DRAFT ENVIRONMENTAL IMPACT REPORT NO. 23-002
SCH NO. 2022080663



PALMDALE INDUSTRIAL PARK
SITE PLAN REVIEW NO. 22-012
City of Palmdale, California

Lead Agency

City of Palmdale

Department of Economic and Community Development
Attn: Brenda Magaña, Planning Manager
38250 Sierra Highway
Palmdale, CA 93550

May 2023

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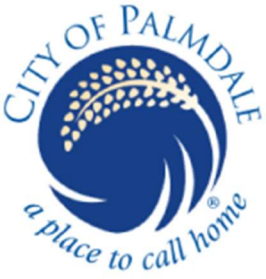
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SITE PLAN REVIEW NO. 22-012

Lead Agency
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Lead Agency Discretionary Approval
Site Plan Review No. 22-012



May 2023

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L2. Vehicle Miles Traveled Analysis
L3. Supplemental Vehicle Miles Traveled Analysis
L4. Railroad Safety Evaluation
M1. Sanitary Sewer Analysis
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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
AIA	Airport Influence Area
AIRFA	American Indian Religious Freedom Act
ALUC	Airport Land Use Commission
ALUP	Airport Land Use Plan
amsl	Above Mean Sea Level
ANSI	American National Standards Institute
A-P Act	Alquist-Priolo Earthquake Fault Zoning Act
APS	Alternative Planning Strategy
APSA	Aboveground Petroleum Storage Act
APN	Assessor Parcel Number
AQIA	Air Quality Impact Analysis
AQMIS	Air Quality and Meteorological Information System
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
CalGEM	California Geologic Energy Management Division
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
CCG	Consolidated Consulting Group, LLC
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
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
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	Department of Water Resources
EC	elemental carbon
EDD	Employment Development Department

EIA	Energy Information Administration
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMFAC	Emission Factor Model
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
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
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
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
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
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
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
MDV	medium duty vehicles
MEISC	maximally exposed individual school child
MEIR	maximally exposed individual receptor
MEIW	maximally exposed individual worker
Metro	Los Angeles County Metropolitan Transportation Authority
mg	milligrams
MG	million gallons
mgd	million gallons per day
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
MTCO2e	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
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
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
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
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
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
SoCal Gas	Southern California Gas Company
SORE	small off-road engines
SP	service population
SPR	Site Plan Review
SPRR	Southern Pacific Railroad
SR	State Route
SRA	State responsibility area
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
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
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
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
yr	year
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 Palmdale Industrial Park 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. 2022080663 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 18.05 acre vacant property located along the west side of 8th Street East, immediately south of an inactive Union Pacific Railroad (UPRR) rail spur, approximately 0.14-mile south of East Rancho Vista Boulevard / Avenue P, and approximately 95 feet east of active UPRR mainline tracks, which are located adjacent to Sierra Highway. An unnamed graded channel that flows from west to east occurs along the southern boundary of the site.

The entitlement application filed by the Project Applicant with the City of Palmdale pertaining to the proposed Project is Site Plan Review 22-012 (SPR 22-012). This action and the physical and operational aspects of the Project's construction and operation are more fully described in Section 3.0, *Project Description.* The proposed Project entails the construction and operation of a 380,410 square foot (s.f.) non-refrigerated fulfillment warehouse building that is designed to include 374,410 s.f. of warehouse space and a total of 6,000 s.f. of office uses at the northeast and southeast corners of the building. Access to the site would be accommodated by two proposed driveways along the property's frontage connecting with 8th Street East. The northern and southern driveways would provide full access for trucks and passenger vehicles. Both of the proposed driveways would allow for full turning movements into and out of the site. The building would have 54 docking doors within the fenced and gated loading dock area (also called truck court), positioned on the northern façade of the building. As currently designed, 200 parking stalls for passenger vehicles, electric vehicles (EV), and accessible parking are proposed along the eastern and western sides of the building and 30 bicycle space racks are provided. In addition to truck parking at the loading docks, 68 truck trailer parking stalls are proposed. Parking space striping is subject to change depending on the ultimate needs of the building user.

The City of Palmdale determined that the scope of this EIR should cover 15 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 15 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 & Hazardous Materials
9. Hydrology / Water Quality
10. Noise
11. Public Services
12. Transportation
13. Tribal Cultural Resources
14. Utilities / Service Systems
15. 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 (August 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 18.05 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 18.05-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 1.2 miles southeast of State Route 14 (SR-14).

The census tract containing the Project site (Census Tract 6037910101) 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 88th percentile of communities that are disproportionately burdened by multiple sources of pollution (OEHHA, 2023). The Project site is 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 diversify the mix of developed land uses in the City of Palmdale to support the growing goods movement supply chain;

B. 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;

C. 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;

D. To develop an industrial building in the City of Palmdale that is designed to meet contemporary industry standards and be economically competitive with similar industrial buildings in the local area and region;

E. 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;

F. 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; and

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

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 biological resources, air quality, and utilities and service systems among others listed in Table 1-1 in Section 1.0, *Introduction.*

S.5 PROJECT ALTERNATIVES

S.5.1 NO DEVELOPMENT ALTERNATIVE (THE NO PROJECT 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 18.05-acre site would remain vacant and undeveloped for the foreseeable future. The Project site would be subject to routine maintenance (i.e., discing) 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. Implementation of the NDA would result in no physical environmental impacts beyond those that have historically occurred on the property. Almost all effects of the proposed Project would be avoided or lessened by the selection of the NDA, with exception of long-term erosion and sedimentation impacts, which would be increased under this alternative. However, the NDA would fail to meet all of the Project's objectives.

S.5.2 REDUCED BUILDING SIZE AND TRAILER LOT ALTERNATIVE

The Reduced Building Size and Trailer Lot Alternative considers a scenario where the Project site would be redeveloped with two uses: a non-refrigerated fulfillment warehouse and a trailer parking lot. Under this Alternative, a 200,000 s.f. non-refrigerated fulfillment warehouse (including related site improvements such as paved areas for vehicle movement and parking, landscaping, and public utility connections) would be developed on the western portion of the Project site and a trailer parking lot would be developed on the eastern portion of the Project site. This alternative was selected to evaluate a scenario that would reduce the total building area on the Project site relative to the Project but still allow productive industrial use of the entire Project site. The Reduced Building Size and Trailer Lot Alternative would reduce the Project's less than significant air quality, greenhouse gas, energy, and noise impacts but would create a significant and unavoidable vehicle miles travelled (VMT) impact that does not occur under the proposed Project. This alternative would meet all of the Project's objectives but some to a lesser extent.

S.5.3 Reduced Intensity Alternative

The Reduced Intensity Alternative considers a scenario where a portion of the Project site would be redeveloped with a non-refrigerated general warehouse building with a total square footage of 63,500 s.f. and the remainder of the site would not be developed. This represents an approximately 82 percent reduction in building space compared to the proposed Project. Under this alternative, the graded drainage channel located in the southern portion of the Project site would remain in its existing condition. Access to the site would occur from two driveways connecting with 8th Street East and a proportional reduction in the number of passenger vehicle parking spaces to service the building would occur on the site. The balance of the site would be undeveloped. This alternative was selected to evaluate a scenario that would reduce the total building size in order to allow the development to meet the small project VMT screening criteria. The Reduced Intensity Alternative would reduce or avoid all of the Project's less than significant impacts. The Reduced Intensity Alternative would meet all but one of the Project's objectives although many of the objectives would be meet to a lesser extent than the proposed Project.

S.5.4 Trailer Lot Alternative

The Trailer Lot Alternative considers a scenario where the Project site is developed as a local-serving truck and trailer parking lot, accommodating approximately 400 truck trailer parking spaces. The entire Project site would be developed for parking and landscaping would occur around the perimeter of the site for screening purposes. This alternative was selected to evaluate a scenario that allows productive industrial use of the entire Project site while not developing a structure other than security booths at the entrance and exit gates. The Trailer Lot Alternative would reduce the Project's less than significant air quality, greenhouse gas, energy, noise, and transportation impacts. This alternative would, however, only meet three of the Project's seven objectives with two of those met at a lesser extent than the proposed Project.

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 15 subject areas identified in an Initial Study prepared pursuant to CEQA Guidelines Section 15063 and CEQA Statute Section 21002(e). The Initial Study, 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; land use and planning; mineral resources; population and housing; and recreation. This EIR addresses these five topics in EIR Subsection 5.0, *Other CEQA Considerations*.

S.7.2 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 not result in any significant and unavoidable environmental impacts.

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 does not contain any visually prominent scenic features. No unique views to scenic vistas are visible from the property. The Project would not substantially change a scenic view or substantially block or obscure a scenic vista; therefore, impacts to scenic vistas 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 b: The Project site does not contain any scenic resources, including trees, rock outcroppings, or historic buildings Because the distance from the Project site to any State scenic highway is approximately 22.6 miles, implementation of the Project would not substantially damage scenic resources within a State scenic highway. Therefore, no impact would occur as a result of the Project and no mitigation is required.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold c: The Project site is located within an urbanized area and would not conflict with applicable zoning and other regulations governing scenic quality either during short-term construction or long-term operation of the Project. 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 d: Project-related development would not create substantial light or glare. Compliance with PMC Chapter 17.86,	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
Outdoor Lighting requirements 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.					
4.2 Air Quality					
Summary of Impacts					
Threshold a: The Project would conform to local land use plans, comply with all applicable all Antelope Valley Air Quality Control Board (AVAQMD) Rules and Regulations, and would not exceed applicable regional air pollutant significance thresholds. As such, the Project is consistent with the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Antelope Valley which are the applicable air quality plans pertaining to the Project site. The Project would not conflict with applicable air quality plans and 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 b: Construction- and operational-related regional emissions from the Project would not exceed any of the AVAQMD regional thresholds for criteria pollutants. As such, Project regional construction- and operational-related emissions 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. Impacts would be less than significant, and no mitigation is required.	No mitigation is required. **AIR DF-1** Prior to the issuance of grading and building permits, the City shall review the construction documents for the Project to ensure that the construction contractors are obligated to implement the following measures to reduce construction air pollutant emissions to the extent feasible. These items shall also be listed in construction bid documents and construction contracts. The construction contractors shall allow City access to the construction site to inspect for adherence to these measures.	N/A Project Applicant; Construction Contractor(s)	N/A City of Palmdale or its designee	N/A Prior to issuance of grading and building permits; During the construction 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
	a. Ensure that the cleanest possible construction practices and equipment are used. This includes eliminating the idling of diesel-powered equipment and providing the necessary infrastructure (e.g., electrical hookups) to support zero and near-zero emission equipment and tools. b. Implement, and plan accordingly for, the necessary infrastructure to support the zero and near-zero emission technology, vehicles, and equipment that will be operating onsite during construction. Necessary infrastructure may include the physical (e.g. needed footprint), energy, and fueling infrastructure for construction equipment, onsite vehicles and equipment, and medium-heavy and heavy-heavy duty trucks. c. All off-road diesel-powered equipment used during construction shall be equipped with Tier 4 Interim or cleaner engines. If the operator lacks Tier 4 Interim or cleaner equipment, and it is not available for lease or short-term rental within 50 miles of the project site, Tier 3 or cleaner off-road construction equipment may be utilized subject to City approval. d. Heavy-duty trucks entering the construction site during grading and building construction phases shall be model year 2014 or later. All heavy-duty trucks shall also meet CARB's lowest optional low oxides of nitrogen (NOx) standard starting in the year 2022.				

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	e. All construction equipment and fleets shall be in compliance with all current air quality regulations.				
	AIR DF-2 Prior to issuance of building permits, the following features shall be demonstrated on the Project's building and landscape plans to the extent feasible. 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. d. Install rainwater collection systems where feasible.	Project Applicant	City of Palmdale or its designee	Prior to issuance of building permits	
	AIR DF-3 Prior to issuance of building permits, the following features shall be demonstrated on the Project's building and landscape plans to the extent feasible. Installation shall be verified by the City prior to issuance of a certificate of occupancy. a. Install rooftop solar panels to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid. b. Install Energy Star-rated heating, cooling, lighting, and appliances. c. Structures shall be equipped with outdoor electric outlets in the front and rear to facilitate use of electrical lawn and garden equipment.	Project Applicant	City of Palmdale or its designee	Prior to issuance of building permits; prior to the issuance of a certificate of occupancy.	
	AIR DF-4 Prior to issuance of building permits, the following features shall be demonstrated on the	Project Applicant	City of Palmdale or its designee	Prior to issuance of building permits; prior to	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	Project's building plans to the extent feasible over minimum California Code of Regulations Title 24 requirements. Installation shall be verified by the City prior to issuance of a certificate of occupancy. a. For use by employees and visitors conducting business at the building, install automobile electric vehicle (EV) charging stations at the minimum number required by the California Code of Regulations Title 24, or to serve at least 25 percent of the employee parking spaces, whichever is greater. All charging stations shall be equipped with Level 2 or faster chargers. Signs shall be posted indicating that the charging stations are for exclusive use by the building's employees and by visitors conducting business at the building. b. Install appropriate electrical infrastructure sufficiently sized to accommodate the potential installation of additional auto and truck EV charging stations in the future. c. Install raceways for conduit to tractor trailer parking areas in logical, gated 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. The charging station location(s) are to be located inside the gated and secured truck courts.			the issuance of a certificate of occupancy.	

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	AIR DF-5 Cold storage warehouse operations (chilled, refrigerated, or freezer warehouse space) shall be prohibited. The City shall not approve any cold storage warehouse spaces as part of implementing building plans.	Project Applicant	City of Palmdale or its designee	Prior to issuance of building permits	
	AIR DF-6 Prior to issuance of a certificate of occupancy, legible, durable, weather-proof signs shall be installed 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 the following: a. Instructions for truck drivers to shut off engines when not in use. b. Instructions for drivers of diesel trucks to restrict idling to no more than five minutes once the vehicle is stopped, the transmission is set to "neutral" or "park" and the parking brake is engaged. c. Telephone numbers of the building facilities manager and CARB to report violations.	Building Tenant(s)	City of Palmdale or its designee	Prior to issuance of certificate of occupancy	
	AIR DF-7 Prior to issuance of a certificate of occupancy, the following language shall be included within tenant lease agreements in order to reduce operational air pollutant emissions to the extent feasible: a. Information about energy efficiency, energy-efficient lighting and lighting control systems, energy management, and existing energy incentive programs. b. Information about funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment.	Project Applicant; 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
	c. Requirements 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. d. Requirements to exclusively use zero-emission light and medium-duty delivery trucks and vans, when economically feasible. e. Requirements to operate in compliance with, and to monitor compliance with, all current and applicable air quality regulations for on-road trucks including the California Air Resources Board's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation. f. Requirements and identification of the responsible party to maintain, replace, and upgrade rooftop solar panels per the manufacturer's recommendations for the life of the lease. Should the capacity for solar connections increase, additional solar panels shall be required to be added to the building. g. Requirements and identification of the responsible party to maintain, replace, and repair the legible, durable, weather-proof signs that were installed at initial building occupancy placed at truck access gates, loading docks, and truck parking areas				

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	that identify applicable CARB anti-idling regulations. h. Requirements that 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. The tenant shall be required to maintain records of haul truck trips to and from the site, and make such records available for review by the City of Palmdale upon request. i. Requirements for the building owner to provide a Green Cleaning Products and Paint Education Program available to the building tenant, to keep at the building's office, break room, leasing space, or on an accessible website.				
	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.	Project Applicant; Building Tenant(s)	City of Palmdale or its designee	During construction and operation of the Project	
	AIR RR-2 The Project shall comply with the provisions of AVAQMD Rule 402, Nuisance, which requires that a person shall not discharge air	Project Applicant; Building Tenant(s)	City of Palmdale or its designee	During construction and operation of the Project	

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	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.	Project Applicant; Project Contractor(s)	City of Palmdale or its designee	Prior to issuance of a grading permit or any permit that authorizes ground disturbance; During construction of the Project	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	• 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 construction and 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 construction of the Project	
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 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

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
4.3 Biological Resources					
Summary of Impacts					
Threshold a: The Project has the potential to directly and indirectly impact nesting migratory birds protected by the MBTA and the California Department of Fish and Wildlife (CDFW) if vegetation is removed during the nesting season (February 1 through September 15). The Project has the potential to indirectly impact desert kit fox that may be located offsite near the Project site boundary. With implementation of Mitigation Measures BIO MM-1 and BIO MM-2, the direct and indirect impacts of the Project to sensitive wildlife species would be reduced to less than significant.	**BIO MM-1**: Nesting Birds/Raptors. To avoid impacts on active nests for common and special status birds and raptors, the Project Contractor shall schedule vegetation clearing and blasting 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 qualified 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 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 qualified biologist determines that nesting activity has ended. Construction may proceed within the buffer once the qualified biologist determines that nesting activity has ceased (i.e., fledglings have left	Project Applicant; Construction Contractors; 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	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
	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 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 qualified biologist shall then prepare a formal Letter describing methods used, results of the survey, recommended buffers, and/or justification for buffer reductions. The Letter 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 shall include a map showing the designated protective buffer.				
	BIO MM-2: Desert Kit Fox Burrows/American Badger. 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 prior to the initiation of the breeding season (i.e., February 1) 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	Professional qualified biologist retained by 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
	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 Environmentally Sensitive Area (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 will 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 shall be prepared and submitted to CDFW documenting the results of the survey within				

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	two weeks of completing the survey effort. If an active burrow/den is observed, the Letter shall include a description of the protective buffer that has been designated and a summary of any additional correspondence with the CDFW.				
	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. 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.	Project Applicant; Construction Contractor(s)	City of Palmdale or its designee	During construction of the Project	
	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	Immediately during construction of the Project should any hazardous waste spills occur on the site	During Project construction activities if accidental hazardous waste spill occurs	
	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	Project Applicant; 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
	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.	Project 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 Applicant or successor in interest shall ensure that a copy of the construction monitoring notebook is	Qualified professional biologist retained by the Project Applicant; 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
	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 construction and 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 construction and operation of the Project	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	BIO DF-10 Herbicides. 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.	Project Applicant or Successor in interest; qualified professional biologist; Building Tenant(s)	City of Palmdale or its designee	During Project construction activities and building operation	
Threshold b: The Project would impact 0.35-acre of Regional Water Quality Control Board (RWQCB) waters of the State and 0.72-acre of CDFW jurisdictional resources, comprising 1,050 linear feet of jurisdictional resource. With implementation of Mitigation Measure BIO MM-3, the direct and cumulatively considerable impact of the Project to jurisdictional resources would be reduced to less than significant.	**BIO MM-3**: Jurisdictional Permits. Prior to any impacts on waters under the regulatory authority of the RWQCB or the CDFW, the Project Applicant shall prepare and process a RWQCB Report of Waste Discharge and a CDFW Section 1602 Notification of Lake or Streambed Alteration, as applicable. As part of the permitting process, the Project Applicant shall schedule a pre-application meeting with RWQCB and CDFW staff to discuss site conditions, the Project, biological and jurisdictional resources, impacts to jurisdictional resources resulting from implementation of the Project, proposed avoidance and minimization measures, the proposed compensatory mitigation program to offset Project impacts, and the regulatory permit process. The Project Applicant shall implement and comply with all measures required by the RWQCB and CDFW permits. Compensatory mitigation may include 1) restoration (i.e., re-establishment or rehabilitation), 2) establishment (i.e., creation), 3) enhancement, 4) and/or preservation of jurisdictional resources. Compensatory mitigation may occur through 1) permittee-responsible mitigation, 2) payment to an in-lieu fee program, or 3) purchase of	Project Applicant	CDFW, Regional Water Quality Control Board (RWQCB), and City of Palmdale or its designee	Prior to any impacts on waters under the regulatory authority of the RWQCB or the CDFW; issuance of a grading permit or any permit that authorizes ground disturbance; During the permitting process	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
	compensatory mitigation credits from an approved mitigation bank. Mitigation ratios (i.e., the amount of mitigation acreage compared to the amount of impacted habitat) shall be determined by the regulatory agencies, but shall be no less than a ratio of 1:1, replacing impacted jurisdictional resources with jurisdictional resources of equivalent or higher quality habitat value.				
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 and 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. 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 reduced to less than significant.	**BIO MM-1** shall apply.				Less than Significant with Mitigation Incorporated
Threshold e: The Project complies with the applicable biological goals and policies of the City of Palmdale General Plan. Therefore, implementation of the Project	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
would not conflict with any local policies protecting biological resources. In addition, no western Joshua trees or California juniper trees are present on the site under existing conditions; therefore, implementation of the Project would not conflict with PMC Chapter 14.04, Native Desert Vegetation Preservation.					
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: No known historical resources are present on the Project site and the site has a low 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 and CUL MM-2 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	**CUL MM-1**: Prior to construction and as needed throughout the construction period involving ground-disturbing construction activities, a construction worker cultural resource awareness training program shall be provided to all new construction workers within one week of employment at the project site. The training shall be prepared and conducted by a qualified cultural resources specialist retained by the construction contractor or by the Project Applicant. 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**: If suspected cultural resources are encountered during ground disturbance activities, all work within 100 feet of the find shall immediately cease and the area cordoned off until a qualified cultural resource specialist that meets the Secretary of the Interior's Professional Qualification Standards can evaluate the find and make recommendations.	Professional cultural resources specialist retained by the Project Applicant or the Construction Contractor(s) Construction Contractor(s); qualified cultural resource specialist that meets the Secretary of Interior's Professional	City of Palmdale or its designee City of Palmdale or its designee	Prior to construction and as needed throughout the construction period involving ground-disturbing activities If suspected cultural resources are encountered	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
required mitigation, the Project's potential impacts to important historical and archaeological resources would be reduced to less than significant.	This requirement shall be noted on all grading plans and construction documents that authorize ground-disturbing construction activities. If the discovery proves to be California Register of Historical Resources (CRHR) eligible, additional work such as data recovery excavation, Native American consultation, and archaeological monitoring may be warranted to mitigate any adverse effects, as determined by the qualified cultural resource specialist. If cultural resources are discovered that may have relevance to Native Americans, the cultural resources specialist or Project Applicant must provide written notice to the City, Native American Heritage Commission, and any other appropriate individuals, agencies, and/or groups as determined by the cultural resource specialist in consultation with the City to receive input regarding treatment and disposition of the resource, which may include avoidance, testing, and/or excavation to prevent destruction of the resource and/or to allow documentation of the resource for research potential. All measures recommended by the cultural resource specialist and the NAHC and concurred with by the City shall be implemented. Work within the 100-foot cordoned off area shall be permitted to resume when the cultural resource specialist confirms that resources have be removed and/or mitigated to less than significant levels. All reports, correspondence, and determinations regarding the discovery shall be submitted to the California Historical Resources Information System's South-Central Coastal Information Center at California State University Fullerton.	Qualification Standards; NAHC			
Threshold b: No known archaeological resources are present on the property and the Project site has a low sensitivity for buried prehistoric archaeological resources.	**CUL MM-1** and **CUL 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
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. Implementation of Mitigation Measures CUL MM-1 and CUL MM-2 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.	**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).	Construction Contractor(s); Los Angeles County Coroner; Native American Historic Commission (NAHC)	County Coroner	If human remains are discovered during ground-disturbing construction activities	Less than Significant Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	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.				
4.5 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 result in the need for additional energy facilities or energy delivery systems.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
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.	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 and the risk of fault rupture to occur on the site is considered low. Although 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
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 static groundwater table within the upper approximately 25 feet, and the mapping performed by the 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: The Project would not result in substantial soil erosion or loss of topsoil. The soils on the Project site are not highly susceptible to erosion. Additionally, the Project Applicant would be required to obtain a NPDES permit for construction activities and adhere to a Stormwater Pollution Prevention Plan (SWPPP) as well as AVAQMD Rule 403 and Section 8.04.265 Chapter 70 of the Palmdale Municipal Code (PMC.) With mandatory	No mitigation is required. **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 given in Section 6.0 of the March 1, 2022 "Geotechnical Investigation, Proposed Warehouse, 8th Street, South of Rancho Vista Boulevard Palmdale, California" prepared by Southern California Geotechnical and included as Technical Appendix F to the Project's EIR, are incorporated	N/A Project Applicant	N/A City of Palmdale Building and Safety Division	N/A Prior to issuance of grading or 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
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, as 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.	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	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 National Pollution Discharge Elimination System (NPDES) permit, and the Project's Stormwater Pollution Prevention Plan (SWPPP)/Stormwater Management Plan (SWMP). Compliance with the NPDES permit and the	Project Applicant; 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
	SWPPP/SWMP 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.				
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, subsidence, and collapse is considered low, resulting in less than significant impacts. In addition, based on the lack of a static groundwater table within the upper approximately 25 feet, 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.	No mitigation is required.	N/A	N/A	N/A	Less than Significant Impact
Threshold d: Laboratory testing performed on a representative sample of the near surface soils indicates that these materials possess a very low expansion potential (EI=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	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
substantial direct or indirect risks to life or property, and no impact would occur.					
Threshold e: Sewer 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 Los Angeles County Sanitation District (LACSD) treatment plant.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold f: The surficial sediments (Qa) underlying the Project site are considered to have a "High Sensitivity" for containing paleontological resources. As such, ground-disturbing activities at depths below already disturbed portions of the Project 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. 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	**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	Project Applicant;. Qualified Paleontologist approved by the City of Palmdale; Construction Contractor(s)	City of Palmdale or its designee	Prior to the issuance of a 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
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.	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:				

