Component Trucks		356	383	739	317	227	544	8,640
Project Buildout Total Trips (PCE)[2]		**2,212**	**1,194**	**3,407**	**1,665**	**1,789**	**3,455**	**31,382**

[1] TSF= thousand square feet

[2] Total Trips=Passenger Cars + Truck Trips

(Urban Crossroads, 2023f, Table 4-5)

Threshold a: ***Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?***

The analysis below addresses the Project's potential to result in a conflict with plans, programs, ordinances, or policies that address the circulation system, including transit, roadway, bicycle, and pedestrian facilities. A project that generally conforms with, and does not obstruct, applicable plans, programs, ordinances, and policies, is considered to be consistent. The transportation plans, policies, programs, ordinances, and standards that are relevant to the Project are identified in the analysis below.

A. General Plan Circulation and Mobility Element

Although the Project is not consistent with the site's land use designation of Employment Flex (EMPFX), the Project Applicant is proposing General Plan Amendment (GPA) No. 22-001 to change the land use designation of the Project site from EMPFX to Specific Plan (SP). With approval of GPA No. 22-001, the Project would be consistent with the City's General Plan (Palmdale 2045).

The Project abuts Columbia Way / East Avenue M to the north which would provide direct access to the Project site. Improvements to Columbia Way / East Avenue M are proposed along the Project frontage and would occur to the portion of Columbia Way / East Avenue M south of its centerline. The primary street section design for Columbia Way / East Avenue M would provide for a 64-foot right-of-way (ROW) south of the centerline. A 12-foot-wide raised center median would be provided south of the centerline along this segment. Three eastbound traffic lanes would be established within the 44 feet of paved roadway, including two 12-foot-wide travel lanes and one 14-foot-wide travel lane. In addition to the travel lanes, a 20-foot-wide curb-adjacent parkway would be provided, and within the 20-foot-wide parkway - an 8-foot-wide sidewalk would be provided for pedestrian access and a 12-foot Class 1 trail would be provided for pedestrian and bike access. These proposed improvements are consistent with Circulation and Mobility Goals CM-1 and CM-2, which are focused on building and maintaining a transportation system that is safe and comfortable for travelers of all modes regardless of age or ability and that accommodates future growth.

Additionally, the Project includes the construction of four public streets (Public Street A, Public Street B, Public Street C, and Public Street D) internal to the Project site. North-south oriented Public Street A would provide access to the western portion of the Project site; north-south oriented Public Street B would provide access to the eastern portion of the Project site; east-west oriented Public Street C would connect Public Street A and Public Street B and provide access to the southern portion of the Project site. North-south oriented Public Street D would connect from east-west oriented Public Street C and would provide access to the southern portion of the Project site as well as to an offsite parcel that is not a part of the proposed Project. Public Street A would provide a 76-foot ROW with a 32-foot-wide travel lane in each direction; Public Street B would provide a 76-foot ROW with a 32-foot-wide travel lane in each direction and a 6-foot-wide curb adjacent sidewalk on both sides of the roadway. The proposed Public Streets comply with the City's standards for Industrial Collectors. (Urban Crossroads, 2023f, p. 1)

In accordance with CALGreen, secure bicycle parking also would be provided interior to the Project site to encourage biking as a form of transportation. The Project site is located approximately 160 feet east of the Sierra Highway Bike Trail and approximately 0.5-mile north of the Palmdale Metrolink Station. Further, the Project site fronts Columbia Way / East Avenue M, and is approximately 83 feet east of the active Union Pacific Railroad (UPRR) mainline tracks, which are located adjacent to Sierra Highway, and both Columbia Way / East Avenue M and Sierra Highway are designated truck routes. This existing rail line also is the location of the planned California High Speed Rail Project, Bakersfield to Palmdale segment. Locating the Project in its proposed location close to the intersection of two designated truck routes is consistent with the General Plan, which establishes the planned truck route to accommodate the regional circulation needs of large trucks, while discouraging truck travel through residential areas (City of Palmdale, 2023, p. 166).

The Project's proposed improvements are fully consistent with all goals and policies of the General Plan's Circulation and Mobility Element, as well as the requirements of the City's Municipal Code. In addition, the Circulation Element indicates that the City's desired Level of Service (LOS) is LOS D or better. As indicated in the Project's Traffic Analysis (*Technical Appendix L2*), although the Project would contribute to projected LOS deficiencies and the need for intersection signalization, the Project would be conditioned to construct improvements, pay fees pursuant to the City's Development Impact Fee (DIF) program, Measure M, and pay fair-share contributions towards improvements not included in any existing fee programs. Construction of public streets to City standards is required and would ensure that the roadway surfaces are built to accommodate the weights and tire friction of all vehicles, including trucks, that are permitted to operate on the public roadway system. The improvements to be constructed as part of the Project, as part of the City's fee programs, or as the result of Project fair-share contributions would ensure that the Project is fully consistent with the General Plan Circulation and Mobility Element policies related to streets and roadways.

B. Transit, Bicycle, and Pedestrian Facilities

As discussed above in Section 4.13.1, AVTA Routes 4, 5, 785 and 786 run along Columbia Way / East Avenue M and Sierra Highway within the vicinity of the Project site and could potentially serve the Project's employees and visitors. Also, the California High Speed Rail Authority is planning for the construction of a high speed rail line, of which the Bakersfield to Palmdale segment alignment is planned to parallel Sierra Highway west of the Project site, with a station planned southwest of the Project site that could potentially serve the Project's employees and visitors.

As shown on Figure 4.13-4, the General Plan shows bicycle routes proposed along Division Street situated to the west of Sierra Highway, west of the Project site. There are limited pedestrian facilities within the vicinity of the Project site. Sidewalks are located along the westbound side of Columbia Way / East Avenue M from Sierra Highway to 4th Street West. Pedestrian crosswalks are located on Columbia Way / East Avenue M at the intersections with Sierra Highway, 6th Street West, and 4th Street West; however, no sidewalks are located on the eastbound side of Columbia Way / East Avenue M, adjacent to the north side of the Project site. The Project would not impact the City's ability to build

out the planned bicycle route and sidewalk system and would implement improvements as described below.

The Project includes the construction of improvements along Columbia Way / East Avenue M along the frontage of the Project site. Under existing conditions, Columbia Way / East Avenue M along the Project's frontage is a 4-lane roadway and is designated by the City's General Plan Circulation Element as a Regional Arterial with a maximum ROW of 136 feet. As discussed above, in addition to the travel lanes, a 14-foot-wide curb-adjacent parkway would be provided, and within the 14-foot-wide parkway - a 10-foot-wide Class 1 trail would be provided for pedestrian and bike access. Also, in accordance with CALGreen, secure bicycle parking would be provided interior to the Project site to encourage biking as a form of transportation.

The Project would not conflict with any plans or policies regarding existing or proposed bicycle or pedestrian facilities. Because the California High Speed Rail Authority's plans would include using existing UPRR mainline tracks located to the west of the Project site, the Project also would not conflict with the California High Speed Rail Authority's plans to construct a high speed rail segment to the west of the Project site. (CA High Speed Rail Authority, 2023)

C. *Connect SoCal*

SCAG's 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), referred to as "Connect SoCal*"* seeks to improve mobility, promote sustainability, facilitate economic development, and preserve the quality of life for the residents in the region. The long-range visioning plan balances future mobility and housing needs with goals for the environment, the regional economy, social equity and environmental justice, and public health. The goals included in Connect SoCal are pertinent to the proposed Project. These goals are meant to provide guidance for considering the proposed Project within the context of regional goals and policies.

Consistency with the Connect SoCal goals identified in Table 4.13-5, *Analysis of Consistency with Connect SoCal Goals*, demonstrates that the Project would not conflict with applicable goals in the 2020-2045 RTP/SCS*,* adopted for the purpose of avoiding or mitigating an environmental effect. Table 4.13-5 shows how the Project promotes consistency with the guiding principles and policies of the RTP/SCS.

Table 4.13-5 Analysis of Consistency with Connect SoCal Goals

Goal	Project Consistency Discussion	Project Consistency
Goal 1: Encourage regional economic prosperity and global competitiveness.	This policy would be implemented by the cities and counties within the SCAG region as part of comprehensive local and regional planning efforts. The Project would support this goal by providing an employment-generating land uses (i.e., industrial and commercial uses) that would help the City better meet its jobs/housing balance. The Project also would support this policy by offering a more balanced array of land uses throughout the Project area.	Consistent
Goal 2: Improve mobility, accessibility, reliability, and travel safety for people and goods.	The Project would be developed in four phases and, upon full buildout, would provide for a maximum building footprint of up to 8,302,536 square feet (s.f.), to be comprised of approximately 8,241,552 s.f. of industrial and 60,984 s.f. of commercial uses, that would be easily accessible to Sierra Highway and SR-14, facilitating the movement of goods throughout Southern California.	Consistent
Goal 3: Enhance the preservation, security, and resilience of the regional transportation system.	This policy would be implemented by the cities and counties within the SCAG region as part of comprehensive local and regional planning efforts. There are no components of the proposed Project that would adversely affect the preservation, security, or resilience of the regional transportation system. The Project Applicant would contribute fees towards regional improvements required in the Project vicinity. Furthermore, the Project would entail roadway and intersection improvements consistent with the General Plan Circulation and Mobility Element, and the PMC. Further, the City has created its own local Development Impact Fee (DIF) program to impose and collect fees from new residential, commercial, and industrial development for the purposes of funding roadways and intersections necessary to accommodate City growth as identified in the City's General Plan Circulation and Mobility Element. As such, the Project Applicant will be subject to the City's DIF fee program and will pay the requisite City DIF fees at the rates in effect.	Consistent
Goal 4: Increase person and goods movement and travel choices within the transportation system.	This policy would be implemented by the cities and counties within the SCAG region as part of the overall planning and maintenance of the	Consistent

Goal	Project Consistency Discussion	Project Consistency
	regional transportation system. The Project would expand facilities for goods movement in the local area, and would construct or contribute fees towards regional transportation improvements.	
Goal 5: Reduce greenhouse gas emissions and improve air quality.	This policy would be implemented by the cities and counties within the SCAG region as part of comprehensive transportation planning efforts. The Project would entail development of a commerce center with industrial and commercial uses, in a region that experiences a relatively low jobs-to-housing ratio; thus, the Project would serve to reduce worker commute times in the local area by providing jobs in close proximity to housing. Additionally, and as discussed in EIR Subsections 4.2, *Air Quality*, and 4.7, *Greenhouse Gas Emissions*, the Project could be required to implement mitigation measures to reduce air quality and greenhouse gas emissions to the maximum extent feasible.	Consistent
Goal 6: Support healthy and equitable communities.	An analysis of the Project's environmental impacts is provided throughout this EIR and mitigation measures, project design features, and regulatory requirement compliance are specified as warranted. Air quality is addressed in EIR Subsection 4.2, *Air Quality*, which identifies mitigation measures to reduce air quality emissions to the maximum feasible extent. Additionally, the Project would implement sidewalks and bike lane improvements along public roadway rights-of-way in a manner that is consistent with General Plan. EV supply equipment would be installed as part of the Project to allow charging stations to be supplied based on demand. The Project study area is within the service area of AVTA, a public transit agency serving various jurisdictions within the Antelope Valley. The Project would not conflict with any existing or planned AVTA routes. Additionally, the Project would be consistent with or otherwise would not conflict with any applicable General Plan policies or requirements, including policies and requirements included in the General Plan's Equitable and Healthy Communities Element and Circulation and Mobility Element. Thus, the Project would facilitate the establishment of healthy and equitable communities.	Consistent

Goal	Project Consistency Discussion	Project Consistency
Goal 7: Adapt to a changing climate and support an integrated regional development pattern and transportation network.	This policy would be implemented by the cities and counties within the SCAG region as part of comprehensive transportation planning efforts. Connect SoCal provides objectives for meeting emissions reduction targets set forth by the CARB; these objectives were provided in a direct response to SB 375 which was enacted to reduce greenhouse gas emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. The Project entails a use that is closely associated with, and relies directly on, the goods movement system (e.g., manufacturing, construction, retail trade, wholesale trade and transportation, and warehousing). The SCAG region is a vibrant hub for international and domestic trade because of its large transportation base and extensive multimodal transportation system. The SCAG region's freight transportation system includes warehouses and distribution centers; the Ports of Los Angeles, Long Beach, and Hueneme; airports; rail intermodal terminals; rail lines, and local streets, State highways, and interstates. Together the system enables the movement of goods from source to market, facilitating uninterrupted global commerce. The region is home to approximately 34,000 warehouses with 1.17 billion square feet (s.f.) of warehouse building space, and undeveloped land that could accommodate an additional 338 million s.f. of new warehouse building space. These regions attract robust logistics activities and are a major reason the region is a critical mode in the global supply chain. Thus, the Project would meet the growing demand for warehouse space and in a location that is easily accessible to regional highways.	Consistent
Goal 8: Leverage new transportation technologies and data-driven solutions that result in more efficient travel.	This policy provides guidance to the City to leverage new transportation technologies and data-driven solutions that result in more efficient travel. There are no components of the proposed Project that would preclude the City's ability to implement this goal. The Project would meet the growing demand for warehouse space and in a location that is easily accessible to regional highways and result in more efficient travel.	Not Applicable.

Goal	Project Consistency Discussion	Project Consistency
Goal 9: Encourage development of diverse housing types in areas that are supported by multiple transportation options.	This policy would be implemented by the cities and counties within the SCAG region as part of comprehensive transportation planning efforts. The Project does not include any residential uses, and therefore has no potential to conflict with this goal.	Not Applicable
Goal 10: Promote conservation of natural and agricultural lands and restoration of habitats.	As discussed in EIR Section 4.3, *Biological Resources*, the Project would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan; and the Project would not impact any jurisdictional resources. The Project site is not mapped as containing any important farmland types. Additionally, the Project site is designated by the General Plan for future development with urban land uses, and therefore the Project site is not suitable for conservation as agricultural land.	Consistent

D. Summary

Based on the analysis provided above, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, impacts would be less than significant and no mitigation is required.

Threshold b: Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

In 2013, the State of California approved legislation (SB 743) to change the primary basis of evaluation of traffic impacts in CEQA from LOS to VMT. CEQA Guidelines Section 15064.3 was approved in December 2018, and became effective in early 2019. Section 15064.3 required agencies to implement the new VMT requirement no later than July 1, 2020. The City of Palmdale uses the County of Los Angeles' *Transportation Impact Analysis Guidelin*es as their criteria for the evaluation of VMT under CEQA.

A. VMT Screening

1. Commercial (Retail) Component

County Guidelines assume local serving retail use to have a less than significant impact on VMT, provided the retail development does not include stores larger than 50,000 square feet. The Project's retail (commercial) component is conceptual at this time and is analyzed to include up to 60,984 total square feet of local serving retail uses such as fast-food users with and without drive-thru window

service, a coffee shop, and other local serving retail uses. Given the overall total square footage, it is reasonable to expect that a single store would not occupy a space greater than 50,000 s.f. The commercial component of the Project is therefore presumed to meet the Retail Project Site screening criteria, thus a full VMT analysis is not required for the Commercial (retail) component of the proposed Project. (Urban Crossroads, 2023g, pp. 2-3)

2. *Industrial Component*

The County Guidelines provide details on appropriate screening criteria that can be used to determine if a proposed land use project would result in a less than significant VMT impact. The industrial land use component of the proposed Project does not meet any of the screening criteria; therefore, a full VMT analysis was conducted. (Urban Crossroads, 2023g, pp. 2-3)

As discussed in the Project's VMT Analysis (*Technical Appendix L2*), based on the results of the HBW VMT analysis, Urban Crossroads determined that the retail component of the proposed Project meets the Retail Project Site screening criteria. However, the remaining industrial component of the proposed Project does not meet any applicable screening criteria, and as discussed below, a VMT analysis was performed for the industrial component of the proposed Project.

B. *Project VMT and Comparison to Impact Threshold*

1. *Phase I*

HBW VMT per employee for Phase I was calculated for Baseline (2022) conditions using the SCAG travel demand model and is shown in Table 4.13-6, *Phase I HBW Per Employee*, along with the estimated number of Phase I employees, and the resulting Phase I HBW VMT per employee. As shown in Table 4.13-6, in comparison to the VMT threshold of 16.8 percent below Baseline VMT of Los Angeles County, the Project is 32.0 percent above the County's thresholds, resulting in a significant VMT impact. (Urban Crossroads, 2023g, pp. 4-5)

Table 4.13-6 Phase I HBW Per Employee

	Project
Project HBW VMT	42,481
Project Employment	2,373
Project HBW VMT per Employee	17.9
County Threshold	13.6
Percent Above Threshold	+ 32.0%
Potentially Significant?	Yes

(Urban Crossroads, 2023g, Table 3)

2. *Project Buildout*

HBW VMT per employee for Project Buildout was also calculated for Baseline (2022) conditions using the SCAG travel demand model and is shown in Table 4.13-7, *Project Buildout HBW VMT Per Employee*, along with the estimated number of Project Buildout employees, and the resulting Project

Buildout HBW VMT per employee. As shown in Table 4.13-7, in comparison to the VMT threshold of 16.8 percent below Baseline VMT of Los Angeles County, the Project Buildout is also 32.0 percent above the anticipated thresholds, resulting in a significant VMT impact. (Urban Crossroads, 2023g, p. 4)

Table 4.13-7 Project Buildout HBW VMT Per Employee

	Project
HBW VMT	147,961
Employment	8,266
HBW VMT per Employee	17.9
County Threshold	13.6
Percent Above Threshold	+32.0%
Potentially Significant?	Yes

(Urban Crossroads, 2023g, Table 4)

Based on the VMT analysis for the industrial component of the proposed Project, Project generated VMT per employee was determined to exceed the County's VMT per employee threshold by 32 percent for both Phase I and for Project Buildout. Therefore, the Project's VMT would be considered a direct and cumulatively considerable impact. (Urban Crossroads, 2023g, p. 6)

It should be noted that VMT has a direct relation to greenhouse gas (GHG) emissions because a majority of the Project's air quality and GHG emissions are related to mobile sources (vehicle tailpipe emissions). Pursuant to the analysis in EIR Section 4.7, *Greenhouse Gas Emissions*, the Project's GHG emissions impact is also significant and although a number of design features and regulatory requirements presented in Section 4.7 address the reduction of GHG impacts, the Project's GHG impact would remain significant and unavoidable.

Threshold c: ***Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

The Project site is located at the southeast corner of Columbia Way / East Avenue M and Sierra Highway, approximately 1.48 miles east of State Route (SR) 14. The Project would allow for the phased development of a master-planned commerce center containing industrial, commercial, and open space land uses, as well as roadways. The four phases of development would allow for a maximum of 8,302,536 s.f. of building footprint, to be comprised of approximately 8,241,552 s.f. of industrial and 60,984 s.f. of commercial uses. Although the Project is not consistent with the site's land use designation of Employment Flex (EMPFX), the Project Applicant is proposing GPA No. 22-001 to change the land use designation of the Project site from EMPFX to Specific Plan (SP). With approval of GPA No. 22-001, the Project would be consistent with the City's General Plan (Palmdale 2045). The types of traffic generated during operation of the Project (i.e., passenger cars and trucks) would be compatible with the type of traffic observed along adjacent roadways under existing conditions. All proposed improvements within the public right-of-way would be installed in conformance with City

design standards and project construction activities that would occur in the public right-of-way and are required to adhere to the applicable construction control practices that are specified in the *State of California Department of Transportation Construction Manual* and the *California Manual on Uniform Traffic Control Devices*, to minimize potential safety hazards.

Phase I of the Project would include the construction of six industrial warehouse buildings. Driveway access points to the buildings have been designed pursuant to City standards and would not introduce any design hazards.

Access to the Building 1 site would be accommodated via two driveways (Driveway 5 and Driveway 6) along Columbia Way / East Avenue M and both driveways would accommodate access for both passenger vehicles and trucks. Proposed Driveways 5 and 6 located along Columbia Way / East Avenue M would be restricted access (right-in/right-out only) because a median restricting left turns would be installed as part of the Project along Columbia Way / East Avenue M.

Access to the Building 2 site would be accommodated via two driveways (Driveway 6 and Driveway 7) along Columbia Way / East Avenue M and would accommodate access for both passenger vehicles and trucks. Driveways 6 and 7 located along Columbia Way / East Avenue M would be restricted access (right-in/right-out only) because a median restricting left turns would be installed as part of the Project along Columbia Way / East Avenue M.

Access to the Building 3 site would be accommodated via one driveway along Columbia Way / East Avenue M, and one driveway along Public Street B. The driveway (Driveway 7) along Columbia Way / East Avenue M would accommodate access for both passenger vehicles and trucks and be restricted access (right-in/right-out only) because a median restricting left turns would be installed as part of the Project along Columbia Way / East Avenue M. Driveway 8 along Public Street B would accommodate passenger vehicles only.

Access to the Building 4 site would be accommodated via four driveways along Public Street A. The northernmost and southernmost driveways (Driveway 1 and Driveway 4) along Public Street A would accommodate access for both passenger vehicles and trucks and the two central driveways (Driveway 2 and Driveway 3) along Public Street A would accommodate passenger vehicles only.

Access to the Building 5 site would be accommodated via four driveways along Public Street B. The northernmost and southernmost driveways (Driveway 9 and Driveway 12) along both Public Street B would accommodate access for both passenger vehicles and trucks, while the central driveways (Driveway 10 and Driveway 11) along Public Street B would accommodate passenger vehicles only.

Access to the Building 6 site would be accommodated via three proposed driveways along Public Street B. The northernmost and southernmost driveways (Driveway 9 and Driveway 11) along Public Street B would accommodate access for both passenger vehicles and trucks, while the central driveway (Driveway 10) along Public Street B would accommodate passenger vehicles only.

The design of building sites proposed in Phases II - IV, the details of which would become available when Site Plan Review applications are proposed in the future, would be required to comply with all PMC requirements regarding driveway design and circulation. As such, it is assured that development in Phases II-IV would have no reasonable potential of substantially increasing geometric design hazards.

Threshold d: Would the Project result in inadequate emergency access?

During construction of the proposed Project, Project construction contractors would be required to maintain adequate emergency access routes on site. Additionally, the Project's proposed development plans have been reviewed by the Los Angeles County Fire Department (LACFD), which has determined that the Project's design would provide for adequate access for emergency vehicles under long-term operations. As shown previously in Section 3.0, *Project Description*, for Phase I of the Project, a 28-foot-wide fire lane would be provided interior to the site around the circumference of the six proposed warehouse buildings for sufficient emergency vehicle and fire truck access. In addition, adequate fire lanes would also be required per the LACFD for the buildings proposed for Phases II - IV. Accordingly, the Project would not result in inadequate emergency access, and impacts would be less than significant.

4.13.5 Cumulative Impact Analysis

This cumulative impact analysis considers development of the proposed Project in conjunction with other nearby planned developments in the cities of Palmdale and Lancaster including but not limited to the projects listed on Table 4-3 and shown on Exhibit 4-6 in the Project's Traffic Analysis included as *Technical Appendix L1* to this EIR and the California High Speed Rial Authority's planned Bakersfield to Palmdale high speed rail segment. The nearest of the development projects to the Project site is the proposed Palmdale Logistics Park project to the west of the Project site and west of Sierra Highway.

Conflict with a Program, Plan, Ordinance or Policy Addressing the Circulation System

As indicated under the analysis of Threshold (a), the Project would be consistent with the City's General Plan and the PMC. Because other cumulative developments would be required to comply with the City's General Plan and ordinances, or the general plan and ordinances of surrounding jurisdictions, the Project would result in less than significant impacts on a cumulatively-considerable basis due to a conflict with a program, plan, ordinance, or policy addressing the circulation system.

Conflict or be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)

As indicated under the analysis of Threshold (b) and based on the Project's VMT analysis (*Technical Appendix L2*), both Phase I and Buildout for the Project was determined to generate HBW VMT per employee that is 32.0 percent above the County's Baseline VMT per employee for Los Angeles County as a whole. The Project's VMT impact based on a HBW trip is therefore considered significant and cumulatively considerable. (Urban Crossroads, 2023g, pp. 4-5)

Increase Hazards Due to a Geometric Design Feature or Incompatible Uses

All public roadway improvements proposed as part of the Project would be constructed to City standards. Other cumulative developments within the cumulative study area likewise would be required to demonstrate that there would be no geometric design feature hazards or impacts due to incompatible risks.

Emergency Access

During Project construction and operations, the Project Applicant would be required to maintain adequate access for emergency vehicles, as required by the PMC. Other cumulative developments similarly would be required to maintain adequate emergency access. Accordingly, cumulative impacts due to inadequate emergency access would be less than significant.

4.13.6 Significance of Impacts Before Mitigation

Threshold a: Less than Significant Impact. The Project is consistent with the RTP/SCS, the City's General Plan, including the goals and policies of the General Plan Circulation and Mobility Element, and also would be required to comply with all applicable requirements of the PMC. As there are no other applicable programs, plans, ordinances, or policies addressing the circulation system, Project impacts due to a conflict with a program, plan, ordinance or policy addressing the circulation system would be less than significant.

Threshold b: Significant Direct and Cumulatively-Considerable Impact. Based on the VMT analysis for the industrial component of the proposed Project, Project generated VMT per employee was determined to exceed the County's VMT per employee threshold by 32 percent for both Phase I and for Project Buildout. Therefore, the Project's VMT would be considered a direct and cumulatively considerable impact.

Threshold c: Less than Significant Impact. With mandatory compliance with City roadway and private driveway design standards, the Project would not substantially increase hazards due to a geometric design feature. Additionally, due to the short distance between the Project site and the designated truck routes, the Project would not result in increased hazards to transportation as a result of incompatible uses.

Threshold d: Less than Significant Impact. Adequate emergency access is required to be maintained during both construction and long-term operation of the Project, in accordance with City and Fire Department requirements. Accordingly, the Project would not result in inadequate emergency access, and impacts would be less than significant.

4.13.7 MITIGATION

TRN MM-1 The Project Applicant shall submit a Transportation Demand Management (TDM) plan prepared by a qualified transportation consultant acceptable by the City to reduce the Project's vehicle miles traveled. The TDM plan shall be approved by the City prior to the issuance of the first industrial building occupancy permit. The TDM plan shall apply to industrial building Project tenant(s) through tenant leases. The TDM plan shall discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking. Examples of trip reduction measures may include, but are not limited to:

a) Transit passes
b) Car-sharing programs
c) Telecommuting and alternative work schedules
d) Ride sharing programs

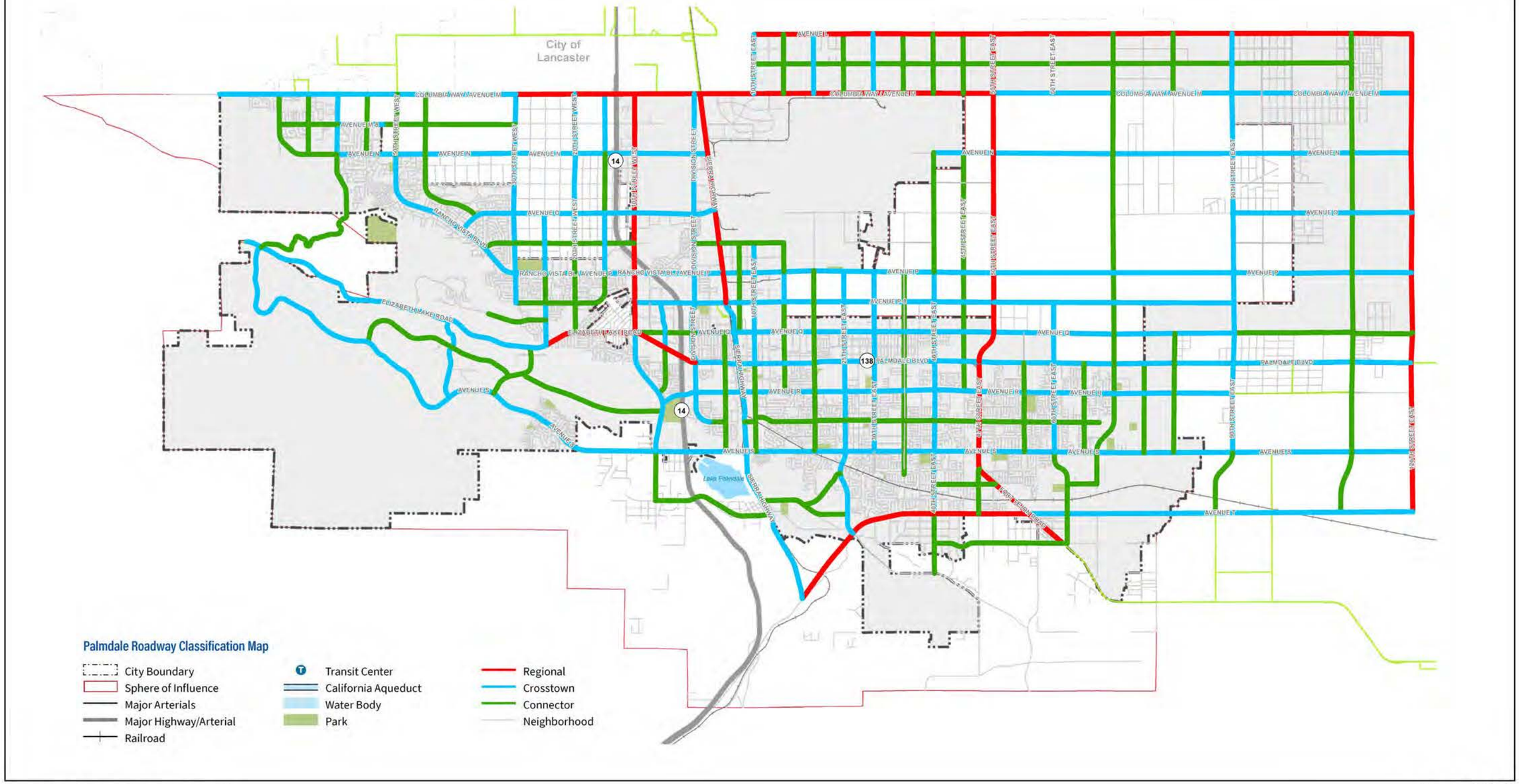
Although not required to reduce transportation impacts, the following mitigation would further ensure that the Project's traffic construction-related activities occur in compliance with the applicable standards and requirements as disclosed in this Section and in the Project's Traffic Impact Analysis (*Technical Appendix L1*).

TRN MM-2 Prior to each phase of construction, the Project Applicant shall provide a Construction Management Plan to the City to further ensure that a) adequate emergency access is required to be maintained during construction of the Project in accordance with City and Fire Department requirements, and b) all proposed improvements within the public right-of-way shall be installed in conformance with City design standards and project construction activities that would occur in the public right-of-way shall adhere to the applicable construction control practices that are specified in the State of California Department of Transportation Construction Manual and the California Manual on Uniform Traffic Control Devices, to minimize potential safety hazards.

4.13.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold b: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. The Project would have a significant and unavoidable vehicle miles traveled (VMT) impact. Because the future building tenants are not known for the Project, the effectiveness of any potential commute trip reduction measure may be limited. In addition to specific tenancy considerations, locational context is also a major factor relevant to the potential application and effectiveness of Transportation Demand Management (TDM) measures. A project may only realize a quantifiable reduction in commute VMT under the most favorable circumstances and ideal local conditions when implementing trip reduction measures. In practical terms, ideal conditions are rarely realized due to variables such as locational context limitations (i.e., non-urban areas). Additionally, to achieve ideal conditions a project must achieve 100 percent employee participation, and maximum employee eligibility, which are not

generally expected. This is even more difficult to presume since future building tenants are not known at this time. Although the Project would be subject to compliance with Mitigation Measure TRN MM-1, which would reduce the Project's VMT, the effectiveness of commute trip reduction measures such as those listed in Mitigation Measure TRN MM-1 cannot be guaranteed to reduce Project VMT to a level of less than significant. No additional feasible mitigation measures are available to measurable reduce the Project's VMT. Therefore, the Project's VMT impacts are considered significant and unavoidable.