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

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	○ 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.				
4.7 Greenhouse Gas Emissions					
Summary of Impacts					
Threshold a: The Project would result in approximately 1,840.6 $MTCO_2e$ per year of GHG emissions, which is below the SCAQMD screening threshold of 3,000 $MTCO_2e$/per year. Accordingly, the Project would not generate GHGs, either directly or indirectly, that may have a significant impact on the environment, and impacts would therefore be less than significant.	No mitigation is required. **AIR DF-1** through **AIR DF-7** and **AIR RR-1** through **AIR RR-5** shall apply. **GHG DF-1** 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-2** 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.	N/A Project Applicant and Construction Contractors Building Tenant(s)	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 During operation of the building	Less than Significant Impact

Threshold	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
	GHG RR-1 The Project is required to comply with the City of Palmdale, Water Efficient Landscape Ordinance, contained as PMC Chapter 14.05. Efficient water use lowers GHG emissions by reducing the consumption of energy resource required to treat and deliver water.	Project Applicant; Construction Contractor(s); Building Tenant(s)	City of Palmdale or its designee	During Project construction activities and during building operation	
	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	Project Applicant; Building Tenant(s)	City of Palmdale or its designee; AVAQMD	During construction and operation of the Project	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	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 design features and regulatory requirements 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					
Threshold a: 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.	N/A	N/A	N/A	Less than Significant Impact
	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).	Construction Contractor(s)	City of Palmdale or its designee	During construction of the Project	
	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.	Construction Contractor(s); Building Tenant(s)	City of Palmdale or its designee	During construction and operation of the Project	
	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	Building Tenant(s)	City of Palmdale or its designee	During operation of the building	

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	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.	Building Tenant(s)	Los Angeles County Fire Department	Ff 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 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.	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 c: The use of and transport of hazardous substances or materials to and from the Project site during construction and long-term operational activities would occur within 0.25 mile of a PSD Head Start facility, but would be required to comply with applicable federal, State, and local regulations that would preclude substantial public safety hazards. With mandatory regulatory compliance, implementation of the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. 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 d: 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. Therefore, no impact would occur and no mitigation is required.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold e: The Project site is not located within any of the runway protection zones or inner safety zones for the inactive Palmdale Regional Airport. Furthermore, the proposed building would have a maximum height of 45 feet, which would not interfere with operations at the inactive Palmdale Regional Airport and would not result in any unusual safety hazards for future occupants of the Project site. Accordingly, 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 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 Operations 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: The Project site is not located in close proximity to wildlands or areas with high fire hazards. Thus, the Project would not expose people or structures to a significant wildfire risk.	No mitigation is required.	N/A	N/A	N/A	No Impact
4.9 Hydrology and Water Quality					
Threshold a: As required by the Lahontan RWQCB Basin Plan and NPDES permit, an approved 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 developed portion of the Project site, and the proposed hydrodynamic separators and infiltration chambers 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	No mitigation is required. **HYDRO RR-1**: As required by the provisions of the NPDES permit, the Project's construction contractors will be required to implement a 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.,	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	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
water quality under long-term operational conditions. Impacts would be less than significant.	Best Management Practices) to reduce or eliminate discharge to surface water from storm water and non-stormwater discharges during construction activities.				
Threshold b: The Project would be served with potable water by Palmdale Water District (PWD), and the Project would not involve direct groundwater extraction via existing or proposed groundwater wells. PWD's Urban Water Management Plan (UWMP) accounts for development of the Project site as proposed and demonstrates PWD's ability to provide water service within its service area during normal, single-dry, and multiple-dry water years over the next 20 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 developed portions of 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.	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 c: The Project's construction contractors would be required to comply with the applicable NPDES permit and prepare and implement 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 occur as result of implementation of the Project.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold e: The Antelope Valley Groundwater Basin is exempt from the requirements of the Sustainable Groundwater Management Act (SGMA), Palmdale Water District (PWD) has not adopted a groundwater management plan, and no regional groundwater management plan currently exists for the Antelope Valley	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
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.					
4.10 Noise					
Threshold a: Noise levels generated by short-term construction of the Project would be less than significant at the nearest sensitive receptor. On-site operational noise levels would be less than significant at the nearest sensitive receptor. In addition, due to the low traffic volumes generated by the Project, 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.	N/A	N/A	N/A	Less than Significant Impact
	NOI RR-1: Construction activities are required to comply with PMC Section 8.28.030, which regulates construction-related noise.	Project Applicant; Construction Contractor(s)	City of Palmdale or its designee	During Project construction activities	
	NOI RR-2: OSHA requires employers to implement a hearing conservation program when noise exposure is at or above 85 decibels averaged over 8 working hours, or an eight-hour time-weighted average.	Project Applicant; Construction Contractor(s)	City of Palmdale or its designee; OSHA	During Project construction activities	
Threshold b: The vibration impacts of the Project are considered less than significant during typical construction activities at 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
Project site. Vibration levels reported at the sensitive 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: Because the Project site is located outside of the Airport Influence Area (AIA) and outside of the 65 A-weighted decibels (dBA) Community Noise Equivalent Levels (CNEL) contour boundaries, 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. Therefore, no impact would occur as a result of implementation of the Project. No mitigation is required.	No mitigation is required.	N/A	N/A	N/A	No Impact
4.11 Public Services					

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 building operation	
	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	
Threshold a. ii.: The Project would place demand on sheriff's services, but would not result in the need for new or physically	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
altered sheriff station facilities. No impact would occur.					
Threshold a.iii.: The Project would not directly generate a resident 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.	No mitigation is required. **PS RR-3** Prior to issuance of occupancy permits, the Project Applicant shall contribute appropriate school impact fees to the Palmdale School District (PSD) and Antelope Valley Unified School District (AVUHSD) at the rates established by the PSD and AVUHSD, as required by Public Education Code § 17072.10-18.	N/A Project Applicant	N/A City of Palmdale or its designee	N/A Prior to issuance of occupancy permits	No Impact
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 resident 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
4.12 Transportation					

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold a: The Project is consistent with 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.	No mitigation is required. **TRN RR-1** All frontage improvements to 8th Street East shall comply with applicable provisions of the PMC.	N/A Project Applicant	N/A City of Palmdale or its designee	N/A Prior to approval of roadway improvement plans	Less than Significant Impact
Threshold b: Project generated vehicle miles travelled (VMT) per employee was determined to be 20.45 percent below the County's currently adopted impact threshold of 16.8 percent below Baseline VMT for North Los Angeles County. Project generated VMT per employee was found to be 22.79 percent below the County's anticipated to be adopted impact threshold of 16.8 percent below Baseline VMT for Los Angeles County. When trucks are considered, the Project's VMT per service population (SP) would be below the Regional VMT per SP threshold by 5.94 percent. Therefore, impacts would be less than significant.	**TRN DF-2** 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 occupancy permit. The TDM plan shall apply to 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	Project Applicant;	City of Palmdale or its designee	Prior to issuance of the first occupancy permit	Less than Significant Impact
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	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
to the short distance between the Project site and the designated truck route, the Project would not result in increased hazards to transportation as a result of incompatible uses, and impacts would be less than significant.					
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
4.13 Tribal Cultural Resources					
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 and CUL MM-2 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** and **CUL MM-2** shall apply.				Less than Significant with Mitigation Incorporated
4.14 Utilities and Service Systems					
Threshold a: The Project's wet and dry utility infrastructure facilities have been	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
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.	**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.	Construction Contractor(s)	City of Palmdale or its designee	During Project construction activities	
	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.	Project Applicant	City of Palmdale or its designee	Prior to 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 construction and operation of the building	
	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, of the City of PMC.	Project Applicant; Construction Contactor(s); Building Users	City of Palmdale or its designee	During construction and operation of the building	
	UTIL RR-5 The Project applicant, construction contractors, and operators, shall comply with all applicable provisions of PMC Chapter 14.05, Water Efficient Landscape, of the City of PMC.	Project Applicant; Construction Contactor(s); Building Operators	City of Palmdale or its designee	During Project construction activities and during building operation	
Threshold b: Existing water supplies in combination with identified future and potential water supply opportunities and demand reduction responses will enable	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
Palmdale Water District (PWD) to meet all future water demands under all hydrologic conditions through 2045. Accordingly, because the Project's proposed land uses are accounted for by the PWD 2020 Urban Water Management Plan (UWMP), and because the UWMP demonstrates that the PWD would have sufficient supplies to meet projected demands, it is concluded that the PWD 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: The Project's wastewater generation would represent approximately 0.25 percent of the daily design capacity at the Palmdale Water Reclamation Plan (WRP). Because the Project's wastewater treatment capacity need is de minimis compared to the total treatment capacity of the Palmdale WRP, impacts 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 de minimis proportions 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	Mitigation Measures (MM) Design Features (DF) and Regulatory Requirements (RR)	Responsible Party	Monitoring Party	Implementation Stage	Level of Significance
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
4.15 Wildfire					
Threshold a: The Project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The Project site does not contain any emergency facilities, nor does it serve as an emergency evacuation route. Additionally, there are no emergency response plans or emergency evacuation plans in effect in the surrounding area. As such, implementation of the proposed Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or an emergency evacuation plan. No impact would occur.	No mitigation is required. **WF DF-1**: The proposed warehouse 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.	N/A Project Applicant; Construction Contractor(s) Project Applicant	N/A City of Palmdale or its designee City of Palmdale or its designee	N/A Prior to issuance of building permits Prior to issuance of building permits	No Impact
Threshold b: The Project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. Due to the lack of wildfire susceptibility in the areas surrounding the Project site, the Project has no potential to exacerbate wildfire risks in a manner that could expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. No impact would occur.	**WF DF-1** and **WF RR-1** shall apply.				No Impact
Threshold c: The Project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity	**WF DF-1** and **WF RR-1** shall apply.				No Impact

THRESHOLD	MITIGATION MEASURES (MM) DESIGN FEATURES (DF) AND REGULATORY REQUIREMENTS (RR)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
zones. 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: The Project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The Project site is not located in a portion of the City that is subject to wildland fire hazards; the nearest such area occurring approximately 2.8 miles southwest of the Project site. As such, the Project would not contribute to downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Accordingly, no impact would occur.	**WF DF-1** and **WF RR-1** shall apply.				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 Palmdale Industrial Park project (Site Plan Review Number 22-012 (SPR 22-012)). For purposes of this EIR, the term "Project" refers to all actions associated with implementing the Palmdale Industrial Park project (SPR 22-012) including planning, construction, and ongoing operations. The term "Project Applicant" used herein refers to Sierra Vista 18 PD, LLC., which is the entity that submitted proposed SPR 22-012 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 is approximately 18.05 acres located in the City of Palmdale, Los Angeles County, California. The Project site is located along the west side of 8th Street East, immediately south of an inactive Union Pacific Railroad (UPRR) rail spur, approximately 0.14 mile south of East Rancho Vista Boulevard / Avenue P, and approximately 95 feet east of active UPRR mainline tracks, which are located adjacent to Sierra Highway. An unnamed graded channel that flows from west to east occurs along the southern boundary of the site.

The Project entails an application for a Site Plan Review (SPR 22-012) to allow for the construction and operation of a 380,410 square foot (s.f.) non-refrigerated fulfillment warehouse building on the approximately 18.05-acre vacant property. The building would provide 54 truck docking doors on the north side of the building. Other site features include landscaping, lighting, and paved areas for vehicle movement and parking. Access to the property is proposed via two proposed driveways connecting with 8th Street East. As part of the Project, an unnamed graded channel along the southern boundary of the site would be redesigned as an earthen channel. A drainage easement is proposed in the southeast corner of the Project site. Refer to Section 3.0, *Project Description*, for a detailed description of proposed SPR 22-012 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 August 29, 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 August 29, 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 15, 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)	9/27/2022	• Provides information, survey requirements 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, which may include an Incidental Take Permit (ITP) or a Consistency Determination in certain circumstances, among other options.	*4.3, Biological Resources*
		• Identifies a stream south of the Project site that the Project may impact.	*4.3, Biological Resources*
		• Recommends that a stream delineation be provided and asks that the EIR include a map showing the Project site plan, stream, and the stream during a 100-year storm event and disclose the total impacts to the stream in linear feet and/or acreage.	*4.3, Biological Resources*
		• Recommends that the Project avoid impacts on streams and natural communities and states that if avoidance is not feasible, the EIR should include measures to fully compensate for impacts	*4.3, Biological Resources*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		on streams and loss of associated natural communities.	
		• Recommends that the City require the Project Applicant submit a Lake and Streambed Alteration (LSA) Notification to CDFW.	*4.3, Biological Resources*
		• 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 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*
		• 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 on resources that are rare or unique to the region.	*4.3, Biological Resources*
		• Recommends a thorough, recent, floristic-based assessment of special status plants and natural communities following CDFW's protocols.	*4.3, Biological Resources*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		• Requests analysis of direct and indirect impacts on biological resources including, but not limited to, impacts to nearby public lands, open spaces, natural habitats, riparian ecosystems, 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*
		• Recommends the inclusion of information in the EIR's Project Description and Alternatives sections, including, but not limited to, a complete discussion of the purpose, need, and description of the proposed Project and a reasonable range of potentially feasible alternatives to the Project to avoid or otherwise minimize direct and indirect impacts on sensitive biological resources and wildlife movement areas.	*3.0, Project Description* *6.0, Alternatives*
		• Related to potential impacts to aquatic and riparian resources, recommends selecting Project designs and alternatives that would fully avoid impacts to such resources.	*4.3, Biological Resources* *6.0, Alternatives*
		• 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 C5*
		• Recommends that the EIR include compensatory mitigation measures for the Project's significant direct and indirect impacts to sensitive, rare, and special status plants, animals, and habitats.	*4.3, Biological Resources*
		• Provides criteria for the long-term management of mitigation lands to be preserved in perpetuity.	*4.3, Biological Resources*
		• Provides criteria for wildlife-friendly fencing and requests that fencing be considered when making impact determinations for biological resource impacts.	*4.3, Biological Resources*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		• 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 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*
		• Encourages avoidance of wetland resources as a primary mitigation measure and discourages the development or type conversion of wetlands to uplands. Recommends mitigation measures to compensate for unavoidable impacts.	*4.3, Biological Resources*
		• Recommends avoidance of water practices and structures that use excessive amounts of water, and minimizes impacts that negatively affect water quality, to the extent feasible.	*4.3, Biological Resources*
California Public Utilities Commission (CPUC)	9/28/2022	• States that the California Public Utilities Commission (CPUC) has jurisdiction over rail crossings and notes that the Project site is located near the 8th Street East crossing (CPUC No. 001B-412.53-C, DOT No. 750605F) of the Union Pacific Mojave Subdivision, which is currently out of service.	*2.0, Environmental Setting*
		• Requests a safety study of the Project's driveway planned near the railroad track. CPUC notes concern about southbound vehicles potentially queuing onto the track while entering the Project, and any turn movements out of the north driveway near the track. CPUC also requests to be notified if rail service resumes at the 8th Street East crossing. CPUC indicates that improvements may be needed to the crossing to address concerns of traffic conflicts due to the new development and any train movements.	*4.12, Transportation*
		• Requests study of potential impacts on the nearby Avenue P / East Rancho Vista Boulevard crossing (CPUC No. 001B-412.20, 101VY-69.95; DOT 750643P).	*4.12, Transportation*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		• Notes that the Project site abuts UPRR right-of-way (ROW) on the northern and western edge of the property, with the track on the western edge being an active mainline that sees heavy freight train traffic, as well as passenger train service from Metrolink trains. The UPRR ROW on the northern edge is currently an inactive spur line. CPUC requests that the Project provide a physical barrier (i.e. fence or block wall) to prevent access onto the UPRR ROW from the proposed development.	*2.0, Environmental Setting* *3.0, Project Description* *4.12, Transportation*
Regional			
Antelope Valley Air Quality Management District (AVAQMD)	9/12/2022	• 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 applicable permit applications and fees be submitted for any equipment or process that may not be exempt under District Rule 219 and have the potential to emit or control air contaminants.	*4.2, Air Quality*
		• Requires that all construction equipment utilized on the project site comply with Air Resources Board In-Use Off-Road Diesel Vehicle Registration.	*4.2, Air Quality*
Local			
Los Angeles County	9/12/2022	• Recommends the Project developer contact the District's Industrial Waste Section to	*4.14, Utilities and Service Systems*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
Sanitation District		determine if the Project requires a permit for Industrial Wastewater Discharge.	
		• Notes that flow originating from the Project would be transported to the District's trunk sewer by local sewer(s) not maintained by the District.	*4.14, Utilities and Service Systems*
		• States that if no local sewer lines currently exist, it is the developer's responsibility to convey any wastewater generated by the Project to the nearest local sewer and/or Districts' trunk sewer.	*4.14, Utilities and Service Systems*
		• States that the nearest District trunk sewer is the Trunk "B" Sewer, located in the intersection of East Avenue P / East Rancho Vista Boulevard and 15th Street East. The Districts' 24–inch diameter trunk sewer has a capacity of 6.9 million gallons per day (mgd) and conveyed a peak flow of 0.3 mgd when last measured in 2017.	*4.14, Utilities and Service Systems*
		• States that wastewater generated by the Project will be treated at the Palmdale Water Reclamation Plant, which has a capacity of 12 mgd and currently processes an average recycled flow of 8.3 mgd.	*4.14, Utilities and Services Systems*
		• States that expected average wastewater flow from the Project is 76,960 gallons per day.	*4.14, 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.	*4.14, 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.	*4.14, Utilities and Service Systems*
Interested Parties			
Lozeau Drury LLP	8/20/22	• On behalf of Supporters Alliance for Environmental Responsibility, requests to be included on the notification list for all	*1.0, Introduction*

Commenter	Date	Comments	Location in EIR Where Comment(s) Addressed
		public notices and hearings pertaining to the Project.	
Coalition for Responsible Equitable Economic Development ("CREED LA")	9/30/2022	• 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*
		• 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 goods movement industry is a major contributor of air pollutants across Southern California and that every effort should be made to ensure that air pollution and public health impacts are studied, quantified, and fully mitigated.	*4.2, Air Quality*
		• Requests that the City make every effort to mitigate all impacts to the fullest extent feasible, including, but not limited to, the adoption of mitigation measures from other jurisdictions.	*4.0, Environmental Analysis* *4.2, Air Quality*
Mitchell. M. Tsai, Attorney at Law; Malou Reyes, Paralegal		• 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; Land Use and Planning; 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
- 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 93350.

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: Brenda Magaña, Planning Manager
38250 Sierra Highway
Palmdale, CA 93550
Email: bmagana@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).

A Project-related decision-making process will be subject to a noticed public hearing held before the City's Planning Commission. The Planning Commission will decide whether to certify the Final EIR and whether proposed SPR 22-012 should be approved, approved with changes, or not approved.

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 SPR 22-012 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

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 serving as the Lead Agency for this EIR; a brief description of the Project; the purpose of this EIR; proposed SPR 22-012 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**, describes the environmental setting, 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 August 29, 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 and contains a level of specificity commensurate with the level of detail proposed by the Project, including the summary requirements pursuant to CEQA Guidelines Section 15123. 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.

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

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 Technical Report
C2. Focused Special Status Plant/Desert Native Plant Survey
C3. Results of a Focused Survey for Blainville's Horned Lizard
C4. Results of a Focused Survey for Burrowing Owl
C5. Jurisdictional Delineation Report
D. Cultural Resource Investigation
E. Energy Analysis
F. Geotechnical Investigation
G. Paleontological Resource Technical Memorandum
H. Greenhouse Gas Emissions
I. Phase I Environmental Site Assessment
J1. Preliminary Hydrology Report
J2. Preliminary LID Report
K. Noise and Vibration Analysis
L1. Traffic Analysis Scoping Agreement
L2. Vehicle Miles Traveled Analysis
L3. Supplemental Vehicle Miles Traveled Analysis
L4. Railroad Safety Evaluation
M1. Sanitary Sewer Analysis
M2. Water Supply Assessment

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 a CDFW Lake and Streambed Alteration (LSA) Agreement.

- **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.

- **Palmdale Water District (PWD)** 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 user of the Project's building 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 treatment, and transportation safety at rail crossings. 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 Project would result in no significant and unavoidable environmental impacts. Therefore, there are no unresolved issues that need to be considered by the decision-making body that would further reduce significant unavoidable impacts.

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 (August 29, 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 encompasses approximately 18.05 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 18.05-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 1.2 miles southeast of State Route 14 (SR-14).

The Project site encompasses Assessor Parcel Number (APN) 3022-001-027 and is located in Section 23, Township 6 North, Range 12 West, San Bernardino Baseline and Meridian. The Project site is located along the west side of 8th Street East, immediately south of an inactive Union Pacific Railroad (UPRR) rail spur, approximately 0.14-mile south of East Rancho Vista Boulevard / Avenue P, and approximately 95 feet east of active UPRR mainline tracks, which are located adjacent to Sierra Highway. An unnamed graded channel that flows from west to east occurs along the southern boundary of the 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 6037910101) 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 88th percentile of communities that are disproportionately burdened by multiple sources of pollution (OEHHA, 2023).

The Project site is located in a 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 10 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. With the exception of 8th Street East and railroad tracks as noted below, remaining land that abuts the Project site is vacant undeveloped land.

- North: To the immediate north of the Project site is an inactive rail spur [California Public Utilities Commission (CPUC) Crossing Number 001B-412.53-C] and railroad easement associated with the UPRR. To the north of the inactive UPRR rail spur is vacant and undeveloped land, an existing light industrial and retail/commercial (AV Graphix, Telesis Collision Center) warehouse development, and East Rancho Vista Boulevard / Avenue P. Further to the north and northeast is a Lockheed Martin Aeronautics facility and the inactive Palmdale Regional Airport. The Palmdale Regional Airport property is owned by the City of Los Angeles Department of Airports and operated under a joint agreement with United States Air Force (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.

- East: 8th Street East forms the eastern boundary of the Project site, which consists of a paved two-lane roadway. To the east of 8th Street East are undeveloped lands, several light industrial uses, sparsely developed residential dwelling units, and 10th Street East. A Head Start Palmdale District office, portions of which are used for school bus parking and early childhood education, is located southeast of the Project site at 975 East Avenue P-8, with the school bus parking lot positioned closest to and facing the Project site. A second Palmdale School District office is located further to the south at 39139 10th Street East.

- South: To the immediate south of the Project site is vacant and undeveloped land. Light industrial uses and single-family dwelling units are situated to the south of Avenue P-8.

- West: Located approximately 95 feet west of the Project site is an active UPRR mainline (CPUC No. 001B-412.20, 101VY-69.95; DOT750643P) that carries heavy freight train traffic and passenger train service from Metrolink trains. Adjacent to the UPRR mainline is the Sierra Highway Bike Trail and Sierra Highway.

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. 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 SCAG REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY (RTP/SCS)

Southern California Association of Governments (SCAG) is a regional agency established pursuant to California Government Code Section 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's Regional Council approved and adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy ("Connect SoCal"). Connect SoCal is the applicable Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for the Project. The goals of Connect SoCal are 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. Performance measures and funding strategies ensure that the adopted goals are achieved through implementation of the RTP. (SCAG, 2020a)

2.4.2 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.

2.4.3 City of Palmdale General Plan (Palmdale 2045)

The City of Palmdale adopted an update to its General Plan (Palmdale 2045) on October 22, 2022. As shown on Figure 2-4, *Existing General Plan Land Use Designations*, the General Plan designates the Project site for "Industrial" land uses. The Industrial land use designation is intended to permit a variety of industrial uses, including manufacturing and assembly of products and goods, warehousing, distribution, and similar uses, with a floor area ratio (FAR) of up to 0.5. (City of Palmdale, 2022a, Table 5.4 and Figure 5.5) The Project is consistent with the land use designation established by the City for the property and would not conflict with applicable General Plan goals and policies.

2.4.4 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, the Project site is zoned Heavy Industrial (HI). The HI zone is intended to allow a range of medium to high intensity industrial uses such as manufacturing, assembly, warehousing, distribution, and the like, which provide employment and services for residents and businesses. This zone implements the Industrial General Plan land use designation (City of Palmdale, 2022a) (PMC, 2022) (City of Palmdale, 2022d, p. 6-2). The Project is consistent with the zoning designation established by the City for the property and would not conflict with applicable zoning requirements.

2.4.5 Los Angeles County Airport Land Use Plan

The Los Angeles County Airport Land Use Commission (ALUC) is responsible for establishing land use policy to mitigate potential noise and safety hazards in regard to the fifteen airports in its jurisdiction. Under State law, any action under consideration by a local public agency or airport operator is subject to ALUC review if such actions take place within the Planning Boundary/Airport Influence Area. (Los Angeles ALUC, 2004, p. 15)

According to mapping information available in the Los Angeles County Airport Land Use Plan (ALUP), the Project site occurs south of the Planning Boundary/Airport Influence Area (AIA) for the inactive Palmdale Regional Airport. Additionally, according to mapping information available from Los Angeles County Enterprise GIS, the Project site is not located within any of the runway protection zones or inner safety zones for the inactive Palmdale Regional Airport. Because the Project site is not within the ALUC Planning Boundary/Airport Influence Area, development on the Project site is not subject to review by the ALUC (Los Angeles County ALUC, 2004, p. 15; Google Earth, 2022) (LA County, 2020)

2.4.6 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, 2022b, p. 4.4-17) While the US 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, pp. 7-8)

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 August 29, 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 18.05-acre Project site is vacant and undeveloped but has been heavily disturbed by grading activities that, according to historical aerial photography, occurred on the site sometime between 2009 and 2011. The site contains several piles of gravel and road base. An unnamed graded channel runs from west to east along the southern boundary of the Project site. (CCG, 2021, p. 5; Google Earth, 2022)

2.5.2 AESTHETICS AND TOPOGRAPHIC FEATURES

As shown on Figure 2-7, *USGS Topographic Map*, the Project site exhibits little topographic variation and generally slopes downward from west to east with an overall topographic relief of approximately 12 feet. Elevations on site range from approximately 2,618 feet above mean sea level (amsl) in the northwest corner of the site to 2,606 feet amsl within the unnamed graded channel near the southeast corner of the Project site.

2.5.3 AIR QUALITY AND CLIMATE

Palmdale is located in 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 located 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 on 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, 2022b, 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 mostly of disturbed rubber rabbitbrush scrub, with a small patch of developed/disturbed rubber rabbitbrush scrub in the eastern portion of the site and big sagebrush–rubber rabbitbrush scrub in the graded channel that runs along the southern boundary of the site. Most of the site has been previously disturbed (e.g., evidence of heavy machine work such as scraping) and contains many trash piles from illegal dumping. (Psomas, 2022a, pp. 15-16)

An unnamed graded channel runs from west to east along the southern boundary of the site. Water conveyed through this channel originates from urban runoff and passes under Sierra Highway and the adjacent UPRR railroad tracks before reaching the Project site. Historic aerial photos of the area show that the natural path of the stream was diverted slightly northward around an agricultural field sometime prior to 1948. The current pathway for this channel was established in approximately 2005 and is maintained to allow water to pass westward. Currently, the channel bed is mostly unvegetated with sparse native desert scrub species growing along the channel banks. Vegetation along the channel consists of Great Basin sagebrush (*Artemisia tridentata*), four-wing saltbush (*Atriplex canescens*), creosote (*Larrea tridentata*), and rubber rabbitbrush scrub (*Ericameria nauseosa*). (Psomas, 2022a, p. 23)

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 five borings (identified as Boring Nos. B-1 through B-5) advanced to depths of approximately 20 to 25 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 conditions: (SCG, 2022, p. 6)

- Artificial Fill: Artificial fill soils were encountered at the ground surface at Boring No. B-3. These fill soils extend to a depth of approximately three feet below the existing site grades. The fill soils generally consist of medium dense fine sandy silts with a varying amount of clay. The fill soils possess a disturbed appearance and mottled appearance resulting in their classification as artificial fill. (SCG, 2022, p. 6)

- Alluvium. Native alluvium was encountered below the fill soils at Boring No. B-3 and at the ground surface of all of the remaining boring locations, extending to at least the maximum depth explored of approximately 25 feet below existing site grades. The alluvium generally consists of medium dense to dense fine to coarse sands and silty fine sands with varying gravel content. Boring No. B-4 encountered a layer of very dense clayey fine sands to fine sandy clays at depths of approximately 17 to 22 feet below the existing site grades. (SCG, 2022, p. 6)

2.5.6 HYDROLOGY

Figure 2-8, *Existing Conditions Hydrology*, depicts the existing hydrology of the Project site. As shown, an existing privately-maintained earthen drainage channel located along the southern edge of the site captures off-site runoff from the west and flows water through the site towards the east where it flows under 8th Street and discharges to an existing channel on the opposite side of 8th Street. For analysis purposes, based on existing flow patterns, Langan subdivided into six drainage areas (Areas A-F), and determined flow lengths and slopes within each area. Under existing conditions, the runoff generally flows from the western property line towards the east. (Langan, 2023a, pp. 1-2) Refer to EIR Subsection 4.9, *Hydrology and Water Quality*, for additional information regarding the site's existing drainage conditions. (Langan, 2023a, p. 1 and Appendix A)

2.5.7 NOISE

Primary sources of noise in the Project site's vicinity include traffic noise from vehicles traveling along 8th Street East and Sierra Highway, and railroad noise from the active UPRR mainline tracks that occur west of the Project site. On October 5, 2022, Urban Crossroads recorded 24-hour noise readings at seven locations near the Project site to determine the baseline for the existing noise environment. Measured daytime noise levels in the area ranged from 59.8 equivalent level decibels (dBA L_{eq}) to 66.3 dBA L_{eq}, and nighttime noise levels from 58.5 dBA L_{eq} to 68.1 dBA L_{eq}. (Urban Crossroads, 2022e, pp. 23-24 and Table 5-1)

2.5.8 TRANSPORTATION

8th Street East, a paved two-lane roadway, is located along the eastern frontage of the Project site and is classified as a secondary arterial in the City's General Plan Circulation and Mobility Element. Access to this segment of 8th Street East is provided from Sierra Highway, Avenue P, and Avenue P-8. Sierra Highway and Avenue P are designated City truck routes. A 4.7-mile Class 1 bicycle path runs along Sierra Highway from Technology Drive, 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)

The Project site is located south of an inactive UPRR rail line, which has a crossing at 8th Street East (CPUC No. 001B-412.53-C, DOT No. 750605F). To the east of the Project site is an active UPRR line that parallels Sierra Highway and carries heavy freight train traffic and Metrolink passenger train service. Metrolink's Palmdale Station is located at 39000 Clock Tower Plaza Dr E, approximately 0.5 mile from the Project site.

The Project area 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.

Regarding vehicle miles traveled (VMT), north Los Angeles County within which the Project site is located, has a 2022 baseline of 15.9 VMT per employee. Los Angeles County as a whole has a baseline VMT of 16.3 per employee. (Urban Crossroads, 2022g, p. 3)

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. 37, located approximately 1.5 miles to the southeast of the Project site. The next closest fire station is LACFD Station No. 24, located approximately 2.1 miles to the west. LACFD maintains a response time for emergency fire protection services of four to six minutes. (City of Palmdale, 2022b, p. 4.15-1) (Google Earth, 2022)

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, 2022b, p. 4.15-2)

The Project site is located within the service area of the Palmdale School District (PSD) for elementary and middle school services and the Antelope Valley Union High School District (AVUHSD) for high school services. Students in the Project area attend Summerwind Elementary School for K-5 school services (2.1 miles west of the Project site), SAGE Academy for grades 6-8 (2.0 miles southeast of the Project site), and Palmdale High School (1.9 miles southeast of the Project site). (Google Earth, 2022)

Existing park facilities located within approximately two miles of the Project site include Desert Sands Park, Manzanita Heights Park, and Melville J. Courson Park. Desert Sands Park is located approximately 0.4-mile southwest of the Project site, comprises approximately 20 acres, and includes a variety of recreational uses, including two baseball fields, two full and one small softball fields, two tennis courts, two full-court basketball courts, a tot lot, and open play areas. Manzanita Heights Park, which is located approximately 1.7 miles southwest of the Project site, comprises approximately four

acres and includes tot lots and a large open play area. Melville J. Courson Park, which is located approximately 1.5 miles southeast of the Project site, comprises approximately five acres and includes a swimming pool, two full court basketball courts, tot lots, and open play areas. (Google Earth, 2022; City of Palmdale, 2022b, Table 4.16-1)

The Palmdale City Library is located at 700 East Palmdale Boulevard, approximately 1.3 mile south of the Project site. The library is currently open Monday through Saturday, along with limited hours on Sunday (Google Earth, 2022; City of Palmdale, 2022b, p. 4.15-5).

2.5.10 Utilities and Service Systems

A. Water Service

The Project site is located within the service area of the Palmdale Water District (PWD). PWD serves a population of 126,062 people, has about 27,000 active water connections, and provides water services to the City and some segments of unincorporated Los Angeles County. The primary function of the PWD is to provide retail water service within its service area. PWD currently receives water from three sources: groundwater, surface water from Littlerock Dam Reservoir, and imported water from the State Water Project (SWP) (KEC Engineers, 2022, pp. 10-14). Existing water facilities in the Project area include existing 12-inch water mains within 8th Street East, East Avenue P, and East Avenue P-8.

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. Unincorporated areas surrounding Palmdale fall within Los Angeles County jurisdiction. Most of the collected wastewater flows that are conveyed through public sewer mainlines discharge to Los Angeles County Sanitation District 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, located approximately 16 miles north of the City. (City of Palmdale, 2022b, pp. 4.19-3 through 4.19-4)

Existing sewer facilities in the Project area include existing 10-inch sewer mains within 8th Street East, East Avenue P, and East Avenue P-8. Pursuant to the Los Angeles County Sanitation District's NOP Comment Letter (See EIR *Appendix A*), the nearest District trunk sewer is the Trunk "B" Sewer, located within the intersection of East Avenue P / Rancho Vista Boulevard and 15th Street East. The Districts' 24–inch diameter trunk sewer has a capacity of 6.9 million gallons per day (mgd) and conveyed a peak flow of 0.3 mgd when last measured in 2017.

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 well as businesses. 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 as summarized in Table 2-1, *City Service Landfill Capacity*. (City of Palmdale, 2022b, p. 4.19-4)

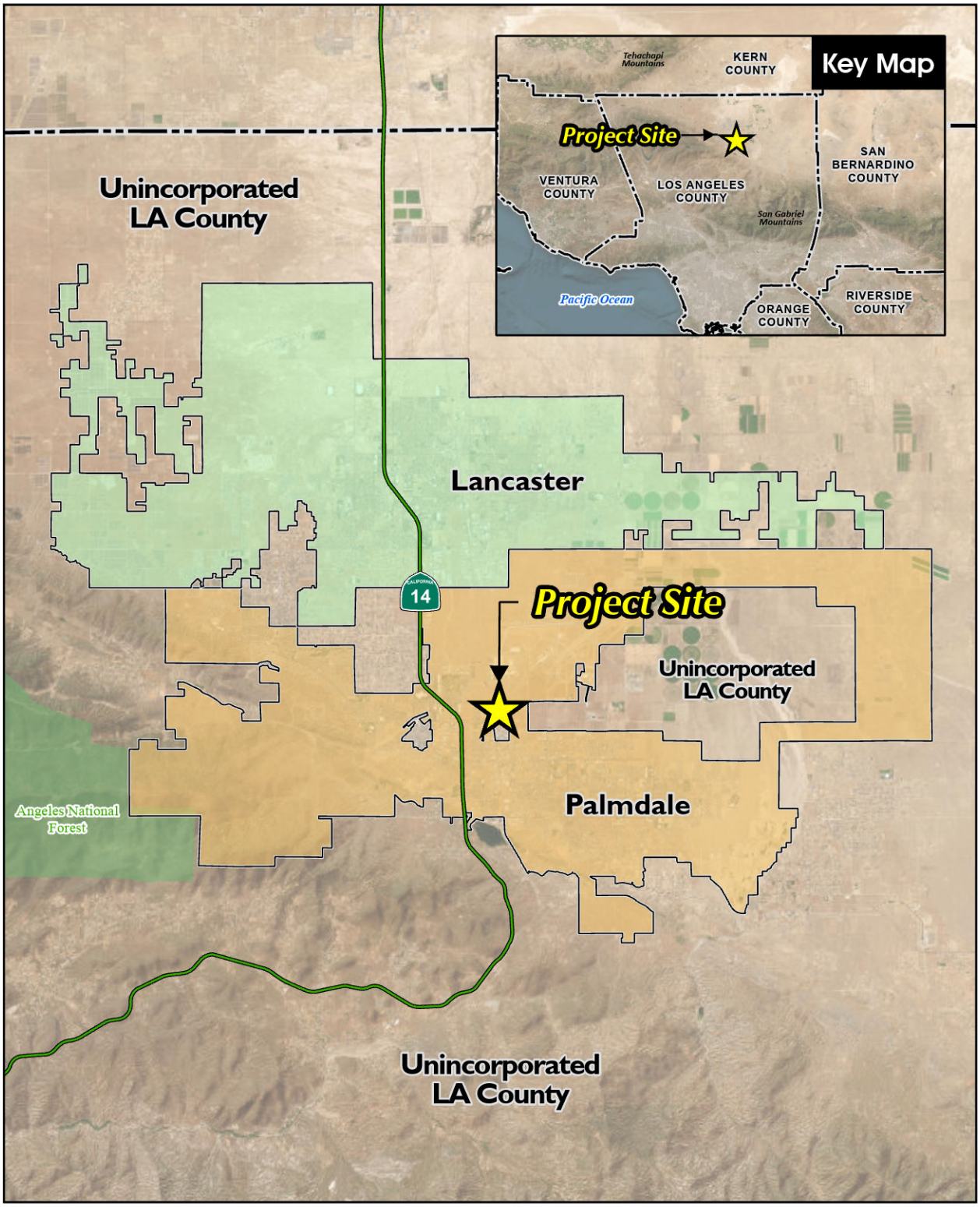
Table 2-1 City Service Landfill Capacity

Solid Waste Facility	Tonnage from Palmdale	Total Facility Capacity (cubic yards)	Percent Capacity Remaining	Ceased Operation Year
Antelope Valley Public Landfill	26,416.63	30,200,000	59%	2044
Lancaster Landfill and Recycling Center	866.77	27,700,000	52%	2044
McKittrick Waste Treatment Site	680.57	5,474,900	14%	2059
Simi Valley Landfill and Recycling Center	261.37	119,600,000	69%	2063
El Sobrante Landfill	41.94	209,910,000	69%	2051
Sunshine Canyon City/County Landfill	11.59	140,900,000	55%	2037
Chiquita Canyon Sanitary Landfill	4.70	110,366,000	55%	2047
Victorville Sanitary Landfill	0.35	93,400,000	85%	2047
Total	**28,283.92**			

Source: (City of Palmdale, 2022b, Table 4.19-1)

2.5.11 Rare and Unique Resources

As required by CEQA Guidelines Section 15125(c), the environmental setting should identify any inconsistencies between a proposed project and applicable general, specific, or regional plans, and place special emphasis on resources that are rare or unique to that region and that would be affected by the project. The principal discretionary action required of the City to implement the Project is approval of proposed SPR 22-012, which is described in detail in Section 3.0, *Project Description*. SRP 22-012 proposes industrial use of the site, which is consistent with the property's existing IND (Industrial) General Plan designation and Heavy Industrial (H-1) zoning classification. Based on the existing conditions of the Project site and surrounding area described above and discussed in more detail in Section 4.0, *Environmental Analysis*, the Project site does not contain any rare or unique resources.



Source(s): Esri, LA County (2022)

Figure 2-1

0 1 2 4 Miles

Regional Map



Source(s): Esri, LA County (2022)

Figure 2-2

0 500 1,000 2,000 Feet

Vicinity Map

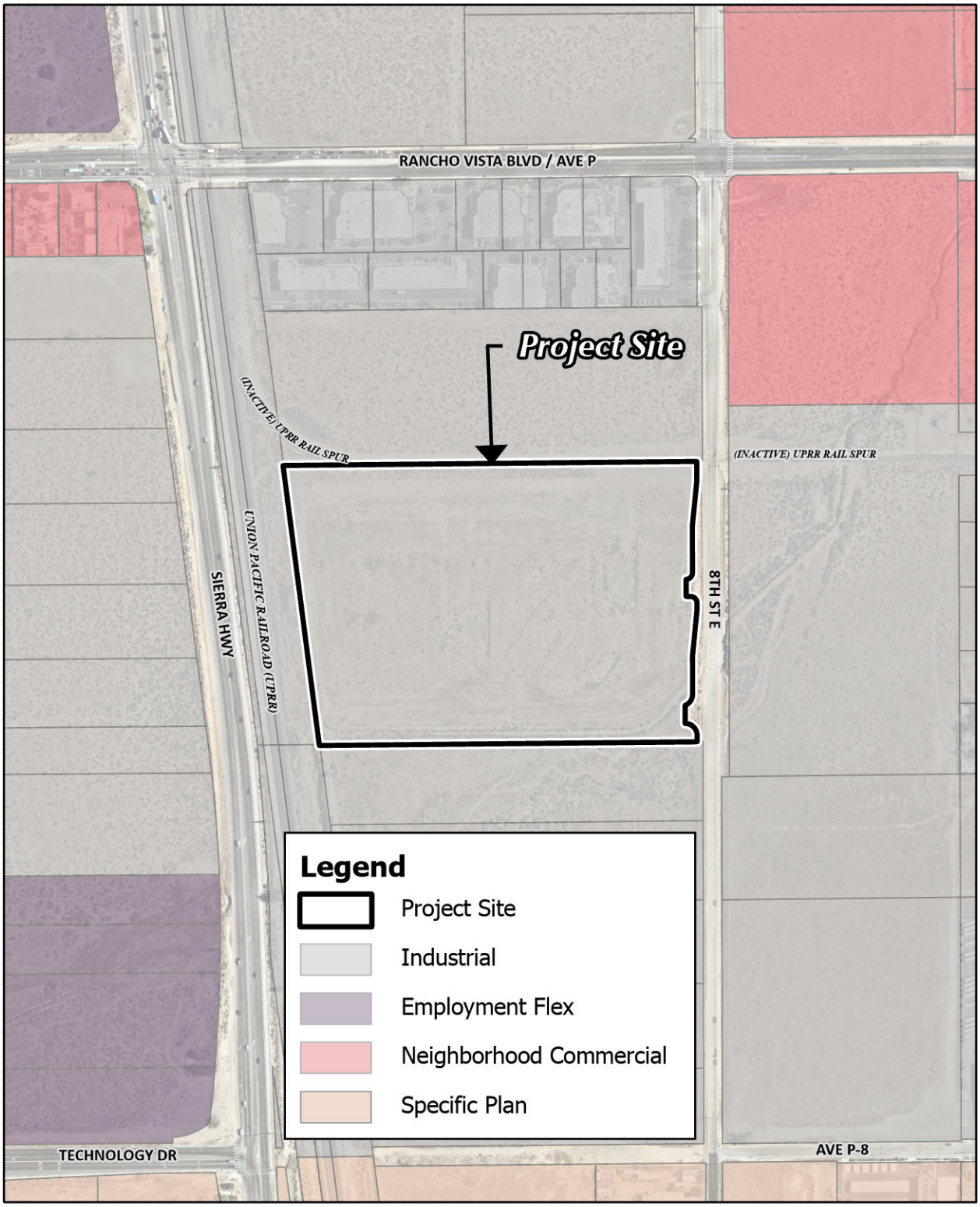


Source(s): Esri, LA County (2022)

Figure 2-3

0 250 500 1,000 Feet

Surrounding Land Uses and Development

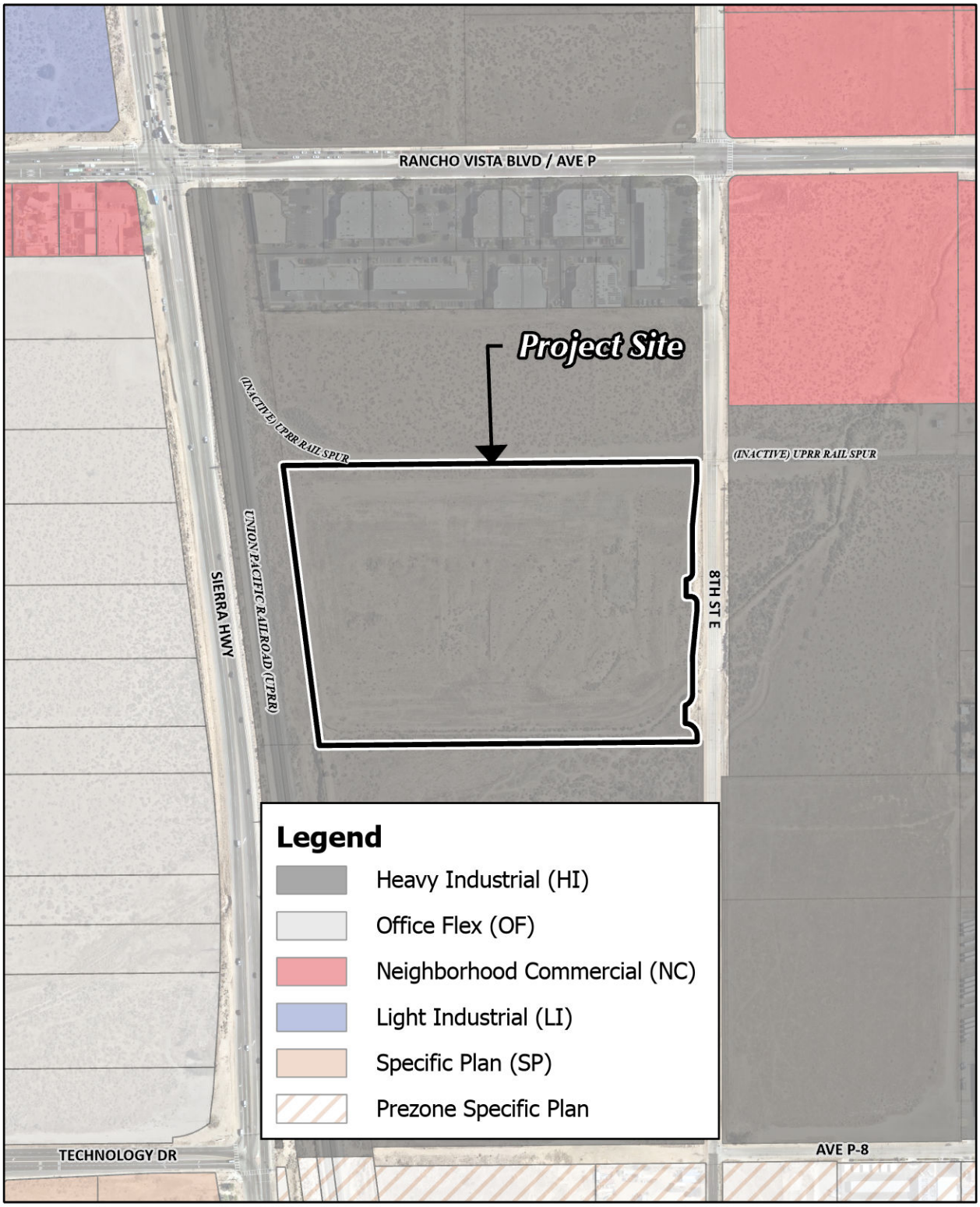


Source(s): City of Palmdale, Esri, LA County (2022), Nearmap Imagery (July 2022)

Figure 2-4

0 100 200 400 Feet

Existing General Plan Land Use Designations



Source(s): City of Palmdale (12-22-2022), Esri, LA County (2022), Nearmap Imagery (July 2022)