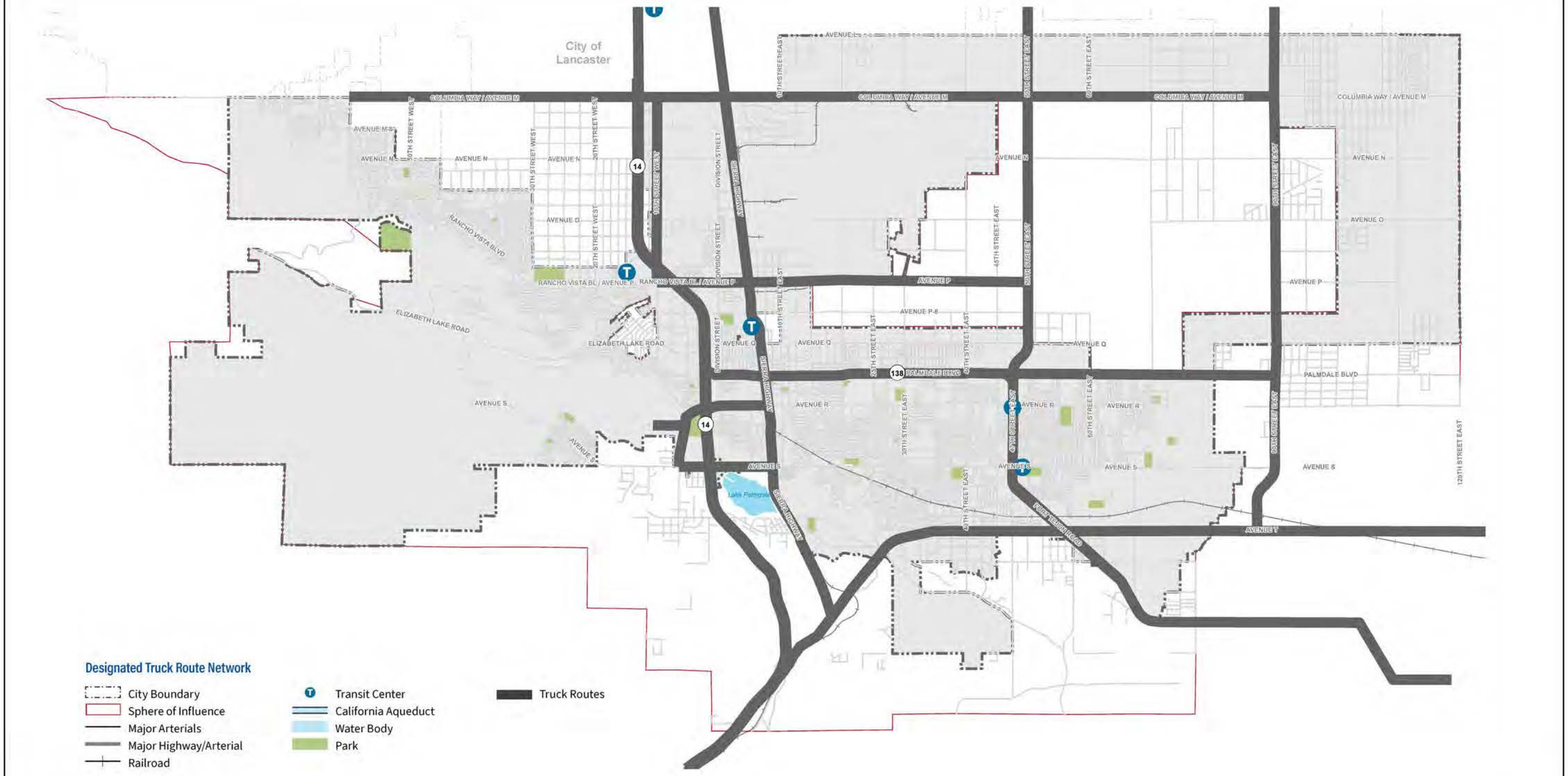


Source(s): City of Palmdale General Plan (03-15-2023)

Figure 4.13-1

Not to Scale

Palmdale Roadway Classification Map

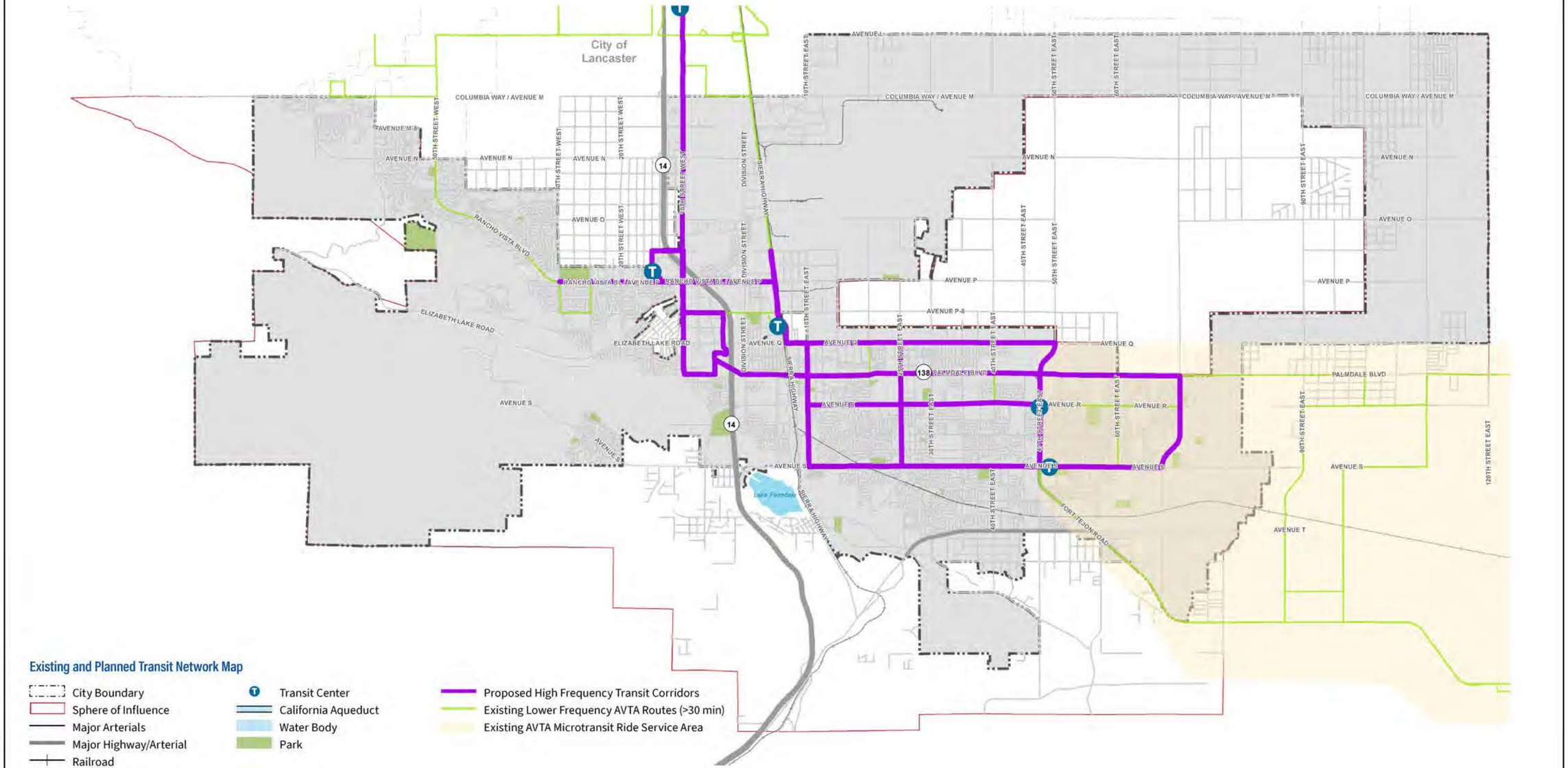


Source(s): City of Palmdale General Plan (03-15-2023)

Not to Scale

Figure 4.13-2

Designated Truck Route Network

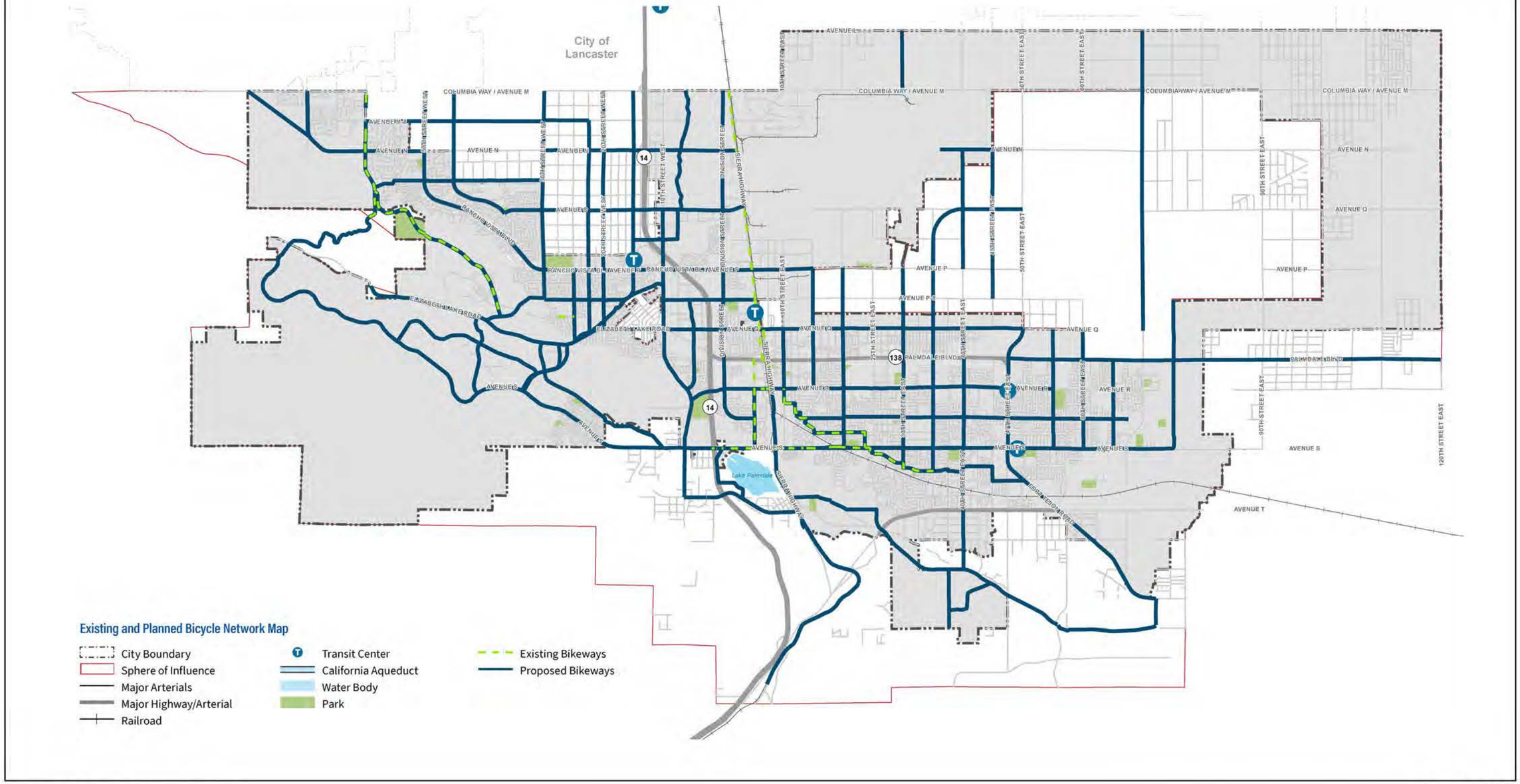


Source(s): City of Palmdale General Plan (03-15-2023)

Figure 4.13-3

Not to Scale

Existing and Planned Transit Network Map



Source(s): City of Palmdale General Plan (03-15-2023)

Figure 4.13-4

Not to Scale

Existing and Planned Bicycle Network Map

4.14 TRIBAL CULTURAL RESOURCES

The analysis in this subsection documents the results of the City's efforts to consult with local Native American Tribes regarding the proposed Project. Communications between Native American tribes and the City of Palmdale is considered confidential in respect to places that have traditional tribal cultural significance (Gov. Code § 65352.4), and although relied upon in part to inform the preparation of this EIR subsection, those communications are treated as confidential and are not available for public review. Under existing law, environmental documents must not include information about the location of archeological sites or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records Act (Cal. Code Regs. § 15120(d)).

4.14.1 EXISTING CONDITIONS

Refer to EIR Subsection 4.4, *Cultural Resources*, for a complete description of the cultural setting, existing site conditions, and the archaeological resources assessment for the Project site.

4.14.2 REGULATORY SETTING

The following is a brief description of the State environmental laws and related regulations addressing Tribal Cultural Resources (TCRs). Refer also to EIR Subsection 4.4.2 for a complete description of federal, State, and local environmental laws and regulations governing the protection of cultural resources.

A. State Regulations

1. Assembly Bill 52

California Assembly Bill 52 (AB 52) (2014) Chapter 532 amended Section 5097.94 of, and added Sections 21073, 21074, 21080.3.1, 21080.3.2, 21802.3, 21083.09, 21084.2 and 21084.3 to the California Public Resources Code, relating to Native Americans. AB 52 was approved on September 25, 2014. By including tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and Tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to tribal cultural resources. By taking this proactive approach, the legislature also intended to reduce the potential for delay and conflicts in the environmental review process. (OPR, 2017a)

The Public Resources Code now establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." (Pub. Resources Code, § 21084.2.) To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the release of a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report is required for a project. (Pub. Resources Code, § 21080.3.1.) (OPR, 2017a)

If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code § 20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources. These rules apply to projects that have a Notice of Preparation for an Environmental Impact Report or Negative Declaration or Mitigated Negative Declaration filed on or after July 1, 2015. (OPR, 2017a)

Section 21074 of the Public Resources Code defines "tribal cultural resources." In brief, in order to be considered a "tribal cultural resource," a resource must be either:

(1) Listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or
(2) A resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource. (OPR, 2017a)

In the latter instance, the lead agency must determine that the resource meets the criteria for listing in the state register of historic resources. In applying those criteria, a lead agency must consider the value of the resource to the tribe. (OPR, 2017a)

Because the proposed Project has a NOP for an EIR, AB 52 is applicable to the Project.

2. Traditional Cultural Places Act (Senate Bill 18)

Senate Bill 18 (SB 18) requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places ("cultural places") through local land use planning. SB 18 also requires the Governor's Office of Planning and Research (OPR) to include in the General Plan Guidelines advice to local governments for how to conduct these consultations.

The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level land use decisions are made by a local government.

SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code § 65300 et seq.) and specific plans (defined in Government Code § 65450 et seq.). Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, existing State planning law requires local governments to use the same processes for adoption and amendment of specific plans as for general plans (see Government Code § 65453). Therefore,

where SB 18 requires consultation and/or notice for a general plan adoption or amendment, the requirement extends also to a specific plan adoption or amendment (OPR, 2005).

Because the proposed Project proposes a Specific Plan and a General Plan Amendment, the Project is subject to Senate Bill 18.

4.14.3 Basis for Determining Significance

Section XVIII of Appendix G to the CEQA Guidelines addresses typical adverse effects on tribal cultural resources and includes the following threshold question to evaluate the impacts of the Project on tribal cultural resources. The Project would result in a significant impact to tribal cultural resources if the Project or any Project-related component would:

1. *Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 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 California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).*
   - *ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth is subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

4.14.4 Impact Analysis

Threshold a:	***Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, 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 California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or ii) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?***

No prehistoric resource sites, features, places, or landscapes were identified on the Project site during a field visit and in literature review that are either listed or eligible for listing in the California Register of Historic Places. (PaleoWest, 2022a, pp. 24, 26). To be eligible for the Register, (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852), a resource must include the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) 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; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

No resources were identified on the Project site that meet any of the four criteria listed above to be eligible for the California Register and no prehistoric resource sites or isolates were found on the Project site based on the cultural records search and pedestrian survey of the Project site (refer to EIR Subsection 4.4, *Cultural Resources*). Furthermore, no substantial evidence was presented to or found by the City that led to the identification of any resources on the Project site that in the City's discretion had the potential to be considered a tribal cultural resource.

Because the proposed Project involves an NOP for an EIR and the Project includes a Specific Plan and a General Plan Amendment, both AB 52 and SB 18 consultation are required. As required by State law, the City sent notification of the Project to Native American tribes with possible traditional or cultural affiliation to the Project area. In compliance with AB 52 and SB 18, on November 10, 2022, the City mailed notices regarding the Proposed project to the following Native American Tribes listed in the Native American Heritage Commission (NAHC) Native American Contact List (included as Appendix A of *Technical Appendix D*).

- Fernandeño Tataviam Band of Mission Indians
- Morongo Band of Mission Indians
- Quechan Tribe of the Fort Uma Reservation
- San Fernando Band of Mission Indians
- Yuhaaviatam of San Manuel Nation (formally San Manuel Band of Mission Indians)
- Serrano Nation of Mission Indians

Out of the six Native American tribal groups, the following two groups requested to consult on the Project The City engaged in consultation accordingly and closed consultation.

- Fernandeño Tataviam Band of Mission Indians (FTBMI)
- Morongo Band of Mission Indians (MBMI)

According to correspondence from the two Native American tribes that requested consultation, there are no known Tribal Cultural Resources (TCRs) on the Project site. However, because TCRs have been identified as occurring offsite in close proximity to the Project area, there is the potential that TCRs could be located beneath the surface of the Project site and become discovered during Project-related

earth-disturbing activities. If TCRs are discovered and do not receive proper treatment, the impact to TCRs would be significant.

Mitigation is provided in subsection 4.4, *Cultural Resources*, based on consultation with the FTBMI, and the MBMI.

4.14.5 Cumulative Impact Analysis

As indicated under the analysis of Threshold (a), the Project would not result in a significant impact to any known TCR. Although unlikely, there is a remote possibility that TCRs could be encountered during ground-disturbing construction activities, which would result in a site-specific potentially significant impact to TCRs. As indicated below, mitigation is defined in EIR Subsection 4.4, *Cultural Resources*, to reduce this potential impact to less than significant.

Other development projects throughout the City that require excavation of undisturbed soils may result in similar site-specific impacts to TCRs, which would also require mitigation in order to reduce their respective impact(s) to a less than significant level. However, the proposed Project does not include any components that would affect potentially significant off-site TCRs or would otherwise result in an increase in the likeliness that such resource would be encountered when combined with the impacts of other cumulative projects. Therefore, cumulative impacts to TCRs would be less than significant.

4.14.6 Significance of Impacts Before Mitigation

Threshold a: Significant Direct Impact. The Project site does not contain any known TCRs. If TCRs are unearthed during the Project's excavation activities, a potentially significant impact could occur if the resources are not properly identified and treated.

4.14.7 Mitigation

Mitigation Measures CUL MM-1 through CUL MM-4, and CUL RR-1 included in EIR Section 4.4, *Cultural Resources*, shall also apply.

4.14.8 Significance of Impacts After Mitigation

Threshold a: Less than Significant with Mitigation Incorporated. Implementation of Mitigation Measures CUL MM-1 through CUL MM-4 and CUL RR-1 would ensure the proper identification and subsequent treatment of any TCRs that may be encountered during ground-disturbing activities associated with Project construction. With implementation of the required mitigation, the Project's potential impacts to important subsurface TCRs (if such resources are unearthed during Project construction) would be reduced to less than significant levels.

4.15 UTILITIES AND SERVICE SYSTEMS

This subsection addresses the topics of water service and supply, wastewater collection and treatment, stormwater drainage facilities, dry utilities, and solid waste collection and disposal. The analysis in this subsection is based in part on publicly available information provided by local service providers and State oversight agencies, as well as a Project-specific Water Supply Assessment (WSA) prepared by KEC Engineers, Inc. (herein, "KEC"). This document is entitled, "Water Supply Assessment Report (WSA), Antelope Valley Commerce Center," dated May 2022, and included as *Technical Appendix M2* to this EIR (KEC Engineers, 2022). All references used in this subsection are included in EIR Section 7.0, *References*.

4.15.1 EXISTING CONDITIONS

The Project site is located within the service boundaries of Los Angeles County Waterworks District (LACWD) District 40 for water service, the City of Palmdale Public Works, Sewer Maintenance Division (COPSM) for sewer service, Southern California Edison (SCE) for electricity, and the Southern California Gas Company (SoCal Gas) for natural gas, with numerous service providers for cable television and telephone services. Solid waste hauling service to the Project site is provided by Waste Management.

A. Water Service and Supply

The Project site is located within the service area of LACWD District 40. LACWD District 40 maintains 1,057 miles of potable and recycled water lines and 71 portable water tank reservoirs. The land use within the Antelope Valley has been primarily agricultural uses; however, this area is in transition from mainly agricultural to residential and industrial uses. According to the 2020 Urban Water Management Plan (UWMP), the region plans to maintain agricultural land use within Antelope Valley, meet the growing demand of the recreational spaces, and improve blended land use and planning management and flexible management strategies for climate change. (KEC Engineers, 2022, pp. 9, 12)

1. Water Supply

LACWD District 40 currently receives water from two sources: groundwater and imported water from the Antelope Valley East Kern Water District (AVEK), as discussed below. LACWD anticipated supplies for the years 2025 through 2045 are summarized in Table 4.15-1, *LACWD Summary of Projected Supplies*. (LACWD, 2021, p. 6-14)

LACWD purchases water from AVEK which is mostly imported water from the State Water Project (SWP). AVEK is able to purchase additional water from the SWP during the low demand period and recharge the ground water basins and has the flexibility to pump the ground water during high demands and drought conditions. To acquire additional water supply, LACWD has executed a Memorandum of Understanding (MOU) with AVEK to implement a new Water Supply Entitlement Acquisition program for new developments that will be used to acquire additional imported water supplies. Developers may secure entitlements by working with the LACWD to determine the volume of new

water supply needed to meet their project's annual demand, and then paying AVEK to purchase the permanent new water supply. AVEK then designates this new water supply to the LACWD for the developer, over and above the LACWD's current allocation of supplies (LACWD, 2021, p. 6-1; KEC, 2022, p. 14).

Groundwater supply is typically the most reliable source of water supply, especially during drought conditions. LACWD District 40 has historically used groundwater as its secondary source of potable water supply. LACWD District 40's groundwater is pumped from the Antelope Valley Groundwater Basin. Although groundwater has not been a major source of water supply to the LACWD, it plays a critical role and continues to be an important resource within the Antelope Valley region. The Antelope Valley Groundwater Basin is composed of two primary aquifers and due to this basin being a closed water basin, the only major outflow is by pumping. The total storage capacity of the Antelope Valley Groundwater basin has been reported at 68 million acre-feet, or over 22 trillion gallons. As of 2020, the groundwater adjudication judgement has provided the LACWD with additional groundwater rights. Based on the LACWD's groundwater pumping record and its available groundwater rights, the LACWD has remained substantially below its groundwater pumping right threshold. Therefore, the LACWD groundwater source is a viable and sustainable secondary source of potable water. The LACWD can increase its groundwater pumping by 35 percent and continue to remain below its pumping right. (KEC Engineers, 2022, pp. 14, 16)

Table 4.15-1 LACWD Summary of Projected Supplies (AFY)

Water Supply	Additional Detail on Water Supply	2025 Reasonably Available Volume	2030 Reasonably Available Volume	2035 Reasonably Available Volume	2040 Reasonably Available Volume	2045 Reasonably Available Volume
Purchased or imported water		57,300	55,800	54,200	52,700	52,700
Groundwater		23,298	23,298	23,298	23,298	23,298
Purchased or imported water	New supply from AVEK	1,733	1,733	1,733	1,733	1,733
Recycled Water		764	902	1,102	1,302	1,302
Total		**83,095**	**80,831**	**80.333**	**79,033**	**79,033**

(LACWD, 2021, Table 6-9)

2. Water Demands

LACWD's projected water deliveries were estimated by understanding the characteristics of the customer type creating the demand. However, fluctuations in climate over the past five years, the global pandemic, and education of the Antelope Valley Groundwater Basin have significantly impacted the demand patterns in the LACWD. As such, the projected water demands are based on the anticipated increase in population in the target per capita water use. Table 4.15-2, *LACWD Projected Water*

Deliveries, depicts LACWD's anticipated water deliveries from 2025 through 2045. (LACWD, 2021, p. 4-2)

Table 4.15-2 LACWD Projected Water Deliveries

	Projected Water Use, ac-ft/yr				
Use Type	**2025**	**2030**	**2035**	**2040**	**2045**
Single-family	40,919	43,709	46,599	49,601	52,116
Multi-family	2,212	2,364	2,518	2,683	2,819
Commercial[1]	3,112	2,617	2,178	1,780	1,870
Industrial	3,315	3,546	3,777	4,022	4,226
Institutional/governmental[1]	1,035	870	726	595	625
Losses[2]	3,808	3,998	4,202	4,419	4,643
Total	**54,400**	**57,100**	**60,000**	**63,100**	**66,300**

[1] The 2025-2040 projected water demand is based on gallons per capita per day (GPCD) times the projected population.
[2] Losses are assumed to be seven percent of projected water demand.
(LACWD, 2021, pp. 4-2, Table 4-2)

B. Sewer Service and Treatment

Public sewer systems that would provide service to the proposed Project are owned and maintained by the COPSM. The COPSM prepared a Sewer System Management Plan (SSMP) in 2014 to comply with the State Water Resources Control Board (SWRCB) Order 2006-0003: *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems* (City of Palmdale, 2014). COPSM manages wastewater collection system of public sewer mainlines within the City's service area, which encompasses approximately 105 square miles. Unincorporated areas surrounding Palmdale fall within Los Angeles County jurisdiction. The City's sewer system includes 396 miles of pipeline and 8,441 manholes, most of which are under 30 years in structure age. Most of the collected wastewater flows that are conveyed through public sewer mainlines discharge to Los Angeles County Sanitation District (LACSD) trunk mainlines, which ultimately direct flows to the Palmdale Water Reclamation Plant (WRP), which is managed in Los Angeles County Sanitation District No. 20 and can reclaim up to 12 million gallons per day (mgd). The Palmdale WRP provides primary, secondary, and tertiary water treatment with a design capacity of 12 mgd. Treatment includes preliminary mechanically cleaned bar screens, aerated grit chambers, and settling tanks; secondary anaerobic digester, air compressors, and clarifier tanks; and tertiary chemical treatments with aqueous ammonia, sodium hypochlorite, and chlorine contact tanks. The fully treated water is then reused in municipal and agricultural settings or stored in recycled water reservoirs (City of Palmdale, 2022a, pp. 4.19-3 and -4)

Some wastewater is sent to the Lancaster Water Reclamation Plant (LWRP), located approximately 16 miles north of the City. (City of Palmdale, 2022a, pp. 4.19-3 and -4) Sewage within the Project area is conveyed to the LWRP for treatment, located approximately 9.5 miles north of the Project site. The LWRP is managed in LACSD District #14 and serves a population of approximately 160,000 people. The LWRP currently provides primary, secondary, and tertiary treatment for a design capacity of 18 million gallons per day (mgd) and currently processes an average recycled flow of 13.9 mgd. The reclaimed water is used for landscape and agricultural irrigation in and around the City of Lancaster,

along with a variety of other municipal and industrial purposes. In addition, reclaimed water is used to maintain water levels in Apollo Lakes Regional Park and Piute Ponds. In addition to producing recycled water, the LWRP processes all wastewater solids generated at the plant. The wastewater solids are anaerobically digested, centrifugally dewatered, and further dried in drying beds. The dried biosolids are hauled away and beneficially used. Methane gas is produced during the digestion process and is used to heat the anaerobic digesters. (LACSD, n.d.)

Pursuant to the LACSD's NOP Comment letter (see EIR *Appendix A*), wastewater flow from the Project would discharge to a local sewer line, which is not maintained by LACSD for conveyance to the LACSD's Trunk "C" Trunk Sewer, located within Columbia Way / East Avenue M, west of 30th Street East. The LACSD's 15-inch diameter trunk sewer has a capacity of 2.2 mgd and conveyed a peak flow of 0.7 mgd when last measured in 2018 (LACSD, 2022). Due to the Project's location, the flow originating from the proposed Project would have to be transported to the LACSD trunk sewer by local sewer(s) that are not maintained by the LACSD. As part of the proposed Project and as shown previously on Figure 3-8, *Sanitary Sewer Infrastructure Phasing Plan*, in Section 3.0, *Project Description*, existing sanitary sewer lines are located within the Columbia Way / East Avenue M right-of-way (ROW) to the north of the Project site boundary. As part of the Project, approximately 1,300 linear feet of the existing sanitary sewer line within the Columbia Way / East Avenue M ROW would be upgraded. Sanitary sewer lines are proposed along Public Street A and Public Street B ROWs. The proposed sanitary sewer lines would connect to the existing sanitary sewer line at the intersection of Public Street A and Columbia Way / East Avenue M and the intersection of Public Street B and Columbia Way / East Avenue M. The proposed sanitary sewer line in Public Street A will remain independent from the proposed sanitary sewer lines in the rest of the Specific Plan Area, serving only the western portion of the Specific Plan Area.

C. *Solid Waste Collection and Disposal*

The City contracts with Waste Management to provide complete residential and commercial trash, organic waste processing, and recycling services, including residential curbside trash, recycling and yard waste collection, pickup of bulky items, and electronic waste pickup, for all single and multi-family homes, as well as businesses. (City of Palmdale, 2022a, p. 4.19-4)

Like all municipalities, the City of Palmdale must meet the solid waste diversion mandates established by the California Integrated Waste Management Act under State Assembly Bill 939 (AB 939) in 1989. AB 939 mandates that all cities reduce annual waste per capita by 50 percent. The City of Palmdale is working toward compliance with all state recycling requirements, including legislation that imposes Mandatory Commercial Recycling on all businesses that generate at least four cubic yards of trash per week and all multi-family dwellings that have five units or more. City waste haulers send all residential and commercial solid waste to the Antelope Valley Recycling and Disposal Facility, located at 1200 West City Ranch Road, approximately one mile from State Route 14 (SR-14). (City of Palmdale, 2022a, p. 4.19-4)

The City also complies with Assembly Bill (AB) 1826, California's Mandatory Commercial Organics Recycling law, which requires businesses and multi-family dwellings to recycle their organic waste. Organic waste includes food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled waste that is mixed with food waste. Through the City of Palmdale, Waste Management offers organic waste recycling services for both businesses and multi-family dwellings. (City of Palmdale, 2022a, p. 4.19-4)

According to the California Department of Resources Recycling and Recovery's (CalRecycle's) Disposal Reporting System, in the fourth quarter of 2019, solid waste generated in the City of Palmdale was disposed of at eight different landfills, recycling centers, and waste recovery and conversion facilities. (City of Palmdale, 2022a, p. 4.19-4)

Table 4.15-3, *Existing Landfill Maximum Permit Capacity and Maximum Permitted Throughput*, summarizes the maximum permit capacity and maximum permitted throughput allowed at each of the solid waste facilities that receive solid waste from the City of Palmdale. The "maximum permit capacity" represents the total capacity of the solid waste facility throughout its lifetime. The "maximum permitted throughput" represents the amount of waste the solid waste facility is allowed to receive per day, or in the case of the Simi Valley Landfill and Recycling Center, per week, and is identified in Table 4.15-3. (CalRecycle, n.d)

Recyclables are collected in separate containers in the City of Palmdale at single family residences, some multi-family residences, businesses, and agencies. Waste Management, the City's waste hauler, achieves most of its waste diversion through mixed waste processing at materials recovery facilities. In accordance with AB 939, recyclables are sorted, and the residual waste is transferred to the landfill. Waste generation for the City of Palmdale is taken into account in the County of Los Angeles Countywide Integrated Waste Management Plan, which projects future waste generation and disposal facility needs. (City of Palmdale, 2022a, p. 4.19-5)

Table 4.15-3 Existing Landfill Maximum Permit Capacity and Maximum Permitted Throughput

Landfill	Maximum Permit Capacity[1]	Maximum Permitted Throughput[1]
Antelope Valley Public Landfill	30,200,000 cy	5,548 tpd
Lancaster Landfill and Recycling Center	27,700,000 cy	5,100 tpd
McKittrick Waste Treatment Site	5,474,900 cy	3,500 tpd
Simi Valley Landfill and Recycling Center	119,600,000 cy	64,750 tpw
El Sobrante Landfill	209,910,000 cy	16,054 tpd
Sunshine Canyon City/County Landfill	140,900,000 cy	12,100 tpd
Chiquita Canyon Sanitary Landfill	110,366,000 cy	12,000 tpd
Victorville Sanitary Landfill	93,400,000 cy	3,000 tpd

Note: cy = cubic yards; tpd = tons per day; tpw = tons per week.
[1] (CalRecycle, 2024)

D. Storm Water Drainage

The City of Palmdale Department of Public Works maintains the public stormwater systems. The City operates closed conduits, open channels, drainage basins, dry wells, and two dry creeks as natural stormwater conveyances. Because of the arid climate within the City, the stormwater system remains dry for most of the year and only captures stormwater during rainy periods. (City of Palmdale, 2022a, p. 4.19-4)

As shown in Figure 2-8, under existing conditions, runoff emanating from the Project site is divided into three areas. Area 1 is located in the central and southwestern portion of the Project site; Area 2 is located in the eastern, south-central, and southeastern portion of the Project site; and Area 3 is located in the northwest corner of the Project site. Area 1 and Area 2 both flow in a northeastern direction across the Project site on to Columbia Way / East Avenue M. Area 3 flows in a northern direction toward an existing culvert system just east of the intersection of Columbia Way / E Avenue M and Sierra Highway. The existing Columbia Way / East Avenue M terrain is very flat and has several low points where runoff accumulates. Along the northern boundary of the Project site, Columbia Way / East Avenue M, does not have any storm drain infrastructure to collect runoff that accumulates at these low points, which act as outlet points for runoff from Area 1 and Area 2. When runoff accumulation exceeds the natural storage volume of the existing low points and the capacity of the existing culvert, flows will overtop Columbia Way / E Avenue M. (JLC, 2023, p. 5)

Runoff from the 400-acres located to the southwest of the Project site, sheet flows in a northeasterly direction towards Sierra Highway and the Project site. A concrete channel, located on the east side of Sierra Highway, directs runoff to flow under the railroad bridge to an existing reinforced concrete box that crosses Columbia Way / East Avenue M to the north. This prevents any runoff from the southwest from flowing onto the Project site. (JLC, 2023, pp. 1-3)

Refer to EIR Subsection 4.9, *Hydrology and Water Quality*, for additional information regarding the Project site's existing drainage conditions.

4.15.2 Regulatory Setting

The following is a brief description of the federal, State, and local environmental laws and related regulations related to utilities and service systems.

A. *Federal Regulations*

1. *Clean Water Act*

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was substantially reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. A specific provision of the CWA is CWA Section 402, which authorizes the National Pollutant Discharge Elimination System (NPDES) permit program that covers point source pollution discharging to a water body. Point sources are discrete conveyances such as pipes or man-made ditches. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2023e)

The NPDES program requires operators of a construction site one acre or larger to obtain authorization to discharge storm water under an NPDES construction storm water permit. Compliance with the NPDES Permit is required for projects that result in more than one acre of ground disturbance, including through clearing, grading, grubbing, excavating, stockpiling, and removing or replacing existing facilities. The NPDES Permit requires the landowner and/or contractor to file permit registration documents prior to commencing construction and pay a fee annually throughout the duration of construction. These documents include a notice of intent, risk assessment, site map, SWPPP, and signed certification statement. The SWPPP is required to specify the minimum Best Management Practices (BMPs) that the Project would be required to implement during construction activities to ensure that all potential pollutants of concern are prevented, minimized, and/or otherwise appropriately treated prior to being discharged from the subject property. The SWPPP must include measures to ensure the following: all pollutants and their sources are controlled; non-stormwater discharges are identified and eliminated, controlled, or treated; site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges; and BMPs are installed to reduce or eliminate pollutants post-construction are completed and maintained. (City of Palmdale, 2022a, p. 4.10-8)

2. Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the US. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources. The Act authorizes EPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards. The 1996 amendments to SDWA require that EPA consider a detailed risk and cost assessment, and best available peer-reviewed science, when developing these standards. State governments, which can be approved to implement these rules for EPA, also encourage attainment of secondary standards (nuisance-related). Under the Act, EPA also establishes minimum standards for state programs to protect underground sources of drinking water from endangerment by underground injection of fluids. (EPA, 2023f)

3. United States Department of Energy/Federal Energy Regulatory Commission

The United States Department of Energy (DOE) is the federal agency responsible for establishing policies regarding energy conservation, domestic energy production and infrastructure. The Federal Energy Regulatory Commission (FERC) is an independent federal agency, officially organized as part of the DOE which is responsible for regulating interstate transmission of natural gas, oil and electricity, reliability of the electric grid and approving of construction of interstate natural gas pipelines and storage facilities. The Energy Policy Act of 2005 has also granted FERC with additional responsibilities of overseeing the reliability of the nation's electricity transmission grid and supplementing state transmission siting efforts in national interest electric transmission corridors.

FERC has authority to oversee mandatory reliability standards governing the nation's electricity grid. FERC has established rules on certification of an Electric Reliability Organization (ERO) which establishes, approves and enforces mandatory electricity reliability standards. The North American Electric Reliability Corporation (NERC) has been certified as the nation's ERO by FERC to enforce reliability standards in all interconnected jurisdictions in North America. Although FERC regulates the bulk energy transmission and reliability throughout the United States, the areas outside of FERC's jurisdictional responsibility include state level regulations and retail electricity and natural gas sales to consumers which falls under the jurisdiction of state regulatory agencies. (FERC, 2023)

B. State Regulations

1. Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act was established to ensure adequate water supplies are available for future uses. To promote the conservation and efficient use of water, the Act requires local agencies to adopt a water efficient landscape ordinance. When such an ordinance had not been adopted, a finding as to why (based on the climatic, geologic, or topographical conditions) such an ordinance is not necessary, must be adopted. In the absence of such an ordinance or findings, the policies and requirements contained in the "model" ordinance drafted by the State of California apply within the affected jurisdiction. (CA Legislative Info, n.d.)

2. *Water Recycling in Landscaping Act*

In 2000, Senate Bill 2095 (SB 2095) (Water Recycling in Landscaping Act) was approved by Governor Davis requiring any local public or private entity that produces recycled water and determines that within 10 years it will provide recycled water within the boundaries of a local agency, to notify the local agency of that fact. In turn, local agencies are required to adopt and enforce, within 180 days, a specified recycled water ordinance, unless the local agency adopted a recycled water ordinance or other regulation requiring the use of recycled water in its jurisdiction prior to January 1, 2001. (CA Legislative Info, n.d.)

3. *Urban Water Management Planning Act*

The Urban Water Management Planning Act (UWMP Act) was proposed and adopted to ensure that water planning is conducted at the local level, as the State of California recognized that two water agencies in the same region could have very different impacts from a drought. The UWMP Act requires water agencies to develop UWMPs over a 20-year planning horizon, and further requires UWMPs to be updated every five years. UWMPs are exempt from compliance with CEQA. (DWR, 2016, p. 1-2) The UWMPs provide a framework for long term water planning and inform the public of a supplier's plans for long-term resource planning that ensures adequate water supplies for existing and future demands. This part of the California Water Code (CWC) requires urban water suppliers to report, describe, and evaluate:

- Water deliveries and uses;
- Water supply sources;
- Efficient water uses;
- Demand management measures; and,
- Water shortage contingency planning. (DWR, 2016, p. 1-3)

The UWMP Act has been modified over the years in response to the State's water shortages, droughts, and other factors. A significant amendment was made in 2009 (Water Conservation Act of 2009, also known as Senate Bill X7-7), after the drought of 2007-2009 and as a result of the governor's call for a statewide 20 percent reduction in urban water use by the year 2020. This Act required agencies to establish water use targets for 2015 and 2020 that would result in statewide savings of 20 percent by 2020. Beginning in 2016, retail water suppliers were required to comply with the water conservation requirements in SB X7-7 in order to be eligible for State water grants or loans. Retail water agencies were required to set targets and track progress toward decreasing daily per capita urban water use in their service area, which will assist the State in meeting its 20 percent reduction goal by 2020. (DWR, 2016, p. 1-2)

4. *California Senate Bill 221*

Under Senate Bill No. 221 (SB 221), approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply. SB 221 is intended as a 'fail safe' mechanism to ensure that collaboration on finding the needed water supplies to serve a new large

subdivision occurs before construction begins. SB 221 requires the legislative body of a city or county or the advisory agency, to the extent that it is authorized by local ordinance to approve, conditionally approve, or disapprove a tentative map, must include a condition of approval requiring that a sufficient water supply is available. Proof of the availability of a sufficient water supply must be requested by the subdivision applicant or local agency, at the discretion of the local agency, and is based on written verification from the applicable public water purveyor within 90 days of a request. SB 221 does not apply to any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediately contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low-income households. (DWR, 2003; CA Legislative Info, n.d.)

5. California Water Code § 10610 et seq. (Senate Bill 901)

Signed into law on October 16, 1995, Senate Bill No. 901 (SB 901) required every urban water supplier to identify as part of its UWMP, the existing and planned sources of water available to the supplier over a prescribed five-year period. The code requires the water service purveyor to assess the projected water demand associated with a proposed project under environmental review. SB 901 requires compliance in the event that the proposed Project involved the adoption of a specific plan, amendment to, or revision of the land use element of a general plan or specific plan that would result in a net increase in the state population density. Upon completion of the water assessment, cities and counties may agree or disagree with the conclusions of the water service purveyors, but cannot approve projects in the face of documented water shortfalls without first making certain findings. (CA Legislative Info, n.d.) The proposed Project does not involve the adoption of a specific plan, amendment to, or revision of the land use element of a general plan or specific plan.

6. Executive Order B-29-15

Executive Order B-29-15 (EO B-29-15) ordered the SWRCB to impose restrictions to achieve a 25-percent reduction in potable urban water usage through February 28, 2016; directed the California Department of Water Resources (DWR) to lead a statewide initiative, in partnership with local agencies, to collectively replace 50 million square feet of lawn and ornamental turf with drought tolerant landscapes; and directed the California Energy Commission to implement a statewide appliance rebate program to provide monetary incentives for the replacement of inefficient household devices. (SWRCB, 2023)

7. Executive Order B-37-16

Signed on May 9, 2016, Executive Order B-37-16 (EO B-37-16) established a new water use efficiency framework for California. The order bolstered the state's drought resilience and preparedness by establishing longer-term water conservation measures that include permanent monthly water use reporting, new urban water use targets, reducing system leaks and eliminating clearly wasteful practices, strengthening urban drought contingency plans, and improving agricultural water management and drought plans. (SWRCB, 2023)

8. Executive Order B-40-17

Signed on April 7, 2017, Executive Order B-40-17 (EO B-40-17) ended the drought state of emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne, where emergency drinking water projects will continue to help address diminished groundwater supplies. It maintains water reporting requirements and prohibitions on wasteful practices. The order was built on actions taken in Executive Order B-37-16, which remains in effect. In a related action, state agencies, including the DWR, released a plan to continue making water conservation a way of life. (SWRCB, 2023)

9. Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) established a new structure for managing California's groundwater resources at a local level by local agencies. SGMA required, by June 30, 2017, the formation of locally-controlled groundwater sustainability agencies (GSAs) in the State's high- and medium-priority groundwater basins and subbasins (basins). A GSA is responsible for developing and implementing a groundwater sustainability plan (GSP) to meet the sustainability goal of the basin to ensure that it is operated within its sustainable yield, without causing undesirable results. The GSP Emergency Regulations for evaluating GSPs, the implementation of GSPs, and coordination agreements were adopted by DWR and approved by the California Water Commission on May 18, 2016. (DWR, n.d.)

10. Senate Bill 610

The California Water Code (Water Code) §§ 10910 through 10915 were amended by the enactment of Senate Bill (SB 610) in 2002. SB 610 requires an assessment of whether available water supplies are sufficient to serve the demand generated by a proposed project, as well as the reasonably foreseeable cumulative demand in the region over the next 20 years under average normal year, single dry year, and multiple dry year conditions. Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code 10912 [a]) subject to CEQA (CA Legislative Info, n.d.) (DWR, 2003). For the purposes of SB 610, "project" is defined and includes industrial facilities planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area (CA Legislative Info, n.d.) (DWR, 2003). Because the Project site is comprised on more than 40 acres of land and proposes more than 650, 000 square feet of floor area for industrial use, the Project meets the definition of a "project" under SB 610. As such, a WSA was prepared for the Project, and is provided as *Technical Appendix M2*.

11. Senate Bill 606

Senate Bill 606 (SB 606) and Assembly Bill 606 (AB 606) build on Governor Brown's ongoing efforts to make water conservation a way of life in California and create a new foundation for long-term improvements in water conservation and drought planning. SB 606 and AB 1668 establish guidelines for efficient water use and a framework for the implementation and oversight of the new standards, which must be in place by 2022. The two bills strengthen the state's water resiliency in the face of future droughts with provisions that include:

- Establishing water use objectives and long-term standards for efficient water use that apply to urban retail water suppliers; comprised of indoor residential water use, outdoor residential water use, commercial, industrial and institutional (CII) irrigation with dedicated meters, water loss, and other unique local uses;
- Providing incentives for water suppliers to recycle water;
- Identifying small water suppliers and rural communities that may be at risk of drought and water shortage vulnerability and provide recommendations for drought planning; and,
- Requiring both urban and agricultural water suppliers to set annual water budgets and prepare for drought.

SB 606 would require an urban retail water supplier to calculate an urban water use objective no later than November 1, 2023, and by November 1st every year thereafter, and its actual urban water use by those same dates. SB 606 would authorize the State Water Resources Control Board to issue information orders, written notices, and conservation orders to an urban retail water supplier that does not meet its urban water use objective, as specified. (SWRCB, 2022)

12. Assembly Bill 1668

Assembly Bill 1668 (AB 1668) requires the SWRCB, in coordination with the DWR, to adopt long-term standards for the efficient use of water and performance measures for commercial, industrial, and institutional water use on or before June 30, 2022. The bill, until January 1, 2025, establishes 55 gallons per capita daily as the standard for indoor residential water use. Beginning January 1, 2025, the bill establishes the greater of 52.5 gallons per capita daily or a standard recommended by the SWRCB and beginning January 1, 2030, the bill establishes the greater of 50 gallons per capita daily or a standard recommended by the SWRCB. AB 1668 imposes civil liability for a violation of an order or regulation issued pursuant to these provisions. (SWRCB, 2020)

13. California Plumbing Code

Title 24, Part 5 of the California Code of Regulations establishes the California Plumbing Code. The California Plumbing Code sets forth efficiency standards (i.e., maximum flow rates) for all new federally-regulated plumbing fittings and fixtures, including showerheads and lavatory faucets. The 2022 California Plumbing Code, which is based on the 2021 Uniform Plumbing Code, was published by the California Building Standards Commission on July 1, 2022 and went into effect on January 1, 2023. (CBSC, 2023) The proposed Project is subject to the 2022 CBC.

14. California Code of Regulations Title 20 and 24

Title 20 of the California Code of Regulations (CCR) includes state and federal minimum efficiency requirements for energy and water use in regulated appliances. These appliances include, but are not limited to, water heaters, furnaces, heat pumps, air conditioners, refrigerators, pumps, lamps and ballasts, computers, spray sprinkler bodies and showerheads. Manufacturers are responsible for certifying regulated appliances to the California Energy Commission's Modernized Appliance

Efficiency Database System. This serves as the manufacturer's claim that it has met all applicable requirements, including testing, and marking products. (CCR, n.d.)

Title 24 of the CCR is a broad set of requirements for energy conservation, green design, construction and maintenance, fire and life safety, and accessibility that apply to the structural, mechanical, electrical, and plumbing systems in a building. Title 24 was published by the California Building Standards Commission and applies to all buildings in California. Title 24 receives updates every three years with the latest revisions being in 2022. Title 24 energy compliance requirements apply to new construction and any new installations or retrofits in existing buildings. Older buildings do not have to upgrade their systems, but if they choose to renovate, their new systems must meet Title 24 standards. (CBSC, 2023) The proposed Project is subject to the 2022 CBC.

15. California Water Plan

The California Water Plan is the State's strategic plan for sustainably managing and developing water resources for current and future generations. Required by Water Code Section 10005(a), it presents the status and trends of California's water-dependent natural resources; water supplies; and agricultural, urban, and environmental water demands for a range of plausible future scenarios. The plan is updated every five years; provides a way for various groups to collaborate on findings and recommendations and make informed decisions regarding California's water future; cannot mandate actions or authorize spending for specific actions; does not make project- or site-specific recommendations nor include environmental review or documentation as would be required by CEQA; and requires policy- and law-makers to take definitive steps to authorize the specific actions proposed in the plan and appropriate funding needed for implementation.

California Water Plan Update 2018 (Update 2018) provides recommended actions, funding scenarios, and an investment strategy to bolster efforts by water and resource managers, planners, and decision-makers to overcome California's most pressing water resource challenges. It reaffirms the unique role of the State and commitment to sustainable, equitable, long-term water resource management; it also introduces implementation tools to inform sound decision-making. Update 2018 also provides a broad and diverse portfolio of recommended actions addressing critical, systemic, and institutional challenges facing the State. (DWR, 2019)

16. California Water Action Plan

The California Water Action Plan is a roadmap for the State's journey towards sustainable water management. The first California Water Action Plan was released in January 2014 under the administration of Governor Brown and was updated in 2016. The California Water Action Plan discusses the challenges to water in California: uncertain water supplies, water scarcity/drought, declining groundwater supplies, poor water quality, declining native fish species and loss of wildlife habitat, floods, supply disruptions, and population growth and climate change further increasing the severity of these risks. (CDFW, n.d.)

17. California Solid Waste Integrated Waste Management Act

Assembly Bill 939 (AB 939), the Integrated Waste Management Act (IWMA) of 1989, established an integrated waste management hierarchy aimed at reducing solid waste through various programs such as source reduction, recycling and composting, and environmentally safe transformation and land disposal. The IWMA established the California Integrated Waste Management Board (CIWMB) whose task was to reduce the waste stream generated by the state by encouraging recycling and overseeing landfills and other solid waste facilities. The IWMA required each city or county to prepare, adopt, and submit an Integrated Waste Management Plan (IWMP) to the CIWMB. IWMPs were required to include an implementation schedule indicating diversion of 50 percent of all solid waste by January 1, 2000, through source reduction, recycling, and composting activities. In July of 2009, the CIWMB was eliminated and all CIWMB duties and responsibilities were assumed by CalRecycle. (CalRecycle, n.d.) (LA County Solid Waste Management Committee, 2010)

18. Waste Reuse and Recycling Act

The Waste Reuse and Recycling Act (WRRA) required the CIWMB to approve a model ordinance for adoption by any local government for the transfer, receipt, storage, and loading of recyclable materials in development projects by March 1, 1993. The WRRA also required local agencies to adopt a local ordinance by September 1, 1993, or allow the model ordinance to take effect. The WRRA requires all development projects that are commercial, industrial, institutional, or marina in nature and where solid waste is collected and loaded, to provide an adequate area for collecting and loading recyclable materials over the lifetime of the project. The area is required to be provided prior to issuance of building permits. (CalRecycle, n.d.)

19. Mandatory Commercial Recycling Program

Assembly Bill 341 (AB 341) (Chapter 476, Statutes of 2011) directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. CalRecycle initiated formal rulemaking with a 45-day comment period beginning October 28, 2011. The final regulation was approved by the Office of Administrative Law on May 7, 2012. AB 341 was designed to help meet California's recycling goal of 75 percent by the year 2020. AB 341 requires all commercial businesses and public entities that generate four cubic yards or more of waste per week to have a recycling program in place. In addition, multi-family apartments with five or more units are also required to form a recycling program. (CalRecycle, n.d.)

20. California Green Building Standards Code (CAL Green; Part 11 of Title 24, California Code of Regulations)

The current edition of CalGreen became effective on January 1, 2023. The provisions of CalGreen are applicable to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout the State of California (including warehouse buildings like the buildings evaluated in this EIR). CalGreen Section 5.408.3 requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting from land clearing must be reused or

recycled. For a phased project, such material may be stockpiled on site until the storage site is developed. (CBSC, 2023)

21. Senate Bill 1374

SB 1374 (Chapter 501, Statues of 2002), the Construction and Demolition Waste Materials Diversion Requirements, was codified in Public Resources Code Section 42919. SB 1374 requires that jurisdictions include in their annual AB 939 report a summary of the progress made in diverting construction and demolition waste. The legislation also required that CalRecycle adopt a model ordinance for diverting 50 to 75 percent of all construction and demolition waste from landfills. The model ordinance was adopted by CalRecycle on March 16, 2004. (CA Legislative Info, n.d.)

22. Assembly Bill 1826

Assembly Bill 1826 (AB 1826) (Chapter 727, Statues of 2014) requires jurisdictions to implement an organic waste recycling program for businesses, including outreach, education, and monitoring of affected businesses. Additionally, each jurisdiction must identify information including barriers to siting organic waste recycling facilities, as well as closed or abandoned sites that might be available for new organic waste recycling facilities. AB 1826 defines "organic waste" as food waste, green waste, landscape and pruning waste, non-hazardous wood waste, and food-soiled paper waste that is mixed in with food waste. It also defines a "business" as a commercial or public entity, including, but not limited to, a firm, partnership, proprietorship, joint stock company, corporation, or association that is organized as a for-profit or nonprofit entity, or a multifamily residential dwelling consisting of five or more units. As of January 1, 2017, businesses that generate four cubic yards or more of organic waste per week are subject to this requirement. Commencing January 1, 2019, businesses that generate four cubic yards or more of commercial solid waste per week also are required to arrange for organic waste recycling services. (CA Legislative Info, n.d.) In September 2020, CalRecycle reduced this threshold to two cubic yards of solid waste generated by covered businesses. (CalRecycle, n.d.)

23. Zero Waste California

Zero Waste California is a state program launched by CalRecycle in 2002 to promote a new vision for the management of solid waste by maximizing existing recycling and reuse efforts, while ensuring that products are designed for the environment and have the potential to be repaired, reused, or recycled. The Zero Waste California program promotes the goals of market development, recycled product procurement, and research and development of new and sustainable technologies. (CalRecycle, n.d.)

24. Senate Bill 1383

SB 1383 (Chapter 395, Statues of 2016) establishes methane emissions reduction targets for California in an effort to reduce emissions of short-lived climate pollutants. Recognizing that 20 percent of the state's methane emissions originate from organic waste in landfills, these targets aim to reduce organic waste disposal by 75 percent by 2025 and recover at least 20 percent of currently disposed surplus food by 2025. (City of Palmdale, 2022a, p. 4.6-5)

25. California Energy Efficiency Standards for Residential and Nonresidential Buildings (24 CA. Code Regs. 6)

The Building Energy Efficiency Standards were first adopted in 1976 and have been updated periodically since then as directed by statute. In 1975 the Department of Housing and Community Development (HCD) adopted rudimentary energy conservation standards under the authority granted to HCD by State Housing Law that were a precursor to the first generation of the Standards. However, the Warren-Alquist Act was passed one year earlier with explicit direction to the Energy Commission (formally titled the State Energy Resources Conservation and Development Commission) to adopt and implement the Standards. The Energy Commission's statute created separate authority and specific direction regarding what the Standards must address, what criteria must be met in developing the Standards, and what implementation tools, aids, and technical assistance must be provided. (CEC, 2023)

The Standards contain energy and water efficiency requirements (and indoor air quality requirements) for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. Public Resources Code Sections 25402 subdivisions (a)-(b) and 25402.1 emphasize the importance of building design and construction flexibility by requiring the Energy Commission to establish performance standards, in the form of an "energy budget" in terms of the energy consumption per square foot of floor space. For this reason, the Standards include both a prescriptive option, allowing builders to comply by using methods known to be efficient, and a performance option, allowing builders complete freedom in their designs provided the building achieves the same overall efficiency as an equivalent building using the prescriptive option. Reference Appendices are adopted along with the Standards that contain data and other information that helps builders comply with the Standards. (CEC, 2023)

The 2022 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential Standards include the introduction of photovoltaic into the prescriptive package, improvements for attics, walls, water heating, and lighting. The most significant efficiency improvements to the nonresidential Standards include alignment with the ASHRAE 90.1 2017 national standards. The 2022 Standards also include changes made throughout all of its sections to improve the clarity, consistency, and readability of the regulatory language. (CEC, 2023)

Public Resources Code Section 25402.1 also requires the Energy Commission to support the performance standards with compliance tools for builders and building designers. The Alternative Calculation Method (ACM) Approval Manual adopted by regulation as an appendix of the Standards establishes requirements for input, output, and calculational uniformity in the computer programs used to demonstrate compliance with the Standards. From this, the Energy Commission develops and makes publicly available free, public domain building modeling software in order to enable compliance based on modeling of building efficiency and performance. The ACM Approval Manual also includes

provisions for private firms seeking to develop compliance software for approval by the Energy Commission, which further encourages flexibility and innovation. (CEC, 2023)

26. California Solar Rights and Solar Shade Control Acts

The Solar Rights Act sets parameters for establishing solar easements, prohibits ordinances and private covenants, which restrict solar systems, and requires communities to consider passive solar and natural heating and cooling opportunities in new construction. This Act is applicable to all California cities and counties. California's solar access laws appear in the state's Civil, Government, Health and Safety, and Public Resources Codes. California Public Resources Code § 25980 sets forth the Solar Shade Control Act, which encourages the use of trees and other natural shading except in cases where the shading may interfere with the use of active and passive solar systems. (EPIC, 2014; EPIC, 2010)

27. California Public Utilities Commission

The California Public Utilities Commission (CPUC) establishes policies and rules for electricity and natural gas rates provided by private utilities in California such as SCE and SoCal Gas. Public owned utilities, such as the Los Angeles Department of Water and Power (LADWP), do not fall under the CPUCs jurisdiction. The Digital Infrastructure and Video Competition Act of 2006 (DIVCA), which became effective on January 1, 2007, established the CPUC as the sole cable/video television franchising authority in the State of California.

The CPUC is overseen by five commissioners appointed by the Governor and confirmed by the state Senate. The CPUC's responsibilities include regulating electric power procurement and generation, infrastructure oversight for electric transmission lines and natural gas pipelines and permitting of electrical transmission and substation facilities. (CPUC, n.d.)

28. California Energy Commission

The California Energy Commission (CEC) is a planning agency which provides guidance on setting the state's energy policy. Responsibilities include forecasting electricity and natural gas demand, promoting and setting energy efficiency standards throughout the state, developing renewable energy resources and permitting thermal power plants that are 50 megawatts and larger. The CEC also has regulatory specific regulatory authority over publicly owned utilities to certify, monitor and verify eligible renewable energy resources procured. (CEC, n.d.)

29. Senate Bill 1389

SB 1389 (Public Resources Code Sections 25300–25323), adopted in 2002, requires the development of an integrated plan for electricity, natural gas, and transportation fuels. Under the bill, the CEC must adopt and transmit to the Governor and Legislature an Integrated Energy Policy Report every two years. In 2018, the CEC decided to write the Integrated Energy Policy Report in two volumes. Volume I, which was published on August 1, 2018, highlights the implementation of California's innovative policies and the role they have played in moving toward a clean energy economy. Volume II, which

was adopted in February 2019, identifies several key energy issues and actions to address these issues and ensure the reliability of energy resources. (CA Legislative Info, n.d.)

C. Regional and Local Regulations

1. Water Shortage Contingency Plan

On November 22, 2022, LACWD updated its Water Shortage Contingency Plan (WSCP) as part of its UWMP. The WSCP details how the LACWD responds in the event of a declared water emergency or water shortage conditions. The WSCP provides guidance for managing water supplies, mitigating water shortages, improving preparedness for droughts, and other impacts to water supplies and ultimately enables LACWD to efficiently manage future response actions due to water shortages. Provisions in the California Water Code Section 10632.1 require that an annual assessment of water supply and demand be conducted by LACWD on or before July 1 each year beginning in July 2022. The annual assessment must then be submitted to the DWR. (City of Palmdale, 2022a, p. 4.19-9) (LACWD, 2022, pp. 3, 8)

2. City of Palmdale Municipal Code

PMC Chapter 5.52, Solid Waste Handling and Recycling Services, establishes regulations and standards for collection of solid waste and recycling of solid waste materials. The intent of PMC Chapter 5.52 is to set forth terms and conditions pursuant to which authorization may be granted by the City Council to provide solid waste handling services, and to promote the public health, welfare and safety of the community by establishing reasonable regulations relating to the storage, accumulation, collection and disposal of garbage, trash, rubbish, debris and other discarded matter, goods and material. (PMC, 2023)

3. City of Palmdale Storm Water Management Plan

The Palmdale Storm Water Management Plan (SWMP) was adopted in 2003. The SWMP was prepared by the City of Palmdale Department of Public Works with the objective to preserve the quality of City waters, including storm water conveyances such as closed conduits, open channels, drainage basins, and dry wells. The City was issued a "small" Municipal Separate Storm Sewer System (MS4) permit by the Lahontan RWQCB which authorizes the City to legally discharge stormwater into local waterways. The California State Water Resources Control Board (SWRCB) designated the City of Palmdale MS4 as a "small" MS4 because it is located within an urbanized area defined by the US Census Bureau. As part of the MS4 permit requirements, the City was required to develop and submit a SWMP to the Lahontan RWQCB. The goal of the City's SWMP is to reduce the discharge of pollutants to the MS4 to the Maximum Extent Practicable (MEP). A requirement of the SWMP is that each development attenuate post-developed flows to 85 percent of pre-developed flows with the objective of protecting downstream properties. Additional requirements of the SWMP include employing BMPs for on-site detention/retention of stormwater runoff erosion events and tracking. (City of Palmdale, 2023, p. 329)

4.15.3 BASIS FOR DETERMINING SIGNIFICANCE

Based on Section XIX of Appendix G to the State CEQA Guidelines, the Project would result in a significant impact to utilities and service systems if the Project or any Project-related component would:

a. *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;*

b. *Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;*

c. *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;*

d. *Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or,*

e. *Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.*

4.15.4 IMPACT ANALYSIS

Threshold a: 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?

As discussed in EIR Section 3.0, *Project Description*, water service to the proposed Project would be provided by the LACWD. As shown previously on Figure 3-36, *Conceptual Utility Plan – West*, and Figure 3-37, *Conceptual Utility Plan – East*, water service for all buildings would be provided by existing LACWD water lines, located within the Columbia Way / East Avenue M ROW. In addition to the LACWD water line, an Antelope Valley-East Kern Water Agency (AVEK) water line is located along the Columbia Way / East Avenue M ROW, at the 4th Street East intersection. As part of the Project, a water line is proposed along Columbia Way / East Avenue M. Additionally, water lines would be constructed within Public Street A and Public Street B ROWs. The proposed water lines will connect to the existing LACWD water line at the intersection of Public Street A and Columbia Way / East Avenue M and at the intersection of Public Street B and Columbia Way / East Avenue M.

Water service to Buildings 1, 2, and 3 would be accommodated by a proposed water line extending from the proposed water line within Columbia Way / East Avenue M, which would extend to the northeast corner of each individual building. Water service to Building 4 would be accommodated by a proposed water line extending from the proposed water line within Public Street A, which would extend to the northwest corner of Building 4. Water service to Buildings 5 and 6 would be

accommodated by a proposed water line extending from the proposed water line within Public Street B, which would extend to the northeast corner and northwest corner of Buildings 5 and 6, respectively.

Water lines for fire service lines and fire hydrants would be constructed around all proposed buildings. The fire service water lines for the Buildings 1 and 2 sites would connect to the existing water main within Columbia Way / East Avenue M near the northeast and northwest corners of Buildings 1 and 2. The fire service water lines for the Building 3 site would connect to the existing water main within Columbia Way / East Avenue M near the northwest corner of the Building 3. The fire service water lines for the Building 4 site would connect to the proposed water line within Public Street A at the northwestern and southwestern corner of Building 4. The fire service water lines for the Building 5 site would connect to the proposed water line within Public Street B at the northeastern and southeastern corner of Building 5. The fire service water lines for the Building 6 site would connect to the proposed water line within Public Street B at the northwestern and southwestern corner of Building 6.

Public sewer service would be provided by the COPSM. Wastewater flow from the Project would discharge to a local sewer line maintained by COPSM for conveyance to the LACSD's trunk sewer line. As shown previously on Figure 3-36, *Conceptual Utility Plan – West*, and Figure 3-37, *Conceptual Utility Plan – East*, sewer service for Buildings 1 and 2 would be accommodated by an existing sewer main located within Columbia Way / East Avenue M along the northern boundary of the Buildings 1 and 2 sites and would extend southerly to the northeast corner of Buildings 1 and 2. Sewer service for Buildings 3, 5, and 6 would be accommodated by the proposed sewer line along Public Street B which would extend south from Columbia Way / East Avenue M to the midpoint of Public Street B. The sewer line will extend from Public Street B and connect to the northeastern corner of Buildings 3 and 5 and connect to the northwestern corner of Building 6. Sewer service for Building 4 would be accommodated by the proposed sewer line along Public Street A which would extend south from Columbia Way / East Avenue M to the midpoint of Public Street A. The sewer line will extend from Public Street A and connect to the northwestern corner of Building 4. The new sewer lines would convey the sewer discharge from the proposed buildings to the existing sanitary sewer within Columbia Way / East Avenue M. As part of the Project, the existing sanitary sewer line within Columbia Way / East Avenue M would be upgraded. The sewer discharge would then be conveyed to the LWRP for treatment, located approximately 9.5 miles north of the Project site.

The City of Palmdale Department of Public Works maintains the public stormwater systems. Improvements include the construction of the following: a proposed storm drain line within a portion of Public Street A; a storm drain line within Private Drive D extending east towards the water quality drainage basin in the northeastern portion of the Project site; and a storm drain line in a portion of Public Street B.

The Project would result in slight alterations to the site's natural drainage pattern in order to accommodate site grading activities. With development of the Project site as proposed, on-site stormwater would be conveyed through a storm drain system to an on-site infiltration basin located in the northern portion of the Project site, directly east of Challenger Way. The on-site basin would be designed to function as an infiltration basin that would mitigate water quality, reduce downstream

flows to be less than or equal to existing conditions, and to promote groundwater infiltration. The basin would be sized to mitigate the increased runoff and fully retain the 50-yr storm event. (JLC, 2023, pp. 5-6)

The Project's storm drain system would locate storm drains beneath the drive aisle north of proposed Buildings 1 and 2; beneath the Private Drive proposed south of proposed Buildings 1 and 2; beneath the parking area between proposed Buildings 4 and 5; beneath the drive aisle south of proposed Buildings 4 and 5; and beneath Public Street B between proposed Buildings 5 and 6. These storm drains would drain to the proposed infiltration basin located in the northeast portion of the Project site.

The Project site is located in the service territories of the SoCal Gas and SCE (CEC, 2020a; CEC, 2020b). A variety of companies in Palmdale and the surrounding area provide telecommunications utilities, including phone, internet, and television. Because electricity, gas, and telecommunications facilities are available in the local area, it is anticipated that the Project would connect to the existing facilities within existing improved roadways.