Figure 2-5

Existing Zoning Classifications

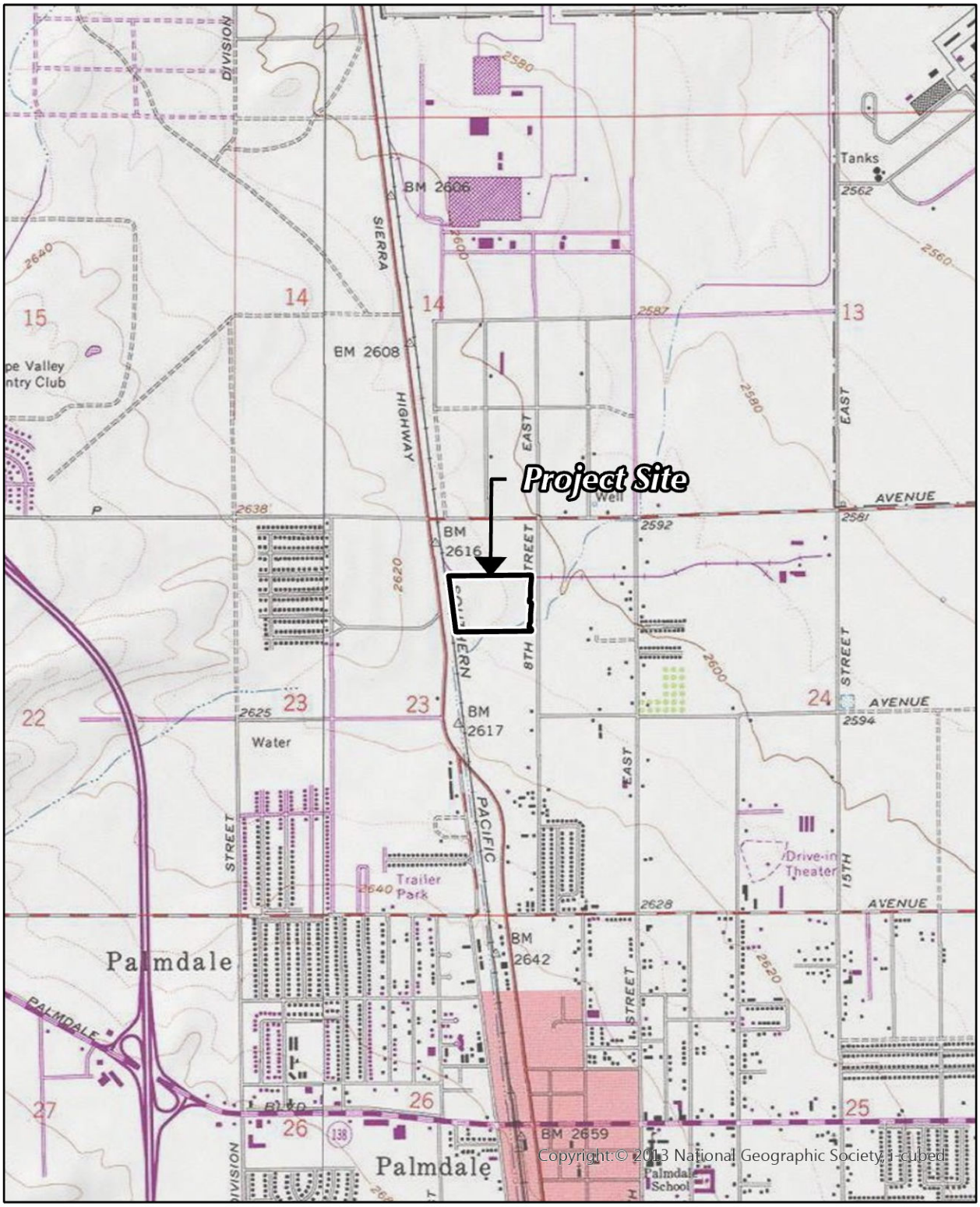


Source(s): Esri, LA County (2022), Nearmap Imagery (July 2022)

Figure 2-6

0 100 200 400 Feet

Aerial Photograph



Source(s): USGS (2013)

Figure 2-7

0 50 100 200 Feet

USGS Topographic Map

LEGEND

- PROJECT DRAINAGE BOUNDARY
- SUB-AREA BOUNDARY
- FLOW PATH
- SUB-DRAINAGE AREA ID
- X / X — SUB-DRAINAGE AREA IDENTIFIER
- SUB-DRAINAGE SURFACE AREA (ACRE)
- XXX — SURFACE FLOW NODE
- 100.00 EG — APPROXIMATE EXISTING GROUND ELEVATION

PROJECT SUMMARY

SITE AREA (GROSS):	18.11 ACRES
SITE AREA (NET):	17.90 ACRES
IMPERVIOUS COVERAGE:	0% (PRE-DEVELOPMENT)
SOIL GROUP:	134
ISOHYETALS:	3.5-INCHES (50-YEAR, 24-HOUR)
FREQUENCY:	25-YEAR (FOR STORM DRAIN ANALYSIS)
METHOD:	LOS ANGELES COUNTY HYDROLOGY MANUAL

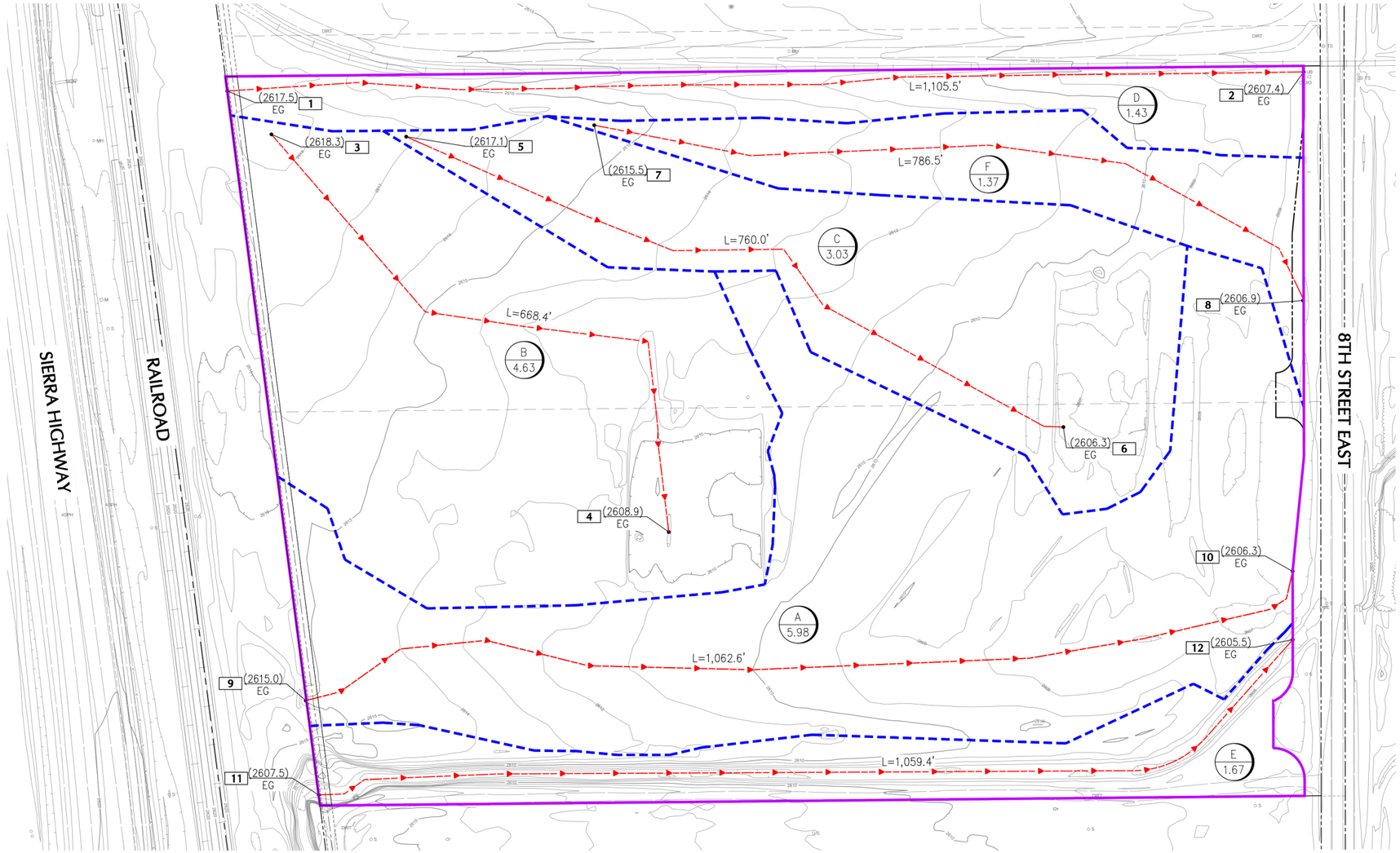
GENERAL NOTES:

1. SEE PRELIMINARY LID REPORT PREPARED BY LANGAN ENGINEERING FOR THE COMPLETE POST DEVELOPMENT LID CALCULATIONS.
2. CALCULATIONS WERE BASED ON THE REQUIREMENTS OF THE LOS ANGELES COUNTY LID MANUAL FOR THE 0.75-INCH, 24-HOUR RAINFALL DEPTH.
3. PROPOSED ON-SITE DRAINAGE SYSTEM LAYOUT IS PRELIMINARY.
4. ALL EXISTING ELEVATIONS ARE APPROXIMATE.

ABBREVIATIONS:

EG – EXISTING GRADE

L – LENGTH OF FLOW



Source(s): Langan (03-27-2023)

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 as evaluated herein consists of an application for a Site Plan Review (SPR 22-012) to allow for the construction and operation of one 380,410 square foot (s.f.) light industrial warehouse building on an approximately 18.05-acre vacant property in the City of Palmdale, California. A total of 54 truck docking doors are proposed on the north side of the building. Other site features include landscaping, lighting, and paved areas for vehicle movement and parking. Access to the property is proposed via two new driveways extending from 8th Street East along the Project frontage. As part of the Project, an unnamed graded channel that runs along the southern boundary of the site would be redesigned as an earthen channel. A drainage easement is proposed in the southeast corner of the Project site.

3.2 REGIONAL SETTING

The Project site encompasses approximately 18.05 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 the Figure 2-2, *Vicinity Map,* in EIR Section 2.0, the 18.05-acre Project site that is the subject of this EIR is located in the central portion of the City. 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 1.25 miles southeast of State Route 14 (SR-14).

The Project site encompasses Assessor Parcel Number (APN) 3022-001-027 and is located in Section 23, Township 6 North, Range 12 West, San Bernardino Baseline and Meridian. The Project site is located along the west side of 8th Street East, immediately south of an inactive Union Pacific Railroad

(UPRR) rail spur, approximately 0.14-mile south of East Rancho Vista Boulevard / Avenue P, and immediately east of active UPRR mainline tracks and Sierra Highway. An unnamed graded channel that flows from west to east occurs along the southern boundary of the site.

As previously shown on Figure 2-6, *Aerial Photograph,* in EIR Section 2.0, the Project site is vacant and undeveloped but has been heavily disturbed by grading activities that, according to historical photography, occurred on the site sometime between 2009 and 2011. The site contains several piles of gravel and road base. The Project site contains an unnamed graded channel that flows from west to east along the southern boundary of the site.

With the exception of 8th Street East, an inactive UPRR rail spur to the north, and the active UPRR mainline to the east, land immediately abutting the site is vacant and undeveloped. Beyond the immediately abutting features are the Sierra Highway Bike Trail and Sierra Highway, light industrial and retail/commercial uses, United States Air Force (USAF) Plant 42, residential homes, school district facilities, and other uses. 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 diversify the mix of developed land uses in the City of Palmdale to support the growing goods movement supply chain;

B. 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;

C. 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;

D. To develop an industrial building in the City of Palmdale that is designed to meet contemporary industry standards and be economically competitive with similar industrial buildings in the local area and region;

E. 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;

F. 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; and

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

3.5 PROJECT'S COMPONENT PARTS AND DISCRETIONARY APPROVALS

The Project evaluated in this EIR involves an application for SPR 22-012, which proposes the future development of a non-refrigerated 380,410 s.f. fulfillment warehouse building on the approximately 18.05-acre Project site. The proposed Project is consistent with the property's IND (Industrial) land use designation assigned by the City's General Plan and Heavy Industrial (HI) zoning classification assigned by the City's Zoning Code; the Project does not require a General Plan Amendment or a Zone Change. Designation of the site with an Industrial General Plan land use designation was evaluated by a Final EIR certified by the City of Palmdale for the City of Palmdale 2045 General Plan Update (SCH No. 2021060494), which is 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.

As discussed in Section 2.0, *Environmental Setting,* the City adopted its updated General Plan (Palmdale 2045) on October 20, 2022. Palmdale 2045 serves as a blueprint for the City's vision and future. As shown previously on Figure 2-4, *Existing General Plan Land Use Designations*, the General Plan designates the Project site for "Industrial" land uses. The Industrial land use designation is intended to permit a variety of industrial uses, including manufacturing and assembly of products and goods, warehousing, distribution, and similar uses, with a floor area ratio (FAR) of up to 0.5. (City of Palmdale, 2022a, Table 5.4 and Figure 5.5)

Title 17 of the Palmdale Municipal Code (PMC) establishes zoning classifications for properties in the City. The City recently updated its Zoning Code Ordinance and Zoning Map to be consistent with the City's newly adopted General Plan, Palmdale 2045. As shown on Figure 2-5, *Existing Zoning Classifications*, the Project site is zoned Heavy Industrial (HI). The HI zoning classification is intended to intended to allow a range of medium to high intensity industrial uses such as manufacturing, assembly, warehousing, distribution, and the like, which provide employment and services for residents and businesses. This zone implements the Industrial General Plan land use designation. (City of Palmdale, 2022a) (PMC, 2022) (City of Palmdale, 2022d, p. 6-2)

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 3-2, *Matrix of Project Approvals/Permits*, at the end of this Section.

3.5.1 Site Plan and Building Configuration

As depicted on Figure 3-1, *Overall Site Plan*, the Project Applicant is proposing to develop the 18.05-acre vacant Project site with a 380,410 s.f. non-refrigerated fulfillment warehouse that would include 374,410 s.f. of warehouse space and a total of 6,000 s.f. of office uses at the northeast and southeast corners of the building. Access to the site would be accommodated by two proposed driveways along the property's frontage connecting with 8th Street East. The northern and southern driveways would provide full access for trucks and passenger vehicles. Both of the proposed driveways would allow for full turning movements into and out of the site. The building would have 54 docking doors within the fenced and gated loading dock area (also called a truck court), positioned on the northern façade of the building. As currently designed, 200 parking stalls for passenger vehicles, electric vehicles (EV), and accessible parking are proposed along the eastern and western sides of the building and 30 bicycle space racks are provided. In addition to truck parking at the loading docks, 68 truck trailer parking stalls are proposed. Parking space striping is subject to change depending on the ultimate needs of the building user.

3.5.2 Grading and Site Work

As depicted on Figure 3-2, *Conceptual Grading Plan* and Figure 3-3, *Conceptual Offsite Grading Plan*, the site would be graded in a manner that largely approximates the existing flat and gently sloping topographic conditions of the site. Grading activities would require a total of 42,000 cubic yards (cy) of cut and 42,000 cy of fill; thus, earthwork quantities on the Project site would balance on-site and no import or export of soils would be required. The Project's civil engineer estimates maximum depth of grading would be 15 feet. No blasting is required. As part of site grading activities, the existing unnamed graded channel that runs along southern boundary of the site would be redesigned as an earthen channel. Off-site improvements along the eastern side of 8th Street East abutting the Project site would be required consisting of roadway frontage improvements and the installation of storm drain outlet pipes to accommodate the existing flows from the channel. A drainage easement is proposed in the southeast corner of the Project site. Proposed manufactured slopes on the site would be limited to along the northern site boundary, with slopes measuring up to six feet in height, and along a portion of the passenger vehicle parking area at the northeast corner of the proposed building.

3.5.3 Architectural Design

The architectural elevations for the proposed building are depicted on Figure 3-4, *Proposed Building Elevations*. The proposed building would have a variable roofline ranging in height from approximately 41 feet to 45 feet. The roof would be solar-ready and the Project Applicant is proposing to cover the roof 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 building walls would be constructed of concrete tilt-up panels with offices located at the northeast and southeast corners of the building. The building would be painted a mixture of white and grey colors, with the office locations being treated with tempered glass with clear anodized aluminum

mullions and grey metal canopies. In order to facilitate truck trailer access to the dock doors, the truck court located to the north of the building would be at a slightly lower elevation (approximately 4 feet) than the remainder of the building. Large overhead doors would be provided along the western and eastern portions of the truck court, along with several metal doors that would provide employee access into the building. The visitor entrances would occur at the office areas.

3.5.4 Roadway Improvements

As shown on Figure 3-5, *Site Cross-Sections* and Figure 3-6, *Conceptual Street Plan,* as part of the Project, 8th Street East would be improved along the frontage of the Project site to include additional pavement, curb, gutter, and an 8-foot-wide parkway that includes a sidewalk. Additional right-of-way (ROW) of variable width would be dedicated to the City for the widening of 8th Street East along the Project site's frontage, ranging from approximately eight feet near the northeast and southeast corners of the site to approximately 30 feet at the proposed entrance driveways.

3.5.5 Landscaping

Figure 3-7, *Conceptual Landscape Plan,* depicts the conceptual landscape plan for the Project. Landscaping for the proposed Project would consist of a variety of trees, shrubs, and groundcover, with landscaping primarily proposed at the Project site frontage along 8th Street East and along the western site boundary, and within the passenger vehicle parking area. Tree species would include 24-inch box European Fan Palm, 24-inch box Desert Museum Palo Verde, 15-gallon Italian cypress, 36-inch box Olive Tree, 24-inch box Thornless Argentine Mesquite, 24-inch box Afghan Pine, 36-inch box Redspire Callery Pear, and 36-inch box Holly Oak.

3.5.6 Lighting, Screening and Walls

Lighting would be provided on the site in compliance with PMC Section 17.86.030, *Outdoor Lighting* Ancillary lighting would include light fixtures in the parking and loading dock areas and downward-directed lighting affixed to the exterior of the building. Decorative lighting, appropriate for the architecture of the building 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 wrought iron fences are proposed along the southern, western and northern boundaries of the site. Eight-foot-tall concrete screen walls are proposed along the entrance to the proposed loading dock area with a 12-foot-tall screen wall positioned in between the eight-foot-tall walls. Vehicular access into the loading dock area truck court would be controlled by manually-operated gates. Fencing and guardrails would be provided for the earthen channel.

3.5.7 Water, Sewer, and Drainage

Figure 3-8, *Conceptual On-Site Utilities* and Figure 3-9, *Conceptual Off-Site Utilities* depict the proposed utility plan for the Project. A description of the Project's proposed water, sewer, and drainage facilities is provided below.

A. Water Service

Water service to the Project would be provided by Palmdale Water District (PWD). As shown on Figure 3-8 and Figure 3-9, a 12-inch water line would be installed in 8th Street East and connect to the existing City of Palmdale 12-inch water main on East Avenue P-8 to service the Project; the line would extend and connect to an existing 12-inch main at a connection point located 350 feet south of the East Avenue P / 8th Street East intersection. Water lines proposed on-site would connect to the proposed 12-inch water main and would provide domestic water service to the two office locations at the northeast and southeast corners of the building. Water lines for fire hydrants would be constructed within the drive aisles surrounding the building, with a total of 10 fire hydrants proposed around the building.

B. Sewer Service

Public sewer systems that would provide service to the proposed Project are owned and maintained by the City of Palmdale Public Works, Sewer Maintenance Division (COPSM). As shown on Figure 3-8 and Figure 3-9, the Project would extend the sewer from 400 feet south of the 8th Street East / East Avenue P intersection to the southerly Project site frontage. Sewage within the Project area is discharged to Sanitation District of Los Angeles County (LACSD) trunk mainlines and sent to the Palmdale Water Reclamation Plant PWRP) (LACSD #20) for treatment.

C. Drainage

The City of Palmdale Department of Public Works maintains the City's public stormwater system. As shown on Figure 3-8 and Figure 3-9, on-site stormwater would be captured through a series of catch basins and storm drains which would be routed to various underground chambers located along the northern and southern areas of the site. The captured stormwater would be pre-treated through a hydrodynamic separator prior to entering the chambers. In the event of high flows, stormwater would bypass the pretreatment within the hydrodynamic separator and flow directly into the underground chambers. The proposed underground infiltration chambers would discharge directly into the proposed culverts beneath 8th Street. No runoff from the developed portions of the site would discharge off site. (Langan, 2023a, p. 1)

In addition, the existing unnamed graded channel that runs along the southern boundary of the site would be redesigned into an earthen channel. The channel is designed to maintain its existing flow path, which flows from west to east. The purpose of the earthen channel is to collect off-site flows from the west and convey the flow through the site where the water would discharge into the proposed culverts. (Langan, 2023a, p. 1)

3.5.8 Public Art

The Project Applicant proposes to provide public art installations in the northeastern and southeastern corners of the Project site along the Project site's frontage with 8th Street East. 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 CONSTRUCTION CHARACTERISTICS

A. Construction Activities Schedule and Equipment Fleet

Construction of the Project is anticipated to begin as early as July 2023 and end in July 2024, as shown in Table 3-1, *Expected Construction Schedule*.

Table 3-1 Expected Construction Schedule

Construction Phase	Start Date	End Date	Work Days
Site Preparation	July 2023	July 2023	10
Grading	July 2023	August 2023	30
Building Construction	August 2023	September 2023	300
Paving	July 2024	July 2024	20
Architectural Coating	June 2024	July 2024	40

Source: Project Applicant

The typical construction sequence entails site preparation followed by grading, followed by construction of the building shell, installation of infrastructure and utilities, paving, landscaping, and then painting and other architectural coatings. Tenant improvements inside the building 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.

The types of construction equipment expected on the site 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. 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.

3.6.2 Operational Characteristics

At the time this EIR was prepared, the future user(s)/occupant(s) of the proposed building were unknown. Based on the building design, the user is expected to operate as a high-cube, non-sort, non-refrigerated fulfillment center. For the purposes of analysis in this EIR, the facility is assumed be operational 24 hours per day, seven days per week, with exterior loading and parking areas illuminated at night. Using an employment generation rate of 1.18 employees per 1,000 s.f. of building space[1], the 380,410 s.f. building is anticipated to generate approximately 449 new, recurring jobs (380,410 s.f. x 1.18 employees/1,000 s.f. = 448.8 employees).

The proposed building is designed such that business operations would be conducted within the enclosed building, 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 698 two-way vehicle trip-ends per day with 59 AM peak hour trips and 60 PM peak hour trips (Urban Crossroads, 2022e). 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 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 certification of the Final EIR and the approval of proposed SPR 22-012.

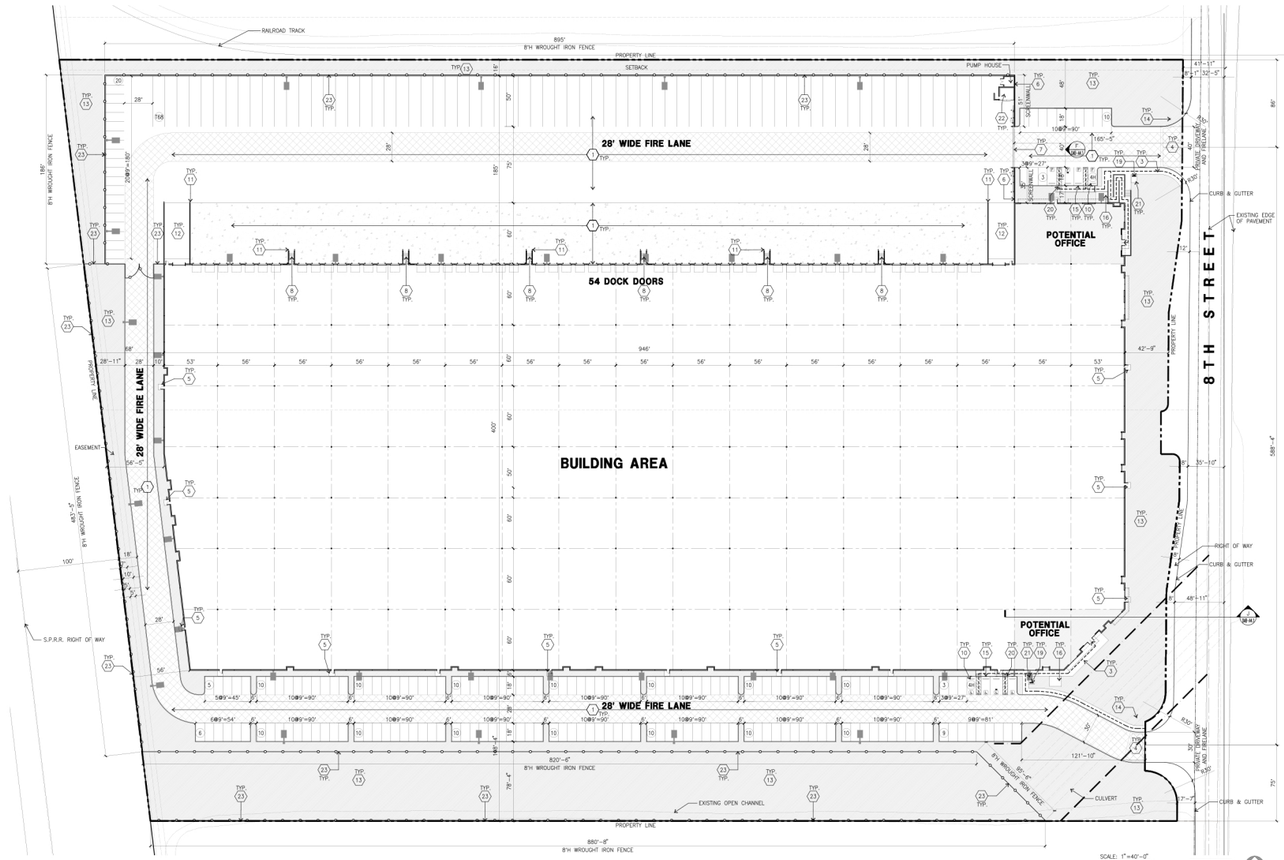
[1] According to Table 2-4 of the City of Palmdale 2045 General Plan Update Final EIR (SCH No. 2021060494), the City projects that between 2016 and 2045 there would be approximately 11,820 new jobs associated with 10,046,865 s.f. of industrial space, which results in a ratio of approximately 1.18 employees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

3.8 Related Environmental Review and Consultation Requirements

Should the City approve SPR 22-012, subsequent discretionary and/or ministerial approvals would be required to implement the Project. Table 3-2, *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 3-2 or elsewhere in this EIR (CEQA Guidelines § 15124(d)).