Impacts to the physical environment associated with the above-described Project-related water, sewer, drainage, electricity, gas, and telecommunications facilities that would be constructed to service the Project are inherent to the Project's construction phase, and all potential impacts have been evaluated throughout this EIR under the appropriate subject headings (e.g., air quality, biological resources, etc.). Where significant direct or cumulative impacts are identified, mitigation measures have been imposed to reduce the Project's impacts to the maximum extent feasible. There are no environmental impacts that would occur specifically related to the Project's proposed water, sewer, drainage, electricity, gas, and telecommunications improvements. As such, Project impacts associated with the installation of water, sewer, drainage, electricity, gas, and telecommunications improvements to service the Project would be less than significant.

With respect to wastewater treatment capacity, using LACSD Table 1, Loadings for Each Class of Land Use, the land uses for the Project would be "Warehousing", which has a flow rate of 25 gpd per 1,000 s.f. and "Shopping Center", which has a flow rate of 325 gpd per 1,000 s.f. Thus, the gpd of wastewater estimated for the Project would be approximately 225,858.6 gpd ["Warehouse": 8,241,552 s.f. ÷ 1000 = 8,241.55 x 25 = 206,038.8 gpd; "Shopping Center": 60,984 ÷ 1,000 = 60.98 x 325 = 19,819.8 gpd. Thus, 206,038.8 gpd ("Warehouse") + 19,819.8 gpd ("Shopping Center") = 225,858.6 gpd]. (LACSD, 2022) Accordingly, the Project is anticipated to generate approximately 225,858.6 gpd of wastewater requiring treatment. The LWRP provides primary, secondary, and tertiary wastewater treatment with a design capacity of 18 mgd (LACSD, n.d.) Wastewater generation from the Project would represent approximately 1.25 percent (225,858.6 gpd ÷ 18,000,000 x 100 = 1.25 percent) of the daily design capacity at the LWRP. Because the Project's demand for wastewater treatment would only amount to approximately 1.25 percent of the total capacity of the LWRP, it is anticipated that no physical alterations of the LWRP would be needed to accept and treat the Project's wastewater.
Based on the foregoing analysis, the proposed Project would result in less than significant impacts associated with the relocation or construction of new or expanded water, wastewater treatment or storm

water drainage, electric power, natural gas, or telecommunications facilities, and impacts would be less than significant.

Threshold b: Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

As previously indicated, LACWD is responsible for supplying water services in the Project area. LACWD's 2020 UWMP provides a framework for long-term water planning and informs the public of LACWD's plans to ensure adequate water supplies through the year 2045. The UWMP also establishes a water use target that aids in meeting the State's goal of reducing per capita water use by 20 percent by 2020. LACWD's UWMP identifies current and future water demands and supplies and provides a planning framework for water-related management decisions.

KEC utilized the City of Palmdale's industrial water demand, which is 1,070 gpd per acre, to estimate the average potable water demand for Phase I of the Project (KEC Engineers, 2022, p. 24). Based on this demand factor, Phase I of the Project would result in a demand for approximately 118,984 gpd of potable water (1,070 gpd/ac X 111.2 ac = 118,984 gpd).

The demand projections included in the UWMP are based, in part, on existing land uses as well as planned land uses, such as land uses identified in the City's General Plan. The proposed Project is seeking to amend the Project site's EMPFX (Employment Flex) land use designation assigned by the City's General Plan to Specific Plan. The EMPFX land use designation is intended to serve as a transition zone intended to permit mixed development of lighter industrial uses and more intensive service, retail and commercial uses. (City of Palmdale, 2023, Table 5.4 and Figure 5.5) As such, the Project's Specific Plan uses are less water-intensive than the current General Plan land use designation of EMPFX (Employment Flex). Therefore, it can be concluded that the Project's water demand is accounted for by the UWMP. (LACWD, 2021, p. 4-2)

LACWD's anticipated water demands and supplies between 2025 and 2045 during normal year, single dry year, and multiple dry years are provided in Tables 7-2 through 7-4 of the 2020 UMWP. As discussed in EIR Section 4.9, *Hydrology and Water Quality*, according to the 2020 UWMP, during a normal year water scenario, it is anticipated that LACWD would have enough water supply on its own without the need to use AVEK's banked groundwater supplies; therefore, no supply deficit is anticipated. In the single dry and multiple dry year scenarios, AVEK would assist with meeting the LACWD's anticipated water demands by pumping groundwater from its banked supplies; therefore, no supply deficit is anticipated. (LACWD, 2021, p. 7-3 to 7-8)

Accordingly, because the Project's proposed land uses are accounted for by the LACWD 2020 UWMP, and because the UWMP demonstrates that the LACWD would have sufficient supply to meet projected demand through 2045, LACWD would have sufficient water supply available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Thus, Project impacts to water supply would be less than significant.

Threshold c: Would the Project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

As noted above under the analysis of Threshold (a), wastewater from the Project would be conveyed to the LWRP for treatment. The LWRP provides primary, secondary, and tertiary wastewater treatment with a design capacity of 18 mgd. The Project's wastewater generation would represent approximately 1.25 percent) of the daily design capacity at the LWRP. Because the Project's demand for wastewater treatment would only represent approximately 1.25 percent of the total capacity of the LWRP, the Project would not individually trigger the need for any physical changes or treatment capacity increases at the LWRP to service the Project. As such, impacts would be less than significant.

Threshold d: Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Solid waste generated by the Project would be disposed of at one of eight landfills. Table 4.15-3 (previously presented) provides a summary of the maximum daily permitted throughput capacity for each of the landfills that may service the proposed Project.

A. Solid Waste Impacts During Construction

Table 4.15-4, *Estimated Construction Solid Waste Generation*, provides an estimate of the amount of construction waste that would be generated by the Project for all four phases, based on non-residential construction waste generation factors provided by the U.S. EPA. Table 4.15-4 does not account for the construction of site improvements other than buildings. Proposed non-building features (e.g., parking areas, drive aisles, utilities, etc.) would produce nominal amounts of construction waste that would not substantially exceed the solid waste totals listed in Table 4.15-4.

Table 4.15-4 Estimated Construction Solid Waste Generation

Land Use	Construction Rate[1]	Estimated Building Size[2]	Solid Waste Generation Rate[3]	Total	
				lbs/Day[4]	Tons/Day
Non-Residential	7,983 s.f./day for 1,040 days	8,302,536 s.f.	4.34 lbs/s.f.	34,646	17.32

[1]Based on information presented in the Project's Energy Analysis technical report (EIR *Technical Appendix E*), which indicates that building construction would occur between June 2024 and January 2032.

[2]Includes the total square footage for commercial and industrial combined as proposed for the four phases of development.

[3]Source: U.S. Environmental Protection Agency. *Estimating 2003 Building-Related Construction and Demolition Materials Amounts*. Available online at: https://www.epa.gov/smm/estimating-2003-building-related-construction-and-demolition-materials-amounts. Accessed: September 26, 2023.

[4] 7,983 s.f./day X 4.34 lbs/s.f. = 34,646 lbs/day

[5] 34,646 lbs/day ÷ 2,000 (pounds to tons conversion rate) = 17.32 tons/day

As presented in Table 4.15-4, and based on an analysis of the Project's expected rate of building construction, the Project is anticipated to generate approximately 34,646 pounds per day (lbs/day) of construction waste requiring disposal, or approximately 17.32 tons per day (tpd). In total, construction of the Project would produce a projected 18,012.8 tons of construction waste (17.32 tons/day for 1,040 days = 18,012.8 tons), which equates to approximately 12,866.3 cubic yards (cy) (18,012.8 tons/1.4 [tons to cubic yards conversion rate] = 12,866.3 cubic yards).

As discussed above, the Project would generate approximately 12,866.3 cy per day and 17.32 tpd of construction waste requiring disposal. Each percentage shown in Table 4.15-5, *Comparison of Project-Generated Construction Waste to Permitted Capacities at Each Landfill*, represents a scenario in which all Project-generated construction waste would go to only one landfill (i.e., Project-generated construction waste would not be divided among the eight landfills).

Table 4.15-5 Comparison of Project-Generated Construction Waste to Permitted Capacities at Each Landfill

Landfill	Maximum Permit Capacity[1]	Percentage of Maximum Permit Capacity Utilized by Project-Generated Construction Waste	Maximum Permitted Throughput[1]	Percentage of Maximum Permitted Throughput Utilized by Project-Generated Construction Waste
Antelope Valley Public Landfill	30,200,000 cy	0.04 percent	5,548 tpd	0.31 percent
Lancaster Landfill and Recycling Center	27,700,000 cy	0.05 percent	5,100 tpd	0.33 percent
McKittrick Waste Treatment Site	5,474,900 cy	0.24 percent	3,500 tpd	0.49 percent
Simi Valley Landfill and Recycling Center	119,600,000 cy	0.01 percent	64,750 tpw	0.19 percent
El Sobrante Landfill	209,910,000 cy	0.01 percent	16,054 tpd	0.11 percent
Sunshine Canyon City/County Landfill	140,900,000 cy	0.01 percent	12,100 tpd	0.14 percent
Chiquita Canyon Sanitary Landfill	110,366,000 cy	0.01 percent	12,000 tpd	0.14 percent
Victorville Sanitary Landfill	93,400,000 cy	0.01 percent	3,000 tpd	0.58 percent

Note: cy = cubic yards; tpd = tons per day; tpw = tons per week.
[1] (CalRecycle, 2024)

Because the estimated solid waste quantity generated by the Project on a daily basis during construction represents less than one percent of the total maximum permit capacities and total maximum permitted throughput capacities of each landfill, it is anticipated that all landfills would have sufficient daily capacity to accept the construction waste generated by the proposed Project. Furthermore, all proposed

development within the City is required to submit a Construction Waste Management Plan (CWMP). To verify AB 341 compliance for recycling of construction materials, the City requires accurate records for construction material recycling and solid waste disposal. Mandatory compliance with the CWMP requirements would further reduce Project impacts to solid waste by ensuring that 65 percent of the nonhazardous construction waste is recycled or reused. Based on the foregoing analysis, the Project would not cause or contribute to the need for new or expanded solid waste facilities during construction, and impacts would therefore be less than significant.

B. Solid Waste Impacts During Operation

As shown in Table 4.15-6, *Estimated Operational Solid Waste Generation*, buildout and occupancy of the Project is estimated to produce approximately 20.75 tpd of solid waste, or approximately 7,520.41 tpy. Per the County of Los Angeles Countywide Integrated Waste Management Plan (CIWMP), which applies to the Project, up to 65 percent of its solid waste would need to be diverted from area landfills. In conformance with the CIWMP, the Project applicant is required to work with future contract refuse haulers to implement recycling and waste reduction programs for solid wastes.

Table 4.15-6 Estimated Operational Solid Waste Generation

Land Use	Square Footage (s.f.)	Generation Factors per Day	Total Solid Waste Generated	Average Solid Waste per Day
Industrial	8,241,552 square feet	5 lbs/1,000 square feet	7,520.41tpy	20.60 tpd
Commercial	60,984 square feet	5 lbs/1,000 square feet	55.64 tpy	0.15 tpd
		Total	7,597.91 tpy	20.75 tpd

Notes: s.f. = square feet; tpy = tons per year; tpd = tons per day.
(City of Palmdale, 2022a, Table 4.19-4)

As discussed above, solid waste from the Project would be disposed of at one of eight landfills that serve the City of Palmdale. The Project's estimated daily operational solid waste generation rate of 20.75 tpd represents the following percentages of the maximum permitted throughputs for the landfills shown below in Table 4.15-7, *Comparison of Project-Generated Operational Waste to Maximum Permitted Throughput at Each Landfill*. Each percentage shown in Table 4.15-7 represents a scenario in which all Project-generated operational waste would go to only one landfill (i.e., the Project-generated operational waste would not be divided amongst the eight landfills). Note that a percentage of maximum permit capacity utilized by Project-generated operational waste cannot be determined because the Project is assumed to operate indefinitely and therefore, an "operational rate" in days cannot be determined.

Table 4.15-7 Comparison of Project-Generated Operational Waste to Maximum Permitted Throughput at Each Landfill

Landfill	Maximum Permit Capacity[1]	Maximum Permitted Throughput[1]	Percentage of Maximum Permitted Throughput Utilized by Project-Generated Operational Waste
Antelope Valley Public Landfill	30,200,000 cy	5,548 tpd	0.37 percent
Lancaster Landfill and Recycling Center	27,700,000 cy	5,100 tpd	0.40 percent
McKittrick Waste Treatment Site	5,474,900 cy	3,500 tpd	0.59 percent
Simi Valley Landfill and Recycling Center	119,600,000 cy	64,750 tpw	0.22 percent
El Sobrante Landfill	209,910,000 cy	16,054 tpd	0.12 percent
Sunshine Canyon City/County Landfill	140,900,000 cy	12,100 tpd	0.17 percent
Chiquita Canyon Sanitary Landfill	110,366,000 cy	12,000 tpd	0.17 percent
Victorville Sanitary Landfill	93,400,000 cy	3,000 tpd	0.69 percent

[1] (CalRecycle, 2024)

Because the estimated solid waste quantity generated by the Project on a daily basis during operation, represents less than one percent of the total maximum permitted throughput capacities for each landfill, it is anticipated that all landfills would have sufficient daily capacity to accept the solid waste generated by operation of the proposed Project. Based on the foregoing analysis, the Project would not cause or contribute to the need for new or expanded solid waste facilities during operation, and impacts would therefore be less than significant.

C. *Summary of Project Solid Waste Impacts*

As indicated above, regional solid waste facilities would have adequate capacity to handle solid waste generated by the Project's construction and operational phases, and the Project would not cause or contribute to the need for new or expanded solid waste facilities during construction or operation of the Project. Accordingly, impacts would be less than significant.

Threshold e: Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The proposed Project would be regulated by the County of Los Angeles CIWMP. The CIWMP outlines goals, policies, and programs Los Angeles County and its cities would implement to create an integrated and cost-effective waste management system that complies with the provisions of AB 939 and its diversion mandates. Additionally, AB 341 made a legislative declaration that it is the policy goal of the State that not less than 75 percent of solid waste generated be source reduced, recycled, or

composted by the year 2020, although CalRecycle may not establish or enforce a diversion rate greater than the 50 percent diversion rate as set forth by the CIWMP (per Public Resources Code § 41780.01[b]).

The proposed Project would be required to comply with the CIWMP's requirement to divert up to 65 percent of its solid waste from area landfills. In conformance with the CIWMP, the Project applicant is required to work with future contract refuse haulers to implement recycling and waste reduction programs for solid wastes. Implementation of a waste disposal strategy for the proposed Project would assist Los Angeles County and the City of Palmdale in achieving the mandated goals of the IWMA by developing feasible waste programs that encourage source reduction, recycling, and composting. The City of Palmdale is required to implement programs that ensure that the City achieves 65 percent diversion of solid waste from landfill disposal. With mandatory compliance to AB 939, AB 341, and the City's programs and policies, the potential for implementation of the Project to the Project would result in a less than significant impact due to a conflict with federal, State, and local management and reduction statutes and regulations related to solid waste. The Project would be required to comply with all applicable solid waste statutes and regulations; as such, impacts related to solid waste statutes and regulations would be less than significant.

4.15.5 Cumulative Impact Analysis

This cumulative impact analysis for utilities and service systems considers development of the Project site in conjunction with other development projects in the vicinity of the Project site as well as full General Plan buildout in the City of Palmdale and other jurisdictions in the region.

Relocation or Construction of New or Expanded Utilities

As indicated under the analysis of Threshold (a), the Project would require the installation of water, sewer, stormwater, electric power, natural gas, and telecommunications facilities to provide utility service to the Project site. Cumulative effects associated with the proposed water, sewer, stormwater drainage, and utility connections associated with the Project have been evaluated throughout this EIR. There are no components of the water, sewer, stormwater drainage, or utility connections associated with the Project that would result in cumulatively considerable impacts not already evaluated by this EIR. Accordingly, Project impacts due to new or expanded water, wastewater treatment, stormwater drainage, and utility connections would be less than cumulatively considerable.

Water Supply

As discussed under the analysis of Threshold (b), based on LACWD's 2020 UWMP, with implementation of the Project and other cumulative developments, the LACWD would have adequate water supplies during normal, dry, and multiple dry years to meet projected demand through 2045. Therefore, cumulatively-considerable impacts due to water supply would be less than significant.

Wastewater Treatment Capacity

As indicated under the analysis of Threshold (c), the wastewater generation associated with the Project would represent approximately 1.25 percent of the daily design capacity at the LWRP. In terms of cumulative conditions and as noted by the EIR prepared for the City's General Plan, the City concluded that upgrades to the LWRP may be needed in the future to accommodate the additional wastewater generated from full buildout of the City of Palmdale per its General Plan. However, because the demand for wastewater treatment associated with the Project would only represent approximately 1.25 percent of the existing capacity of the LWRP, the contribution of the Project to the possible future need to expand the capacity of the LWRP or to build a new treatment plant would not be cumulatively considerable. Should the existing LWRP need to be expanded or should a new treatment plant be needed in the future to serve full buildout of the City of Palmdale, these additional wastewater treatment facilities would be evaluated under CEQA on a project-specific basis at the time such physical improvements are proposed by the City's Utilities Services Division. The need for potential future improvements to treatment plant capacity is too speculative for evaluation in this EIR (CEQA Guidelines § 15145). (City of Palmdale, 2022a, Table 4.19-3 and pp. 4.19-20 and -21)

Pursuant to the Notice of Preparation (NOP) comment letter received for the Project from the LACSD, dated September 23, 2022, due to anticipated volume of LACSD notes that there is no relief sewer scheduled for construction at this time; as additional flows are generated and the LACSD's trunk sewer nears capacity, LACSD will schedule construction of a relief sewer depending on the availability of relief funding. (LACSD, 2022)

The Project would be consistent with General Plan Goal PSFI-5, Policy PFSI-5:3, "Off-Site Fair Share Contribution. Require all new development, including major modifications to existing development, to construct or provide a fair share contribution toward construction of required off-site improvements needed to support the project. This includes a fair share contribution toward development of regional master facility plans for roads, sewer, water, drainage, schools, libraries, parks, fire, and other community facilities, prior to granting approval of development applications." (City of Palmdale, 2023, p. 322) Additionally, the Project is required to adhere to PMC Chapter 3.45, which requires development applicants to pay Development Impact Fees (DIF) to address usage demands from new development on the City's existing facilities. Payment of the required DIF would ensure that the Project provides fair share funds for the provision of public facilities. The proposed Project and all cumulative developments within the City of Palmdale or surrounding areas would be required to contribute DIFs to address the impacts of each development on the City's existing sewer system facilities. Mandatory fee contributions by the Project Applicant and cumulative developments would ensure that adequate funding is provided to the LACSD for the construction of additional facilities, equipment, and personnel, as needed.

Solid Waste Generation

As indicated under the analysis of Threshold (d), solid waste generated by construction and operation of the Project would represent small proportions (less than one percent) of the total/daily/weekly disposal capacities at each of the eight landfills that serve the City of Palmdale. These landfills have a

sufficient capacity to handle solid waste generated by the Project and other cumulative developments both during construction and long-term operation. The incremental contribution to solid waste generation associated with the Project would be less than cumulatively considerable given the available capacities at existing landfills. Therefore, the Project's impacts to solid waste disposal facilities are evaluated as less than significant on a cumulatively-considerable basis.

Compliance with Solid Waste Reduction Requirements

The Project would adhere to regulations set forth by local and State regulations (including AB 341 and AB 939) during both construction and long-term operations. Other cumulative developments also would be required to comply with such regulations. As such, the Project as well as other cumulative developments in the area would not result in cumulative impacts with respect to compliance with federal, State, and local statutes and regulations related to solid wastes. Impacts would be less than cumulatively considerable.

4.15.6 Significance of Impacts Before Mitigation

Threshold a: Less Than Significant Impact. The Project's wet and dry utility infrastructure facilities have been evaluated throughout this EIR under the appropriate subject headings (e.g., air quality, biological resources, etc.). There are no significant environmental impacts that would occur specifically related to the Project's proposed water, sewer, drainage, and dry improvements that have not already been addressed.

Threshold b: Less Than Significant Impact. Existing water supplies in combination with identified future and potential water supply opportunities and demand reduction responses would enable Los Angeles County Waterworks District (LACWD) District 40 to meet all future water demands under all hydrologic conditions through 2045. Additionally, because the Project's proposed land uses are accounted for by the LACWD 2020 UWMP, and because the UWMP demonstrates that the LACWD would have sufficient supplies to meet projected demands, it is determined that the LACWD will have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years. Thus, Project impacts to water supply would be less than significant.

Threshold c: Less Than Significant Impact. The Project's wastewater generation would represent approximately 1.25 percent of the daily design capacity at the Lancaster Water Reclamation Plant (LWRP). Because the Project's individual wastewater treatment capacity need represents only 1.25 percent of the total treatment capacity of the LWRP, impacts due to implementation of the Project would be less than significant.

Threshold d: Less Than Significant Impact. Solid waste generated by construction and operation of the Project would represent less than one percent of the disposal capacities at landfills that service the area. Existing landfills have a sufficient capacity to accept the Project's solid waste for disposal and the Project 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. Therefore, impacts would be less than significant.

Threshold e: Less Than Significant Impact. There is no potential for the Project to conflict with applicable federal, State, and local statutes and regulations related to the management and reduction of solid waste and pertaining to waste disposal, reduction, and recycling. Impacts would be less than significant.

4.15.7 Mitigation

Impacts would be less than significant; therefore, no mitigation is required.

4.15.8 Design Features (DF) and Regulatory Requirements (RR)

The City of Palmdale is required to assure that implementing development complies with the assumptions relied upon herein and applicable regulatory requirements pertaining to the topic of Utilities and Service Systems, which include the following regulatory requirements and design features. The Project shall be conditioned to implement the following design features and regulatory requirements as part of the City's Conditions of Approval for the Project.

UTIL RR-1 Project construction contractors are required to comply with the requirements of the California Green Building Standards Code (CalGreen, Part 11 of Title 24, California Code of Regulations), which requires among other items the installation of low water-use appliances and the diversion of a certain amount of construction waste from landfills.

UTIL RR -2 The Project design is required to comply with the provisions of the California Solid Waste Reuse and Recycling Act (AB 1327), which requires that an adequate area for collecting and loading recyclable materials over the lifetime of the Project must be provided. The City of Palmdale shall ensure the Project applicant has met this requirement prior to the issuance of building permits.

UTIL RR-3 The Project applicant, construction contractors, and operators, shall comply with all applicable provisions of PMC Chapter 5.52, Solid Waste Handling and Recycling Services.

UTIL RR-4 The Project applicant, construction contractors, and operators, shall comply with all applicable provisions of PMC Title 13, Sanitary Sewers and Industrial Waste.

UTIL RR-5 The Project applicant, construction contractors, and operators, shall comply with all applicable provisions of PMC Chapter 14.05, Water Efficient Landscape.

4.16 WILDFIRE

4.16.1 EXISTING CONDITIONS

Under existing conditions, the Project site is vacant and undeveloped. An unpaved portion of Challenger Way runs north to south through the eastern portion of the Project site. A graded dirt access road runs around the perimeter of the Project site and two graded dirt roads run east-west and north-south in the southern portion of the Project site. An unnamed sandy wash occurs in the extreme northwest corner of the Project site.

Columbia Way / East Avenue M forms the northern boundary of the Project site. To the immediate south of Columbia Way / East Avenue M and north of the central portion of the Project site is a parcel containing four water storage tanks and groundwater wells operated by the Antelope Valley – East Kern Water Agency. To the north of Columbia Way / East Avenue M are lands located within the City of Lancaster that include a restaurant (Ruben's Bar and Grill), a storage facility (Small Town Storage), an automobile salvage yard, Lancaster Adult Day Healthcare facility, an auto repair center (Affordable Transmission and Auto Repair Center), a construction yard and vacant land. Offsite and to the east of Challenger Way is vacant land, beyond which is 15th Street East, beyond which is the USAF Plant 42 facility and the inactive Palmdale Regional Airport. Avenue M-12 forms the southern boundary of the Project site. Beyond Avenue M-12 is vacant land, and runways associated with the USAF Plant 42 and the inactive Palmdale Regional Airport. To the west of the Project site is the Union Pacific Railroad (UPRR) mainline tracks and easement, west of which is the Sierra Highway Bike Trail, which is adjacent to Sierra Highway. West of Sierra Highway is an ARCO gas station, Northrop Grumman Federal Credit Union, a commercial plaza (Sierra Highway Plaza) and vacant land.

A. Wildfire Susceptibility

According to Palmdale 2045 General Plan Final Environmental Impact Report (SCH #2021060494) Figure 4.20-1, Palmdale Fire Hazard Severity Zones, the Project site and immediately surrounding areas are not located within a Very High Fire Hazards Zone and as such, the Project site is not located in a portion of the City that is subject to wildland fire hazards. The nearest area subject to wildland fire hazards occurs approximately 5.02 miles southwest of the Project site. (City of Palmdale, 2022a, Figure 4.20-1)

B. Topography

As previously shown on Figure 2-7, *USGS Topographic Map*, the Project site is mostly level, with an average elevation of approximately 2,528 feet above mean sea level (amsl). Overall site topography slopes downward to the east-northeast at a gradient less than approximately one percent. (SCG, 2023, p. 4) (AES, 2022, p. 5)

C. Existing Vegetation

The Project site is located within an area referred to as "the high desert." Common vegetation communities in the Mojave Desert include creosote bush scrub, shadscale scrub, alkali sink, and Joshua

tree woodland. Vegetation on the Project site consists of big sagebrush – disturbed rubber rabbitbrush scrub, rubber rabbitbrush scrub, disturbed rubber rabbitbrush – Nevada ephedra scrub, rubber rabbitbrush - Nevada joint-fir scrub/Joshua tree woodland, Nevada ephedra - cheesebush - Cooper's box thorn/Joshua tree woodland, creosote bush scrub, Joshua tree woodland, disturbed Joshua tree woodland, and bare ground. Bare ground consists of graded dirt roads with less than five percent vegetation cover. Joshua tree woodland and disturbed Joshua tree woodland generally occurs throughout the southern two-thirds of the Project site. This vegetation type is dominated by western Joshua trees with various shrubs as the dominant understory species. Creosote bush shrubs are the dominant understory species in the southeastern portion of the site. (Psomas, 2022a, pp. 19, 22)

D. State Responsibility Areas

State Responsibility Areas (SRAs) are recognized by the Board of Forestry and Fire Protection (BFFP) as areas where the Department of Forestry and Fire protection (CAL FIRE) is the primary emergency response agency responsible for fire suppression and prevention. The Project site and immediately surrounding areas to the north and west are not located within an SRA. The nearest area located within an SRA occurs approximately 5.28 miles south of the Project site. According to mapping information available from the BFFP, the Project site is located within a Local Responsibility Area (LRA) (BFFP, n.d.). Local Responsibility Areas (LRA) are incorporated cities, urban regions, agriculture lands, and portions of the desert where the local government is responsible for wildfire protection. This is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract. (CalFire, 2023)

The USAF Plant 42 and the inactive Palmdale Regional Airport property immediately to the east and south of the Project site is located within a Federal Responsibility Area (FRA). Federal agencies are responsible for wildfire prevention and suppression for lands in FRAs. (City of Palmdale, 2022a, p. 4.20-1)

4.16.2 Regulatory Setting

The following is a brief description of the federal, State, and local environmental laws and related regulations related to wildfire hazards.

A. Federal Regulations

1. Healthy Forests Restoration Act of 2003

On August 22, 2002, President Bush established the Healthy Forests Initiative, directing the Departments of Agriculture and the Interior, and the Council on Environmental Quality, to improve regulatory processes to ensure more timely decisions, greater efficiency, and better results in reducing the risk of catastrophic wildland fires. On June 5, 2003, the Departments of Agriculture and the Interior adopted two new categorical exclusions from documentation in an environmental assessment or environmental impact statement (EIS): an exclusion for hazardous-fuel reduction and another for rehabilitation of resources and infrastructure damaged by wildfire (68 FR 33814). (BLM, 2003)

B. State Regulations

1. Public Resources Code Sections 4290-4299

Public Resources Code (PRC) Sections 4290-4299 establish minimum statewide fire safety provisions pertaining to: 1) roads for fire equipment access; 2) signs identifying streets, roads, and buildings; 3) minimum private water supply reserves for emergency fire use; and 4) fire fuel breaks and greenbelts. With certain exceptions, all new construction after July 1, 1991, in potential wildland fire areas, is required to meet these statewide standards. The state requirements, however, do not supersede more restrictive local regulations. (CA Legislative Info, n.d.)

As defined by CAL FIRE, wildland areas defined as SRAs may contain substantial wildfire risks and hazards and consist of lands exclusive of cities, and federal lands regardless of ownership. The primary financial responsibility for preventing and suppressing fires within wildlands belongs to the State of California. However, it is not the State's responsibility to provide fire protection services to buildings or structures located within the wildlands unless CAL FIRE has entered into a cooperative agreement with a local agency for those purposes pursuant to PRC Section 4142. As such, wildland areas require disclosure of these fire hazards in real estate transactions, and owners of properties in wildland areas are subject to PRC Section 4291 maintenance requirements. The law requires CAL FIRE to provide maps identifying the boundaries of lands classified as SRAs to the appropriate County Assessor every five years (1991, 1996, 2001, etc.). (CA Legislative Info, n.d.)

2. Public Resources Code Section 4213 – Fire Prevention Fees

Pursuant to PRC Section 4213, in July of 2011, the State of California began assessing an annual "Fire Prevention Fee" for all habitable structures within SRAs to pay for fire prevention services. SRAs are the portions of California where the State of California is financially responsible for the prevention and suppression of wildfires. The SRA does not include lands within incorporated city boundaries, Tribal or federally owned land. As a result of AB 398, California Global Warming Solutions Act of 2006, the fire prevention fee was suspended as of July 1, 2017. (CA Legislative Info, n.d.)

3. California Government Code Section 51178

California Government Code (CGC) Section 51178 specifies that the Director of CAL FIRE, in cooperation with local fire authorities, shall identify areas that are Very High Fire Hazard Severity Zones (VHFHSZ) in LRAs, based on consistent statewide criteria, and the expected severity of fire hazard. Per CGC Section 51178, a local agency may, at its discretion, exclude from the requirements of CGC Section 51182 an area within its jurisdiction that has been identified as a VHFHSZ, if it provides substantial evidence in the record that the requirements of CGC Section 51182 are not necessary for effective fire protection within the area. Alternatively, local agencies may include areas not identified as VHFHSZ by CAL FIRE, following a finding supported by substantial evidence in the record that the requirements of CGC Section 51182 are necessary for effective fire protection within the new area. According to CGC Section 51182, such changes made by a local agency will be final and shall be rebuttable by CAL FIRE. (CA Legislative Info, n.d.)

4. California Code of Regulations Title 14 – Natural Resources

California Code of Regulations (CCR) Title 14 regulations constitute the basic wildland fire protection standards of the Board of Forestry and Fire Protection (BFFP). The Title 14 regulations were prepared and adopted to establish minimum wildfire protection standards in conjunction with building, construction, and development within SRAs. Among other things, CCR Title 14 requires the design, and construction of structures, subdivisions, and developments in an SRA provide for basic emergency access and perimeter wildfire protection measures (fire fuel modification zones, etc.). (CCR, n.d.)

5. California Code of Regulations Title 24, Parts 2 and 9 – Fire Codes

Part 2 of Title 24 of the CCR refers to the California Building Code, which contains complete regulations and general construction building standards of state adopting agencies, including administrative, fire and life safety, and field inspection provisions. Part 2 was updated in 2008 to reflect changes in the base document from the Uniform Building Code (UBC) to the International Building Code. Part 9 refers to the California Fire Code, which contains other fire safety-related building standards. In particular, Chapter 7A, *Materials and Construction Methods for Exterior Wildfire Exposure*, in the 2010 California Building Code addresses fire safety standards for new construction. In addition, Section 701A.3.2, *New Buildings Located in Any Fire Hazard Severity Zone*, states: (CBSC, 2022)

> "*New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.*"

C. Local Regulations

1. General Plan Safety Element

The General Plan Safety Element outlines the goals and policies related to hazards and safety in Palmdale. Per California Government Code Section 65302, a Safety Element provides protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence; liquefaction; and other seismic hazards identified pursuant to Chapter 7.8 (commencing with Section 2690) of Division 2 of the Public Resources Code, and other geologic hazards known to the legislative body; flooding; and wildland and urban fires. The Safety Element also includes mapping of known geologic hazards and addresses evacuation routes, military installations, peak load water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards. The following State and Federal regulations have been established to prevent and mitigate community harm associated with safety hazards. (City of Palmdale, 2023)

2. City of Palmdale Emergency Operations Plan

The Palmdale Emergency Operations Plan (EOP) was developed in 2012 to serve as a guiding document for emergency/disaster response in the City and is currently being updated with the goal of City adoption by December 2022. The Plan assigns responsibility to organizations and individuals for carrying out specific actions at projected times and places in an emergency that exceeds the capability or routine responsibility of any one agency; sets forth lines of authority and organizational relationships and shows how all actions will be coordinated; describes how people and property will be protected in emergencies and disasters; and identifies personnel, equipment, facilities, supplies, and other resources available - within the jurisdiction or by agreement with other jurisdictions - for use during response and recovery operations. (City of Palmdale, 2022a, p. 4.9-17)

3. City of Palmdale Local Hazard Mitigation Plan 2021-2026 Update

To help ensure that the City can protect its residents and businesses from natural and manmade hazards. The City has adopted a Local Hazard Mitigation Plan (LHMP). The LHMP covers a wide range of hazards affecting Palmdale including earthquakes, floods, dams and inundation, wildfires and brush fires, transportation accidents and hazardous materials spills, drought, severe weather, and power/utility failure. The LHMP describes these hazards and lays out how the City and other local partners can work to either reduce hazards or to help address their impacts when disasters occur. Having an LHMP in place helps direct City resources appropriately and qualifies the City for federal disaster relief. (City of Palmdale, 2022c) (City of Palmdale Public Works Department, 2021)

4.16.3 Basis for Determining Significance

Based on Section XX of Appendix G to the State CEQA Guidelines, the Project would result in a significant impact if the Project or any Project-related component would:

a. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, substantially impair an adopted emergency response plan or emergency evacuation plan;*

b. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;*

c. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, 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; or,*

d. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, 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.

4.16.4 IMPACT ANALYSIS

Although the Project site is not located in or near an SRA or lands classified as very high fire hazard severity zones, in the interest of disclosure, analysis is provided.

Threshold a: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

The Project site is not located within an SRA; the nearest area subject to an SRA occurs approximately 5.28 miles south of the Project site (BFFP, n.d.; Google Earth, n.d.). According to mapping information available from the BFFP, the Project site is located within a Local Responsibility Area (LRA). (BFFP, n.d.) According to Palmdale 2045 General Plan Final Environmental Impact Report (SCH #2021060494) Figure 4.20-1, Palmdale Fire Hazard Severity Zones, the Project site and immediately surrounding areas are not located in a Very High Fire Hazards Zone.

The Project site does not contain any emergency facilities, nor does it serve as an emergency evacuation route. Additionally, because the Project is not located near SRAs or lands classified as very high fire hazard severity zones, the Project would not impair local plans such as the Local Hazard Mitigation Plan (LHMP) or the Palmdale Emergency Operations Plan (EOP).

During construction and long-term operation of the Project, adequate emergency access for emergency vehicles would be required to be maintained along public streets that abut the Project site. As part of the City's discretionary review process, the Los Angeles County Fire Department (LACFD) conducted a review of the Project plans to ensure that appropriate emergency ingress and egress would be available to and from the Project site and that circulation on the Project site was adequate for emergency apparatus.

The USAF Plant 42 and the inactive Palmdale Regional Airport property immediately to the east and south of the Project site is located within an FRA. Federal agencies are responsible for wildfire prevention and suppression for lands in FRAs.

Because the Project is not located in or near SRAs or lands classified as very high fire severity zones, implementation of the Project would not substantially impair an adopted emergency response plan or an emergency evacuation plan; thus, no impact would occur, and no mitigation is required.

Threshold b: ***If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?***

Because the Project is not located in or near SRAs or lands classified as very high fire severity zones, the Project, due to slope, prevailing winds, and other factors, would not exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Therefore, no impact would occur as a result of implementation of the Project; thus, no mitigation is required.

Threshold c: ***If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project 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?***

Because the Project is not located in or near SRAs or lands classified as very high fire severity zones, and because the Project involves construction of new structures in compliance with all applicable Building and Fire Codes and installation of on-site and off-site improvements to provide fire access, implementation of the Project would not exacerbate fire risk of the undeveloped site. Due to the lack of wildfire susceptibility in the areas surrounding the Project site, the Project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Therefore, no impact would occur as a result of implementation of the Project; thus, no mitigation is required.

Threshold d: ***If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project 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?***

Because the Project site is not located in or near an SRA or lands classified as very high fire severity zones, the Project would not 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. Therefore, no impact would occur as a result of implementation of the Project; thus, no mitigation is required.

4.16.5 Cumulative Impact Analysis

The cumulative study area for the issue of wildfire includes areas within a two-mile radius of the Project site. The study area is appropriate for analysis because fire events located more than two miles from the Project site are unlikely to affect the Project, and any fires starting in the Project area likely would not affect lands located more than five miles away.

Adopted Emergency Response Plan or Emergency Evacuation Plan

As discussed under the analysis of Threshold (a), the Project site does not contain any emergency facilities, nor does it currently serve as an emergency evacuation route, and the Project would not serve as an evacuation route under long-term conditions. During construction and at Project build-out, the LACFD requires approval prior to and during construction of the proposed Project and the Project would be required to maintain adequate access for emergency apparatus. Other cumulative developments similarly would be required to accommodate emergency access and facilities. As such, cumulatively-considerable impacts would not occur as a result of implementation of the Project.

Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire

As discussed under the analysis of Threshold (b), due to the lack of wildfire susceptibility in the areas surrounding the Project site, the Project and other cumulative developments within the local area have no potential to exacerbate wildfire risks in a manner that could expose occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. As such, cumulatively-considerable impacts would not occur as a result of implementation of the Project.

Fire Protection-related Infrastructure

As discussed under the analysis of Threshold (c), due to the lack of wildfire susceptibility in the areas surrounding the Project site, the Project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. As such, cumulatively-considerable impacts due to fire protection-related infrastructure would not occur as a result of implementation of the Project.

Wildfire-related Hazards

As indicated under the analysis of Threshold (d), the Project site is not located in a portion of the City that is subject to wildland fire hazards and is not located within a portion of the City that is subject to wildfire-related downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Cumulatively-considerable impacts would not occur as a result of implementation of the Project.

4.16.6 Significance of Impacts Before Mitigation

Threshold a: No Impact. Because the Project site is not located in or near SRAs or lands classified as very high fire severity zones, implementation of the Project would not substantially impair an adopted emergency response plan or an emergency evacuation plan; therefore, no impact would occur and no mitigation is required.

Threshold b: No Impact. Because the Project is not located in or near SRAs or lands classified as very high fire severity zones, the Project, due to slope, prevailing winds, and other factors, would not exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a

wildfire or the uncontrolled spread of a wildfire. Therefore, no impact would occur and no mitigation is required.

Threshold c: No Impact. The Project is not located in or near SRAs or lands classified as very high fire severity zones. Therefore, due to the lack of wildfire susceptibility in the areas surrounding the Project site, the Project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Accordingly, no impact would occur.

Threshold d: No Impact. Because the Project site is not located in or near an SRA or lands classified as very high fire severity zones, the Project would not 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. Therefore, no impact would occur and no mitigation is required.

4.16.7 Mitigation

The Project would not be developed in or near state responsibility areas (SRAs) or lands classified as very high fire hazard severity zones. Thus, no impact would occur, and no mitigation is required.

4.16.8 Design Features (DF) and Regulatory Requirements (RR)

The City of Palmdale is required to assure that implementing development complies with the assumptions relied upon herein and applicable regulatory requirements pertaining to the topic of Wildfire, which include the following regulatory requirements and design features. The Project shall be conditioned to implement the following design features and regulatory requirements as part of the City's Conditions of Approval for the Project.

WF DF-1 The proposed structures shall be equipped with an early suppression fast response (ESFR) fire sprinkler system. Installation of the ESFR system shall be assured through City review and approval of building permits.

WF RR-1 Prior to issuance of building permits, the City shall assure that the Project's building plans comply with required fire protection ratings specified in the applicable California Code of Regulations Title 24 requirements.

5.0 Other California Environmental Quality Act Considerations

5.1 Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented

The California Environmental Quality Act (CEQA) Guidelines require that an Environmental Impact Report (EIR) disclose the significant environmental effects of a proposed project that cannot be reduced to a level of less than significant if the Project is implemented and, where impacts cannot be alleviated without imposing an alternative design, the reasons why the project is being proposed, notwithstanding its effect, should be described (CEQA Guidelines Section 15126(b) and Section 15126.2(c)). As described in detail in Section 4.0, *Environmental Analysis*, of this EIR, the proposed Project is anticipated to result in impacts to the environment that cannot be reduced to below a level of significance after the consideration of Project design features, compliance with applicable federal, State, and local regulations, and the application of feasible mitigation measures. These impacts are as follows:

- Air Quality (Thresholds a and b): Significant and Unavoidable Direct and Cumulatively Considerable Impact. As shown in Table 4.2-17, *Summary of Peak Operational Emissions - With Mitigation*, with the implementation of mitigation measures, Phase I VOC emissions resulting from operation of the Project would be reduced and would not exceed the threshold established by the AVAQMD. However, Phase I NO_X and PM_{10} emissions would still exceed applicable thresholds established by the AVAQMD. Phase II – IV VOC, NO_X, CO, PM_{10}, and $PM^{2.5}$ emissions would still exceed applicable thresholds established by the AVAQMD. Therefore, with implementation of the mitigation measures, operational activities associated with the Project would still 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. Impacts would be significant and unavoidable.

- Greenhouse Gas Emissions (Threshold a): Significant Unavoidable Cumulatively-Considerable Impact. After implementation of mitigation measures, as shown previously on Table 4.7-5, *Project GHG Emissions Summary – With Mitigation*, emissions resulting from Phase I of the Project would result in 39,953.73 $MTCO_2e$/yr and Phases II - IV would result in 108,240.42 $MTCO_2e$/yr. Project Buildout emissions are estimated to be 148,194.15 $MTCO_2e$/yr beginning in 2032 when the entire Project is completed and becomes operational. Thus, the proposed Project would exceed the SCAQMD screening threshold of 3,000 $MTCO_2e$ per year. Because the majority (89 percent) of the Project GHG emissions would be generated by Project vehicular sources, the Project cannot feasibly achieve the SCAQMD 3,000 $MTCO_2e$ per year threshold. Because responsibility and authority for regulation of vehicular-source emissions resides with the State of California (CARB, et al.), neither the Applicant nor the Lead Agency can affect or mandate substantial reductions in vehicular-source GHG emissions, much less reductions that would achieve the SCAQMD's 3,000 $MTCO_2e$ per year threshold. In effect, all Project traffic would need to be eliminated or be "zero GHG emissions sources"

to achieve the SCAQMD's numeric threshold. There are no feasible means to or alternatives to eliminate all Project traffic, or to ensure that Project traffic would be zero GHG emissions sources. In terms of its practical application, this would constitute a "no build" condition. On this basis, even with implementation of applicable Project Design Features and Mitigation Measures AIR MM-1 through AIR MM-5, the Project could generate direct or indirect GHG emissions that would result in a significant impact on the environment. This is a significant and unavoidable impact.

- Transportation (Threshold b): Significant and Unavoidable Direct and Cumulatively-Considerable Impact. Because the future building tenants are not known for the Project, the effectiveness of any potential commute trip reduction measure may be limited. In addition to specific tenancy considerations, locational context is also a major factor relevant to the potential application and effectiveness of Transportation Demand Management (TDM) measures. A project may only realize a quantifiable reduction in commute VMT under the most favorable circumstances and ideal local conditions when implementing trip reduction measures. In practical terms, ideal conditions are rarely realized due to variables such as locational context limitations (i.e., non-urban areas). Additionally, to achieve ideal conditions a project must achieve 100 percent employee participation, and maximum employee eligibility, which are not generally expected. This is even more difficult to presume since future building tenants are not known at this time. Although the Project would be subject to compliance with Mitigation Measure TRN RR-1, which would reduce the Project's VMT, the effectiveness of commute trip reduction measures such as those listed in Mitigation Measure TRN MM-1 cannot be guaranteed to reduce Project VMT to a level of less than significant. No additional feasible mitigation measures are available to measurable reduce the Project's VMT. Therefore, the Project's VMT impacts are considered significant and unavoidable.

5.2 Significant Irreversible Environmental Changes Which Cannot be Avoided if the Proposed Project is Implemented

The CEQA Guidelines require EIRs to address any significant irreversible environmental changes that would be involved in the proposed action should it be implemented (CEQA Guidelines Section 15126.2(c)). An environmental change would fall into this category if: a) the project would involve a large commitment of non-renewable resources; b) the primary and secondary impacts of the project would generally commit future generations to similar uses; c) the project would involve uses in which irreversible damage could result from any potential environmental accidents; or d) the proposed consumption of resources is not justified (e.g., the project results in the wasteful use of energy).

Determining whether the proposed Project may result in significant irreversible environmental changes requires a determination of whether key non-renewable resources would be degraded or destroyed in such a way that there would be little possibility of restoring them. Natural resources in the form of construction materials and energy resources would be used in the construction of the proposed Project, but development of the Project site as proposed would have no measurable adverse effect on the availability of such resources, including resources that may be non-renewable (e.g., fossil fuels).

Construction and operation of the proposed Project would not involve the use of large sums or sources of non-renewable energy. Additionally, the Project is required by law to comply with the California Green Building Standards Code (CALGreen), compliance with which requires a reduction in building operation energy volume that is produced by fossil fuels. The Project would be subject to regulations to reduce the Project's reliance on non-renewable energy sources. The Project also would be subject to the Energy Independence and Security Act of 2007, which contains provisions designed to increase energy efficiency and availability of renewable energy. In addition, the Project is subject to California Energy Code, or Title 24, which contains measures to reduce natural gas and electrical demand, thus requiring less non-renewable energy resources. The Project would avoid the wasteful, inefficient, or unnecessary consumption of energy during Project construction or operation. With mandatory compliance to the energy efficiency regulations and any applicable mitigation measures, the Project would not involve the use of large sums or sources of non-renewable energy. A more detailed discussion of Project energy consumption is provided in EIR Subsection 4.5, *Energy*.

EIR Section 4.8, *Hazards and Hazardous Materials*, provides an analysis of the potential for the Project to transport or handle hazardous materials which if released into the environment, could result in irreversible damage. As concluded in EIR Section 4.8, compliance with federal, State, and local regulation related to hazardous materials would be required during the construction phase of the Project and for all future occupants of the Project's buildings. As such, construction and long-term operation of the proposed Project would not have the potential to cause significant irreversible damage to the environment, including damage that may result from upset or accident conditions.

5.3 GROWTH-INDUCING IMPACT OF THE PROPOSED PROJECT

CEQA requires a discussion of the ways in which the proposed Project would be growth inducing. The CEQA Guidelines identify a project as growth inducing if it would foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment (CEQA Guidelines Section 15126.2(d)). New employees and new residential development represents direct forms of growth. These direct forms of growth have a secondary effect of expanding the size of local markets and inducing additional economic activity in the area.

To address this issue, potential growth-inducing effects are examined through analysis of the following questions:

1. Would this project remove obstacles to growth (e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area or through changes in existing regulations pertaining to land development)?

2. Would this project result in the need to expand one or more public services to maintain desired levels of service?

3. Would the project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?

4. Would approval of this project involve some precedent setting action that could encourage and facilitate other activities that could significantly affect the environment?

A project could indirectly induce growth by reducing or removing barriers to growth, or by creating a condition that attracts additional population or new economic activity. However, a project's potential to induce growth does not automatically result in growth. Growth can only happen through capital investment in new economic opportunities by the private or public sectors. Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of little significance to the environment. This issue is presented to provide additional information on ways in which the Project could contribute to significant changes in the environment, beyond the direct consequences of implementing the Project examined throughout Section 4.0, *Environmental Analysis* of this EIR.

Would this project remove obstacles to growth (e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area or through changes in existing regulations pertaining to land development)?

The Project would require the construction and extension of roadways and utility infrastructure to serve the development. Figure 3-3, *Conceptual Vehicular Circulation and Access Plan* and Figure 3-4, *Roadway Cross-Sections – Sheet 1*, and Figure 3-5, *Roadway Cross Sections – Sheet 2*, depict the proposed roadway classifications. As shown and as described in EIR Section 3.0, Project Description, the Project would improve Columbia Way / East Avenue M along the Project frontage as well as construct four public streets (Public Streets A, B, C, and D) internal to the Project site. In addition to improving the travel lanes on Columbia Way /East Avenue M, the Project would also provide a 14-foot-wide curb-adjacent parkway and within the 14-foot-wide parkway - a 10-foot-wide Class 1 trail would be provided for pedestrian and bike access. Because Columbia Way / East Avenue M is an existing roadway and Public Streets A, B, C, and D, are internal to the Project site, the Project would not create any major new roadway infrastructure that could result in substantial, unplanned growth.

Utility infrastructure would be installed as roadways are constructed even if the proposed utility is not needed until a later phase of the Project. As shown in Figure 3-7, *Potable Water Infrastructure Plan* and Figure 3-8, *Sanitary Sewer Infrastructure Plan*, the Project's proposed water and sewer lines would connect to existing lines in Columbia Way /East Avenue M and then lines would be constructed internal to the Project site to serve only the Project's buildings. The master storm drain system for the Project is shown in Figure 3-9, *Storm Drain Infrastructure Plan*, improvements include the construction of storm drain lines and a drainage basin interior to the Project site to serve the Project site. As shown in Figure 3-10, Dry Utilities Infrastructure Plan, natural gas, and dry utility lines would be installed to connect to the existing gas and dry utility lines at Columbia Way / East Avenue M. Gas lines would be stubbed and available for service as requested by future building users in conjunction with approval of implementing site plans for each building.

As discussed in EIR Section 4.9, *Hydrology and Water Quality*, based on the information in the adopted 2020 UWMP for the LACWD No. 40, the District has documented and is prepared to serve its existing

customers, including the proposed Project, potable water demands through 2045. Furthermore, LACWD 40 in collaboration with the AVEK has secured contingency plans to deliver uninterruptable water supply to the proposed Project. According to the Project's WSA and documented communications with the LACWD therein, the LACWD has stated that a 3 million gallon (MG) water storage tank, including construction of new transmission and distribution pipelines to serve development in the area, including the proposed Project, would be necessary. As disclosed, although the LACWD plans to build a 3 MGD water tank to further serve development in the area, because the LACWD has stated it can serve the proposed Project through 2045, the Project would not indirectly include substantial unplanned population growth but instead by the payment of development impacts fees, the Project would instead provide a financial means to assist the LACWD with serving future needs of the area, beyond the year 2045.

In summary, as described above, because new utility infrastructure is not proposed to extend beyond the Project site; the Project would not indirectly induce substantial unplanned population growth.

Would this project result in the need to expand one or more public services to maintain desired levels of service?

As discussed in Section 4.12, *Public Services*, the Project would not necessitate the expansion of existing public service facilities to maintain desired levels of service. If these facilities or associated resources do need to be expanded in the future, funding mechanisms are in place through existing regulations and standard practices to accommodate such growth. This Project would not, therefore, have significant growth inducing consequences with respect to public services.

Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?

A project could indirectly induce growth at the local level by increasing the demand for additional goods and services associated with an increase in population or employment and thus reducing or removing the barriers to growth. This typically occurs in suburban or rural environments where population or employment growth results in increased demand for service and commodity markets responding to the new population of residents or employees. Economic growth would likely take place as a result of the operation of the proposed Project as a master-planned commerce center. The Project would generate employment during the construction and operational phases of the Project, which would result in the purchase of goods and services in the region. Any secondary increase in employment associated with meeting these goods and services needs would be marginal, accommodated by existing goods and service providers, and highly unlikely to result in any new physical impacts to the environment. Therefore, while the Project would create economic opportunities by introducing new job opportunities to the Project site, this change would not induce substantial new growth in the region. It is anticipated that the employment base for both the construction and operational phases of the Project would come from the existing population in the City of Palmdale and surrounding area.

Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of significance to the environment. Typically, growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population in excess of what is assumed in pertinent master plans, land use plans, or in projections made by regional planning agencies such as the Southern California Association of Governments (SCAG). Significant growth impacts also could occur if a project provides infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies. In general, growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way.

As disclosed in the City's General Plan EIR, SCAG's Regional Comprehensive Plan (RCP) and Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) serve as a framework for addressing problems and creating a path to correct issues on a regional level through 2045. Population projections are made through the RTP/SCS and are the basis for growth for the RCP. Reasonably foreseeable development under the General Plan (Palmdale 2045) is projected to result in approximately 22,000 new homes and 26,391 new jobs, which would move the City closer to a 1 to 1 (1:1) jobs/housing ratio. Based on Palmdale's estimated average household size of 3.44 persons (DOF 2022), this would lead to an increase of approximately 75,756 residents in the City. Adding the 75,756 new residents to the City's 2022 population of 167,398, future residential growth carried out under the General Plan is predicted to increase the City's total population to 243,154, which is above SCAG's 2045 population forecasts of 207,000 as cited in the 2016-2040 RTP/SCS. The addition of approximately 75,756 residents constitutes a 45 percent population increase between 2022 and 2045. Therefore, the General Plan would accommodate substantial population growth in the area. (City of Palmdale, 2022a, p. 4.14-4)

It is noted herein that the 2016-2040 RTP/SCS was published before the City's General Plan update was adopted in October 2022 and therefore does not reflect the population forecasts as cited in the General Plan EIR and herein.

Economic growth would likely take place as a result of the operation of the proposed Project as a master-planned commerce center. Employees (short-term construction and long-term operational) of the Project would purchase goods and services in the region, but any secondary increase in employment associated with meeting these goods and services demands is expected to be accommodated by existing goods and service providers near the Project site, and would be highly unlikely to result in any unanticipated, adverse physical impacts to the environment. As previously disclosed in EIR Section 3.0, *Project Description*, using an employment generation rate for industrial buildings of 1.18 employees per 1,000 s.f. of building space[1], the 2,373,226 s.f. of total building space in Phase I is anticipated to generate approximately 2,800 new, recurring jobs (2,373,226 s.f. x 1.18 employees =

[1] According to Table 2-4 of the City of Palmdale 2045 General Plan Update Final EIR (SCH No. 2021060494), the City projects that between 2016 and 2045 there would be approximately 11,820 new jobs associated with 10,046,865 s.f. of industrial space, which results in a ratio of approximately 1.18 employees per 1,000 s.f. of building area.

2,800,406.68 /1,000 s.f. = 2,800.40 employees). The industrial building space in Phases II, III, and IV is anticipated to generate approximately 6,953.05 new, recurring jobs (5,892,419 s.f. x 1.18 employees = 6,953,054.42 /1,000 s.f. = 6,953.05 employees). Using an employment generation rate for commercial uses of 2.22, the commercial space[2] in Phase III is expected to generate 135.38 new, recurring jobs (60,984 s.f. x 2.22 employees = 135,384.48/1,000=135.38). Thus, in total, the Project is expected to generate approximately 9,888.83 (2800.40 + 6953.05 + 135.38) jobs.

While the Project would create economic opportunities by introducing new job opportunities to the Project site, it is anticipated that the employment base for both the construction and operational phases of the Project would come from the existing population in the City of Palmdale and surrounding area. Accordingly, because it is anticipated that most of the future employees of the proposed Project would already be living in Palmdale, introduction of employment opportunities by the proposed Project on the Project site would not induce substantial unplanned growth in the area.

As discussed in Section 2.0, *Environmental Setting*, under existing conditions, the Project site is vacant and undeveloped. An unpaved portion of Challenger Way runs north to south through the eastern portion of the Project site. A graded dirt access road runs around the perimeter of the Project site and two graded dirt roads run east-west and north-south in the southern portion of the Project site. An unnamed sandy wash occurs in the extreme northwest corner of the Project site.

Development of the Project site is not expected to place short-term development pressure on abutting vacant properties because the Project site is located directly south of Columbia Way / East Avenue M; approximately 0.03-mile east of Sierra Highway and approximately 0.02-mile east of the active Union Pacific Railroad (UPRR) mainline tracks located adjacent to Sierra Highway; Avenue M-12 forms the southern boundary of the Project site beyond which is Runway 7 of USAF Plant 42. East of Challenger Way is vacant land, beyond which is 15th Street East, beyond which is the USAF Plant 42 facility and the inactive Palmdale Regional Airport. In addition, an unnamed sandy wash occurs in the extreme northwest corner of the Project site. In summary, with the exception of vacant undeveloped land between the Project site and 15th Street SE, and vacant undeveloped land northwest of Columbia Way / East Avenue M, the immediately surrounding land is mostly built out. Furthermore, the improvements necessitated by the proposed Project to the public infrastructure, including Columbia Way / East Avenue M that forms the northern boundary of the Project site and proposed Public Streets A and B and C, drainage infrastructure, and other utility improvements, are consistent with the City's General Plan (Palmdale 2045) and would not indirectly induce substantial and unplanned population growth in the local area.

Would approval of this project involve some precedent setting action that could encourage and facilitate other activities that could significantly affect the environment?

[2] According to Table 2-4 of the City of Palmdale 2045 General Plan Update Final EIR (SCH No. 2021060494), the City projects that between 2016 and 2045 there would be approximately 3,050 new jobs associated with 1,372,465 s.f. of retail + restaurant space, which results in a ratio of approximately 2.22 employees per 1,000 s.f. of building area.

General Plan Amendment 22-001 proposes to amend the Employment Flex (EMPFX) General Plan land use designation of the site to Specific Plan (SP) which would allow for the establishment and implementation of the proposed Project. Zone Change No. 22-001 proposes to modify the existing zoning classification of the site from Office Flex (OFX) to Specific Plan (SP), which would allow for the establishment and implementation of the proposed Project. The Project is limited to the Project site's boundaries and does not include any components that would indirectly affect existing or planned uses on neighboring properties. The development of the proposed commercial, industrial, and open uses on the Project site would not reasonably or foreseeably cause the redevelopment of other properties or cause development on other properties.

Furthermore, the Project's potential influence on other nearby properties to redevelop at greater intensities and/or different uses than the City's General Plan and Zoning Code allow is speculative; however, it should be noted that implementation of the Project would not result in the approval of proposed uses on any other property outside of the Project site. CEQA does not require the analysis of speculative effects (State CEQA Guidelines Section 151454). If any other property owner were to propose redevelopment of a property in the Project vicinity or in any part of the City, the redevelopment project would require evaluation under CEQA based on its own merits, including an analysis of direct and cumulatively considerable effects.

The operation and maintenance of the Project would generate jobs, but any potential growth-inducing impact of the employment of persons at the Project site was accounted for in the City's General Plan. Accordingly, the Project would not directly promote growth either at the Project site or at the adjacent and surrounding properties that were not accounted for in the City's General Plan. Upon the approval of the Project Applicant's requested discretionary applications (General Plan Amendment, Zone Change, Specific Plan, TPM, and Development Agreement), the Project would be consistent with the existing General Plan land use designation and Zoning classification for the Project site.

Implementation of the proposed Project would create revenue in the form of construction and operational jobs as well as revenues generated by the businesses that would occupy the Project's buildings and that would be taxable by the City sales tax and through traditional e-commerce taxes or as an e-commerce marketplace facilitator. The local economy would benefit economically through direct spend within the community that would be driven by operations of the new facilities. Additional direct spend would come from construction of the Project's buildings. As these new monies from construction and ongoing operations ripple through the economy it would create jobs directly on the Project site as well as indirectly in the surrounding community. Moreover, these economic activities would generate additional tax revenues for the City. The economic activity generated by construction and ongoing operations of the tenants would increase the personal earnings of City residents as the monies generated from the activities circulates through the local economy. The new monies introduced into the City as a result of the new construction and new business activity taking place would also increase the economic output of the region.

Based on the foregoing analysis, the Project would not result in substantial, adverse growth-inducing impacts.

5.4 EFFECTS NOT FOUND TO BE SIGNIFICANT DURING THE EIR SCOPING PROCESS

CEQA Guidelines Section 15128 requires that an EIR *"...contain a statement briefly indicating 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."* The Project's Notice of Preparation (NOP) for this EIR, which is included in *Technical Appendix* A to this EIR, determined that implementation of the Project for a master-planned commerce center would clearly have no potential to result in significant impacts under the following four environmental issue areas: 1) agriculture and forestry resources; 2) mineral resources; 3) population and housing; and 4) recreation. These four issues were not required to be analyzed in detail in EIR Section 4.0, *Environmental Analysis*. A brief analysis of the potential impacts to agriculture and forestry resources, mineral resources, population and housing, and recreation is presented below.

5.4.1 AGRICULTURE AND FORESTRY RESOURCES

Threshold a:	***Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?***

According to information available from the Farmland Mapping and Monitoring Program (FMMP), the entire Project site is designated as "Other Land." According to the California Department of Conservation, "Other Land" is classified as "land which is not included in any other category with common examples including low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as "Other Land" (CDC, 2018).

The Project site is not designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland). Therefore, because the Project site is not designated Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), no impact would occur as a result of implementation of the Project and no mitigation is required.

Threshold b:	***Would the Project conflict with existing zoning for agricultural use, or Williamson Act contract?***

According to the California Department of Conservation, the Project site is not located on land that is subject to a Williamson Act contract (CDC, 2018). Under existing conditions, the Project site is zoned Office Flex (OFX). In addition, no land zoned for agricultural use or Williamson Act contract is located adjacent to the Project site (CDC, 2018). Therefore, because the Project site is not zoned for agricultural

use nor does it abut land zoned for agricultural use, and it does not contain land under a Williamson Act contract, no impact would occur as a result of implementation of the Project, and no mitigation is required.

Threshold c:	***Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?***

The Project site is not located on lands designated as forest land, timberland, or timberland zoned Timberland Production by the City's General Plan, and none of the immediately surrounding properties are designated as forest lands or timberlands. Therefore, the Project would have no potential to conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104(g)). As such, no impact would occur as a result of implementation of the Project and no mitigation is required.

Threshold d:	***Would the Project result in the loss of forest land or conversion of forest land to non-forest use?***

As noted above under Threshold (c), the Project site is not located on or near forest land. Therefore, the proposed Project would not result in the loss of any forest land or convert forest land to non-forest use. As such, no impact would occur as a result of implementation of the Project, and no mitigation is required.

Threshold e:	***Would the Project involve other changes to the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?***

As noted above under Thresholds (a) and (c), the Project site is not located on or near lands designated Farmland or forest land. There is no Farmland, forest land, or timberland near the Project site. As such, the proposed Project has no potential to involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use, or conversion of forest land to non-forest use. As such, no impact would occur as a result of implementation of the Project and no mitigation is required.

5.4.2 Mineral Resources

Threshold a:	***Would the Project result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?***

According to the City's General Plan, known and potential major deposits of sand and gravel, crushed rock, clay, limestone, and dolomite have been identified in the City's Planning Area by the State Division of Mines and Geology. Sand and gravel deposits are found extensively in flood plains and

stream channels located north of the San Gabriel Mountains in the Little Rock and Big Rock Wash areas.

Palmdale lies within the Palmdale Production-Consumption region, which is a California Department of Conservation-designated Mineral Resource Zone encompassing 1,103 square miles, including Palmdale and Lancaster. Two mineral resource zones (MRZ) MRZ-2 areas were classified within the Palmdale area. The mineral deposits within Palmdale are the Littlerock Fan and the Big Rock Creek Fan alluvial deposits. The Littlerock Fan is a 12 square mile area extending from the north flank of the San Gabriel Mountains for approximately eight miles, which includes the Littlerock Wash floodplain and the fan area to the west. The Big Rock Creek Fan encompasses a 26 square mile area extending northward from the San Gabriel Mountains for eight miles. Both mineral deposits are composed of approximately 60 percent fine to coarse sand and silt, overlain by approximately 40 percent pebbly gravel. As shown in General Plan Figure 4.12-1, *Mineral Resource Locations in and Around Palmdale* and Figure 4.12-2, *Mineral Resource Extraction in Palmdale,* the Project site is not located in an area of known mineral resource availability. (City of Palmdale, 2022a, p. 4.12-1 and Figure 4.12-1 and Figure 4.12-2)

Because the Project site is not located within an area known for mineral resources that are of value to the region and the residents of the State, no impact would occur and no mitigation is required.

Threshold b:	***Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?***

The General Plan designation for the Project site is EMPFX (Employment Flex) and is a transition zone intended to permit mixed development of lighter industrial uses and more intensive service, retail, and commercial uses, with a floor area ratio (FAR) of up to 1.0. The Project site is not zoned for mineral resources extraction. As discussed above under Threshold (b), the Project site is not located within an area designated by the State Mining and Geology Board as being of regional or Statewide significance. Therefore, because the Project site is not located on an important mineral resources recovery site, implementation of the Project would have no potential to result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan; therefore, no impact would occur and no mitigation is required.

5.4.3 Population and Housing

Threshold a:	***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 result in the construction of a master-planned commerce center that would generate employment opportunities in the area. It is anticipated that the employment base for both the construction and operational phases of the Project would come from the existing population in the City

of Palmdale and surrounding area. According to the California Employment Development Department, the City of Palmdale's civilian labor force contains approximately 61,200 persons with approximately 57,000 people employed and an unemployment rate of approximately 6.9 percent (approximately 4,200 persons) (EDD, 2022). Furthermore, approximately 85 percent of Palmdale residents commute outside of the City for work (SCAG, 2019, p. 21). Accordingly, the Project region already contains an ample supply of potential employees under existing conditions, and the labor demand of the Project – estimated to be 9,888.83 employees - is not expected to draw substantial numbers of new residents to the area.

There are no components of the Project that would reasonably result in indirect or unplanned population growth because the land use of the surrounding area is planned for industrial and aerospace industrial uses by the City's General Plan. Accordingly, no significant indirect impacts associated with population growth would result from any Project related improvements because the Project and its required improvements would not induce substantial growth on surrounding properties.

Based on the foregoing analysis, neither the Project nor any Project related component would result in substantial, direct, or indirect population growth that would cause a significant direct or indirect impact to the environment. This impact is considered less than significant.