Table 3-2 Matrix of Project Approvals/Permits

Public Agency	Approvals and Decisions
City of Palmdale Discretionary Approvals (Proposed Project)	
Planning Commission	• Reject or certify the Final EIR along with appropriate CEQA Findings. • Approve, conditionally approve, or not approve SPR 22-012.
Subsequent City of Palmdale Approvals	
City of Palmdale Subsequent Implementing Approvals:	• 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.
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.
Palmdale Water District (PWD)	• 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.



PROPERTY OWNER

COVINGTON GROUP
14180 DALLAS PARKWAY, SUITE 730
DALLAS, TX 75254

ADDRESS OF THE PROPERTY

8TH STREET
PALMDALE, CA

ASSESSOR'S PARCEL NUMBER

3022-001-027

LEGAL DESCRIPTION

LOT 43 AND 44 OF TRACT NO. 7670, IN THE CITY OF PLAMDALE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOL 114, PAGES 28 TO 30 INCLUSIVE OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY. EXCEPTING THEREFROM THE NORTHERLY 41.50 FEET OF SAID LOT 44.

THE ABOVE LEGAL DESCRIPTION IS PURSUANT TO THAT CERTAIN VOLUNTARY LOT MERGER #163, RECORDED AUGUST 13, 2009, AS INSTRUMENT NO. 2009-1248572, OFFICIAL RECORDS.

ZONING

ZONING DESIGNTATION -- HEAVY INDUSTRIAL (HI)

USES OF THE PROPOSED BUILDINGS TO ENSURE CONSISTENCY WITH THE M-2 ZONE, PURSUANT TO PALMDALE MUNICIPAL CODE (PMC) CHAPTER 17.62, THE M-2 ZONE IS INTENDED FOR A VARIETY OF LIGHT AND HEAVY INDUSTRIAL USES.

APPLICANT

SIERRA VISTA 18 PD, LLC
(949) 413-3568
ATTN: MICHAEL DI SANO
ADDRESS: 3 CORPORATE PLAZA, SUITE 230

APPLICANT'S REPRESENTATIVE

HPA, INC
1883 BARDEEN AVE SUITE 100
IRVINE CA 92612
TEL: 949-862-2127

PROJECT DATA

SITE AREA	
In s.f.	786,044 s.f.
In acres	18.05 ac
BUILDING AREA	
Office	6,000 s.f.
Warehouse	374,410 s.f.
TOTAL	380,410 s.f.
COVERAGE	48.4%
AUTO PARKING REQUIRED	
Office: 1/250 s.f. above 25% GFA	N/A
Whse: 0.5/1,000 s.f.	187 stalls
TOTAL	187 stalls
AUTO PARKING PROVIDED	
Standard (9'x 18')	173 stalls
Accessible Parking (9' x 18')	5
Accessible Van Parking (12' x 18')	1
EV Parking parking (9' x 18')	16
EV Standard Accessible (9' x 18')	1
EV Van Accessible (12' x 18')	1
Clean Air/ Van pool (9' x 18')	3 stalls
TOTAL	200 stalls
TRAILER PARKING PROVIDED	
Trailer (12' x 50')	68 stalls
BICYCLE PARKING REQUIRED	
10% auto - short term bicycle parking	20
5% auto - long term bicycle parking	10
TOTAL	30 racks
BICYCLE PARKING PROVIDED	30 racks
ZONING ORDINANCE FOR CITY	
Zoning Designation - Heavy Industrial (HI)	
MAXIMUM BUILDING HEIGHT ALLOWED	
Height - 50' *	
MAXIMUM FLOOR AREA RATIO	
FAR - 0.5	
MAXIMUM LOT COVERAGE	
Coverage - N/A	
LANDSCAPE REQUIREMENT	
Percentage	10%
LANDSCAPE PROVIDED	159,583 s.f.
Percentage	20.3%
SETBACKS	
Building	Landscape
Freeway/arterial St. - 20' *	10'
Local / Collector St. - 10'	10'
Adjacent to R zone - 40'	10'
Rear/ Interior/ Front - 10'	

* Building over 35' in height, addidtional 1' of setback for every 1' of height over 35' along arterial or collector collector street, and 1/2' for local street.

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT.
2. FUTURE MONUMENT SIGN.
3. CONCRETE WALKWAY. SEE CIVIL PLAN.
4. DRIVEWAY APRONS.
5. 5'-4"X5'-4"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. 8'H SCREENWALL.
7. MANUAL OPERATED GATES W/ KNOX. REFER TO F/DAB-A4.1.
8. PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
9. EXTERIOR CONC. STAIR.
10. NOT USED.
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 HANDICAPPED ENTRY SIGN.
16. ACCESSIBLE HANDICAPPED PARKING STALL SIGN.
17. OUTDOOR PATIO, EMPLOYEE BREAK AREA
18. NOT USED.
19. HOLLOW METAL DOOR, MAN DOOR.
20. OUTDOOR SHORT TERM BICYCLE SPACE RACK (1 PER 20 AUTO PARKING RATIO). REFER TO D/DAB-A4.1.
21. TRUNCATED DOME.
22. DESIGNATED SMOKING AREA.
23. TRASH ENCLOSURE. REFER TO G/H/DAB-A4.1.
24. 8'H WROUGHT IRON FENCE. REFER TO E/DAB-A4.1.

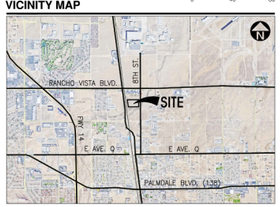
SITE PLAN GENERAL NOTES

1. THE SOILS REPORT PREPARED BY SOCAL GEOTECHNICAL 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 STAKING 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 PARKING ROWS. ALL PLANTERS AT ENDS 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 THE PLANNING 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

- LANDSCAPED AREA
- CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
- STANDARD PARKING STALL (9' X 18')
- ACCESSIBLE PARKING STALL (9' X 18')
- LIGHT STANDARD
- EXISTING PUBLIC FIRE HYDRANT
- PRIVATE FIRE HYDRANT-- APPROXIMATE LOCATION
- CATCH BASIN APPROX. LOCATION

VICINITY MAP

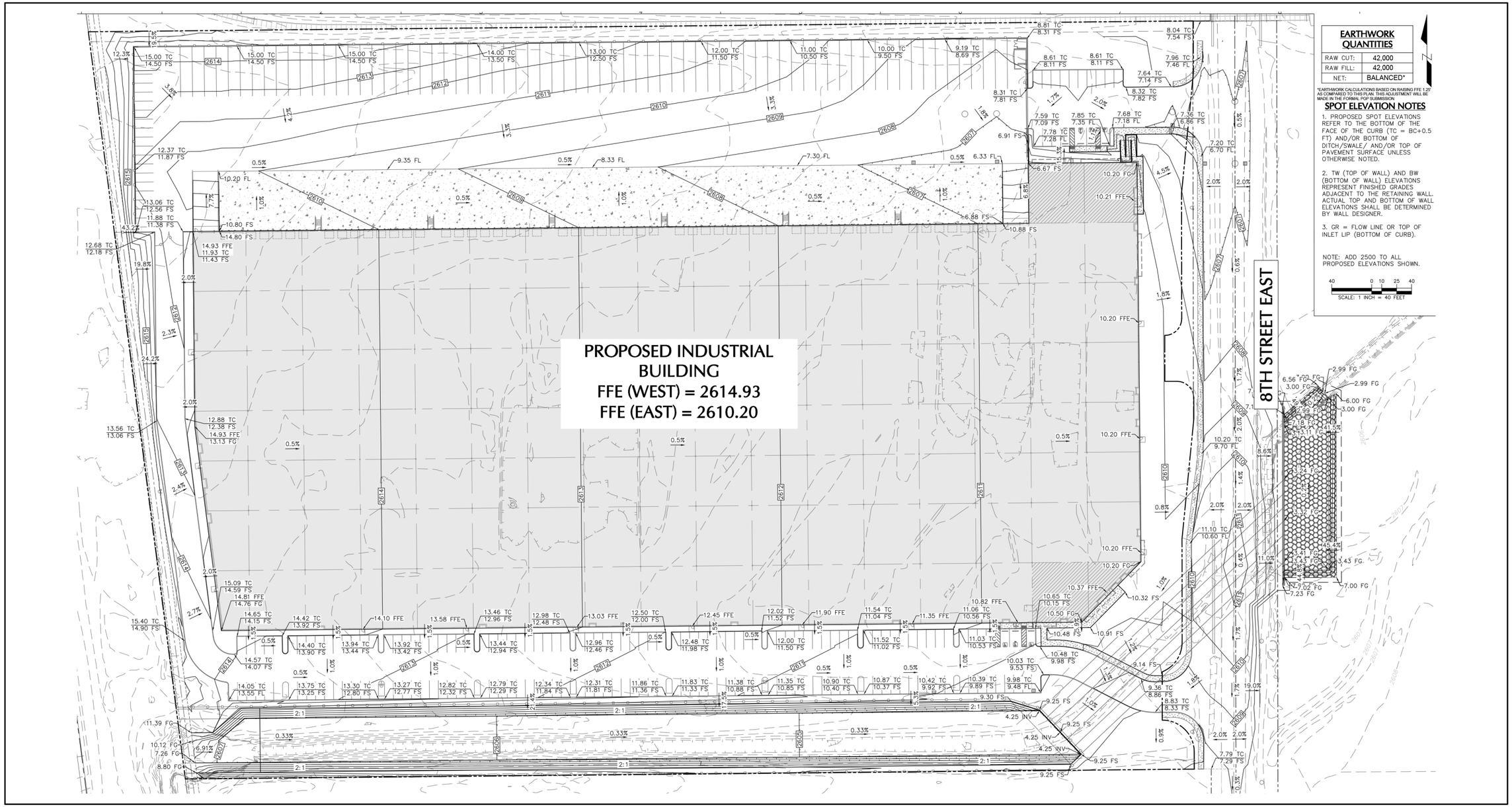


Source(s): HPA (03-24-2023)

Figure 3-1

Not to Scale

Overall Site Plan

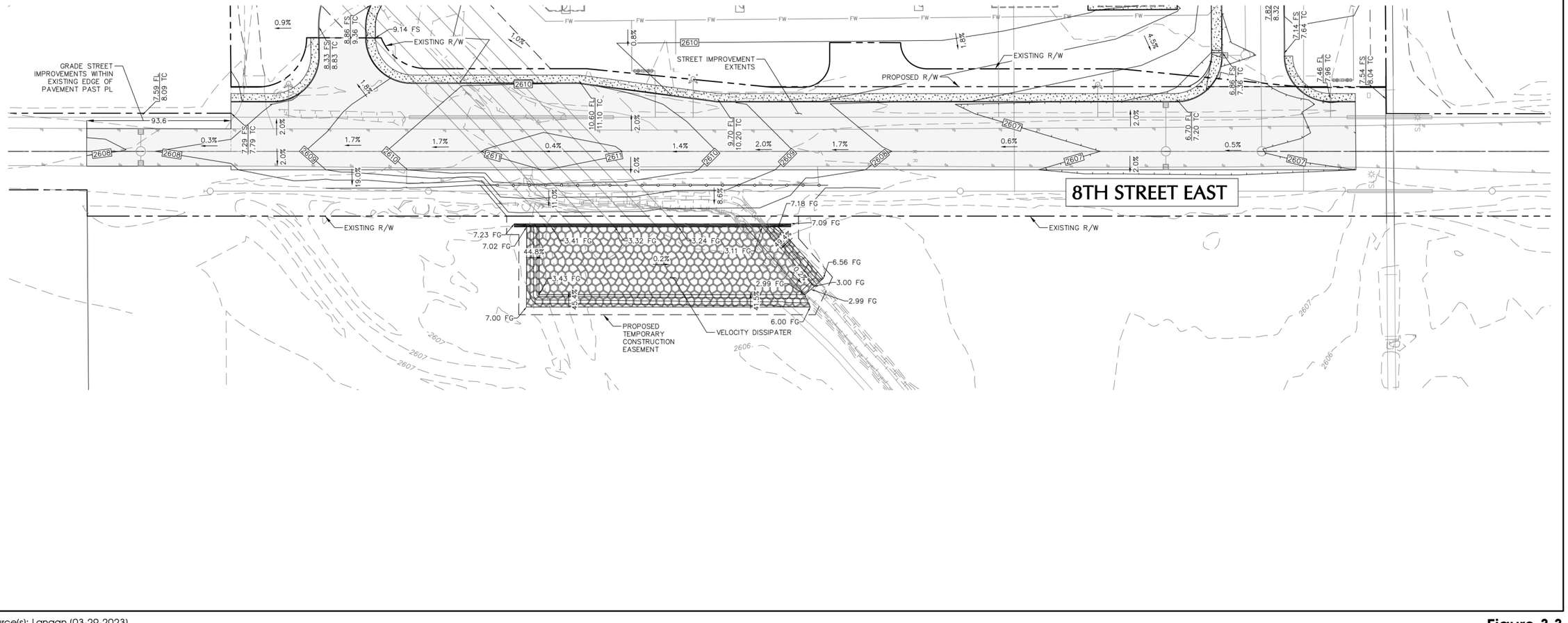


Source(s): Langan (03-29-2023)

Figure 3-2

Not to Scale

Conceptual Grading Plan



Source(s): Langan (03-29-2023)

Figure 3-3

Not to Scale

Conceptual Offsite Grading Plan







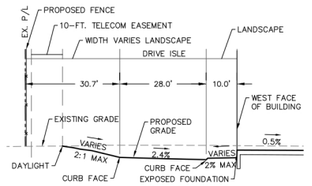


Source(s): HPA (02-23-2023)

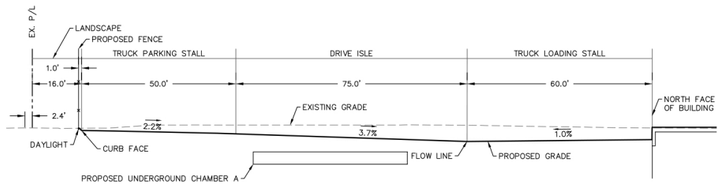
Figure 3-4

Not to Scale

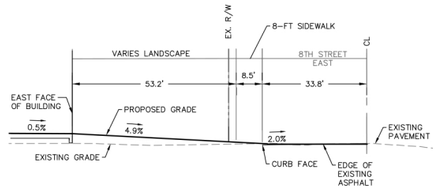
Proposed Building Elevations



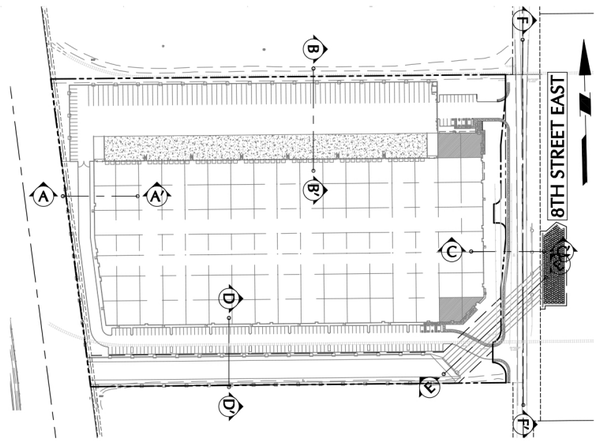
SECTION A-A'
1" = 20'



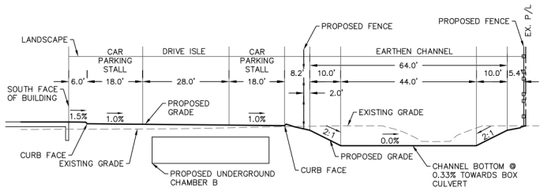
SECTION B-B'
1" = 20'



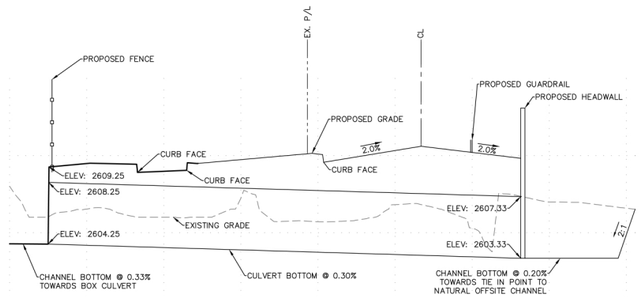
SECTION C-C'
1" = 20'



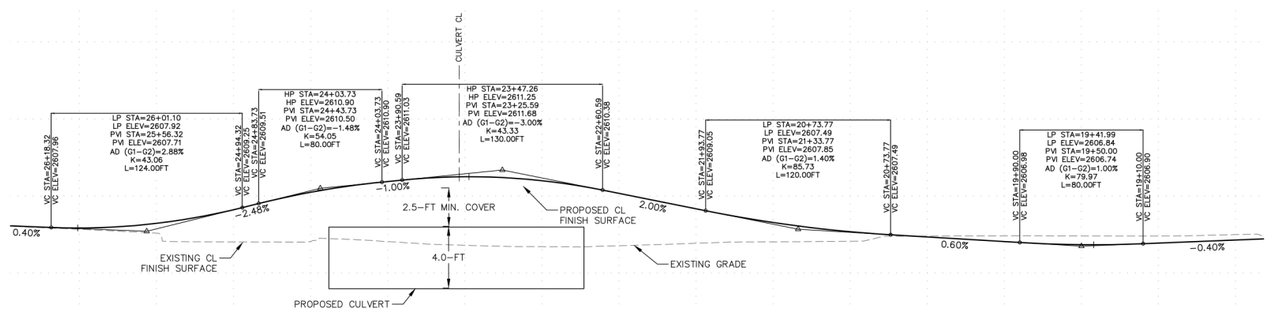
KEY MAP



SECTION D-D'
1" = 20'



SECTION E-E'
1" = 40'



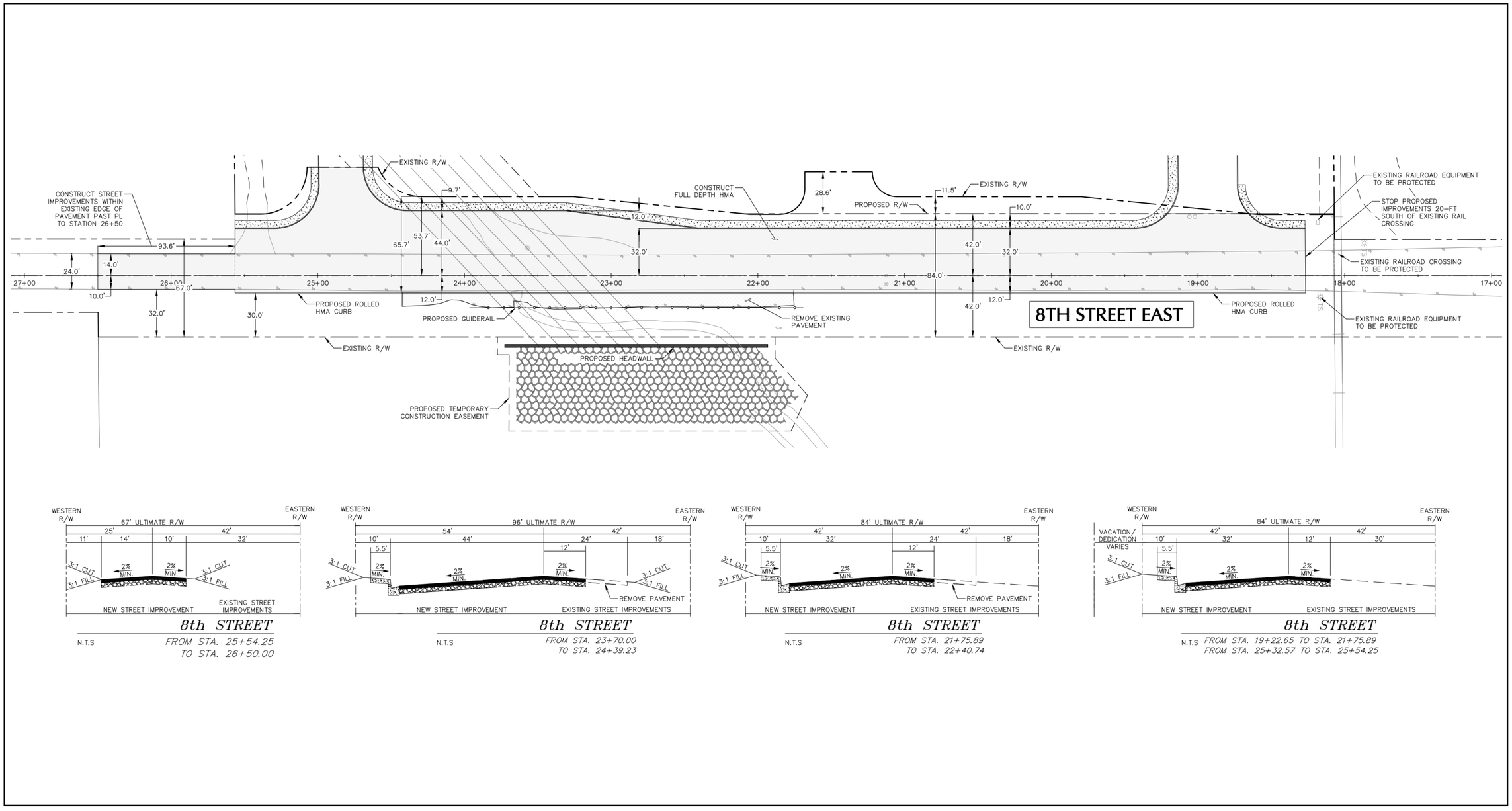
SECTION F-F'
1" = 40'

Source(s): Langan (03-29-2023)