Threshold b:	***Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?***

The Project site is currently vacant; therefore, implementation of the Project would not result in the displacement of substantial numbers of existing people or housing and would not necessitate the construction of replacement housing elsewhere. Accordingly, no impact would occur, and no mitigation is required.

5.4.4 RECREATION

Threshold a:	***Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?***

The Project does not involve any type of residential use or other land use that may generate a population that would increase the use of existing neighborhood and regional parks or other recreational facilities. Accordingly, implementation of the proposed Project would not result in the increased use or substantial physical deterioration of an existing neighborhood or regional park, and no impact would occur.

Threshold b:	***Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?***

The Project does not involve the construction of any new on- or off-site recreation facilities. The Project would not expand any existing off-site recreational facilities. Therefore, no impacts related to the construction or expansion of recreational facilities would occur with implementation of the proposed Project.

6.0 ALTERNATIVES

An Environmental Impact Report (EIR) must identify ways to mitigate or avoid the significant effects that a Project may have on the environment. In compliance with California Environmental Quality Act (CEQA) Guidelines Section 15126.6(a), an EIR must "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 significant effects of the project and evaluate the comparative merits of the alternatives."

As discussed in Section 4.0 of this EIR, the Project would result in significant adverse environmental effects to the environment that cannot be reduced to below a level of significance after the consideration of Project design features, compliance with applicable federal, State, and local regulations, and the application of feasible mitigation measures. These impacts are as follows:

- Air Quality (Thresholds a and b): Significant Direct and Cumulatively-Considerable Impact. After implementation of feasible mitigation, NO_X and PM_{10} emissions from Phase I of the Project would still exceed applicable daily air pollutant significance thresholds established by the AVAQMD. Emissions of VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$ from Phases II – IV of the Project also would still exceed applicable daily air pollutant significance thresholds established by the AVAQMD. Therefore, the Project would result in a cumulatively-considerable net increase of criteria air pollutants for which the Project region is non-attainment under an applicable federal or State ambient air quality standard. It should be noted that a majority of the Project's NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions are derived from vehicle usage which the City does not have the regulatory authority to control or enforce. Neither the Project Applicant nor the Lead Agency can substantively or materially affect reductions in Project-related vehicular source emissions beyond the regulatory requirements and the feasible mitigation measures identified in this EIR. While there are no feasible mitigation measures that would reduce vehicular emissions to less than significant, the Project will install EV supply equipment in accordance with the California Building Code which will allow charging stations to be supplied on the Project site based on demand. Charging stations could lead to less use of gasoline-burning automobiles and thus, less air pollutant emissions. Hence, overall, there are no feasible mitigation measures that would reduce emissions to less than significant and this impact is considered significant and unavoidable.

- Greenhouse Gas Emissions (Threshold a): Significant Unavoidable Cumulatively-Considerable Impact. After implementation of feasible mitigation, greenhouse gas (GHG) emissions resulting from Phase I of the Project are calculated to be 39,953.73 $MTCO_2e$/yr and GHG emissions from Phases II - IV of the Project are calculated to be 108,240.42 $MTCO_2e$/yr. Project Buildout emissions are estimated to be 148,194.15 $MTCO_2e$/yr beginning in 2032 when the entire Project is completed and becomes operational. Thus, the proposed Project's GHG emissions would exceed the SCAQMD screening threshold of 3,000 $MTCO_2e$ per year. Because the majority (89 percent) of the Project GHG emissions would be generated by

Project-related vehicular sources that are outside of the City's regulatory authority to control and enforce, the Project cannot feasibly achieve the SCAQMD 3,000 $MTCO_2e$ per year threshold. Because responsibility and authority for regulation of vehicular-source emissions resides with the State of California (CARB, et al.), neither the Applicant nor the Lead Agency can affect or mandate substantial reductions in vehicular-source GHG emissions, much less reductions that would achieve the SCAQMD's 3,000 $MTCO_2e$ per year threshold. In effect, all Project traffic would need to be eliminated or be "zero GHG emissions sources" to achieve the SCAQMD's numeric threshold. There are no feasible means to or alternatives to eliminate all Project traffic, or to ensure that Project traffic would be zero GHG emissions sources. In terms of its practical application, this would constitute a "no build" condition. On this basis, even with implementation of applicable Project Design Features and Mitigation Measures AIR MM-1 through AIR MM-5, the Project would generate direct or indirect GHG emissions that would result in a significant impact on the environment. This is a significant and unavoidable impact. The no building condition is evaluated as the "No Development" Alternative.

- Transportation (Threshold b): Significant and Unavoidable Direct and Cumulatively-Considerable Impact. Based on the VMT analysis for the industrial component of the proposed Project, Project generated VMT per employee was determined to exceed the County's VMT per employee threshold by 32 percent for both Phase I and for Project Buildout; therefore, the Project would have a significant and unavoidable VMT impact. Because the future building tenants are not known for the Project, the effectiveness of any potential commute trip reduction measure may be limited. In addition to specific tenancy considerations, locational context is also a major factor relevant to the potential application and effectiveness of Transportation Demand Management (TDM) measures. A project may only realize a quantifiable reduction in commute VMT under the most favorable circumstances and ideal local conditions when implementing trip reduction measures. In practical terms, ideal conditions are rarely realized due to variables such as locational context limitations (i.e., non-urban areas). Additionally, to achieve ideal conditions a project must achieve 100 percent employee participation, and maximum employee eligibility, which are not generally expected. This is even more difficult to presume since future building tenants are not known at this time. Although the Project would be subject to compliance with Mitigation Measure TRN MM-1, which would reduce the Project's VMT, the effectiveness of commute trip reduction measures such as those listed in Mitigation Measure TRN MM-1 cannot be guaranteed to reduce Project VMT to a level of less than significant. No additional feasible mitigation measures are available to measurable reduce the Project's VMT. Therefore, the Project's VMT impacts are considered significant and unavoidable.

This Section 6.0 identifies potential alternatives to the Project aimed at reducing or avoiding the Project's significant and unavoidable impacts and evaluates them, as required by CEQA. Key provisions of the State CEQA Guidelines on alternatives (Sections 15126.6[b]–15126.6[f]) are provided below to explain the foundation and requirements for the alternatives analysis in the EIR.

- The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objective or would be more costly (Section 15126.6[b]).
- The specific alternative of "no project" shall also be evaluated along with its impact (Section 15126.6[e][1]).
- The "no project" analysis shall discuss the existing conditions at the time the Notice of Preparation (NOP) is published, and at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (Section 15126.6[e][2]).
- The range of alternatives required in an EIR is governed by the "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making. 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) (Section 15126.6[f]).
- For alternative locations, "only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR" (Section 15126.6[f][2][A]).
- If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project which must be in close proximity to natural resources at a given location (Section 15126.6[f][2][B]).
- An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (Section 15126.6[f][3]).

6.1 ALTERNATIVES UNDER CONSIDERATION

CEQA Guidelines Section 15126.6(e) requires that an EIR include an alternative that describes what would reasonably be expected to occur on the Project site in the foreseeable future if the Project were not approved, based on current plans and consistent with available infrastructure and community

services (i.e., "No Project" Alternative). For projects that include a revision to an existing land use plan, the "No Project" Alternative may be the continuation of the existing land use plan into the future. For projects other than a land use plan (for example, a development project on an identifiable property), the "No Project" Alternative is considered to be a circumstance under which the project does not proceed (CEQA Guidelines Section 15126(e)(3)(A-B)). The potential scenario where the Project site remains in its current undeveloped condition is called the "No Development Alternative (NDA)," which is the No Project Alternative. Should the proposed Project not be approved, the most likely outcome would be continuation of the existing condition of the property as vacant land.

In compliance with CEQA Guidelines Section 15126.6(a), an EIR must 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." The EIR need not consider every conceivable alternative; rather it must consider a reasonable range of potentially feasible alternatives to the project, or to the location of the project, which would avoid or substantially lessen significant effects of the project, even if "these alternatives would impede to some degree the attainment of the project objectives or would be more costly" (CEQA Guidelines Section 15126.6(b)).

The following scenarios are identified by the City of Palmdale as potential alternatives to implementation of the proposed Project.

6.1.1 No Development Alternative (NDA)

The No Development Alternative (NDA) considers no development on the Project site beyond what occurs on the site under existing conditions. Under this Alternative, the approximately 432.9 gross acres would remain vacant and undeveloped for the foreseeable future and would be subject to routine maintenance for weed abatement. This Alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project with an alternative that would leave the Project site in its existing condition.

6.1.2 No Project (Existing General Plan Designation) Alternative (NPA)

The No Project (Existing General Plan Designation) Alternative (NPA), assumes development of the property in accordance with the site's existing General Plan land use designation. Figure 2-4 in EIR Subsection 2.0 depicts the site's existing General Plan designation and Figure 2-5 depicts the site's existing zoning. As discussed in EIR Section 2.0, under existing conditions, the General Plan designates the Project site for Employment Flex (EMPFX) land uses. The Employment Flex (EMPFX) land use designation is a transition zone intended to permit mixed development of lighter industrial uses and more intensive service, retail, and commercial uses, with a floor area ratio (FAR) of up to 1.0. However, for purpose of analysis, the property is assumed to be developed with up to 8,302,536 s.f. of commercial uses at a FAR of 0.44. This Alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project with an alternative that would allow for buildout of the Project site in accordance with the site's existing General Plan land use designations and zoning.

6.1.3 Reduced Project Alternative – Phase I (RPA - Phase I)

The Reduced Project Alternative - Phase I (RPA - Phase I) considers the development of Phase I and no development under Phases II – IV. Under this Alternative, Parcels 1, 2, 3, 4, 5, 6, and Lot D of TPM No. 83738 would be developed with industrial buildings and a detention basin along with associated roadways, public utilities, and infrastructure improvements. Phases II - IV would remain undeveloped as they are under existing conditions.

6.1.4 Reduced Project Alternative – Phases I & II (RPA – Phases I & II)

The Reduced Project Alternative - Phases I & II (RPA – Phases I & II) considers the development of Phase I and Phase II and no development under Phases III and IV. Under this Alternative, Parcels 1, 2, 3, 4, 5, 6, 7, 8, 9, and Lot D would be developed with industrial buildings, a detention basin, and associated roadways, public utilities, and infrastructure improvements.

6.2 Alternatives Considered and Rejected

An EIR is required to identify any alternatives that were considered by the Lead Agency but were rejected as infeasible. Among the factors described by CEQA Guidelines Section 15126.6 in determining whether to exclude alternatives from detailed consideration in the EIR are: a) failure to meet most of the basic project objectives, b) infeasibility, or c) inability to avoid significant environmental impacts. With respect to the feasibility of potential alternatives to the Project, CEQA Guidelines Section 15126.6(f)(1) notes:

> *"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…"*

In determining an appropriate range of alternatives to be evaluated in this EIR, three alternatives were initially considered and, for a variety of reasons, rejected. The alternatives were rejected because either: 1) it could not accomplish the basic objectives of the Project, 2) it would not have resulted in a reduction of significant adverse environmental impacts, or 3) it was considered infeasible to construct or operate. A summary of the alternatives that were considered but rejected are described below.

6.2.1 Alternative Sites

CEQA does not require that an analysis of alternative sites be included in an EIR. However, if the surrounding circumstances make it reasonable to consider an alternative site, then an alternative sites analysis should be considered and analyzed in the EIR. In making the decision to include or exclude an analysis of an alternative site, the "key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in

another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR" (CEQA Guidelines Section 15126.6(f)(2)). The City of Palmdale conducted a review of potential alternative site locations and identified no other sites of approximately the same size as the Project site that contain fewer environmental constraints.

The Project Applicant does not own or otherwise have control of any other properties in the City of Palmdale that are of similar size as the Project site and that are not already entitled for development with industrial, commercial, and open spaces. Furthermore, and based on the analysis presented in EIR Section 4.0, *Environmental Analysis*, the proposed Project would result in significant and unavoidable impacts due to a) air emissions that would exceed the applicable daily air pollutant significance thresholds, b) GHG emissions that would exceed the SCAQMD screening thresholds, and c) Project-generated vehicle miles traveled (VMT) above the County's currently adopted threshold. Moving the Project to another location would not reduce air quality and GHG impacts because any alternative site would be developed in the same air basin. Also, as discussed in EIR Section 4.7, *Greenhouse Gas Emissions*, GHG is a global issue; therefore developing the same project in a different location would not materially reduce GHG emissions. Given the Project site's close proximity to regional transportation corridors (i.e., SR-14), development of the Project site at an alternative location could result in an increase in VMT if developed on a property located further from regional transportation facilities. As noted above, only locations that would avoid or substantially lessen a Project's significant environmental effects need to be considered in an EIR. Accordingly, because development of the Project site at an alternative site location would not reduce or avoid the Project's significant and unavoidable impacts due to VMT, a more detailed analysis of alternative site locations is not warranted.

6.2.2 Alternative that Considers Less than 24/7 Operations

A public comment submitted on this EIR's NOP suggested an alternative to the Project that would limit Project operational activities to less than 24 hours a day, 7 days a week (24/7). This suggestion was rejected from further consideration due to functional infeasibility. Operating a master-planned commerce center on a schedule other than 24/7 is firstly not practical because goods movement across the region occurs during all hours of the day and night every day of the year. If Project operations were limited to only certain days of the week or certain hours of a day, building users in practicality would seek out buildings to occupy on other sites without such limitations, thereby capturing no environmental benefits especially in terms of the Project's significant and unavoidable air quality emissions, GHG emissions, and VMT. Instead of reducing environmental effects, the effects would simply be transferred to another location. If on the other hand building users did choose to occupy the Project site with day of week or time of day operational restrictions, it is likely that operational intensity would not be reduced overall, but would occur at higher concentrations during the days and times when the buildings are open for business. For example, it is likely that if the Project was prohibited from operating during nighttime hours, more passenger vehicle and truck trips would occur during daytime hours than would otherwise occur, resulting in more roadway congestion, concentrated air pollutant emissions, and an increase in noise levels during peak operating hours. Therefore, such an alternative has a reasonable potential of resulting in more severe environmental impacts than the proposed Project.

In addition, limiting the days or hours that trucks could arrive/depart and load/unload at the site could cause queuing in public streets and other issues caused by drivers needing to wait to enter or exit the site. This alternative would not meet 8 of the 9 objectives of the Project. This alternative would only meet Objective H - to develop a property that has access to available infrastructure, including roads and utilities.

6.3 ALTERNATIVE ANALYSIS

The discussion on the following pages compares the environmental impacts expected from each alternative considered by the Lead Agency relative to the impacts of the Project. A conclusion is provided for each topic as to whether the alternative results in one of the following: 1) reduction of elimination of the Project's impact, 2) a greater impact than would occur under the Project, 3) the same impact as the Project, or 4) a new impact in addition to the Project's impacts. Table 6-6, *Alternatives to the Project – Comparison of Environmental Impacts*, at the end of this section compares the impacts of the alternatives against those of the Project and identifies the ability of the alternative to meet the basic objectives of the Project.

The underlying purpose and goal of the proposed Project is to accomplish the development of vacant property with an economically viable, employment-generating use that is compatible with the surrounding area. This underlying goal aligns with various aspects of the SCAG's 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); also referred to as "Connect SoCal"), particularly the facilitation of goods movement industries and the generation of local employment opportunities that can reduce the need for long commutes to and from work. The following objectives are intended to achieve these underlying purposes:

A. To develop a master-planned commerce center that attracts industrial and commercial users to the City of Palmdale;

B. To diversify the mix of developed land uses in the City of Palmdale to support the growing goods movement supply chain;

C. To develop supply chain uses in close proximity to designated truck routes and the State highway system to avoid or shorten vehicular trip lengths on other roadways;

D. To expand economic development, facilitate job creation, and increase the tax base for the City of Palmdale by accommodating and diversifying facilities needed to support the goods movement supply chain;

E. To develop Class A light industrial buildings in the City of Palmdale that are designed to meet contemporary industry standards and be economically competitive with similar industrial buildings in the local area and region;

F. To attract new employment-generating businesses in the City of Palmdale, thereby growing the economy and providing a more equal jobs-housing balance in the local area that will reduce the need for members of the local workforce to commute outside the area for employment;

G. To develop supply chain buildings that have architectural design and operational characteristics that are compatible with other existing and planned developments in the local area;

H. To develop a property that has access to available infrastructure, including roads and utilities; and,

I. To developed a master planned commerce center that includes commercial uses that allows for commercial retail, restaurants, and small-scale retail commercial goods and services that would benefit residents, employees, and visitors in and around the Specific Plan Area and surrounding neighborhoods.

6.3.1 NO DEVELOPMENT ALTERNATIVE (NDA)

Under the NDA, the approximately 432.9 gross acres would remain vacant and undeveloped for the foreseeable future and be subject to routine maintenance for weed abatement. The NDA allows decision-makers to compare the environmental impacts of approving the Project to the environmental impacts that would occur if the property were left in its existing vacant, undeveloped condition for the foreseeable future. As discussed in EIR Section 2.0 *Project Description*, under existing conditions, the Project site is vacant and undeveloped. An unpaved portion of Challenger Way runs north to south through the eastern portion of the Project site. A graded dirt access road runs around the perimeter of the Project site and two graded dirt roads run east-west and north-south in the southern portion of the Project site. An unnamed sandy wash occurs in the extreme northwest corner of the Project site. An approximately 6-acre area in the southeastern portion of the Project site is highly disturbed and shows visible evidence of recent and previous illegal squatting, including extensive off-road vehicle disturbance and higher than average trash cover. Along the edges of the easternmost perimeter access road, moderate illegal dumping has occurred, and there are a few other trash piles scattered throughout the Project site. It would be expected for these types of unauthorized activities to continue occurring under the NDA. Refer to EIR Section 2.0, *Project Description* for a description of the Project's existing physical condition.

A. Aesthetics

The NDA would leave the Project site in its existing condition. As such, the site would remain vacant undeveloped land. Because the Project site does not comprise a scenic vista and no unique views to scenic vistas are visible from the property that are not also visible from other areas surrounding the site; neither the Project nor the NDA would impact a scenic vista; therefore, the level of no impact would be similar to the proposed Project. Because there are no designated or eligible State scenic highways within the Project site's immediate vicinity; neither the Project nor the NDA would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and

historic buildings within a State scenic highway; therefore, the NDA's level of no impact would be similar to the proposed Project. Because no new development would be proposed under the NDA and the NDA would not include a General Plan Amendment or a Zone Change, the Project's less-than-significant impact to conflict with applicable zoning and other regulations governing scenic quality would be reduced to no impact under the NDA. Additionally, because the NDA would not introduce any new sources of light or glare to the site, the Project's less-than-significant impact would be reduced to no impact under the NDA.

B. Air Quality

Because the NDA would not involve construction activities, the NDA would not generate construction-related air pollutant emissions. The proposed Project would result in less than significant construction-related impacts after the implementation of mitigation measures; because the NDA would not involve construction activities, the NDA would avoid all construction-related air quality impacts, thus, construction-related impacts would be reduced to no impact under the NDA. In addition, because the Project site would remain vacant and undeveloped the NDA would not generate operational air pollutant emissions. The proposed Project would result in significant direct and cumulatively considerable operational impacts associated with criteria pollutant emissions after mitigation; because the NDA would not involve operational activities that could result in operational air pollutant emissions, the NDA would avoid all operational-related air quality impacts, thus, operational-related impacts would be reduced from significant and unavoidable to no impact under the NDA.

C. Biological Resources

The NDA would leave the property in its existing condition and the site would continue to undergo periodic disturbances related to weed abatement and other routine on-site vegetative maintenance activities. Because the NDA would leave the property in its existing condition, the Project's less-than-significant impacts to biological resources after mitigation would be reduced to no impact under the NDA. The NDA would avoid direct and indirect impacts to sensitive wildlife species, migratory birds under the MBTA, and direct impacts to western Joshua Tree.

Both the proposed Project and the NDA would avoid the jurisdictional sandy wash, located in the northwest corner of the Project site, however, because no indirect impacts would result as part of the NDA, the Project's less-than-significant impact would be reduced to no impact under the NDA. Because no wetland conditions are present on the Project site under existing conditions, neither the Project nor the NDA would have the potential to have substantial adverse effects on State- or federally-protected wetlands; therefore, similar to the Project, no impact would occur under the NDA. The Project site does not serve as a wildlife movement corridor or a native wildlife nursery site; therefore, neither the Project or the NDA would result in any impacts to wildlife movement corridors or wildlife nursery sites; similar to the proposed Project, no impact would occur. Neither the Project nor the NDA has the potential to conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan; therefore, no impact would occur; impacts would be the same.

D. Cultural Resources

The NDA would leave the property in its existing condition and the site would continue to undergo periodic disturbances related to weed abatement and other routine on-site vegetative maintenance activities. The Project would not cause a substantial adverse change in the significance of a historical resource or an archaeological resource as defined in Section 15064.5. However, because the NDA would result in no grading disturbances to the site, the NDA would avoid the Project's less-than-significant impact (after mitigation), to potentially uncover previously undiscovered significant cultural resources that may be buried beneath the ground surface. In addition, because no new ground disturbance would occur as part of the NDA, the NDA would avoid the Project's less than significant impacts to potential buried and undiscovered human remains that could be uncovered during site grading activities.

E. Energy

Under the NDA, because there would be no new development on the site, there would be no increase in demand from the Project site for energy resources. As such, the NDA would completely avoid the Project's less than significant impacts associated with the consumption of energy resources during construction and long-term operation. Neither the Project nor the NDA would conflict with a State or local plan for renewable energy or energy efficiency, although impacts would be reduced under the NDA in comparison to the Project because the NDA would not result in an increase in the use of energy resources.

F. Geology and Soils

Under the NDA, there would be no grading or development on the site. There are no known faults on or trending towards the Project site; thus, impacts associated with rupture of a known fault would be less than significant and similar under the proposed Project and the NDA. However, because the Project would involve a substantial increase in the number of employees on site, the Project's less-than-significant impacts due to strong seismic ground shaking would be reduced under the NDA. Although the NDA would avoid the Project's less than significant construction-related impacts due to erosion or the loss of topsoil, because the Project site would not be covered with impervious surfaces under the NDA, the NDA would result in increased but less than significant impacts due to soil erosion under long-term conditions. Although the site is not located on a geologic unit or soil that is unstable, because no development would occur and no structures would be built under the NDA, the Project's less than significant impact to potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse, would be reduced to no impact under the NDA. Because the Project site is not located on an expansive soil, neither the Project or the NDA, would create substantial direct or indirect risks to life or property as a result of being located on an expansive soil. Because neither the Project nor the NDA would result in grading that affects or negates subsurface sewage disposal systems, and neither the Project nor the NDA would require septic tanks or alternative waste water disposal systems on unsuitable soils; no impact would occur. In addition, because no ground-disturbing activities would occur under the NDA, the NDA would avoid the Project's less than significant impacts (with

mitigation) to unknown and potentially undiscovered paleontological resources that could be buried beneath the surface of the Project site.

G. Greenhouse Gas Emissions

Under the NDA, there would be no construction activities on site and no new development would occur on the Project site. As such, implementation of the NDA would avoid the Project's significant direct and unavoidable cumulatively-considerable impact due to GHG emissions during construction and long-term operation. Neither the Project nor the NDA would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

H. Hazards and Hazardous Materials

Because no development would occur under the NDA, the NDA would have no potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and would have no potential to 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; therefore, no impact would occur, and impacts would be reduced in comparison to the proposed Project. There are no existing or proposed schools within 0.25-mile of the Project site; therefore, no impact would occur under the Project or the NDA, although impacts would be reduced under the NDA because no new sources of potential hazardous materials would be introduced on site. Because the Project site is not located on any list of hazardous materials sites complied pursuant to Government Code Section 65962.5, neither the Project nor the NDA have the potential to create a significant hazard to the public or the environment due to existing site conditions; therefore, the level of impact would be similar. Additionally, since no new development would occur on site, the NDA also would completely avoid the Project's less-than-significant impact 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, to result in a safety hazard or excessive noise for people residing or working in the Project area. Neither the Project nor the NDA has the potential to impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan; thus, no impact would occur under the Project or NDA, and the level of impact would be similar. Because the Project site is not located in close proximity to wildlands or areas with high fire hazards, neither the Project or the NDA would expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires significant wildfire risk.

I. Hydrology and Water Quality

With respect to water quality, the NDA would not involve any new development on site. With the exception of erosion potential on site, the NDA would result in reduced impacts to hydrology and water quality as compared to the proposed Project's less-than-significant water quality impacts. While the risk of erosion would increase during construction of the proposed Project, under long-term operating conditions the Project would result in the introduction of impervious surfaces and landscaped areas; thus, long-term operational erosion impacts would be increased under the NDA due to the lack of

vegetative cover on portions of the Project site. While the Project would result in less-than-significant impacts due to groundwater recharge, impacts to groundwater recharge would be reduced under the NDA because there would be no new impervious surfaces on site. Although the Project would result in less-than-significant impacts to the site's existing drainage pattern, because there would be no changes to the site's drainage patterns under the NDA, impacts would be reduced in comparison to the proposed Project. Similarly, although the Project would not exceed the capacity of any existing or planned stormwater drainage systems, because there would be no changes to site drainage under the NDA, impacts would be reduced in comparison to the Project. The Project site is not subject to flood hazards under existing conditions; thus, impacts under the NDA and proposed Project would be similar and would be less than significant. The Project site is not subject to inundation from tsunamis or seiches; thus, impacts would be less than significant and would be similar under the Project and NDA. Neither the Project nor the NDA would conflict with a water quality control plan or sustainable groundwater management plan, and the level of impact would be the same.

J. Land Use and Planning

Neither the Project or the NDA would disrupt or divide the physical arrangement of an established community. The No Development Alternative would not be consistent with the land use designations applied to the property by the General Plan.

K. Noise

The NDA would avoid the Project's less-than-significant impacts due to construction-related and operational noise levels and would avoid the Project's less-than-significant impact due to traffic-related noise impacts to study area roadway segments because there would be no new development and no increase in traffic generated by the site under the NDA. Additionally, the NDA would avoid the Project's less-than-significant impacts due to construction-related vibration, and also would avoid the Project's less-than - significant impacts due to operational-related vibration. Although the Project site is located within the Airport Influence Area (AIA), the Project's industrial and commercial land uses are considered *normally acceptable* within the AIA; thus impacts would be less than significant. However, because no development would occur under the NDA, there would be no potential to expose people residing or working in the Project area to excessive noise levels related to a private airstrip, airport land use plan or public airport our public use airport; therefore, the Project's less-than-significant impact would be reduced to no impact under the NDA.

L. Public Services

There would be no new development on site under the NDA; therefore, the NDA would avoid the Project's less-than-significant impacts to public services.

M. Transportation

Under the NDA, there would be no new development on site; therefore, there would be no increase in traffic associated with the site. As such, the NDA would avoid the Project's significant and unavoidable

impacts due to VMT and would avoid the Project's less-than-significant impacts to conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Additionally, because no development would occur, the NDA would avoid the Project's less-than-significant impacts due to increased hazards due to a geometric design feature or incompatible uses. The NDA also would avoid the Project's less-than-significant impacts due to the need for new or altered maintenance of roads. The NDA would not involve a construction phase, and thus would avoid the Project's less-than-significant (after mitigation) impacts to circulation during construction activities on site. The NDA would not result in any impacts due to emergency access or access to nearby uses; thus, the NDA would avoid the Project's less-than-significant impact to emergency access.

N. Tribal Cultural Resources

There would be no ground-disturbing construction activities on site under the NDA. Accordingly, there would be no potential to encounter and potentially impact a subsurface tribal cultural resource and the NDA would avoid the Project's less-than-significant impacts (after mitigation) to tribal cultural resources.

O. Utilities and Service Systems

Under the NDA, there would be no increased demand for water, wastewater treatment, or storm water drainage; thus, the NDA would avoid the Project's less-than-significant impact due to the construction of such facilities and due to the provision of water or wastewater treatment services. There would be no increase in demand for water resources under the NDA; thus, the NDA would avoid the Project's less-than-significant impacts to water supply. Additionally, the NDA would avoid the Project's less-than-significant impacts due to the construction of wastewater conveyance facilities on and off site, and would avoid the Project's less-than-significant impacts to wastewater treatment capacity. There would be no increase in solid waste generated on site; thus, the NDA would avoid the Project's less-than-significant impacts due to solid waste. There are no components of the NDA or the proposed Project that would conflict with federal, State, and local management and reduction statutes and regulations related to solid wastes; therefore, impacts would be less than significant and the level of impact would be similar. The NDA also would avoid the Project's less-than-significant impacts due to the construction of facilities for electricity, natural gas, communication systems, street lighting, or due to increased roadway maintenance.

P. Wildfire

The Project site is not located near state responsibility areas (SRAs) or lands classified as very high fire hazard severity zones; therefore, no impact would occur as a result of implementation of the proposed Project or the NDA.

Q. *Conclusion*

Implementation of the NDA would result in no physical environmental impacts beyond those that have historically occurred on the property. Almost all environmental effects of the proposed Project would be avoided or lessened by the selection of the NDA, although a few impacts, such as erosion and sedimentation impacts, would be increased under the NDA because no development would occur which would stabilize the site condition and reduce natural erosion and sedimentation effects that occur under the existing condition. Because the NDA would not result in developing the site, the NDA would therefore not promote local economic development, including through the creation of new jobs and the expansion of the local tax base. Also, the NDA would not facilitate public roadway frontage improvements to Columbia Way / East Avenue M, including widening, paving, and associated bike lane and sidewalk improvements as would occur under the proposed Project. Because there would be no economic benefits associated with the NDA, the NDA would fail to meet the Project's main objectives.

6.3.2 No Project (Existing General Plan Designation) Alternative (NPA)

The No Project (Existing General Plan Designation) Alternative (NPA), assumes development of the property in accordance with the site's existing General Plan land use designation. Figure 2-4 in EIR Subsection 2.0 depicts the site's existing General Plan designation and Figure 2-5 depicts the site's existing zoning. As discussed in EIR Section 2.0, under existing conditions, the General Plan designates the Project site for Employment Flex (EMPFX) land uses. The Employment Flex (EMPFX) land use designation is a transition zone intended to permit mixed development of lighter industrial uses and more intensive service, retail, and commercial uses, with a floor area ratio (FAR) of up to 1.0. However, for purpose of analysis, the property is assumed to be developed with up to 8,302,536 s.f. of commercial uses at a FAR of 0.44. This Alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project with an alternative that would allow for buildout of the Project site in accordance with the site's existing General Plan land use designations and zoning.

A. *Aesthetics*

Aesthetic impacts under the NPA would have the same less than significant impact conclusions as compared to the effects on aesthetics that would occur under the proposed Project. Under long-term operating conditions, both the Project and the NPA would be required to comply with the design measures approved or proposed for the Project site, which would ensure that future development on site occurs in a manner that is not visually offensive. Notwithstanding, because the Project would include large warehouse buildings that would not occur under the NPA, impacts to visual quality under the NPA would be reduced in comparison to the Project's less-than-significant impacts. Both the Project and NPA would be required to comply with applicable zoning and other regulations governing scenic quality; thus, impacts would be less than significant, and the level of impact would be similar.

B. Air Quality

Due to the change to commercial uses and associated construction and operational activities that would occur under the NPA, air pollutant impacts would be reduced compared to the proposed Project. However, the Project's operational significant and unavoidable criteria air pollutant emissions impacts would not be reduced to below a level of significance under this Alternative. Under the NPA, the Project site would be developed with commercial uses, while the proposed Project would result in the generation of a substantial increase in the number of large truck trips as compared to the NPA. Thus, the NPA would reduce the Project's impacts due to the exposure of sensitive receptors to substantial pollutant concentrations. Neither the Project nor the NPA would be associated with the generation of odors affecting a substantial number of people, although impacts due to odors would be slightly reduced under the NPA as compared to the Project due to the reduction in the number of large truck trips, which are associated with the generation of diesel exhaust.

C. Biological Resources

Biological resources impacts under the NPA would have the same less than significant impact conclusions as compared to the proposed Project. Because no wetland conditions occur on the property, similar to the proposed Project, there is no potential for this Alternative to have a substantial adverse effect on State or federally protected wetlands. Similarly, based on the proposed limits of disturbance, the jurisdictional sandy wash, located in the northwest corner of the property, would be avoided and no direct impacts to jurisdictional waters would occur.

D. Cultural Resources

Cultural resources impacts under the NPA would have the same less than significant impact conclusions as compared to the proposed Project. Both the Project and the Alternative would have the potential to impact unknown and undiscovered historic and archaeological resources should they be uncovered during grading activities. Similar to the Project, impacts would be less than significant after mitigation.

E. Energy

Construction characteristics associated with the NPA would largely be similar to the proposed Project. As with the proposed Project, energy use during construction activities would be primarily in the form of fuel consumption to operate heavy equipment, vehicles, machinery, and generators. In general, the construction processes under both the Project and NPA would promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing, and refinement. Use of construction materials in bulk reduces energy demands associated with preparation and transport of construction materials as well as the transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations. As such, impacts due to the wasteful or inefficient use of energy during construction activities would be less than significant, and the level of impact would be similar

F. Geology and Soils

The NPA would be developed on the same site and construction activities would occur in the same or similar manner as the proposed Project. As such, impacts to geology and soils would be similar under the Project and NPA. Specifically, neither the NPA nor the Project would result in impacts due to earthquake faults, strong seismic ground shaking, seismic-related ground failure (including liquefaction), landslides, lateral spreading, subsidence, liquefaction, collapse, or expansive soils. Similarly, impacts associated with erosion and the loss of topsoil would be similar under the proposed Project and NPA during both construction and long-term operation, and impacts would be less than significant. Both the Project and NPA would result in full disturbance to the Project site, and thus have similar potential to result in impacts to paleontological resources that may be buried beneath the site's surface. Mitigation for paleontological resources would be required under both the Project and NPA, which would reduce impacts to paleontological resources to less-than-significant levels. Therefore, under this Alternative, paleontological impacts would be the same as the Project and also require mitigation to reduce impacts to less than significant.

G. Greenhouse Gas Emissions

Because the NPA would generate substantially more traffic than the proposed Project, mobile source greenhouse gas (GHG) emissions would be substantially increased by the selection of this alternative. Because the No Project (Existing General Plan Designation) Alternative is not designed, it is speculative to conclude whether or not this alternative would exceed the SCAQMD screening threshold of 3,000 $MTCO_2e$ per year. This alternative would result in greater greenhouse gas emissions impacts; thus, the Project's greenhouse gas emissions impacts would be increased, and would not be reduced or avoided.

H. Hazards and Hazardous Materials

Neither implementation of the NPA or the proposed Project would result in a significant impact related to hazards or hazardous materials. Land uses that would occur on-site under this Alternative would have a similar potential to handle and store hazardous materials. With mandatory regulatory compliance, similar to the Project, this Alternative would pose a less than significant impact associated with hazards and hazardous materials.

I. Hydrology and Water Quality

Neither the Project or the NPA would substantially violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. An approved Stormwater Pollution Prevention Plan (SWPPP) would be required to implemented during construction activities; therefore, impacts to water quality during construction would be less than significant. Under long-term operation, the Project would not discharge any surface waters from the Project site, and the proposed aboveground infiltration basin would address erosion and other water quality pollutants of concern. As such, neither the Project or this Alternative would have the potential to violate any water quality standards or waste discharge requirements or otherwise substantially

degrade surface water quality under long-term operational conditions. Impacts would be less than significant for both the Project and this Alternative.

Neither the Project or the NPA would involve groundwater production; therefore, neither would substantially decrease groundwater supplies or interfere substantially with groundwater recharge; thus impacts would be less than significant for both the Project and this Alternative. The property is not subject to inundation by flood hazards, seiches, or tsunamis. As such, neither the Project or this Alternative would have the potential to risk release of pollutants due to site inundation. No impact would occur under the Project or this Alternative.

The Antelope Valley Groundwater Basin is exempt from the requirements of the Sustainable Groundwater Management Act (SGMA), Los Angeles County Water District (LACWD) District 40 has not adopted a groundwater management plan, and no regional groundwater management plan currently exists for the Antelope Valley Groundwater Basin. As such, neither the Project or this Alternative would have the potential to conflict with or obstruct implementation of a sustainable groundwater management plan, and no impact would occur. Furthermore, neither the Project or this Alternative would have the potential to conflict with or obstruct implementation of a water quality control plan. No impact would occur for either this Alternative or the proposed Project.

J. Land Use and Planning

Neither the Project or the NPA would disrupt or divide the physical arrangement of an established community. The NPA would develop the Project site in accordance with the City's General Plan. As such, there would be no conflicts with applicable land use plans, policies, or regulations resulting in significant environmental effects. Comparatively, the Project proposes a General Plan Amendment (GPA) to address consistency between the proposed land uses and the General Plan and other plans, polices, and regulations that rely on General Plan buildout projections. With approval of the Project's GPA, both the NPA and proposed Project would comply with all applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. As such, impacts would be less than significant, and the level of impact would be similar.

K. Noise

Construction activities associated with the NPA would be similar to the proposed Project. As with the proposed Project, noise levels generated during construction would not exceed the identified threshold of significance. As such, construction-related noise impacts would be similar under the proposed Project and NPA, and impacts would be less than significant. Additionally, neither the Project nor the NPA would expose nearby sensitive receptors to operational noise levels exceeding the City's threshold of significance and neither the Project nor the NPA would result in long-term operational traffic-related noise impacts exceeding the City's threshold of significance. As such, traffic-related noise impacts would be similar under the NPA and the Project. Both the Project and NPA would result in less-than-significant impacts due to groundborne noise or vibration during construction activities. Likewise, both the Project and the NPA would result in less-than-significant operational groundborne

noise or vibration impacts, although impacts would be slightly reduced under the NPA due to the reduction in the number of large truck trips as compared to the proposed Project.

L. Public Services

Because the NPA would construct approximately the same amount of building space as the proposed Project, approximately the same amount of demand would be placed on public service providers. Increased demand is not an environmental effect under CEQA, and no physical impacts to public service facilities would occur. Impacts would be the same under this alternative as they would be for the proposed Project. Less-than-significant impacts would occur under the proposed Project and this alternative. As with the Project, this Alternative would require the payment of Public Facility Development Impact Fees and mandatory payment of school impact fees as required by Public Education Code § 17072.10-18.

M. Transportation

Neither the Project nor the NPA has the potential to conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Impacts would be less than significant, and the level of impact would be similar. The NPA would likely result in a significant and unavoidable VMT impact associated with the NPA because employee and visitor vehicle trip lengths would be increased as compared to the Project; the NPA would include more regional commercial retail land uses that would attract vehicular trips from further away than the commercial uses proposed as part of the Project and would generate more employees than the proposed Project. However, because the NPA does not include a land use that would attract a large volume of truck trips, the NPA would eliminate the Project's significant and unavoidable impact associated with truck-related VMT.

Similar to the proposed Project, this Alternative would be consistent with the RTP/SCS, the City's General Plan, including the goals and policies of the General Plan Circulation and Mobility Element, and also would be required to comply with all applicable requirements of the PMC; thus impacts would be less than significant. With mandatory compliance with City roadway and private driveway design standards, impacts due to hazardous geometric design features and incompatible uses would be less than significant under both the Project and this Alternative and the level of impact would be similar. With mandatory compliance with City and Fire requirements, neither the Project or this Alternative would result in inadequate emergency access; impacts would be less than significant and the level of impact would be similar.

N. Tribal Cultural Resources

Tribal cultural resources impacts under NPA would have the same less than significant impact conclusions as compared to the proposed Project. Under both the Project or this Alternative, there is the potential to impact tribal cultural resources should they be uncovered during grading activities. Similar to the Project, impacts would be less than significant after mitigation.

O. *Utilities and Service Systems*

Both the Project and NPA would require the construction of water, wastewater, storm water drainage, electric power, natural gas, and telecommunication facilities. Impacts associated with the provision of such facilities would be similar and less than significant. The LACWD determined that it has sufficient water resources to accommodate development proposed as part of the Project, and therefore also would have sufficient water resources to serve this Alternative. Similarly, the LACWD would have adequate capacity to treat wastewater generated by either the Project or this Alternative; thus, impacts due to wastewater would be less than significant under both the Project and this Alternative. Both the Project and this Alternative would be subject to the City's solid waste regulations, and neither the Project nor this Alternative would result in the generation of solid waste that could adversely affect landfill capacity. Impacts associated with solid waste would be less than significant.

P. *Wildfire*

The Project site is not located near state responsibility areas (SRAs) or lands classified as very high fire hazard severity zones; therefore, as with the proposed Project, no impacts associated with wildfire potential in or near SRAs would occur. Neither the Project nor this Alternative would pose a wildfire impact and impacts would be less than significant.

Q. *Conclusion*

Implementation of the NPA would result in identical physical environmental impacts as compared to the proposed Project related to biological resources; cultural resources; geology and soils; hazards and hazardous materials; hydrology and water quality; and tribal cultural resources because the extent and depth of ground disturbance would be similar. Although the building type would be different, the intensity of use on the site would be similar resulting in similar less than significant construction-related and long-term effects associated with aesthetics, public services, utilities and services systems, and wildfire. Because truck traffic would be less under the NPA, but total vehicle trips would likely increase, operational impacts related to air quality, GHG, and noise would be similar under the No Project Alternative and the GHG impact and short-term construction-related vibration impact would remain significant and unavoidable. The Project's VMT impact would be omitted as the NPA VMT impact would be based on service population and less than significant. The NPA would not meet any of the Project's objectives.

6.3.3 Reduced Project Alternative - Phase I (RPA - Phase I)

The Reduced Project Alternative - Phase I (RPA - Phase I) considers development of Phase I and no development under Phases II – IV. Under this Alternative, as described in EIR Section 3.0, *Project Description*, Parcels 1, 2, 3, 4, 5, 6, would be developed with 2,373,226 s.f. of industrial use (identified with Buildings 1, 2, 3, 4, 5, 6 on the Project Plans) and a detention basin (identified on Lot D on the Project Plans) of TPM No. 83738 along with associated roadways, public utilities, and infrastructure improvements on approximately 135.1 acres of land. Phases II – IV comprised on approximately 297.8 acres of land would remain undeveloped as under existing conditions and the approximately 3,336,728

s.f. of industrial and commercial uses planned for Phases II - IV would not be developed. Therefore, this Alternative would develop approximately 69% less land and 58% less building space as compared to the Project that would develop 432.9 acres and 5,709,954 s.f. of building space.

Under this Alternative, Columbia Way / East Avenue M would only be improved to the east of the water towers that occur on the northern not-a-part parcel (shown as N.A.P. on the Projects Plans). A Class I trail would likely not be provided due to Parcels 11 and 12 along Columbia Way / East Avenue M not being developed, thereby leaving a gap from other industrial uses slated for development by a different Project Applicant, to the west of the Project site. Also, because planned Public Street A would traverse through a portion of Phase III and Phase I, the street would likely not be developed; resulting in only one access to the Phase I area via planned Public Street B which would only be required to be developed to serve as access to the Phase I buildings and the detention basin. Private Drive D would be developed as shown on the Project Plans as an interior street that would serve the 6 buildings.

A. Aesthetics

Aesthetic impacts under the RPA - Phase I would have the same less than significant impact conclusions as compared to the effects on aesthetics that would occur under the proposed Project. However, because there would be fewer buildings constructed under this Alternative and less land area developed and thereby more land left as natural open space, aesthetic effects would be concomitantly reduced compared to the Project. As with the proposed Project, development under this Alternative would be required to comply with the development standards and design guidelines of SP 22-001, in addition to all other applicable requirements of the PMC.

B. Air Quality

Due to the reduction in building floor area and associated construction and operational activities that would occur under the RPA - Phase I, air pollutant impacts would be reduced compared to the proposed Project. However, the Project's operational significant and unavoidable criteria air pollutant emissions impacts would not be reduced to below a level of significance under this Alternative.

Although the peak daily intensity of construction emissions would be the same as would occur under the proposed Project, total construction-related air pollutant emissions would be reduced because the construction duration would be shorter due to the reduction of approximately 58% of total building space as compared to the proposed Project. As such, the total amount of air pollutant emissions generated during the construction phase would be concomitantly reduced under this Alternative as compared to the Project. Although the total daily emissions during the construction phase would be reduced as compared to the proposed Project, similar to the proposed Project, daily construction emissions would exceed the AVAQMD threshold for VOC prior to implementation of any mitigation. Similar to the Project, after the implementation of the mitigation measures identified in EIR Section 4.2, *Air Quality*, the Project's construction impacts would be reduced to less than significant. Construction emissions calculated for each individual phase of construction (Phases I - IV) are

identified in Table 4.2-13, *Emissions Summary of Construction (Without Mitigation)* and Table 4.2-16 *Emissions Summary of Construction (With Mitigation*) in EIR Section 4.2, *Air Quality*.

Because this Alternative would result in less building floor area than the Project, this Alternative would require less energy to operate than the Project and would therefore result in a reduction of non-mobile source air quality emissions as compared to the Project. Due to less heavy truck traffic, this Alternative would generate a reduced amount of mobile source air pollutant emissions compared to the Project and it would reduce mobile source air quality emissions from passenger vehicles due to a reduction in employees on-site. In total, although this Alternative would result in a reduction of operational regional air quality emissions, it would not reduce Phase I NO_X and PM_{10} emissions to a level of less than significant. Therefore, similar to the Project, this Alternative would result in a significant direct and cumulatively considerable air quality impact related to operations. Operational emissions calculated by each individual phase of operation are identified in Table 4.2-14, *Summary of Peak Operations (Without Mitigation)* and Table 4.2-17 *Summary of Peak Operational Emissions* (*With Mitigation)* in EIR Section 4.2, *Air Quality*.

Similar to the Project, this Alternative would generate odors during short-term construction activities (e.g., diesel equipment exhaust, architectural coatings, asphalt) and long-term operation (e.g., diesel exhaust). However, and similar to Project, these odors would occur intermittently, be of short-term duration, and would not be substantial. Therefore, long-term operation of this Alternative similarly would not create objectionable odors affecting a substantial number of people and impacts would be less than significant with compliance with mandatory regulatory requirements.

C. *Biological Resources*

Biological resources impacts under the RPA - Phase I would have the same less than significant impact conclusions as compared to the proposed Project. However, because there would be approximately 297.8 acres less of land (69% less than proposed by the Project) disturbed under this Alternative and accordingly more land left as natural open space, impacts to biological resources would be concomitantly reduced compared to the Project.

Under this Alternative, approximately 135.1 acres involving Parcels 1, 2, 3, 4, 5, 6, Lot D, and roadways would be developed and approximately 297.8 acres involving Phases II - IV would remain undeveloped as they are under existing conditions. Therefore, this Alternative would result in approximately 297.8 fewer acres of land that would be disturbed as compared to the proposed Project. Therefore, any potential impacts to biological resources that are present or that may occur on the remaining undeveloped 297.8 acres would be avoided and would not be directly impacted by this Alternative.

Because this Alternative would only develop the Phase I area, although development of Phase I would impact approximately 38% of Joshua tree woodland, it would not impact approximately 62% of Joshua tree woodland and approximately 100% of the disturbed Western Joshua tree woodland that are present in the Phase II – IV area. Therefore, although this Alternative would result in a lesser amount of Joshua

tree woodland and disturbed Joshua tree woodland being impacted by development, because this Alternative would impact Western Joshua tree woodland, it would result in significant direct and indirect impacts similar to the proposed Project. Also, similar to the proposed Project, with the implementation of the mitigation measures identified in EIR Section 4.3, *Biological Resources*, impacts would be reduced to less than significant. Similar to the proposed Project, this Alternative has the potential to directly and indirectly impact nesting migratory birds protected by the MBTA and the CDFW if active nests are disturbed during the nesting season (February 1 through September 15). Similarly, this Alternative has the potential to directly impact desert kit fox that may utilize the property site for denning and the burrowing owl that may utilize the property for nesting/burrowing. However, with mandatory compliance with the mitigation measures and regulatory requirements disclosed in EIR Section 4.3, impacts would be less than significant under both this Alternative and the proposed Project.

Under this Alternative, a total of nine cactus individuals protected by the California Desert Native Plants Act (CDNPA) are present in the Phase I area. As with the proposed Project, these impacts are considered potentially significant and would require a permit from Los Angeles County. Implementation of the mitigation measure identified in EIR Section 4.3, *Biological Resources* would reduce potential impacts to less than significant and ensure compliance with the CDNPA for both this Alternative and the proposed Project.

Because no wetland conditions occur on the property, similar to the proposed Project, there is no potential for this Alternative to have a substantial adverse effect on State or federally protected wetlands. Similarly, based on the proposed limits of disturbance of Phase I, the jurisdictional sandy wash, located in the northwest corner of the property, would be avoided and no direct impacts to jurisdictional waters would occur.

D. Cultural Resources

Cultural resources impacts under the RPA - Phase I would have the same less than significant impact conclusions as compared to the proposed Project. However, because there would be approximately 297.8 acres less of land disturbed (69% less than proposed by the Project) under this Alternative and thus more land left as natural open space, impacts to cultural resources would be concomitantly reduced compared to the Project.

Under this Alternative, approximately 135.1 acres would be developed and approximately 297.8 acres of Phases II - IV would remain undeveloped as they are under existing conditions. Because the Phases II - IV area would not be disturbed by grading and trenching activities, approximately 68% less land would be disturbed and any cultural resources existing below the ground surface would not be subject to potential discovery and impact. Although less land would be disturbed by ground-disturbing activities under this Alternative, both the Project and the Alternative would have the potential to impact unknown and undiscovered historic and archaeological resources should they be uncovered during grading activities. Similar to the Project, impacts would be less than significant after mitigation.

E. Energy

Due to a reduction in building space and associated construction and operational activities that would occur under the RPA - Phase I, the total amount of energy consumed during construction and operation would be reduced under this Alternative, as compared to the Project. Therefore, the total energy consumed with this Alternative would be reduced but would still result in less-than-significant energy impacts similar to the Project.

Because this Alternative would result in less building floor area than the Project, the Alternative would require less energy to construct and operate as compared to the Project. Less total energy would be used for construction and operations for this Alternative as compared to the proposed Project due to the reduction of approximately 58 percent of building floor area.

F. Geology and Soils

Because under the RPA – Phase I, Phases II - IV would not be developed, soil erosion impacts would be increased in these areas as compared to the Project because the areas would continue to be subjected to natural erosion and sedimentation. This Alternative would be required to comply with the same mandatory regulatory requirements as the proposed Project to preclude substantial seismic ground shaking and geologic hazards; however, because Phases II and III would not be developed with buildings, impacts for this Alternative would result in less buildings that would be subject to strong seismic ground shaking of a building that could be occupied by workers. Although approximately 297.8 fewer acres of land would be developed, there is still a potential that ground-disturbing activities conducted in previously undisturbed portions of the Phase I area may result in significant impacts to previously undiscovered paleontological resources. Therefore, under this Alternative, paleontological impacts would be the same as the Project and also require mitigation to reduce impacts to less than significant.

G. Greenhouse Gas Emissions

Because the RPA – Phase I would result in less construction and operational activity than the proposed Project, this Alternative would result in a concomitant reduction of GHG emissions as compared to the Project. As shown in Table 4.7-5, *Project GHG Emissions Summary (With Mitigation)* in EIR Section 4.7, *Greenhouse Gas Emissions,* after the implementation of feasible mitigation, GHG emissions resulting from Phase I of the Project are calculated to be 39,953.73 $MTCO_2e$/yr. and GHG emissions from Phases II - IV of the Project are calculated to be 108,240.42 $MTCO_2e$/yr. Project Buildout emissions are estimated to be 148,194.15 $MTCO_2e$/yr beginning in 2032 when the entire Project is completed and becomes operational. Because this Alternative would not develop Phases II – IV, the Alternative would decrease GHG emissions by approximately 73%. However, because this Alternative would exceed the SCAQMD screening threshold of 3,000 $MTCO_2e$ per year, although GHG emissions would be reduced under this Alternative as compared to the proposed Project, even with implementation of applicable project design features, regulatory requirements and mitigation, this Alternative would generate direct or indirect GHG emissions that would result in a significant impact on the environment. Impacts would be significant and unavoidable similar to the Project.

H. Hazards and Hazardous Materials

Neither implementation of the RPA - Phase I or the proposed Project would result in a significant impact related to hazards or hazardous materials. Land uses that would occur on-site under this Alternative would have a similar potential to handle and store hazardous materials. With mandatory regulatory compliance, similar to the Project, this Alternative would pose a less than significant impact associated with hazards and hazardous materials.

I. Hydrology and Water Quality

Neither the Project or the RPA - Phase I would substantially violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Because less land would be developed under this Alternative, thereby resulting in less impervious surface area, erosion impacts would be greater under this Alternative. Although this Alternative would increase erosion as compared to the Project, similar to the proposed Project, an approved Stormwater Pollution Prevention Plan (SWPPP) would be required to implemented during construction activities; therefore, impacts to water quality during construction would be less than significant. Under long-term operation, the Project would not discharge any surface waters from the Project site, and the proposed aboveground infiltration basin would address erosion and other water quality pollutants of concern. As such, neither the Project or this Alternative would have the potential to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality under long-term operational conditions. Impacts would be less than significant for both the Project and this Alternative.

Neither the Project or the RPA - Phase I would involve groundwater production; therefore, neither would substantially decrease groundwater supplies or interfere substantially with groundwater recharge; thus impacts would be less than significant for both the Project and this Alternative.

The property is not subject to inundation by flood hazards, seiches, or tsunamis. As such, neither the Project or this Alternative would have the potential to risk release of pollutants due to site inundation. No impact would occur under the Project or this Alternative.

The Antelope Valley Groundwater Basin is exempt from the requirements of the Sustainable Groundwater Management Act (SGMA), Los Angeles County Water District (LACWD) District 40 has not adopted a groundwater management plan, and no regional groundwater management plan currently exists for the Antelope Valley Groundwater Basin. As such, neither the Project or this Alternative would have the potential to conflict with or obstruct implementation of a sustainable groundwater management plan, and no impact would occur. Furthermore, neither the Project or this Alternative would have the potential to conflict with or obstruct implementation of a water quality control plan. No impact would occur for either this Alternative or the proposed Project.

J. Land Use and Planning

Similar to the proposed Project, the RPA – Phase 1 would require a General Plan Amendment (GPA), Zone Change, Tentative Parcel Map (TPM), and a Site Plan Review (SPR) to develop the site. Impacts associated with land use and zoning and division of a community would be less than significant under both this Alternative and the Project.

K. Noise

Due to a reduction in building space and associated construction and operational activities that would occur under the RPA – Phase I, noise level increases under the Alternative would be concomitantly reduced compared to the proposed Project. However, both this Alternative and the proposed Project would result in less-than-significant noise impacts.

Similar to the proposed Project, under this Alternative, the types of daily construction activities conducted would be similar (and less than significant), although the intensity of construction activities would be slightly reduced under this Alternative due to not developing Phases II - IV. Therefore, noise levels during the building construction phase would be reduced under this Alternative, as compared to the Project, but would still be less than significant. Under long-term operational conditions, noise impacts from operations in Phases II -IV would be reduced (and less than significant) relative to the Project, due to reduced operational practices (i.e., cargo loading/unloading activities) and reduced daily heavy truck traffic volumes.

L. Public Services

The RPA – Phase I would result in a reduced level of development intensity on site compared to the proposed Project due to no development in Phases II – IV. As such, impacts to public services would be reduced under this Alternative; however, similar to the Project, impacts would be less than significant. As with the Project, this Alternative would require the payment of Public Facility Development Impact Fees and mandatory payment of school impact fees as required by Public Education Code § 17072.10-18.

M. Transportation

Because the RPA - Phase I would only develop Phase I, this Alternative would result in 9,296 total passenger equivalent trips (PCE) in comparison to the proposed Project that would result in a total of 31,382 PCEs; therefore, although this Alternative would result in a reduction of 22,086 PCEs, impacts to transportation would be similar to the proposed Project. See Table 4.13-4, *Project Trip Generation Summary (PCE*) in EIR Section 4.13, *Transportation.* Both the Project and the RPA - Phase I would be conditioned to submit a Transportation Demand Management (TDM) plan to reduce the Project's vehicle miles traveled. However, a TDM plan cannot guarantee a reduction in VMT to less than significant; therefore, VMT impacts are considered significant and unavoidable for both the Project and this Alternative.

Similar to the proposed Project, this Alternative would be consistent with the RTP/SCS, the City's General Plan, including the goals and policies of the General Plan Circulation and Mobility Element, and also would be required to comply with all applicable requirements of the PMC; thus impacts would be less than significant. With mandatory compliance with City roadway and private driveway design standards, impacts due to hazardous geometric design features and incompatible uses would be less than significant under both the Project and this Alternative and the level of impact would be similar. With mandatory compliance with City and Fire requirements, neither the Project or this Alternative would result in inadequate emergency access; impacts would be less than significant and the level of impact would be similar.

As shown on Table 4.13-6, *Phase I HBW Per Employee* in EIR Section 4.13, *Transportation*, Phase I would be 32 percent above the County's threshold of 13.6 home-based work (HBW) threshold; thereby resulting in a significant VMT impact. Therefore, VMT impacts under this Alternative would be significant and unavoidable, similar to the proposed Project. Similar to the Project, this Alternative would also be subject to compliance with Mitigation Measure TRN-MM-1 to submit a Transportation Demand Management (TDM) Plan which would reduce VMT, the effectiveness of commute trip reduction measures such as those listed in Mitigation Measure TRN MM-1 cannot be guaranteed to reduce Project VMT to a level of less than significant. No additional feasible mitigation measures are available to measurable reduce VMT. Therefore, similar to the Project, this Alternative would result in significant and unavoidable direct and cumulatively considerable impacts.

N. Tribal Cultural Resources

Tribal cultural resources impacts under the RPA - Phase I would have the same less than significant impact conclusions as compared to the proposed Project. However, because there would be approximately 297.8 acres less of land disturbed under this Alternative and thus more land left as natural open space, impacts to tribal cultural resources would be concomitantly reduced compared to the Project.

Under this Alternative, approximately 135.1 acres would be developed and approximately 297.8 acres of Phases II - IV would remain undeveloped as they are under existing conditions. Because the Phases II - IV area would not be disturbed by grading and trenching activities, approximately 68% less land would be disturbed any tribal cultural resources existing below the ground surface would not be subject to potential discovery and impact. However in areas that would be developed, under both the Project or this Alternative, there is the potential to impact tribal cultural resources should they be uncovered during grading activities. Similar to the Project, impacts would be less than significant after mitigation.

O. Utilities and Service Systems

Both the Project and RPA -Phase I would require the construction of water, wastewater, storm water drainage, electric power, natural gas, and telecommunication facilities. Impacts associated with the provision of such facilities would be similar and less than significant. The LACWD determined that it has sufficient water resources to accommodate development proposed as part of the Project, and

therefore also would have sufficient water resources to serve this Alternative. However, due to the reduction in development intensity on site, this Alternative would result in a substantial reduction in demand for water resources, thereby reducing the Project's less-than-significant impacts to water supply. Similarly, the LACWD would have adequate capacity to treat wastewater generated by either the Project or this Alternative; thus, impacts due to wastewater would be less than significant under both the Project and this Alternative, although the level of impact would be reduced under this Alternative as it would generate less wastewater requiring treatment. Both the Project and this Alternative would be subject to the City's solid waste regulations, and neither the Project nor this Alternative would result in the generation of solid waste that could adversely affect landfill capacity. Impacts associated with solid waste would be less than significant, although the level of impact would be reduced under this Alternative as compared to the Project because this Alternative would generate less solid waste requiring disposal at regional landfills.

P. *Wildfire*

The Project site is not located near state responsibility areas (SRAs) or lands classified as very high fire hazard severity zones; therefore, as with the proposed Project, no impacts associated with wildfire potential in or near SRAs would occur. Because Parcel 10 would not be developed under this alternative, fuel management would continue to occur on Parcel 10 as required by Fire Code. As such, neither the Project nor the RPA - Phase I would pose a wildfire impact and impacts would be less than significant.

Q. *Conclusion*

All impacts under the RPA – Phase I would be similar to the proposed Project. Although this Alternative would develop approximately 68% less land and 58% less building space as compared to the Project, this Alternative does not reduce any of the Project's less than significant impacts to a level of no impact nor does it reduce any of the Project's significant and unavoidable impacts to a level of less than significant.

The RPA - Phase I would: 1) meet five of the nine Project's objectives, 2) meet two of the nine objectives but to a lesser extent; 3) fail to meet two of the Project objectives.

Similar to the proposed Project, this Alternative would meet the following objectives: 1) diversify the mix of developed land uses in the City of Palmdale to support the growing goods movement supply chain, 2) develop supply chain uses in close proximity to designated truck routes and the State highway system to avoid or shorten vehicular trip lengths on other roadways, 3) develop Class A light industrial buildings in the City of Palmdale that are designed to meet contemporary industry standards and be economically competitive with similar industrial buildings in the local area and region, 4) develop supply chain buildings that have architectural design and operational characteristics that are compatible with other existing and planned developments in the local area, and 5) develop a property that has access to available infrastructure, including roads and utilities.

This Alternative would meet the following objectives but to a lesser extent mainly related to economic growth: 1) expand economic development, facilitate job creation, and increase the tax base for the City of Palmdale by accommodating and diversifying facilities needed to support the goods movement supply chain, and 2) attract new employment-generating businesses in the City of Palmdale, thereby growing the economy and providing a more equal jobs-housing balance in the local area that will reduce the need for members of the local workforce to commute outside the area for employment.

This Alternative would not meet the following Project objectives: 1) develop a master-planned commerce center that attracts industrial and commercial users to the City of Palmdale and 2) develop a master-planned commerce center that includes commercial uses that allows for commercial retail, restaurants, and small-scale retail commercial goods and services that would benefit residents, employees, and visitors in and around the Specific Plan Area and surrounding neighborhoods.

6.3.4 Reduced Project Alternative – Phases I & II (RPA – Phases I & II)

The Reduced Project Alternative - Phases I & II (RPA – Phases I & II) considers the development of Phase I and Phase II and no development under Phases III and IV. Under this Alternative, as described in EIR Section 3.0, *Project Description*, Parcels 1, 2, 3, 4, 5, 6, 7, 8, and 9 would be developed with 4,553,378 s.f. of industrial use (identified with Buildings 1, 2, 3, 4, 5, 6, 7, 8, 9 on the Project Plans) and a detention basin (identified on Lot D on the Project Plans) of TPM No. 83738 along with associated roadways, public utilities, and infrastructure improvements on approximately 238.7 acres of land. Phases III and IV comprised on approximately 194.2 acres of land would remain undeveloped as under existing conditions and the approximately 1,156,576 s.f. of industrial and commercial uses along with Public Street C, Lot A, Lot B and Lot C planned for Phases III and IV would not be developed. Therefore, this Alternative would develop approximately 45 percent less land and 20 percent less building space as compared to the Project that would develop 432.9 acres and 5,709,954 s.f. of building space.

Under this Alternative, Columbia Way / East Avenue M would only be improved to the east of the water towers that occur on the northern not-a-part parcel (shown as N.A.P. on the Projects Plans). A Class I trail would likely not be provided due to Parcels 11 and 12 along Columbia Way / East Avenue M not being developed, thereby leaving a gap from other industrial uses slated for development by a different Project Applicant, to the west of the Project site. Also, because planned Public Street A would traverse through a portion of Phase III and Phase I, the street would likely not be developed; resulting in only one access to the Phase I and II areas via planned Public Street B. Private Drive D would be developed as shown on the Project Plans as an interior street that would serve the 9 buildings.

A. Aesthetics

Aesthetic impacts under the RPA - Phases I & II would have the same less than significant impact conclusions as compared to the effects on aesthetics that would occur under the proposed Project. However, because there would be 3 fewer buildings constructed under this Alternative and less land area developed and thereby more land left as natural open space along the western portion of the

property nearest the offsite sandy wash, aesthetic effects would be concomitantly reduced compared to the Project. As with the proposed Project, development under this Alternative would be required to comply with the development standards and design guidelines of SP 22-001, in addition to all other applicable requirements of the PMC.

B. Air Quality

Due to the reduction in building floor area and associated construction and operational activities that would occur under the RPA - Phases I & II, air quality impacts would be reduced compared to the proposed Project. However, the Project's operational significant and unavoidable criteria air pollutant emissions impacts would not be reduced to below a level of significance under this Alternative.

Although the peak daily intensity of construction emissions would be the same as those which would occur under the proposed Project, total construction-related air pollutant emissions would be reduced because the construction duration would be shorter due to the reduction of approximately 20 percent of total building space as compared to the proposed Project. As such, the total amount of air pollutant emissions generated during the construction phase would be concomitantly reduced under this Alternative as compared to the Project. Although the total daily emissions during the construction phase would be reduced as compared to the proposed Project, similar to the proposed Project, daily construction emissions would exceed the AVAQMD threshold for VOC prior to implementation of any mitigation. Similar to the Project, after the implementation of the mitigation measures identified in EIR Section 4.2, *Air Quality*, the Project's construction impacts would be reduced to less than significant. Construction emissions calculated for each individual phase of construction (Phases II - IV) are identified in Table 4.2-13, *Emissions Summary of Construction (Without Mitigation)* and Table 4.2-16 *Emissions Summary of Construction (With Mitigation*) in EIR Section 4.2, *Air Quality*.

Because this Alterative would result in less building floor area than the Project, this Alternative would require less energy to operate than the Project and would therefore result in a reduction of non-mobile source air quality emissions as compared to the Project. Due to less heavy truck traffic, this Alternative would generate a reduced amount of mobile source air pollutant emissions compared to the Project and would reduce mobile source air quality emissions from passenger vehicles due to a reduction in employees on-site. Although this Alternative would result in a reduction of operational regional air quality emissions, as shown in Table 6-1, *Phase I & II Operational Emissions (Without Mitigation)* and Table 6-2, *Phase I & II Operational Emissions (With Mitigation)* it would not reduce emissions to a level of less than significant. Therefore, similar to the Project, this Alternative would result in a significant direct and cumulatively considerable air quality impact related to operations.