Figure 3-5

Site Cross Sections

Not to Scale



8th STREET

N.T.S

FROM STA. 25+54.25
TO STA. 26+50.00

8th STREET

N.T.S

FROM STA. 23+70.00
TO STA. 24+39.23

8th STREET

N.T.S

FROM STA. 21+75.89
TO STA. 22+40.74

8th STREET

N.T.S

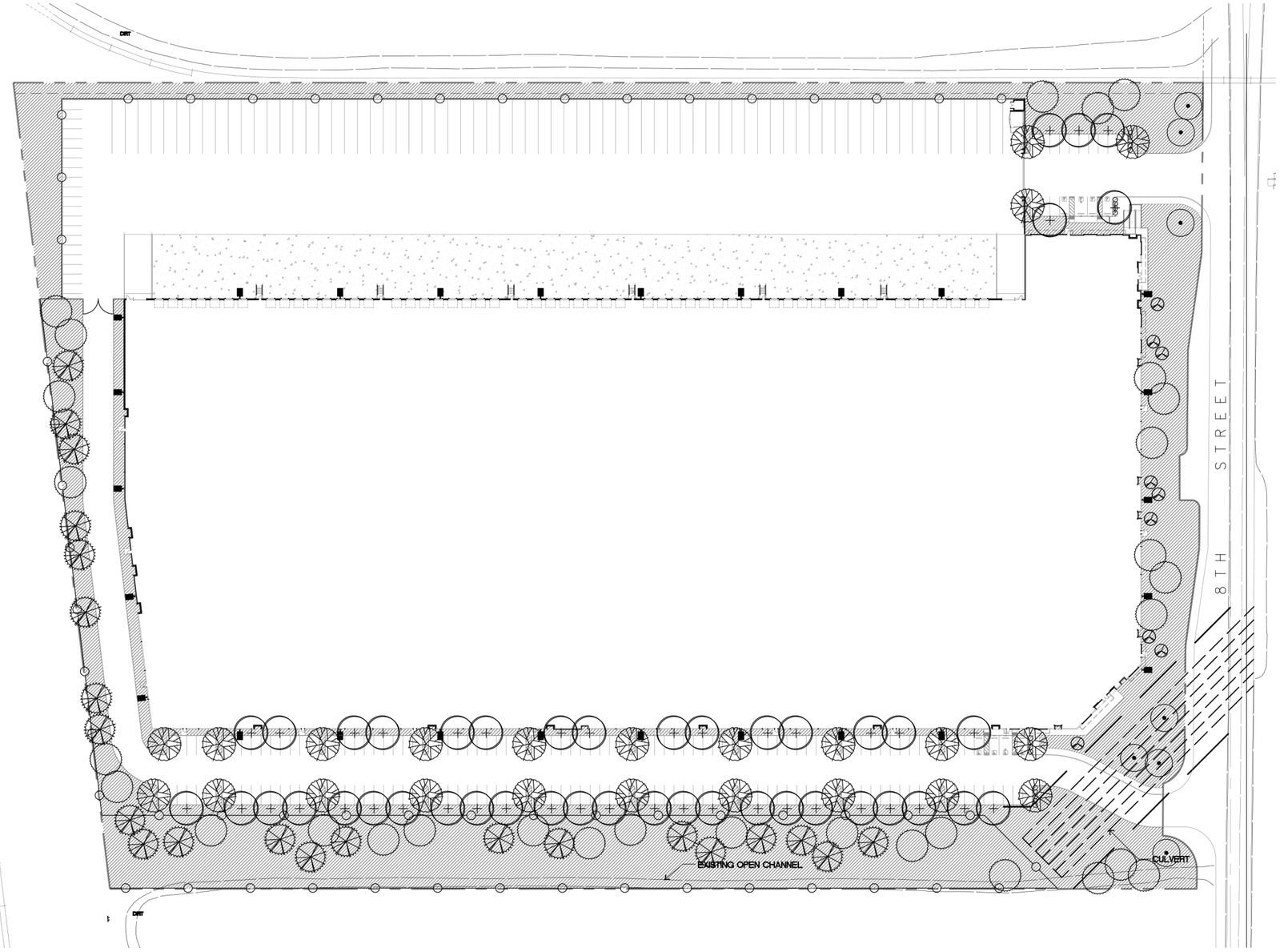
FROM STA. 19+22.65 TO STA. 21+75.89
FROM STA. 25+32.57 TO STA. 25+54.25

Source(s): Langan (03-29-2023)

Figure 3-6

Not to Scale

Conceptual Street Plan



PLANTING LEGEND

TREES

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Cercidium 'Desert Museum' Blue Palo Verde	36" Box	7	L	Multi
	Pinus eldarica Afghan Pine	24" Box	30	L	Standard
	Pistachia chinensis Chinese Pistache	15 Gal	44	L	Standard
	Prosopis chilensis Chilean Mesquite	24" Box	22	M	Multi
	Prunus c. 'Krauter Vesuvius' Purple-leaf Plum	15 Gal	9	M	Standard
	Quercus ilex Holly Oak	15 Gal	23	L	Standard

SHRUBS

SYMBOL	BOTANICAL/COMMON NAME	SIZE		WUCOLS	REMARKS
	Acca sellowiana Pineapple Gauva	5 Gal		M	
	Arbutus undeo Strawberry Tree	5 Gal		L	
	Dietes bicolor Fortnight Lily	5 Gal		M	
	Gaura lindheimeri Gaura	1 Gal		M	
	Heteromeles arbutifolia Toyon	15 Gal		L	
	Juniperus c. 'Armstrong' Armstrong Juniper	5 Gal		L	
	Leucophyllum frutiscens Texas Ranger	5 Gal		L	
	Ligustrum j. Texanum Texas Privet	5 Gal		M	
	Myrtus c. 'Complacta' Dwarf Myrtle	5 Gal		M	
	Muhlenbergia capillaris Pink Muhly	5 Gal		M	
	Muhlenbergia rigens Deer Grass	5 Gal		M	
	Rhus ovata Holly Berry	5 Gal		L	
	Salvia greggii Autumn Sage	5 Gal		L	

ACCENTS

SYMBOL	BOTANICAL/COMMON NAME	SIZE		WUCOLS	REMARKS
	Agave americana Century Plant	5 Gal		L	
	Agave 'Blue Glow Blue Glow Agave	5 Gal		L	
	Agave parryi Parry's Agave	5 Gal		L	
	Dasylerion wheeleri Desert Spoon	5 Gal		L	
	Hesperaloe parviflora Red Yucca	5 Gal		L	

GROUNDCOVER

SYMBOL	BOTANICAL/COMMON NAME	SIZE		WUCOLS	REMARKS
	Baccharis p. 'Pigeon Point' Dwarf Coyote Bush	1 Gal	48" O.C.	L	
	Cotoneaster 'Lowfast' Cotoneaster	1 Gal	60" O.C.	M	
	Hemerocallis hybridus-Yellow Yellow Day Lily	1 Gal	24" O.C.	M	
	Lonicera j. 'Halliana' Hall's Honeysuckle	1 Gal	48" O.C.	L	
	Rosmarinus o. 'Huntington Carpet' Prostrate Rosemary	1 Gal	36" O.C.	L	
	Trachelospermum jasminiodes Star Jasmine	1 Gal	24" O.C.	M	
	Tulbaghia violacea Society Garlic	1 Gal	24" O.C.	M	

Parking Area = 59,500 sf
Parking Landscape Area = 3,500 sf/ 5.8%

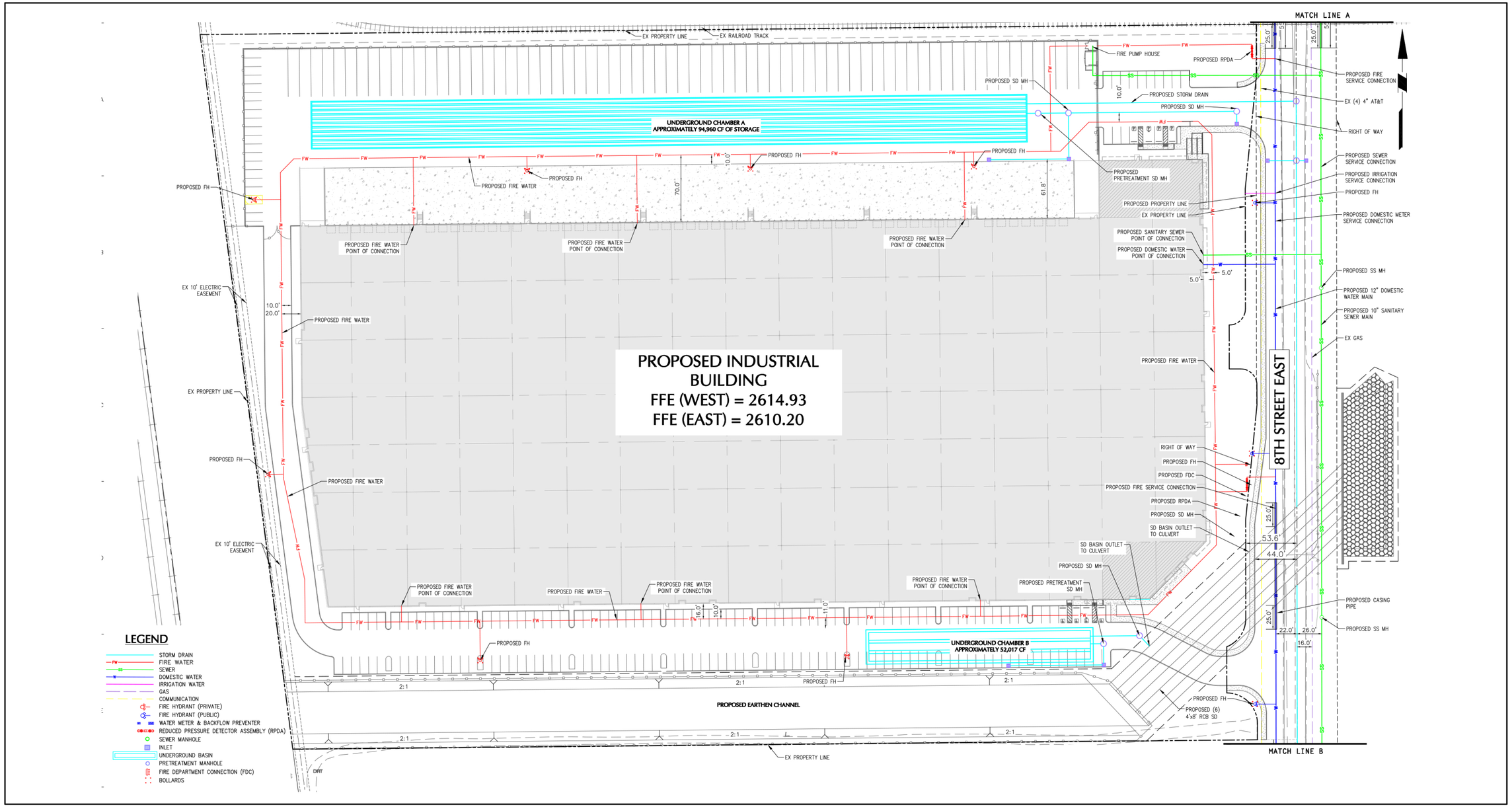
Proposed 3' high landscape screening

Source(s): Hunter Landscape (03-06-2023)

Figure 3-7

Not to Scale

Conceptual Landscape Plan

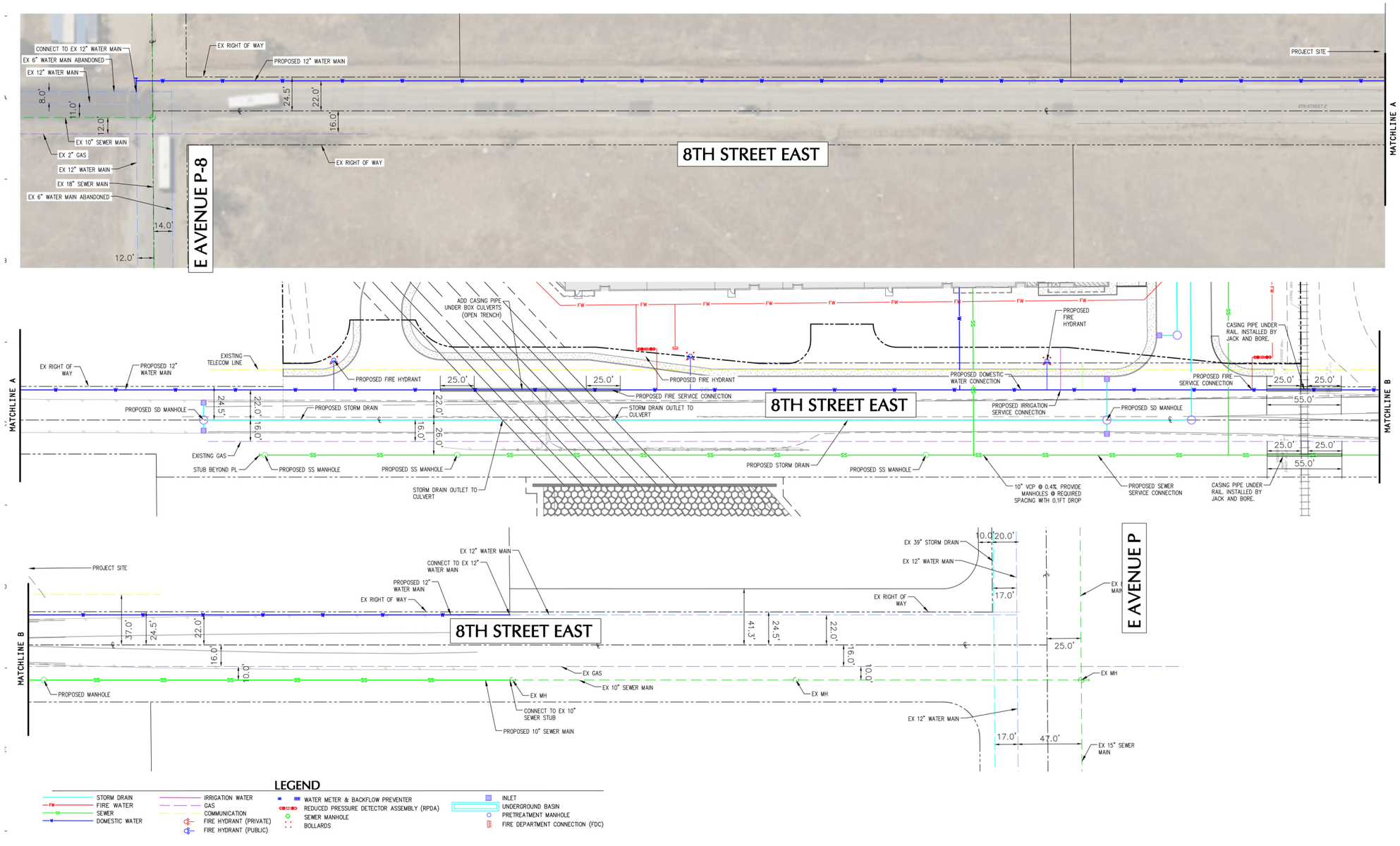


Source(s): Langan (03-29-2023)

Figure 3-8

Not to Scale

Conceptual On-Site Utilities



Source(s): Langan (03-29-2023)

Figure 3-9

Not to Scale

Conceptual Off-Site Utilities

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, 15 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	Noise
4.3	Biological Resources	4.11	Public Services
4.4	Cultural Resources	4.12	Transportation
4.5	Energy	4.13	Tribal Cultural Resources
4.6	Geology / Soils	4.14	Utilities / Service Systems
4.7	Greenhouse Gas Emissions	4.15	Wildfire
4.8	Hazards and Hazardous Materials		

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, 2022a).

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 4.15 of this EIR evaluate the 15 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 9, 2022. In addition, aerial photography (Google Earth, 2022) and Project application were used for this analysis. This Subsection also is based in part on information and policies contained in the City of Palmdale General Plan titled Palmdale 2045 (City of Palmdale, 2022a) and the City of Palmdale Municipal Code (PMC). (PMC, 2022) 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 encompasses approximately 18.05 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 along the west side of 8th Street East, immediately south of an inactive Union Pacific Railroad (UPRR) rail spur, approximately 0.14-mile south of East Rancho Vista Boulevard / Avenue P, and approximately 95 feet east of active UPRR mainline tracks, which are located adjacent to Sierra Highway. An unnamed graded channel that flows from west to east occurs along the southern boundary of the 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. With the exception of 8th Street East and railroad tracks as noted below, remaining land that abuts the Project site is vacant undeveloped land.

- North: To the immediate north of the Project site is an inactive rail spur (CPUC Crossing Number 001B-412.53-C) and railroad easement associated with the UPRR. To the north of the inactive UPRR rail spur is vacant and undeveloped land, an existing light industrial and retail/commercial (AV Graphix, Telesis Collision Center) warehouse development, and East Rancho Vista Boulevard / Avenue P. Further to the north and northeast is a Lockheed Martin Aeronautics facility and the inactive Palmdale Regional Airport. The Palmdale Regional Airport property is owned by the City of Los Angeles Department of Airports and operated under a joint agreement with United States Air Force (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.

- East: 8th Street East forms the eastern boundary of the Project site, which consists of a paved two-lane roadway. To the east of 8th Street East are undeveloped lands, several light industrial uses, sparsely developed residential dwelling units, and 10th Street East. A Head Start Palmdale District office, portions of which are used for school bus parking and early childhood

education, is located approximately 1,300 feet southeast of the Project site at 975 East Avenue P-8, with the school bus parking lot positioned closest to and facing the Project site. A second Palmdale School District office is located further to the south at 39139 10th Street East.

- South: To the immediate south of the Project site is vacant and undeveloped land. Light industrial uses and single-family dwelling units are situated to the south of Avenue P-8.

- West: Located approximately 95 feet west of the Project site is an active UPRR mainline (CPUC No. 001B-412.20, 101VY-69.95; DOT750643P) that carries heavy freight train traffic and passenger train service from Metrolink trains. Adjacent to the UPRR mainline is the Sierra Highway Bike Trail and Sierra Highway.

As shown previously on Figure 2-6, *Aerial Photograph*, the 18.05-acre Project site is vacant and undeveloped, but has been heavily disturbed by grading activities that, according to historical aerial photography, occurred on the site sometime between 2009 and 2011. The site contains several piles of gravel and road base. An unnamed graded channel runs from west to east along the southern boundary of the Project site. (CCG, 2021, p. 5) (Google Earth, 2022)

There are no rock outcroppings or other unique topographic or aesthetic features present on the property. As previously shown in Figure 2-7, *USGS Topographic Map*, the Project site exhibits little topographic variation and generally slopes downward from west to east with an overall topographic relief of approximately 12 feet. Elevations on the site range from approximately 2,618 feet above mean sea level (amsl) in the northwest corner of the site to 2,606 feet amsl within the unnamed graded channel near the southeast corner of the Project site. (Westland, 2022a, Appendix A)

Vegetation on the Project site consists mostly of disturbed rubber rabbitbrush scrub, with a small patch of developed/disturbed rubber rabbitbrush scrub in the eastern portion of the site and big sagebrush-rubber rabbitbrush scrub in the graded channel that runs along the southern boundary of the site. Most of the site has been previously disturbed (e.g., evidence of heavy machine work such as scraping), and contains many trash piles from illegal dumping. (Psomas, 2022a, pp. 14-16)

Pursuant to CEQA Guidelines Section 15125 and as discussed in Section 2.0, *Environmental Setting*, 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 August 29, 2022. As of that date, the Project site was vacant and undeveloped and had been subject to previous disturbance. To demonstrate the existing conditions, T&B Planning, Inc. collected photographs of the Project site on August 9, 2022. Figure 4.1-1, *Public Viewpoint Key Map*, illustrates the locations of the photographs taken from eight public vantage points to show the existing aesthetic condition and character of the Project site. These photographs provide a representative visual depiction of the visual characteristics of the Project site 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 may be visible in the distance from the northeast corner of Desert Sands Park, which is located approximately 0.53-mile southwest of the Project site. To the west of the Project site and adjacent to the UPRR mainline is the Sierra Highway Bike Trail and Sierra Highway; the Project site is visible from the UPRR mainline, the Sierra Highway Trail, and from Sierra Highway. 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 Highway looking southeast toward the Project site. Desert scrub vegetation and a wooden rail fence that runs along the active UPRR track are visible in the foreground of the photograph. The active UPRR track, which parallels the western boundary of the Project site, is visible in the center of the photograph. A portion of a commercial building from the commercial/light industrial park, located approximately 390 feet north of the Project site, is visible in the left-hand portion of the photograph. Mountain views associated with the San Gabriel Mountains are visible in the far distance along the horizon in the right-hand portion of the photograph.

- Viewpoint 2 is from 8th Street East standing at the inactive UPRR rail spur, which parallels the northern edge of the Project site, looking southwest toward the Project site. A UPRR utility box is visible in the center of the photograph. 8th Street East is visible in the left-hand portion of the photograph. Desert scrub vegetation is visible in the center of the photograph. Commercial/light industrial buildings are visible along the horizon in the right-hand portion of the photograph. Mountain views associated with the Sierra Pelona Mountains are visible along the horizon in the entire photograph.

- Viewpoint 3 is from 8th Street East standing at the southeast corner of the Project site, looking northwest toward the Project site. Desert scrub vegetation of the vacant property to the south of the Project site is visible in the foreground center of the photograph. Mountain views associated with the Tehachapi Mountains are visible in the far distance along the horizon in the left-hand portion of the photograph. Buildings from the industrial park, located approximately 1,235 feet west of the Project site, are visible along the horizon in the center portion of the photograph. Commercial/light industrial buildings from the commercial/light industrial park located approximately 390 feet north of the Project site are visible along the horizon in the right-hand portion of the photograph.

- Viewpoint 4 is from Sierra Highway nearest the southwestern corner of the Project site, looking northeast toward the Project site. Sierra Highway, a wooden rail fence, and desert scrub vegetation are visible in the foreground of the photograph. The inactive UPRR spur is visible in the center of the photograph. Buildings from the commercial/light industrial park, located

approximately 390 feet north of the Project site, are visible along the horizon in the center portion of the photograph.

- Viewpoint 5 is from the active UPRR, standing south of its intersection with East Rancho Vista Boulevard / Avenue P, looking southeast toward the Project site. The active UPRR, which parallels the western edge of the Project site, is visible in the center of the photograph. A portion of a commercial building from the commercial/light industrial park, located approximately 390 feet north of the Project site, is visible in the left-hand portion of the photograph. Desert scrub vegetation is visible throughout the photograph. A wooden rail fence that runs along the active UPRR mainline is visible in the right-hand portion of the photograph. Mountain views associated with the San Gabriel Mountains are visible along the horizon.

- Viewpoint 6 is from a parking lot in the back of the commercial/light industrial park located approximately 390 feet north of the Project site along East Rancho Vista Boulevard / Avenue P, looking south toward the Project site. Development in the commercial/light industrial park is visible in the distant left, center and right-hand portions of the photograph. Mountain views associated with the San Gabriel Mountains are visible along the horizon in the entire photograph.

- Viewpoint 7 is from the corner of East Avenue P-8 at its intersection with 8th Street East, looking northwest toward the Project site. 8th Street East is visible in the immediate foreground of the photograph. Desert scrub vegetation is visible throughout most of the photograph. Mountain views associated with the Tehachapi Mountains are visible in the far distance along the horizon in the left-hand portion of the photograph. Buildings from the industrial park, located approximately 1,235 feet west of the Project site, are visible along the horizon in the center portion of the photograph. Commercial/light industrial buildings from the industrial park located approximately 390 feet north of the Project site are visible along the horizon in the right-hand portion of the photograph.

- Viewpoint 8 is from East Avenue P-8, standing north of the AV Self Storage building, and approximately 100 feet west from the Palmdale School District bus facility, looking northwest towards the Project site. Desert scrub vegetation runs across the center of the photograph. Mountain views associated with the Tehachapi Mountains are visible in the far distance along the horizon in the left and right-hand portions of the photograph. Buildings from the industrial park, located approximately 1,235 feet west of the Project site, are visible along the horizon in the center portion of the photograph. Buildings from the commercial/light industrial park located approximately 390 feet north of the Project site are visible along the horizon in the right-hand portion of the photograph.

B. Scenic Vistas and Scenic Resources

The Project site is located within a relatively flat valley floor surrounded by rugged hills and mountains. Major scenic resources in Palmdale that contribute to scenic vistas include the Tehachapi Mountains

to the northwest, the San Gabriel Mountains to the south, and the Sierra Pelona Mountains to the west. In the far distance on clear days, views are possible from the Project site and the roads surrounding the Project site, to the Tehachapi Mountains ridgelines to the northwest, the San Gabriel Mountains to the south, and the Sierra Pelona Mountains to the west (Google Earth, 2022).

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 often obscures or completely blocks the distant views of the mountains.

C. *Light and Glare*

The Project site contains no sources of artificial exterior lighting under existing conditions. Artificial, exterior lighting sources occur in the vicinity of the Project site, emanating from Sierra Highway, East Rancho Vista Boulevard / Avenue P, a commercial/light industrial park located approximately 390 feet north of the Project site, and light industrial uses located approximately 1,235 feet to the west.

4.1.2 Regulatory Setting

A. *City of Palmdale General Plan*

The Land Use and Community Design Element of the City's General Plan titled 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 Plant 42 while maintaining compatibility with adjacent non-industrial uses (Goal LUD-17). (City of Palmdale, 2022a)

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 p. 130 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, 2022a, p. 130)

B. *City of Palmdale Municipal Code*

The Palmdale Municipal Code (PMC) addresses lighting requirements and development standards.