Table 6-1 Phase I & II Operational Emissions (Without Mitigation)

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Phase I & II						
Summer						
Mobile	83.20	378.95	1032.02	5.26	293.30	80.37
Area	137.98	1.67	198.02	0.01	0.35	0.27
Energy Source	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Source	8.86	24.77	22.60	0.04	1.30	1.30
On-Site Equipment Source	2.50	18.65	23.01	0.03	1.61	1.48
TRU Source	8.19	9.11	0.89	0.00	0.36	0.33
Total Maximum Daily Emissions (Phase I & II)	**240.72**	**433.15**	**1276.54**	**5.35**	**296.92**	**83.75**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**
Winter						
Mobile	77.34	401.87	798.02	5.08	293.30	80.37
Area	105.47	0.00	0.00	0.00	0.00	0.00
Energy Source	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Source	8.86	24.77	22.60	0.04	1.30	1.30
On-Site Equipment Source	2.50	18.65	23.01	0.03	1.61	1.48
TRU Source	8.19	9.11	0.89	0.00	0.36	0.33
Total Maximum Daily Emissions (Phase I & II)	**202.35**	**454.39**	**844.52**	**5.16**	**296.57**	**83.48**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**

Table 6-2 Phase I & II Operational Emissions (With Mitigation)

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Phase I & II						
Summer						
Mobile	83.20	378.95	1032.02	5.26	293.30	80.37
Area	99.40	0.00	0.00	0.00	0.00	0.00
Energy Source	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Source	8.86	24.77	22.60	0.04	1.30	1.30
On-Site Equipment Source	0.00	0.00	0.00	0.00	0.00	0.00
TRU Source	8.19	9.11	0.89	0.00	0.36	0.33
Total Maximum Daily Emissions (Phase I & II)	**199.64**	**412.83**	**1055.51**	**5.30**	**294.96**	**82.00**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**
Winter						
Mobile	77.34	401.87	798.02	5.08	293.30	80.37
Area	99.40	0.00	0.00	0.00	0.00	0.00
Energy Source	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Source	8.86	24.77	22.60	0.04	1.30	1.30
On-Site Equipment Source	0.00	0.00	0.00	0.00	0.00	0.00
TRU Source	8.19	9.11	0.89	0.00	0.36	0.33
Total Maximum Daily Emissions (Phase I & II)	**193.78**	**435.75**	**821.51**	**5.12**	**294.96**	**82.00**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**YES**	**YES**	**YES**	**NO**	**YES**	**YES**

Similar to the Project, this Alternative would generate odors during short-term construction activities (e.g., diesel equipment exhaust, architectural coatings, asphalt) and long-term operation (e.g., diesel exhaust). However, and similar to Project, these odors would occur intermittently, be of short-term duration, and would not be substantial. Therefore, long-term operation of this Alternative similarly would not create objectionable odors affecting a substantial number of people and impacts would be less than significant with compliance with mandatory regulatory requirements.

C. *Biological Resources*

Biological resources impacts under the RPA - Phases I & II would have the same less than significant impact conclusions as compared to the proposed Project. However, because there would be

approximately 194.2 acres less land disturbed (45 percent less than proposed by the Project) under this Alternative and accordingly more land left as natural open space, impacts to biological resources would be concomitantly reduced compared to the Project.

Under this Alternative, approximately 238.7 acres involving Parcels 1, 2, 3, 4, 5, 6, 7, 8, 9, and Lot D, and associated roadways public utilities, and infrastructure improvements would be developed and approximately 194.2 acres involving Phases III - IV would remain undeveloped as they are under existing conditions. Therefore, this Alternative would result in approximately 194.2 fewer acres of land that would be disturbed as compared to the proposed Project. Therefore, any potential impacts to biological resources that are present or that may occur on the remaining undeveloped 194.2 acres would be avoided and would not be directly impacted by this Alternative. Implementation of this Alternative would avoid impacts to: creosote bush scrub; Nevada ephedra – cheesebush – Cooper's box thorn scrub/Joshua tree woodland; California Juniper; Crowned muilla; and jurisdictional waters. Implementation of this Alternative would result in reduced impacts to: rubber rabbitbush – Nevada ephedra scrub/Joshua tree woodland; Joshua tree woodland; western Joshua tree; Silver cholla; and potential burrowing owl burrows.

Because this Alternative would only develop Phases I and II, and Phases III and IV would remain undeveloped, impacts to special status vegetation type Joshua tree woodland would be reduced. Although this Alternative would result in a lesser amount of Joshua tree woodland being impacted by development, because this Alternative would still impact Western Joshua tree woodland, it would result in significant direct and indirect impacts similar to the proposed Project. However, similar to the proposed Project, with the implementation of the mitigation measures identified in EIR Section 4.3, *Biological Resources*, impacts would be reduced to less than significant. This Alternative would completely avoid impacts to special status plant Crowned muilla and would reduce impacts to special status plant western Joshua tree. Similar to the proposed Project, this Alternative has the potential to directly and indirectly impact nesting migratory birds protected by the MBTA and the CDFW if active nests are disturbed during the nesting season (February 1 through September 15). Also, similar to the Project, this Alternative has the potential to directly impact desert kit fox that may utilize the property site for denning and the burrowing owl that may utilize the property for nesting/burrowing; however, this Alternative would avoid five of the six potential burrowing owl burrows observed during the Project surveys. However, with mandatory compliance with the mitigation measures and regulatory requirements disclosed in EIR Section 4.3, impacts would be less than significant under both this Alternative and the proposed Project.

Under this Alternative, a total of nine cactus individuals protected by the California Desert Native Plants Act (CDNPA) are present in the Phase I area. As with the proposed Project, these impacts are considered potentially significant and would require a permit from Los Angeles County. Implementation of the mitigation measure identified in EIR Section 4.3, *Biological Resources* would reduce potential impacts to less than significant and ensure compliance with the CDNPA for both this Alternative and the proposed Project.

Because no wetland conditions occur on the property, similar to the proposed Project, there is no potential for this Alternative to have a substantial adverse effect on State or federally protected wetlands. Similarly, based on the proposed limits of disturbance of Phases I and II, the jurisdictional sandy wash, located in the northwest corner of the property, would be avoided and no direct impacts to jurisdictional waters would occur.

D. Cultural Resources

Cultural resources impacts under the RPA - Phases I & II would have the same less than significant impact conclusions as compared to the proposed Project. However, because there would be approximately 194.2 acres less of land disturbed (45 percent less than proposed by the Project) under this Alternative and thus more land left as natural open space, impacts to cultural resources would be concomitantly reduced compared to the Project.

Under this Alternative, approximately 238.7 acres would be developed and approximately 194.2 acres of Phases III and IV would remain undeveloped as they are under existing conditions. Because the Phases III and IV area would not be disturbed by grading and trenching activities, approximately 45 percent less land would be disturbed and any cultural resources existing below the ground surface would not be subject to potential discovery and impact. Although less land would be disturbed by ground-disturbing activities under this Alternative, both the Project and the Alternative would have the potential to impact unknown and undiscovered historic and archaeological resources should they be uncovered during grading activities. Similar to the Project, impacts would be less than significant after mitigation.

E. Energy

Due to a reduction in building space and associated construction and operational activities that would occur under the RPA - Phases I & II, the total amount of energy consumed during construction and operation would be reduced under this Alternative, as compared to the Project. Therefore, the total energy consumed with this Alternative would be reduced but would still result in less-than-significant energy impacts similar to that of the Project.

Because this Alternative would result in less building floor area than the Project, this Alternative would require less energy to construct and operate as compared to the Project. Less total energy would be used for construction and operations for this Alternative as compared to the proposed Project due to the reduction of approximately 20 percent of building floor area.

F. Geology and Soils

Because under the RPA – Phases I & II, Phases III - IV would not be developed, soil erosion impacts would be increased in these areas as compared to the Project because the areas would continue to be subjected to natural erosion and sedimentation. This Alternative would be required to comply with the same mandatory regulatory requirements as the proposed Project to preclude substantial seismic ground shaking and geologic hazards; however, because Phases III and IV would not be developed

with buildings, impacts for this Alternative would result in less buildings that could be occupied by workers that would be subject to strong seismic ground shaking. Although approximately 194.2 fewer acres of land would be developed, there is still a potential that ground-disturbing activities conducted in previously undisturbed portions of the Phase I & II area may result in significant impacts to previously undiscovered paleontological resources. Therefore, under this Alternative, paleontological impacts would be the same as the Project and would also require mitigation to reduce impacts to less than significant.

G. *Greenhouse Gas Emissions*

Because the RPA – Phases I & II would result in less construction and operational activity than the proposed Project, this Alternative would result in a concomitant reduction of GHG emissions as compared to the Project. As shown in Table 6-3, *Phase I & II GHG Emissions Summary (With Mitigation)* after the implementation of feasible mitigation, GHG emissions resulting from Phase I & II of the Project are calculated to be 90,384.31 $MTCO_2e$/yr. As shown on Table 4.7-5 (previously provided in Section 4.7, *Greenhouse Gas Emissions*) Project Buildout emissions are estimated to be 148,194.15 $MTCO_2e$/yr beginning in 2032 when the entire Project is completed and becomes operational. Because this Alternative would not develop Phases III and IV, the Alternative would decrease GHG emissions by approximately 39%. However, because this Alternative would exceed the SCAQMD screening threshold of 3,000 $MTCO_2e$ per year, although GHG emissions would be reduced under this Alternative as compared to the proposed Project, even with implementation of applicable project design features, regulatory requirements and mitigation, this Alternative would generate direct or indirect GHG emissions that would result in a significant impact on the environment. Impacts would be significant and unavoidable similar to the Project.

Table 6-3 Phase I & II GHG Emissions Summary (With Mitigation)

Emission Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	Refrigerants	Total CO_2e
Phase I & II					
Annual construction-related emissions amortized over 30 years	237.59	0.01	0.01	0.26	242.31
Mobile Source	77,585.29	1.18	8.67	110.36	80,308.47
Area Source	0.00	0.00	0.00	0.00	0.00
Energy Source	4,382.22	0.42	0.05	0.00	4,407.65
Water Usage	1,299.94	34.35	0.82	0.00	2,404.43
Waste	390.20	39.00	0.00	0.00	1,365.16
Refrigerants	0.00	0.00	0.00	47.16	47.16
Stationary Source	102.82	0.00	0.00	0.00	103.16
On-Site Equipment Source					0.00
TRU Source					1,505.98
Total CO_2e (All Sources)	**90,384.31**				

H. Hazards and Hazardous Materials

Neither implementation of the RPA - Phases I & II or the proposed Project would result in a significant impact related to hazards or hazardous materials. Land uses that would occur on-site under this Alternative would have a similar potential to handle and store hazardous materials. With mandatory regulatory compliance, similar to the Project, this Alternative would pose a less than significant impact associated with hazards and hazardous materials.

I. Hydrology and Water Quality

Neither the RPA - Phases I & II or the Project would substantially violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Because less land would be developed under this Alternative, thereby resulting in less impervious surface area, erosion impacts would be greater under this Alternative. Although this Alternative would increase erosion as compared to the Project, similar to the proposed Project, an approved Stormwater Pollution Prevention Plan (SWPPP) would be required to be implemented during construction activities; therefore, impacts to water quality during construction would be less than significant. Under long-term operation, the Project would not discharge any surface waters from the Project site, and the proposed aboveground infiltration basin would address erosion and other water quality pollutants of concern. As such, neither the Project or this Alternative would have the potential to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality under long-term operational conditions. Impacts would be less than significant for both the Project and this Alternative.

Neither the RPA - Phases I & II or the Project would involve groundwater production; therefore, neither would substantially decrease groundwater supplies or interfere substantially with groundwater recharge; thus impacts would be less than significant for both this Alternative and the Project.

The property is not subject to inundation by flood hazards, seiches, or tsunamis. As such, neither this Alternative or the Project would have the potential to risk the release of pollutants due to site inundation. No impact would occur under this Alternative or the Project.

The Antelope Valley Groundwater Basin is exempt from the requirements of the Sustainable Groundwater Management Act (SGMA); Los Angeles County Water District (LACWD) District 40 has not adopted a groundwater management plan; and no regional groundwater management plan currently exists for the Antelope Valley Groundwater Basin. As such, neither this Alternative would have the potential to conflict with or obstruct implementation of a sustainable groundwater management plan, and no impact would occur. Furthermore, neither this Alternative or the Project would have the potential to conflict with or obstruct implementation of a water quality control plan. No impact would occur for either this Alternative or the proposed Project.

J. Land Use and Planning

Similar to the proposed Project, the RPA – Phases 1 & II would require a General Plan Amendment (GPA), Zone Change, Tentative Parcel Map (TPM), and a Site Plan Review (SPR) to develop the site. Impacts associated with land use and zoning and division of a community would be less than significant under both this Alternative and the Project.

K. Noise

Due to a reduction in building space and associated construction and operational activities that would occur under the RPA – Phases I & II, noise level increases under this Alternative would be concomitantly reduced compared to the proposed Project. Both this Alternative and the proposed Project would result in less-than-significant noise impacts.

Similar to the proposed Project, under this Alternative, the types of daily construction activities conducted would be similar (and less than significant), although the intensity of construction activities would be slightly reduced under this Alternative due to not developing Phases III and IV. Therefore, noise levels during the building construction phase would be reduced under this Alternative, as compared to the Project, but would still remain less than significant. Under long-term operational conditions, noise impacts from operations in Phases III and IV would be reduced (and less than significant) relative to the Project, due to reduced operational practices (i.e., cargo loading/unloading activities) and reduced daily heavy truck traffic volumes.

L. Public Services

The RPA – Phases I & II would result in a reduced level of development intensity on site compared to the proposed Project due to not developing Phases III and IV. As such, impacts to public services

would be reduced under this Alternative; however, similar to the Project, impacts would be less than significant. As with the Project, this Alternative would require the payment of Public Facility Development Impact Fees and mandatory payment of school impact fees as required by Public Education Code § 17072.10-18.

M. Transportation

Table 6-4, *Phases I and II Trip Generation Summary (PCE)* below restates the Trip Generation Summary for Phase I (provided previously on Table 4.13-4, *Project Trip Generation Summary (PCE*) in EIR Section 4.13, *Transportation*); provides the Trip Generation Summary for Phase II; and provides the RPA - Phases I & II total passenger equivalent trips (PCE). As shown in Table 6-4, this Alternative would result in 20,144 total PCEs daily in comparison to the proposed Project that would result in a total of 31,382 PCEs daily; therefore, although this Alternative would result in a reduction of 11,238 PCEs, impacts to transportation would be similar to the proposed Project. Both the Project and the RPA - Phases I & II Alternative would be conditioned to submit a Transportation Demand Management (TDM) plan to reduce the Project's vehicle miles traveled. However, a TDM plan cannot guarantee a reduction in VMT to less than significant; therefore, VMT impacts are considered significant and unavoidable for both this Alternative and the Project.

Table 6-4 Phases I and II Trip Generation Summary (PCE)

Land Use	Quantity Units	AM Peak Hour			PM Peak Hour			
		In	Out	Total	In	Out	Total	Daily
Phase I (2025)								
General Light Industrial	103.418 TSF							
-Passenger Cars:		67	9	76	9	57	66	478
- Total Truck Trips (PCE)		1	1	2	1	1	2	68
Warehousing	516,396 TSF							
-Passenger Cars		62	15	77	18	60	78	574
-Total Truck Trips (PCE)		15	11	26	20	18	38	792
High-Cube Fulfillment (Sort)	680.469							
-Passenger Cars		473	105	578	312	491	803	4,254
-Total Truck Trips (PCE)		17	17	34	17	17	34	330
High-Cube Cold Storage	251.057 TSF							
-Passenger Cars		19	1	20	5	18	23	344
-Total Truck Trips (PCE)		6	13	19	9	9	18	448
High-Cube Fulfillment (Non-Sort)	753.171							
-Passenger Cars		84	14	98	43	70	113	1,190
-Total Truck Trips (PCE)		19	20	39	10	10	20	442
Manufacturing	68.715							
-Passenger Cars		34	10	44	15	34	49	296
-Total Truck Trips (PCE)		2	2	4	2	3	5	80

Land Use	Quantity Units	AM Peak Hour			PM Peak Hour			
		In	Out	Total	In	Out	Total	Daily
Industrial Component Passenger Cars		739	154	893	402	730	1,132	7,136
Industrial Component Trucks		60	64	124	59	58	117	2,160
Phase I (2025) Total Trips (PCE)[2]		**799**	**218**	**1,017**	**461**	**788**	**1,249**	**9,296**
Phase II								
High-Cube Parcel Hub	1,630.362 TSF							
-Passenger Cars		497	497	995	642	303	946	6,604
-Total Truck Trips (PCE)		186	187	373	170	78	248	2,406
Manufacturing	137.448 TSF							
-Passenger Cars		69	21	90	30	68	98	592
-Total Truck Trips (PCE)		7	4	11	4	7	11	158
Warehousing	412.342 TSF							
-Passenger Cars		49	12	61	14	48	62	458
-Total Truck Trips (PCE)		12	10	22	16	15	31	630
Industrial Component Passenger Cars		615	530	1,146	686	419	1,106	7,654
Industrial Component Trucks		205	201	406	190	100	290	3,194
Phase II Total Trips (PCE)[2]		**820**	**731**	**1,552**	**876**	**519**	**1,396**	**10,848**
Phase I and II Total Trips (PCE)[2]		**1,619**	**949**	**2,569**	**1,337**	**1,307**	**2,645**	**20,144**

Similar to the proposed Project, this Alternative would be consistent with the RTP/SCS; the City's General Plan, including the goals and policies of the General Plan Circulation and Mobility Element; and also would be required to comply with all applicable requirements of the PMC; thus impacts would be less than significant. With mandatory compliance with City roadway and private driveway design standards, impacts due to hazardous geometric design features and incompatible uses would be less than significant under both the Project and this Alternative and the level of impact would be similar. With mandatory compliance with City and Fire requirements, neither this Alternative nor the Project would result in inadequate emergency access; impacts would be less than significant, and the level of impact would be similar.

As previously shown on Table 4.13-6, *Phase I HBW Per Employee* in EIR Section 4.13, *Transportation*, Phase I would be 32 percent above the County's threshold of 13.6 home-based work (HBW) threshold; thereby resulting in a significant VMT impact. As shown in Table 6-5, *Phases I and II HBW Per Employee*, the RPA - Phases I & II would also be 32 percent above the County's threshold; thereby resulting in a significant VMT impact.

Table 6-5 Phases I and II HBW Per Employee

	Phases I and II
Phases I and II HBW VMT	81,506
Phases I and II Employment	4,553
Phases I and II HBW VMT per Employee	17.9
County Threshold	13.6
Percent Above Threshold	+ 32.0%
Potentially Significant?	Yes

Therefore, VMT impacts under this Alternative would be significant and unavoidable, similar to the proposed Project. Similar to the Project, this Alternative would also be subject to compliance with Mitigation Measure TRN-MM-1 to submit a Transportation Demand Management (TDM) Plan which would reduce VMT, the effectiveness of commute trip reduction measures such as those listed in Mitigation Measure TRN MM-1 cannot be guaranteed to reduce Project VMT to a level of less than significant. No additional feasible mitigation measures are available to measurable reduce VMT. Therefore, similar to the Project, this Alternative would result in significant and unavoidable direct and cumulatively considerable impacts.

N. Tribal Cultural Resources

Tribal cultural resources impacts under the RPA - Phases I & II would have the same less than significant impact conclusions as compared to the proposed Project. However, because there would be approximately 194.2 acres less of land disturbed under this Alternative and thus more land left as natural open space, impacts to tribal cultural resources would be concomitantly reduced compared to the Project.

Under this Alternative, approximately 238.7 acres would be developed and approximately 194.2 acres of Phases III and IV would remain undeveloped as they are under existing conditions. Because the Phases III and IV area would not be disturbed by grading and trenching activities, approximately 45 percent less land would be disturbed and any tribal cultural resources existing below the ground surface would not be subject to potential discovery and impact. However, in areas that would be developed, under both this Alternative or the Project, there is the potential to impact tribal cultural resources should they be uncovered during grading activities. Similar to the Project, impacts would be less than significant after mitigation.

O. Utilities and Service Systems

Both the RPA -Phases I & II and the Project would require the construction of water, wastewater, storm water drainage, electric power, natural gas, and telecommunication facilities. Impacts associated with the provision of such facilities would be similar and less than significant. The LACWD determined that it has sufficient water resources to accommodate development proposed as part of the Project, and therefore also would have sufficient water resources to serve this Alternative. However, due to the reduction in development intensity on site, this Alternative would result in a substantial reduction in

demand for water resources, thereby reducing the Project's less-than-significant impacts to water supply. Similarly, the LACWD would have adequate capacity to treat wastewater generated by either this Alternative or the Project; thus, impacts due to wastewater would be less than significant under both this Alternative and the Project, although the level of impact would be reduced under this Alternative as it would generate less wastewater requiring treatment. Both this Alternative and the Project would be subject to the City's solid waste regulations, and neither this Alternative nor the Project would result in the generation of solid waste that could adversely affect landfill capacity. Impacts associated with solid waste would be less than significant, although the level of impact would be reduced under this Alternative as compared to the Project because this Alternative would generate less solid waste requiring disposal at regional landfills.

P. Wildfire

The Project site is not located near state responsibility areas (SRAs) or lands classified as very high fire hazard severity zones; therefore, under the RPA – Phases I and II, as with the proposed Project, no impacts associated with wildfire potential in or near SRAs would occur. Because Parcel 10 would not be developed under this alternative, fuel management would continue to occur on Parcel 10 as required by the Fire Code. As such, neither the RPA - Phases I & II nor the Project would pose a wildfire impact and impacts would be less than significant.

Q. Conclusion

All impacts under the RPA – Phases I & II would be similar to the proposed Project. Although this Alternative would develop approximately 45 percent less land and 20 percent less building space as compared to the Project, this Alternative does not reduce any of the Project's less than significant impacts to a level of no impact, nor does it reduce any of the Project's significant and unavoidable impacts to a level of less than significant.

The RPA - Phases I & II would: 1) meet five of the nine Project's objectives, 2) meet two of the nine objectives but to a lesser extent; and 3) fail to meet two of the Project objectives.

Similar to the proposed Project, this Alternative would meet the following objectives: 1) diversify the mix of developed land uses in the City of Palmdale to support the growing goods movement supply chain, 2) develop supply chain uses in close proximity to designated truck routes and the State highway system to avoid or shorten vehicular trip lengths on other roadways, 3) develop Class A light industrial buildings in the City of Palmdale that are designed to meet contemporary industry standards and be economically competitive with similar industrial buildings in the local area and region, 4) develop supply chain buildings that have architectural design and operational characteristics that are compatible with other existing and planned developments in the local area, and 5) develop a property that has access to available infrastructure, including roads and utilities.

This Alternative would meet the following objectives but to a lesser extent mainly related to economic growth: 1) expand economic development, facilitate job creation, and increase the tax base for the City

of Palmdale by accommodating and diversifying facilities needed to support the goods movement supply chain, and 2) attract new employment-generating businesses in the City of Palmdale, thereby growing the economy and providing a more equal jobs-housing balance in the local area that will reduce the need for members of the local workforce to commute outside the area for employment.

This Alternative would not meet the following Project objectives: 1) develop a master-planned commerce center that attracts industrial and commercial users to the City of Palmdale and 2) develop a master-planned commerce center that includes commercial uses that allows for commercial retail, restaurants, and small-scale retail commercial goods and services that would benefit residents, employees, and visitors in and around the Specific Plan Area and surrounding neighborhoods.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Section 15126.6(e)(2) of the CEQA Guidelines indicates that an analysis of alternatives shall identify an environmentally superior alternative among the alternatives evaluated in the EIR. In general, the environmentally superior alternative as defined by CEQA should minimize adverse impacts to the Project site and its surrounding environment.

As shown in Table 6-6, *Alternatives to the Project – Comparison of Environmental Impacts*, both the No Development Alternative and No Project Alternative would avoid or reduce all or some of the Project's significant environmental impacts and, therefore, can be considered environmentally superior to the Project. Both the No Development Alternative and No Project Alternative are considered to be a "no project" alternative as defined by CEQA Guidelines Section 15126.6(e)(3). If a "no project" alternative is identified as the environmentally superior alternative then the EIR shall also identify an environmentally superior alternative among the other alternatives (see CEQA Guidelines Section 15126.6(e)(2). The Reduced Project Alternative, in the scenario of only Buildings 1 through 6 being implemented, is the Environmentally Superior Alternative, although it does not meet the Project objectives to the extent as the Project.

Table 6-6 Alternatives to the Project – Comparison of Environmental Impacts

Environmental Topic	Project Significance of Impacts after Mitigation	Level of Input Compared to the Proposed Project/Compliance with Project Objectives			
		No Development Alternative (NDA)	No Project Alternative (NPA)	RPA – Phase I Alternative	RPA – Phase I & II Alternative
Aesthetics	Less than Significant	Reduced	Similar	Reduced	Reduced
Air Quality	Significant Direct and Cumulatively-Considerable (Thresholds a and b)	Reduced	Reduced	Reduced	Reduced
Biological Resources	Less than Significant	Reduced	Similar	Reduced	Reduced
Cultural Resources	Less than Significant	Reduced	Similar	Reduced	Reduced
Energy	Less than Significant	Reduced	Similar	Reduced	Reduced
Geology and Soils	Less than Significant	Most Issues: Reduced Long-Term Erosion: Increased	Similar	Most Issues: Reduced Paleontological: Similar Long-Term Erosion: Increased	Most Issues: Reduced Paleontological: Similar Long-Term Erosion: Increased
Greenhouse Gas Emissions	Significant Unavoidable Cumulatively-Considerable (Threshold a)	Reduced	Increased	Reduced	Reduced
Hazards and Hazardous Materials	Less than Significant	Reduced	Similar	Similar	Similar
Hydrology and Water Quality	Less than Significant	Most Issues: Reduced Long-Term Erosion: Increased	Similar	Most Issues: Similar Long-Term Erosion: Increased	Most Issues: Similar Long-Term Erosion: Increased
Land Use and Planning	Significant Direct and Cumulatively-Considerable (Threshold b)	Reduced	Reduced	Similar	Similar
Noise	Less than Significant	Reduced	Similar	Reduced	Reduced
Public Services	Less than Significant	Similar	Similar	Reduced	Reduced
Transportation	Significant and Unavoidable Direct and Cumulatively-Considerable Impact (Threshold b)	Reduced	Most Issues: Similar Truck-Related VMT: Reduced	Reduced	Reduced
Tribal Cultural Resources	Less than Significant	Reduced	Similar	Reduced	Reduced
Utilities and Service Systems	Less than Significant	Reduced	Similar	Reduced	Reduced
Wildfire	No Impact	Reduced	Similar	Reduced	Reduced

Ability to Meet Project Objectives				
	No Development Alternative (NDA)	No Project Alternative	RPA – Phase I Alternative	RPA – Phase I & II Alternative
A. To develop a master-planned commerce center that attracts industrial and commercial users to the City of Palmdale.	No	No	No	Yes, but to a lesser extent
B. To diversify the mix of developed land uses in the City of Palmdale to support the growing goods movement supply chain.	No	No	Yes, but to a lesser extent	Yes, but to a lesser extent
C. To develop supply chain uses in close proximity to designated truck routes and the State highway system to avoid or shorten vehicular trip lengths on other roadways.	No	No	Yes, but to a lesser extent	Yes, but to a lesser extent
D. To expand economic development, facilitate job creation, and increase the tax base for the City of Palmdale by accommodating and diversifying facilities needed to support the goods movement supply chain.	No	No	Yes, but to a lesser extent	Yes, but to a lesser extent
E. To develop Class A light industrial buildings in the City of Palmdale that are designed to meet contemporary industry standards and be economically competitive with similar industrial buildings in the local area and region.	No	No	Yes, but to a lesser extent	Yes, but to a lesser extent
F. To attract new employment-generating businesses in the City of Palmdale, thereby growing the economy and providing a more equal jobs-housing balance in the local area that will reduce the need for members of the local workforce to commute outside the area for employment.	No	No	Yes, but to a lesser extent	Yes, but to a lesser extent
G. To develop supply chain buildings that have architectural design and operational characteristics that are compatible with other existing and planned developments in the local area.	No	No	Yes, but to a lesser extent	Yes, but to a lesser extent

H. To develop a property that has access to available infrastructure, including roads and utilities.	No	No	Yes, but to a lesser extent	Yes, but to a lesser extent
I. To developed a master planned commerce center that includes commercial uses that allows for commercial retail, restaurants, and small-scale retail commercial goods and services that would benefit residents, employees, and visitors in and around the Specific Plan Area and surrounding neighborhoods.	No	No	No	No

7.0 REFERENCES

7.1 PERSONS CONTRIBUTING TO EIR PREPARATION

7.1.1 CITY OF PALMDALE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT

- Megan Taggart, Deputy Director of Economic and Community Development
- Brenda Magaña, Planning Manager

7.1.2 T&B PLANNING, INC.

- Tracy Zinn, Principal
- Connie Anderson, Senior Project Manager
- Andrea Halfhill, Environmental Analyst
- Gary Cheng, Project Planner
- Kristen Goddard, Senior Planner
- Cristina Maxey, Graphics/GIS Specialist

7.2 DOCUMENTS APPENDED TO THIS EIR

The following reports, studies, and supporting documentation were used in preparing the Palmdale Logistics Park EIR and are bound separately as Technical Appendices. A copy of the Technical Appendices is available for review at the City of Palmdale Department of Economic and Community Development at 38250 Sierra Highway Palmdale, CA 93550.

Appendix A: Notice of Preparation (NOP) and Written Comments on the NOP

Appendix B1: Urban Crossroads, 2023a. *Antelope Valley Commerce Center, Air Quality Impact Analysis*. November 14, 2023.

Appendix B2: Urban Crossroads, 2023b. *Antelope Valley Commerce Center, Mobile Source Health Risk Assessment*. November 14, 2023.

Appendix C1: Psomas, 2023a. *Biological Resources Technical Report*. October 2023.

Appendix C2: Psomas, 2022a. *Results of the Focused Special Status Plant/Desert Native Plant Survey*. September 27, 2022.

Appendix C3: Psomas, 2022b. *Results of a Focused Survey for Burrowing Owl.* August 24, 2022.

Appendix C4: Psomas, 2023b. *Results of the Swainson's Hawk Survey*. October 24, 2023.

Appendix C5: Psomas, 2022c. *Jurisdictional Delineation Report*. November 21, 2022.

Appendix C6: Elanco, 2022. *Mohave Ground Squirrel Survey.* September 28, 2022.

Appendix C7: Psomas, 2023c. *Results of the Joshua Tree Survey*. October 24, 2023.

Appendix C8: Glenn Lukos Associates, 2022. *Results of a Focused Desert Tortoise Survey*. September 21, 2022.

Appendix C9: Psomas, 2023d. *Supplemental Letter Assigning Impacts and Mitigation for Phase I and Phases 2–4 for the Antelope Valley Commerce Center Project, City of Palmdale, Los Angeles County, California*. December 8, 2023.

Appendix D: PaleoWest, 2022a. *Cultural Resources Investigation in Support of the Antelope Valley Commerce Center Project, City of Palmdale, Los Angeles County, California*. June 2, 2022.

Appendix E: Urban Crossroads, 2023c. *Antelope Valley Commerce Center Energy Analysis*. October 20, 2023.

Appendix F1: Southern California Geotechnical, 2022. *Geotechnical Investigation.* May 5, 2022.

Appendix F2: Southern California Geotechnical, 2023. *Preliminary Results of Infiltration Testing*. March 15, 2023.

Appendix G: PaleoWest, 2022b. *Paleontological Resource Technical Memorandum for the Antelope Valley Commerce Center Project, City of Palmdale, Los Angeles County, California.* June 2, 2022.

Appendix H: Urban Crossroads, 2023d. *Antelope Valley Commerce Center Greenhouse Gas Analysis*. November 14, 2023.

Appendix I: Advanced Environmental Concepts, Inc., 2022. *Phase I Environmental Site Assessment.* February 18, 2022.

Appendix J: JLC Engineering and Consulting, Inc., 2023. *Preliminary Drainage Report*. October 12, 2023.

Appendix K: Urban Crossroads, 2024e. *Antelope Valley Commerce Center Noise and Vibration Analysis*. January 12, 2024.

Appendix L1: Urban Crossroads, 2023f. *Traffic Analysis*. November 10, 2023.

Appendix L2: Urban Crossroads, 2023g. *Vehicle Miles Traveled (VMT) Analysis*. October 5, 2023.

Appendix M: WestLAND Group, Inc., 2022. *Sanitary Sewer Analysis*. May 20, 2022.

Appendix N: KEC Engineers, Inc., 2022. *Water Supply Assessment Report (WSA).* May 2022.

Appendix O: Federal Aviation Administration (FAA) Determination of No Hazard Letters

7.3 Documents Incorporated by Reference

The following reports, studies, and supporting documentation were used in the preparation of this EIR and are incorporated by reference within this EIR. A copy of the following reports, studies, and supporting documentation is a matter of public record and is generally available to the public at the location listed.

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7.4 Documents, Websites and Persons Consulted

The following reports, studies, and supporting documentation were used in the preparation of this EIR and are incorporated by reference within this EIR. A copy of the following reports, studies, and supporting documentation is a matter of public record and is generally available to the public at the location listed.

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