1. Lighting Standards

PMC Chapter 17.86 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 be 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.

Additionally, 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 to be prepared for new development in conformance with the PMC. (PMC, 2022)

2. Development Standards

Title 17 of the PMC establishes zoning classifications within the City and sets forth development standards applicable to each zone classification. The City recently updated its Zoning Code Ordinance and zoning map to be consistent with the City's newly adopted General Plan (Palmdale 2045). Pursuant to the PMC, the Project site is zoned Heavy Industrial (HI). The HI zone is intended to allow for a range of medium to high intensity industrial uses such as manufacturing, assembly, warehousing, distribution, and the like, which provide employment and services for residents and businesses. The Project is consistent with the zoning designation established by the City for the property and would not conflict with applicable zoning requirements. (PMC, 2022)

C. Palmdale Public Art Master Plan

Public Art Master Plan (2020) Finalized in 2020, the Palmdale Public Art Master Plan 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)

D. Palmdale Freeway and Roadway Landscape Design Guidelines

Palmdale Freeway and Roadway Landscape Design Guidelines (2021) ensures that the design and appearance of City's major landscape plantings, hardscape materials, signage and artwork are cohesive throughout the city and related to the local geography, unique features of the Mojave Desert, and the City's cultural history and future. (City of Palmdale, 2022a, p. 4)

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 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 (PMC, 2022)

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). According to the General Plan EIR, 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 northern undeveloped portions of the City. Leona Valley is a scenic area, located approximately four miles to the west of the City. Distant views are afforded of the Sierra Pelona Mountains located approximately 11 miles to the west; the San Gabriel Mountains located approximately 34 miles to the southeast; and the Tehachapi Mountains located approximately 36 miles to the northwest of the City (City of Palmdale, 2022b, pp. 4.1-1-4.1-2). On clear days, distant views of the Tehachapi Mountains ridgelines to the northwest, the San Gabriel Mountains to the southeast, and the Sierra Pelona Mountains to the west, are possible from the Project site and the roads surrounding the Project site (Google Earth, 2022).

The Project would involve the construction and operation of one 380,410 square foot (s.f.) non-refrigerated fulfillment warehouse building. The approximately 18.05-acre Project site is flat, was previously disturbed, and does not contain resources of substantial scenic value. Because the Project site does not contain significant visual resources under existing conditions and views to 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, has no potential to obscure a scenic vista. There are no pieces of construction equipment so large that scenic views of the distant mountains 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 proposed warehouse building would have a variable roofline, ranging in height from approximately 41 feet to 45 feet. Implementation of the Project would also 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 building. At a maximum height of approximately 45 feet, the proposed building would not be so tall as to obstruct public views or otherwise substantially detract from public views of the surrounding topographic features and landforms, including the Tehachapi, San Gabriel and the Sierra Pelona Mountains, which due to the heights of these landform features ranging from approximately 5,791 feet to 10,069 feet amsl at their highest elevations, and distance from the Project site, would still be visible along and above the horizon.

In some instances, the proposed warehouse building may intermittently obstruct mountain views in the distance as drivers travel immediately adjacent to the Project site along 8th Street East. Single views toward the mountains in the distance across the Project site from this road 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 8th Street East. Intermittent view obstruction is not considered a significant impact. As such, the Project would not have a substantial adverse effect on scenic vistas. Impacts would be less than significant and no mitigation is required.

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?

The Project site does not contain any scenic resources, including trees, rock outcroppings, or historic buildings.

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 22.6 miles south 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 distance from the Project site to any State scenic highway is approximately 22.6 miles, implementation of the Project would not substantially damage scenic resources within a State scenic highway. Therefore, no impact would occur as a result of the Project and no mitigation is required.

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?

A. Urbanized Area

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. The Project site is located within the boundaries of the Census-defined Lancaster-Palmdale urbanized area (USCB, 2010). Because the Project site is located 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, the evaluation herein focuses on the compatibility of the Project with, or potential conflict with, applicable zoning and other regulations governing scenic quality. Applicable policies and regulations are those contained in the General Plan (Palmdale 2045) and the PMC.

B. Applicable Zoning and Other Regulations Governing Scenic Quality

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*.

1. General Plan Land Use and Community Design Element

Palmdale 2045 designates the Project site for Industrial land uses. The proposed Project is consistent with the site's Industrial land use designation. The Land Use and Community Design Element of the General Plan focuses on establishing goals and policies that define and guide the desired visual character and quality of specific districts, village centers, and corridors in the City of Palmdale, including development standards for areas designated Industrial. (City of Palmdale, 2022a, Figure 5-4 and Figure 5-5). Consistency with applicable goals is demonstrated below.

- Land Use and Community Design Goal LUD-4 calls for high quality architecture and site design. The Project is consistent with this goal. Its proposed architectural character and site design are described in EIR Section 3.0, *Project Description*, which are of high quality and meet modern, contemporary standards for the proposed warehouse building type.

- Land Use and Community Design Goal LUD-7 calls for well-landscaped streets and civic spaces. The Project is consistent with this goal. Its proposed landscaping is described in EIR Section 3.0, *Project Description*, which includes a variety of trees, shrubs, and groundcover, with landscaping primarily proposed at the Project site frontage along 8th Street East and along the western site boundary, and within the passenger vehicle parking area in the eastern portion of the site. The Project site's frontage with 8th Street East will be well-landscaped as part of the Project's design.

- Land Use and Community Design Goal LUD-8 encourages art and culture. The Project is consistent with this goal. The Project Applicant proposes to provide public art installations in the northeastern and southeastern corners of the Project site along the Project site's frontage with 8th Street East.

- Land Use and Community Design Goal LUD-16 calls for increasing job opportunities through expanded flex, light industrial, production/ distribution/repair, and creative/flex land uses. The Project is consistent with this goal. The Project is an employment-generating industrial use on land designated Industrial by the City's General Plan.

- Land Use and Community Design Goal LUD-17 calls for and facilitating industrial areas that support and buffer Plant 42 while maintaining compatibility with adjacent non-industrial uses. The Project is consistent with this goal. The Project site is located west of Plant 42 and serves as a compatible transitional use between the aeronautical uses on the Plant 42 site and non-industrial designated land further to the west.

Development standards also are included in Palmdale 2045 for industrially designated areas and address the consideration of setbacks, design of the public realm, connecting features like paseos and sidewalks, and parking. The Project's design is consistent with the applicable standards. The Project's proposed building would be set back from 8th Street East a considerable distance at approximately 145 feet, within which retention basins, drive aisles, parking stalls and landscaping would be positioned. An eight-foot-wide sidewalk would be installed along the Project site's frontage with 8th Street East as a connecting feature and the Project's loading docks would be screened from view along 8th Street East by proposed solid wing walls. Additionally, the building's office elements and proposed outdoor employee amenity areas would be located at the northeast and southeast corners of the building facing 8th Street East, which enhance the visual character of the building as viewed from the public realm.

2. PMC Chapters Governing Scenic Quality

The PMC's standards pertaining to development in Industrial Zones is contained in PMC Division 6. Standards for the HI zone are contained in PMC Chapter 17.62. All permitted uses involving new development are subject to review and approval of a Site Plan Review (SPR) application. As described in Section 3.0*, Project Description*, the Project Applicant submitted SPR 22-012 for the proposed Project. As previously described in Section 3.0, *Project Description*, SPR 22-012 proposes development of the 18.05-acre vacant Project site with a 380,410 s.f. building that would include 374,410 s.f. of warehouse space and a total of 6,000 s.f. of office uses at the northeast and southeast portions of the building. The building would be rectangularly shaped with the shorter sides of the building facing east and west and the longer sides of the building facing north and south. The building would have a total of 54 truck docking doors within the fenced and gated truck court positioned on the north side of the building. The proposed building would have a variable roofline ranging in height from 41 feet to 45 feet. The building's walls would be constructed of concrete tilt-up panels with offices located at the northeast and southeast corners of the building. The building would be painted a mixture of white and grey colors, with the office locations being treated with tempered glass with clear anodized aluminum mullions as well as grey metal canopies. Landscaping for the proposed Project would consist of a variety of trees, shrubs, and groundcover, with landscaping primarily proposed at the Project site frontage along 8th Street East and along the western site boundary, and within the passenger vehicle parking area in the eastern portion of the site.

The City of Palmdale reviewed proposed SPR 22-012 for consistency with the applicable standards of PMC Division 6, *Industrial Zones* (Table 17.66.01-1) and found the Project to be consistent. The Project's design complies with the minimum 20,000 s.f. lot area standard (the Project site is approximately 18.05 acres), the minimum building setback standard of 10 feet or 20 feet abutting a freeway, the maximum building height standard of 50 feet/four stories (the proposed building would be approximately 45 feet tall), the maximum lot coverage standard of 50 percent (the proposed building coverage is 49 percent), the maximum floor area ratio (FAR) of 0.5 (the proposed FAR is 0.5) and the minimum landscape requirement of 10 percent (the Project's design achieves a 10.9 percent landscape coverage). The Project's design also complies with the PMC's off-street parking requirements by providing for 200 paved passenger vehicle parking stalls whereas 187 stalls are required by the PMC,

and as required all loading areas would be screened from public view along 8th Street East by landscaping and solid screen walls.

In summary, the Project is consistent with the land use and zoning designations established by the City for the property and would be not conflict with applicable General Plan goals and policies and zoning requirements. Therefore, implementation of the proposed Project would not conflict with applicable zoning and other regulations governing scenic quality. Thus, impacts would be less than significant and no mitigation is required.

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 a non-refrigerated fulfillment warehouse, 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. 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. 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 the Project would be required to comply with PMC Chapter 17.86.030, Outdoor Lighting standards, which prevent light spillover, glare, nuisance, inconvenience, or hazardous interference of any kind on adjacent properties and streets. Mandatory compliance with the PMC Chapter 17.86 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 would be a required as a condition of the Project's approval.

B. *Glare*

With respect to glare, a majority of the building materials associated with the Project 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 building 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, because the glass proposed for the Project is low-reflective and the building would be set back approximately 145 feet from 8th Street East, which is a considerable distance that greatly minimizes the potential for any vehicle headlights along 8th Street East to shine into the building's glass elements. Also, the Project's conceptual landscaping plan calls for the eastern and northern perimeters of the site and a large portion of the western perimeter of the site 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 building designs also would be softened by landscaping proposed near the building's 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.

Photovoltaic panels proposed to be installed on the building's roof. Some noticeable glare may occur but the panels are expected to absorb and not reflect sunlight. Although the design of the photovoltaic panels is not available at this time, and cannot be available until the building's construction documents become available and the structural roof design is determined and the panel manufacturer selected, glare impacts would be less than significant and not adversely affect day or nighttime views in the area. Of greatest concern to views are reflection or glare observed by drivers. Because the solar panels would be placed on the building's roof and sit flat on the roof no reflected glare is expected to affect nearby roadways or adjacent sensitive land uses and therefore this potential impact is considered less than significant.

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 either vacant land or rail lines. To the north, the ground-level viewshed extends to the inactive UPRR spur and undeveloped land, beyond which approximately 390 feet to the north is an industrial park. To the east, the ground-level viewshed extends to 8th Street East, beyond which is undeveloped land, and further beyond which are light industrial uses. To the south, the ground-level viewshed remains undeveloped for approximately 0.27-mile where there is industrial use. To the west, the ground-level viewshed extends to the active UPRR mainline tracks, beyond which is Sierra Highway and beyond which are a mix of land uses.

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 often 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 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. 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 22.6 miles south 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 commercial and industrial buildings. As with the Project, any 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 all applicable requirements contained in PMC Chapter 17.86. In turn, other development projects in the City would also 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: Less Than Significant Impact. The Project site does not comprise a scenic vista and does not contain any visually prominent scenic features. No unique views to scenic vistas are visible from the property. The Project would not substantially change a scenic view or substantially block or obscure a scenic vista; therefore, impacts to scenic vistas would be less than significant and no mitigation is required.

Threshold b: No Impact. The Project site does not contain any scenic resources, including trees, rock outcroppings, or historic buildings. Because the distance from the Project site to any State scenic highway is approximately 22.6 miles, implementation of the Project would not substantially damage scenic resources within a State scenic highway. Therefore, no impact would occur as a result of the Project and no mitigation is required.

Threshold c: Less than Significant Impact. The Project site is located within an urbanized area and would not conflict with applicable zoning and other regulations governing scenic quality either during short-term construction or long-term operation of the Project. Therefore, 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 PMC Chapter 17.86, Outdoor Lighting requirements 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.

4.1.7 Mitigation

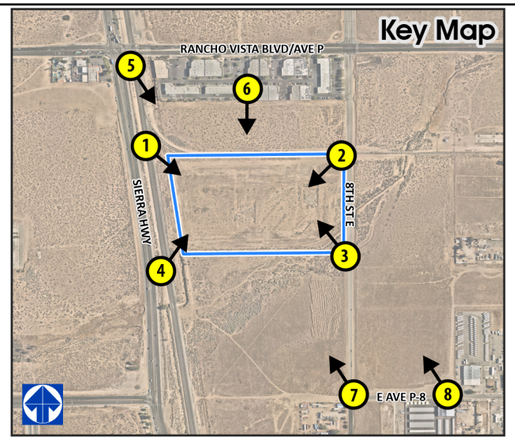
Impacts would be less than significant; therefore, no mitigation is required.

4.1.8 Design Features (DF) and Regulatory Requirements (RR)

There are no design features or regulatory requirements related to the issue area of Aesthetics beyond the general federal, State and local regulations.



Viewpoint 1: From Sierra Hwy. looking southeast towards the Project site.



Source(s): Nearmap Imagery (2022)



Viewpoint 2: From 8th St. E. looking southwest towards the Project site.



Viewpoint 3: From 8th St. E. looking northwest towards the Project site.



Viewpoint 4: From Sierra Hwy. looking northeast towards the Project site.



Viewpoint 5: From the Union Pacific Railroad looking southeast towards the Project site.



Viewpoint 6: From an office park along Rancho Vista Blvd/Ave P looking south towards the Project site.



Viewpoint 7: From E. Ave. P-8 looking northwest towards the Project site.



Viewpoint 8: From E. Ave. P-8 looking northwest towards the Project site.

Figure 4.1-1

Not to Scale

Public Viewpoint Key Map

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, "8th Street Industrial Air Quality Impact Analysis" (herein, "AQIA"), dated January 13, 2023, and is included as *Technical Appendix B1* to this EIR (Urban Crossroads, 2023a). The second report evaluates potential health risk effects from the proposed Project, and is titled, "8th Street Industrial Mobile Source Health Risk Assessment" (herein, "HRA"), dated January 13, 2023, and is included as *Technical Appendix B2* to this EIR (Urban Crossroads, 2023b). It is noted that these technical studies analyzed the Project as a 384,800 square foot (s.f.). cross-dock building which is 4,390 s.f. larger than the proposed building at 380,410 s.f. and is a design that positions loading docks on the north and south sides of the building rather than only on the north side of the building as is proposed in the current Project design; therefore, the analysis herein represents a Project design scenario that would produce more air quality pollutants than would actually occur under the current Project design, which is a smaller building with dock doors on only the north side of the building. 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. 10)

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. 10)

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. 10-11)

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.

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 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. 18)

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 February 20, 2019, CARB posted the 2018 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. 21)

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

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	Nonattainment
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Unclassified/Attainment
$PM_{2.5}$	Unclassified	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.
"-" = The national 1-hour O3 standard was revoked effective June 15, 2005.
(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-Division Street monitoring station, located approximately 4.9 miles north 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 (2019-2021)*, 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. 21)

Table 4.2-3 Project Area Air Quality Monitoring Summary (2019-2021)

Pollutant	Standard	Year		
		2019	2020	2021
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.096	0.099	0.086
Maximum Federal 8-Hour Concentration (ppm)		0.081	0.083	0.079
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	1	4	0
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	13	8	3
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	1.39	1.62	1.42
Maximum Federal 8-Hour Concentration	> 20 ppm	0.63	0.71	0.75
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.050	0.052	0.046
Annual Federal Standard Design Value		0.008	0.008	0.008
PM_{10}				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 150 $\mu g/m^3$	165.1	192.3	411.2
Annual Federal Arithmetic Mean ($\mu g/m^3$)		22.5	30.6	29.6
Number of Days Exceeding Federal 24-Hour Standard	> 150 $\mu g/m^3$	2	1	1
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 35 $\mu g/m^3$	13.6	74.7	35.7
Annual Federal Arithmetic Mean ($\mu g/m^3$)	> 12 $\mu g/m^3$	6.1	9.3	8.1
Number of Days Exceeding Federal 24-Hour Standard	> 35 $\mu g/m^3$	0	9	1

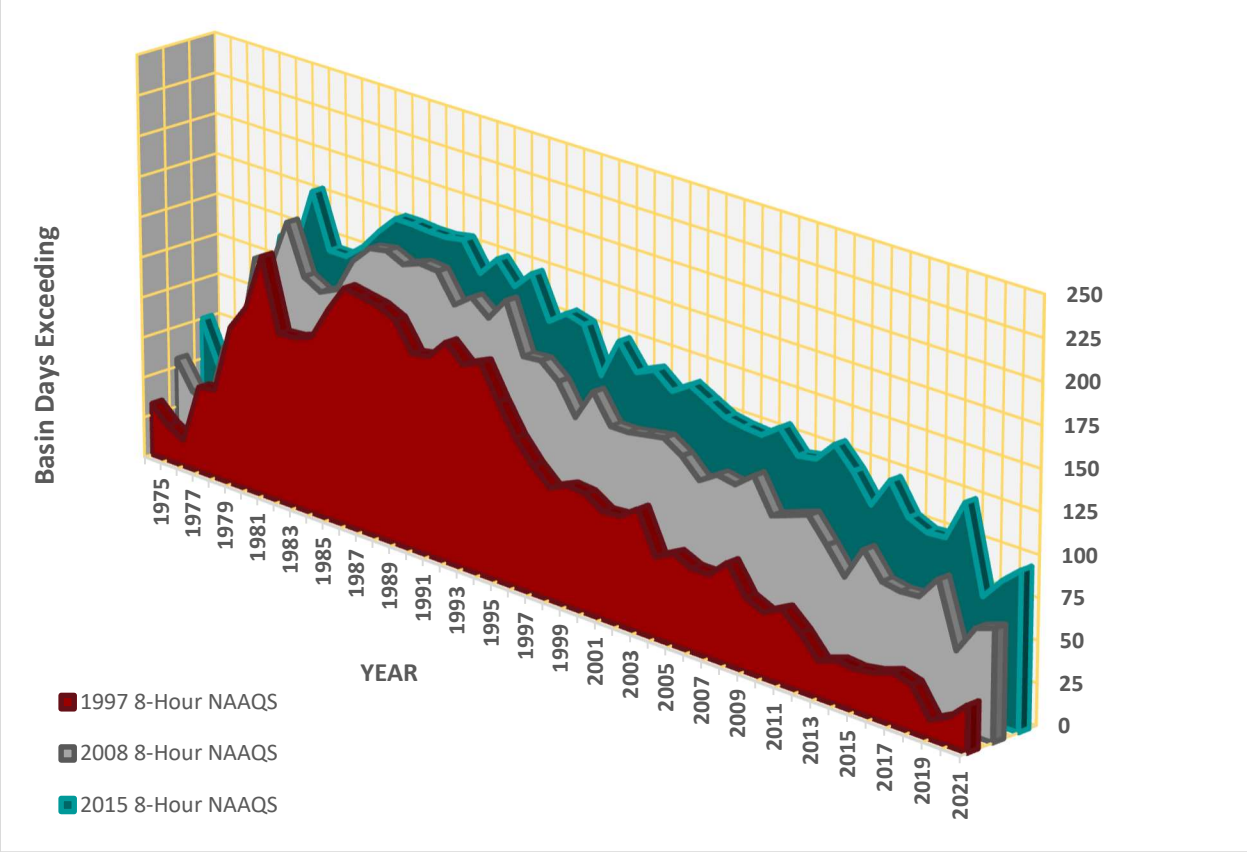
Source: California Air Resource Board iADAM: Air Quality Data Statistics and AQMIS
ppm = Parts Per Million
$\mu g/m^3$ – microgram per cubic meter
-- = data not available
(Urban Crossroads, 2023a, Table 2-4)

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. 26)

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 three 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. 26)

Table 4.2-4 MDAB O_3 Trend



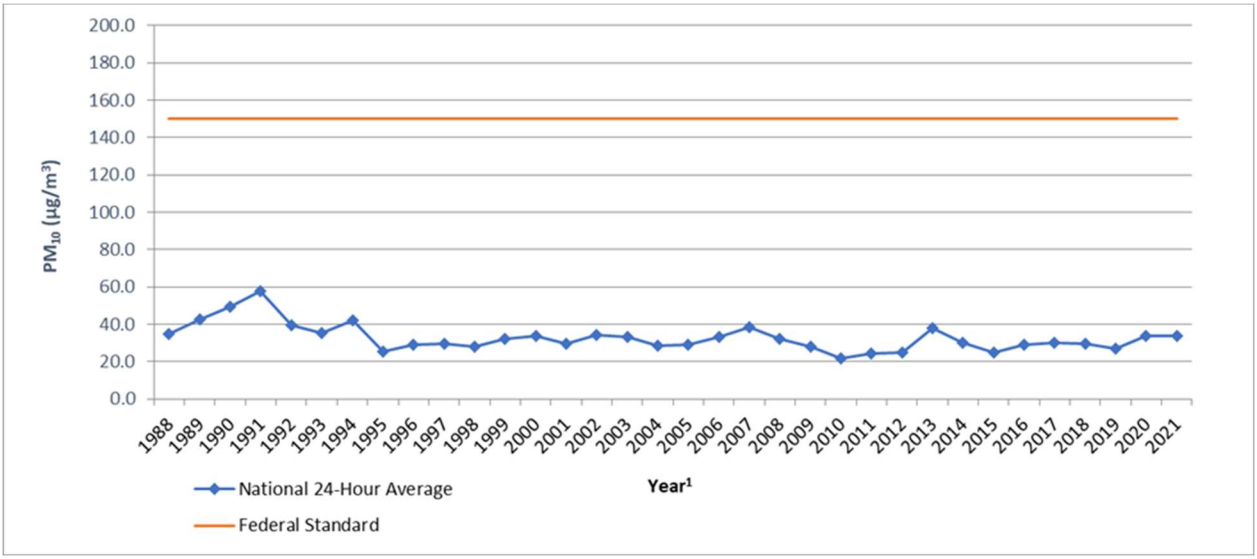
Source: 2020 CARB, iADAM: Top Four Summary: PM^{10} 24-Hour Averages (1973-2021)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.
(Urban Crossroads, 2023a,Table 2-5)

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. 27)

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. 29)

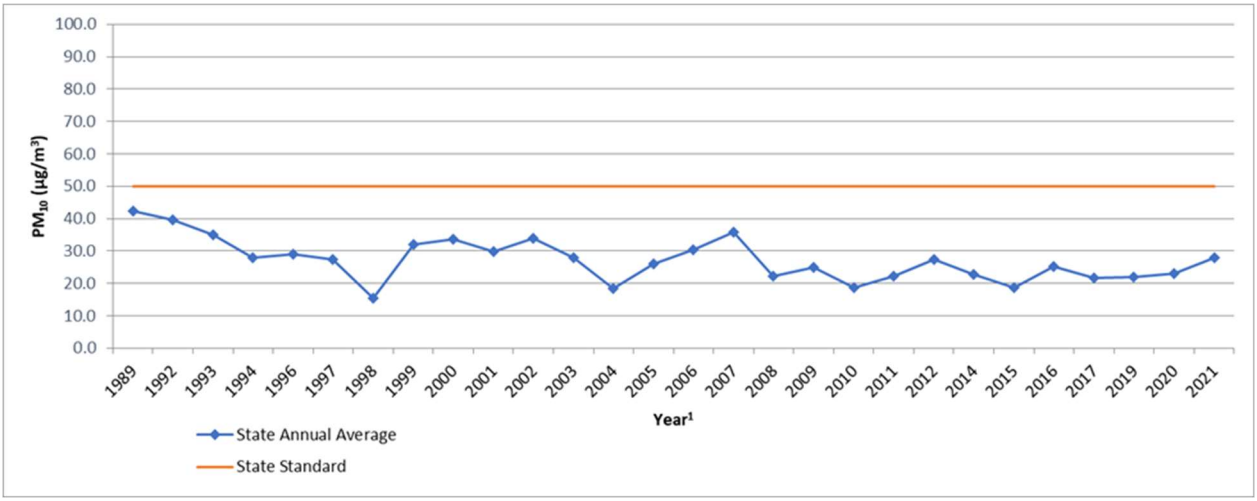
The most recent NO_2 data for the MDAB is shown in Table 4.2-9, *MDAB 1-Hour Average Concentration NO2 Trend (Based on Federal Standard)* and Table 4.2-10, *MDAB 1-Hour Average Concentration NOx Trend (Based on State Standard)*. Over the last 50 years, NO_2 values have decreased substantially; the peak 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. 30)

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



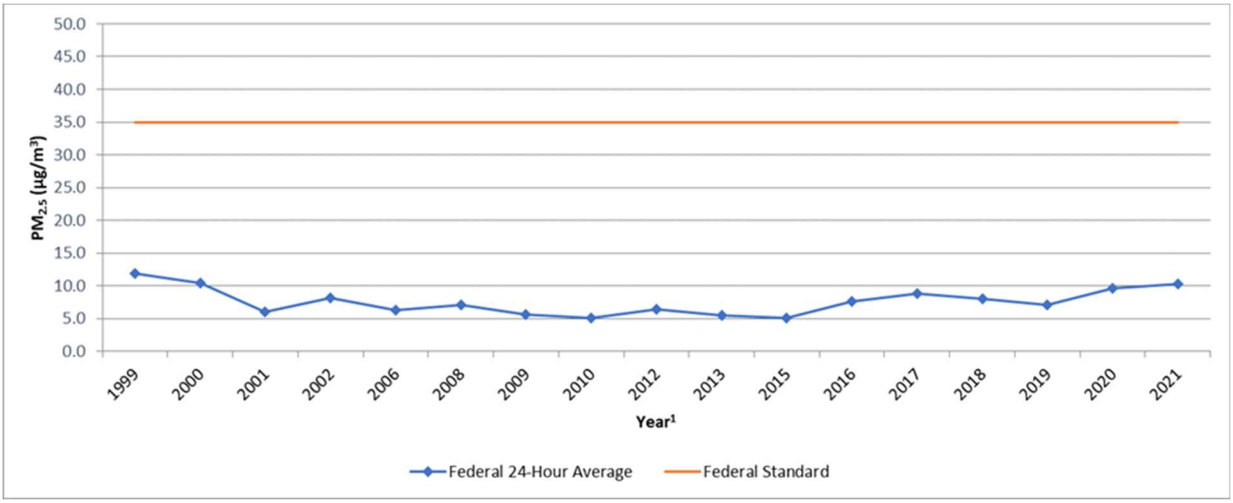
Source: 2020 CARB, iADAM: Top Four Summary: PM^{10} 24-Hour Averages (1988-2021)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.
(Urban Crossroads, 2023a, Table 2-6)

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



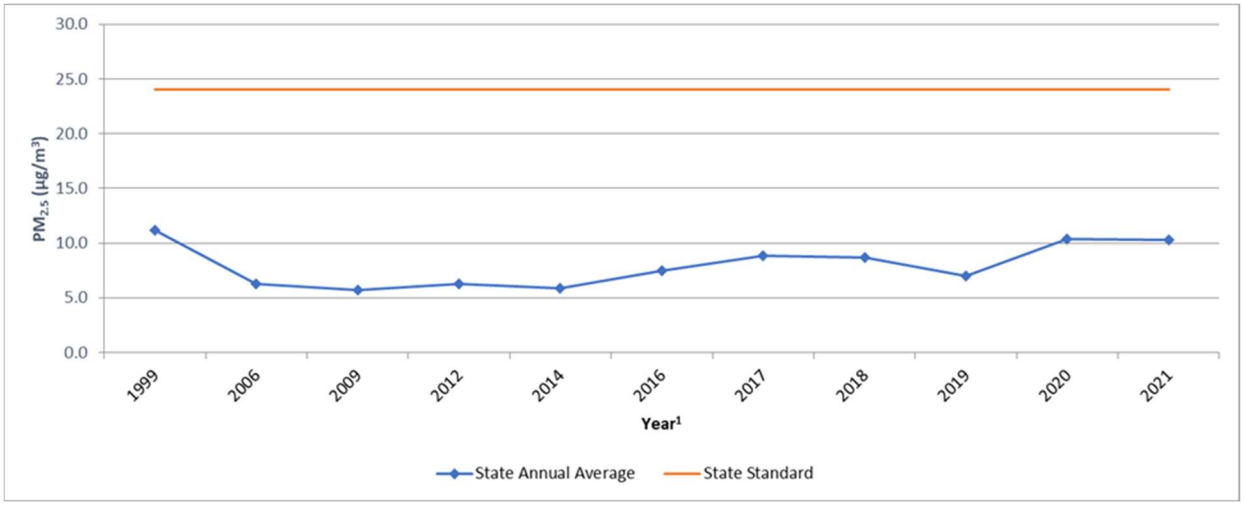
Source: 2020 CARB, iADAM: Top Four Summary: PM^{10} 24-Hour Averages (1988-2021)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.
(Urban Crossroads, 2023a, Table 2-7)

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



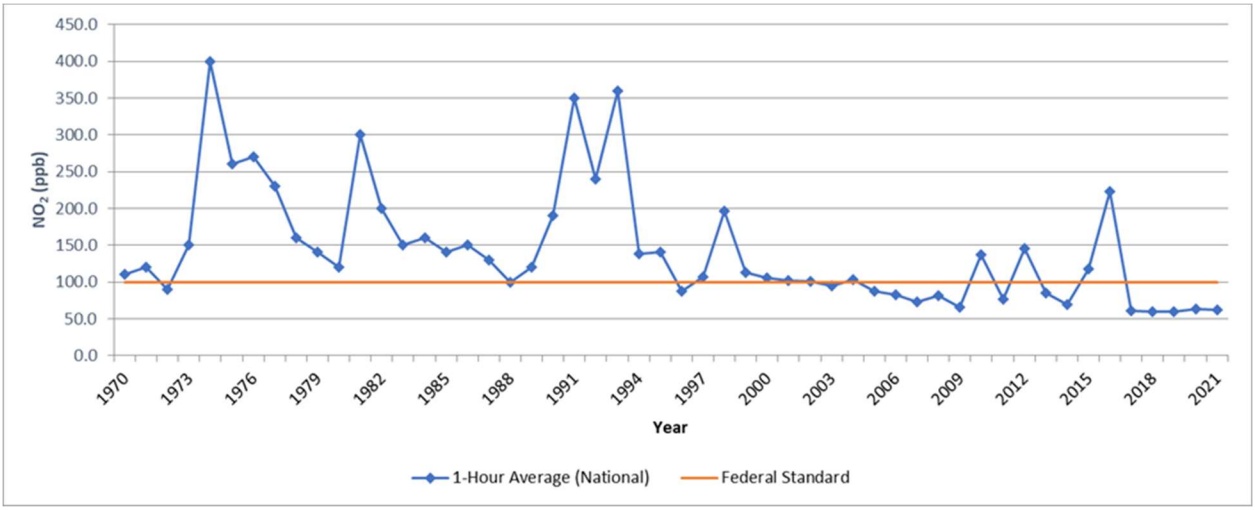
Source: 2020 CARB, iADAM: Top Four Summary: $PM^{2.5}$ 24-Hour Averages (1989-2021)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.
(Urban Crossroads, 2023a, Table 2-8)

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



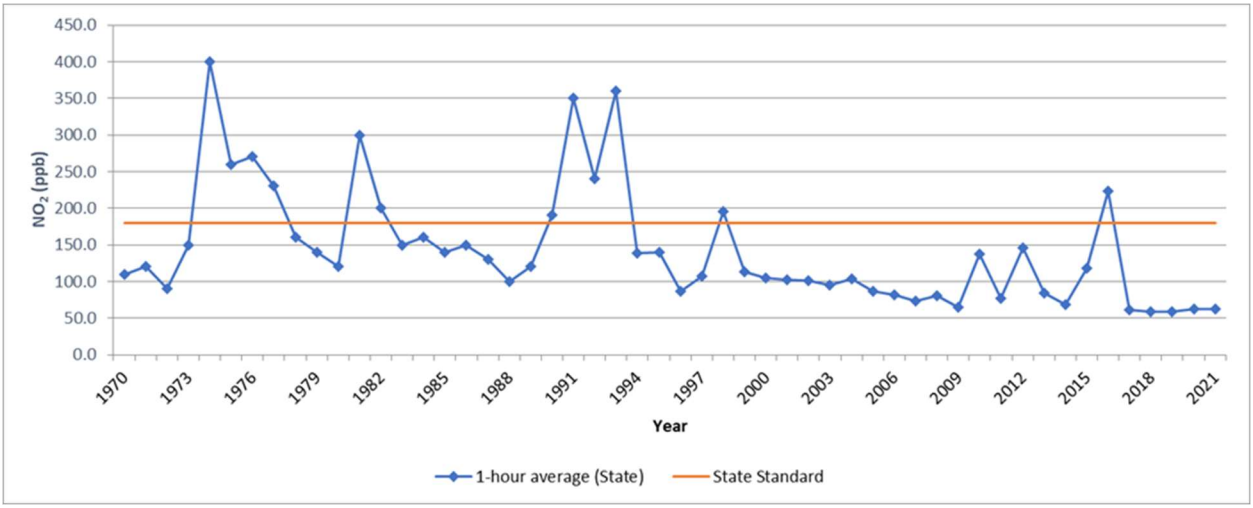
Source: 2020 CARB, iADAM: Top Four Summary: $PM^{2.5}$ 24-Hour Averages (1999-2020)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.
(Urban Crossroads, 2023a, Table 2-9)

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 NOx 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 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. 31)

❑ Mobile Source TACS

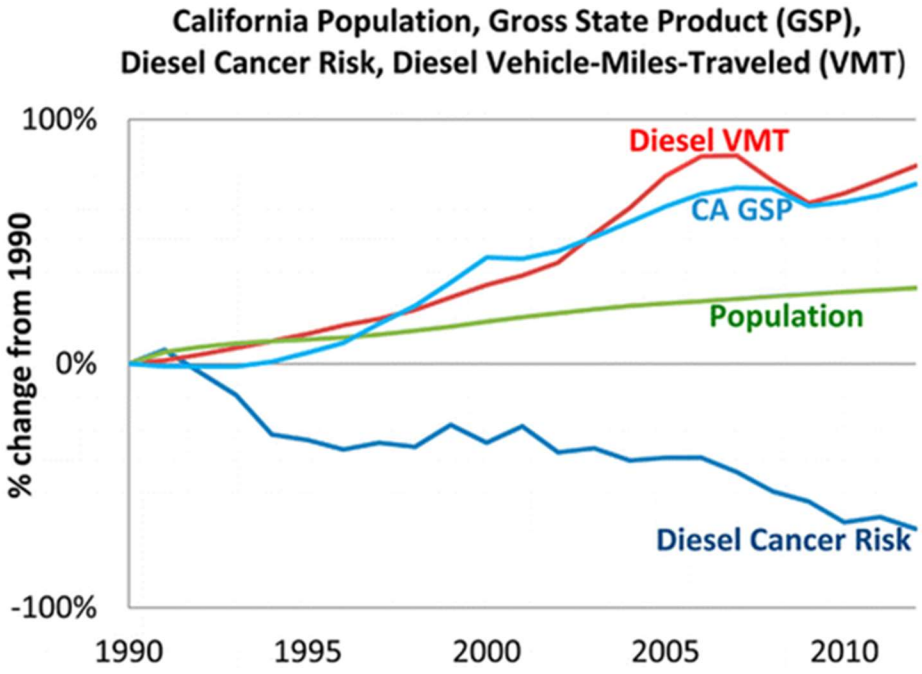
CARB introduced two programs that were aimed at reducing mobile emissions for light and medium duty vehicles through vehicle emissions controls and cleaner fuel. In California, light-duty vehicles sold after 1996 are equipped with California's second-generation On-Board Diagnostic (OBD-II) system. The 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

[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.

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. 31)

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. 31)

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. 32)

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. 32)

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, 2022b)

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, 2022c)

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, 2022a)

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, 2022a)

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, 2023)

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, 2023)

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, 2012)

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, 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 California Building Standards Commission (CBSC). 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:

- 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 sf 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, 2019)

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, 2023)

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. (Palmdale, 2022b)

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, 2022a)

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.

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. 5, 9)

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. 5, 9)

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.

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.

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

The City of Palmdale General Plan designates the Project site for IND (Industrial) land uses. The Industrial designation allows a variety of industrial uses, including manufacturing and assembly of products and goods, warehousing, distribution, and similar uses. The Project Applicant proposes a land use for the Project site that is consistent with the existing General Plan land use designation of Industrial for the Project site. The Project would therefore conform to local land use plans and population/employment projections, and would be consistent with the Federal Particulate Matter

Attainment Plan and Ozone Attainment Plan for the Antelope Valley. (Urban Crossroads, 2023a, p. 43)

In addition to consistency with the site's IND land use designation, and although compliance with every General Plan goal and policy is not a required determinate for land use consistency, the Project also is consistent with the Air Quality Element of the City's General Plan, which establishes goals and policies related to protecting, maintaining, and enhancing air quality within Palmdale, and the Equitable and Healthy Communities Element of the General Plan, which establishes a goal to design the City to improve air quality and reduce disparate health impacts

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 EV charging stations, bicycle racks, and the addition of a sidewalk along the site's frontage with 8th Street East. The location of the Project site is just east of the Sierra Highway Bike Trail and approximately 0.5 mile from the Palmdale Metrolink Station affording opportunities for non-vehicular travel by the Project's employees. The Project site also is located on the City's truck route, 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 consistent with this goal. As discussed below under threshold (b), the Project's particulate matter impacts would be less than significant. 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 consistent with these goals. As discussed below under Threshold (b), the Project's air pollutant emission impacts would be less than significant and 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. The Project site is not located adjacent to any sensitive receptors and is on the City's designated truck route.

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

The Project's construction and operation 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).

- ***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 discussed below in the analyses of Threshold (b) and Threshold (c), Project construction and operational-source emissions would not exceed applicable AVAQMD regional thresholds. As such, the Project would not 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, p. 44)

The Project would conform to local land use plans, comply with all applicable AVAQMD Rules and Regulations, and would not exceed the applicable regional thresholds for air pollutant emissions. As such, the Project would have a less than significant impact and is 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, the Project would not conflict with or obstruct implementation of the applicable air quality plan; thus, impacts would be less than significant and no mitigation is required. (Urban Crossroads, 2023a, p. 44)

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 3.2 of the AQIA (*Technical Appendix B1*) prepared for the Project. (Urban Crossroads, 2023a, p. 29) 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.

A. 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. 35-37)

The estimated maximum daily construction emissions without mitigation for both summer and winter periods is summarized in Table 4.2-13, *Emissions Summary of Construction (Without Mitigation)*. Detailed construction model outputs are presented in Appendix 3.1 to the AQIA (*Technical Appendix B1*) prepared for the Project. Under the assumed scenarios, emissions resulting from construction of the Project would not exceed criteria pollutant thresholds established by the AVAQMD for emissions of any criteria pollutant. Therefore, 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, thus, impacts would therefore be less than significant and no mitigation is required . (Urban Crossroads, 2023a, p. 37)

B. Operational Emissions

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; and 4) on-site equipment 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. 38-40)

Table 4.2-13 Emissions Summary of Construction (Without Mitigation)

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
2023	7.56	63.90	70.60	0.11	9.09	5.08
2024	52.00	29.20	50.40	0.06	4.69	2.14
Winter						
2023	3.03	21.50	29.40	0.04	3.76	1.70
2024	2.86	20.10	28.40	0.04	3.65	1.60
Maximum Daily Emissions	**52.00**	**63.90**	**70.60**	**0.11**	**9.09**	**5.08**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod construction-source (unmitigated) emissions are presented in Appendix 3.1 to the AQIA (*Technical Appendix B1*) prepared for the Project.
(Urban Crossroads, 2023a, Table 3-4)

The estimated operational-source emissions are summarized on Table 4.2-14, *Summary of Peak Operational Emissions*. Detailed operation model outputs for the Project are presented in Appendix 3.2 to the AQIA (*Technical Appendix B1*) prepared for the Project. As shown in Table 4.2-14, the daily regional emissions from on-going operations of the Project would not exceed the thresholds of significance for emissions of any criteria pollutant, even without consideration of Project design features and regulatory requirements that are not considered by CalEEMod 2022.1, which would even further reduce emissions. Therefore, operational 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; thus, impacts would be less than significant and no mitigation is required. (Urban Crossroads, 2023a, p. 40)

Table 4.2-14 Summary of Peak Operational Emissions

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
Mobile Source	2.98	6.11	31.20	0.09	2.44	0.52
Area Source	11.60	0.14	16.70	0.00	0.02	0.03
Energy Source	0.00	0.00	0.00	0.00	0.00	0.00
On-Site Equipment Source	0.12	0.38	16.44	0.00	0.03	0.03
Total Maximum Daily Emissions	**14.70**	**6.63**	**64.34**	**0.09**	**2.49**	**0.58**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Winter						
Mobile Source	2.72	6.55	24.30	0.08	2.44	0.52
Area Source	8.89	0.00	0.00	0.00	0.00	0.00
Energy Source	0.00	0.00	0.00	0.00	0.00	0.00
On-Site Equipment Source	0.12	0.38	16.44	0.00	0.03	0.03
Total Maximum Daily Emissions	**11.73**	**6.93**	**40.74**	**0.08**	**2.47**	**0.55**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

(Urban Crossroads, 2023a, Table 3-7)

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. 41-42)

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), 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. 42)

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. 42)

The proposed Project is anticipated to generate 698 two-way vehicle trips including 90 truck trips, which is far below the 24,000 vph mentioned above; therefore, the Project would not generate large

amounts of CO concentrations at nearby sensitive land uses adjacent to study area roadways. (Urban Crossroads, 2023a, p. 43)

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

A Project-specific Health Risk Assessment (HRA) (*Technical Appendix B1* 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 B1*) 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 is Location R5, which is located approximately 707 feet east of the Project site at an existing residence (39337 10th Street East) (refer to Figure 4.2-1). Location R5 was placed at the private outdoor living area (the backyard of the residence) facing the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project construction DPM source emissions is calculated to be 1.54 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. 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. 20-21)

D. Operational Impacts

1. Residential Exposure Scenario

The residential land use with the greatest potential exposure to Project DPM source emissions is Location R5, which is located approximately 707 feet east of the Project site at an existing residence (39337 10th Street East) (refer to Figure 4.2-1). Location R5 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), the maximum incremental cancer risk attributable to Project DPM source emissions is calculated to be 0.16 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.

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, p. 21)

2. Worker Exposure Scenario

The worker receptor land use with the greatest potential exposure to Project DPM source emissions is Location R4, which represents the adjacent potential worker receptor approximately 390 feet north of the Project site (refer to Figure 4.2-1). At the maximally exposed individual worker (MEIW) receptor, the maximum incremental cancer risk impact is 0.05 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. 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. 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, pp. 21-22)

3. School Child Exposure Scenario

As discussed in Section 2.0, *Environmental Setting*, the nearest school is Head Start Palmdale District, located approximately 1,300 feet southeast of the Project site. At the maximally exposed individual school child (MEISC) receptor, the maximum incremental cancer risk impact attributable to the Project is calculated to be 0.01 in one million, which is less than the significance threshold of 10 in one million. At this same location, non-cancer risks attributable to the Project were calculated to be less than 0.01 (<0.01), which would not exceed the applicable significance threshold of 1.0. The exposure duration at a head start program location is substantially less than the nine year exposure that is reported for schools because children can be in the head start programs at these locations for up to three years. Notwithstanding, based on nine years of exposure, the maximum incremental cancer risk impact is 0.01 in one million which is less than the AVAQMD's significance threshold of 10 in one million. All

other school receptors would be exposed to lower concentrations of TACs and therefore less risk than the MEISC identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby school children. (Urban Crossroads, 2023b, p. 23)

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 is Location R5, which also is identified as the MEIR (refer to Figure 4.2-1). At the MEIR, the maximum incremental cancer risk attributable to Project construction and operational DPM source emissions is calculated to be 1.62 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. 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. All other receptors during construction and operational activity would experience less risk than what is identified for this location. Accordingly, Project construction and operational cancer and non-cancer health risk impacts would be less than significant and no mitigation is required. (Urban Crossroads, 2023b, p. 22)

F. Connection of Air Quality Impacts to Human Health Consequences

In December 2018, in the case of *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 (the "Friant Ranch Case"), the California Supreme Court held that an EIR's air quality analysis must meaningfully connect the identified air quality impacts to the human health consequences of those impacts, or meaningfully explain why that analysis cannot be provided.

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. (Urban Crossroads, 2023a, p. 47)

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 operational of the Project. (Urban Crossroads, 2023a, p. 47)

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, p. 48)

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. 48)

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. 48)

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 is required (Urban Crossroads, 2023a, p. 48).

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. 48)

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, p. 48)

> *"…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. 48-49)
>
> *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. 49)

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. 49)

Cumulatively-Considerable Impacts due to Conflict with the AQMP

The Project would conform to local land use plans, comply with all applicable AVAQMD Rules and Regulations, and would not exceed the applicable regional thresholds. As such, the Project would be considered to have a less than significant impact and is 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, implementation of the Project would result in less than significant cumulatively-considerable impacts due to a conflict with the applicable air quality management plans.

Cumulatively-Considerable Criteria Pollutant Impacts

The Project-specific evaluation of emissions presented under the analysis of Threshold (b) demonstrates that the construction and operational regional emissions of criteria pollutants from the Project would be below the AVAQMD Regional Thresholds (refer to Table 4.2-13 and Table 4.2-14). Therefore, because 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, cumulatively considerable impacts would be less than significant.

Cumulatively-Considerable Impacts to Sensitive Receptors

The census tract containing the Project site (Census Tract 6037910101) is ranked by the State as being in the 60th percentile for pollution burden, which based on the Census Tract's demographic characteristics, results in the Office of Environmental Health Hazard Assessment (OEHHA) ranking the area in the 88th percentile of communities that are disproportionately burdened by multiple sources of pollution (OEHHA, 2023). OEHHA relies on reported demographic information of 1,863 persons living in Census Tract 6037910101. In addition, the Project site is located in a SB 535 Disadvantaged Community identified by the California Environmental Protection Agency (CalEPA). 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, cumulatively considerable impacts would be less than significant. 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: Less than Significant Impact. The Project would conform to local land use plans, comply with all applicable all AVAQMD Rules and Regulations, and would not exceed applicable regional air pollutant significance thresholds. As such, the Project is consistent with the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Antelope Valley which are the applicable air quality plans pertaining to the Project site. The Project would not conflict with applicable air quality plans and impacts would be less than significant and no mitigation is required.

Threshold b: Less than Significant Impact. Construction- and operational-related regional emissions from the Project would not exceed any of the AVAQMD regional thresholds for criteria pollutants. As such, Project regional construction- and operational-related emissions 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. Impacts would be less than significant and no mitigation is required.

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

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

4.2.8 Design Features (DF) and Regulatory Requirements (RR)

Although the impacts from the Project to air quality would be less than significant, 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.

AIR DF-1 Prior to the issuance of grading and building permits, the City shall review the construction documents for the Project to ensure that the construction contractors are obligated to implement the following measures to reduce construction air pollutant emissions to the extent feasible. These items shall also be listed in construction bid documents and construction contracts. The construction contractors shall allow City access to the construction site to inspect for adherence to these measures.

a. Ensure that the cleanest possible construction practices and equipment are used. This includes eliminating the idling of diesel-powered equipment and providing the necessary infrastructure (e.g., electrical hookups) to support zero and near-zero emission equipment and tools.

b. Implement, and plan accordingly for, the necessary infrastructure to support the zero and near-zero emission technology, vehicles, and equipment that will be operating onsite during construction. Necessary infrastructure may include the physical (e.g. needed footprint), energy, and fueling infrastructure for construction equipment, onsite vehicles and equipment, and medium-heavy and heavy-heavy duty trucks.

c. All off-road diesel-powered equipment used during construction shall be equipped with Tier 4 Interim or cleaner engines. If the operator lacks Tier 4 Interim or cleaner equipment, and it is not available for lease or short-term rental within 50 miles of the project site, Tier 3 or cleaner off-road construction equipment may be utilized subject to City approval.

d. Heavy-duty trucks entering the construction site during grading and building construction phases shall be model year 2014 or later. All heavy-duty trucks shall also meet CARB's lowest optional low oxides of nitrogen (NOx) standard starting in the year 2022.

e. All construction equipment and fleets shall be in compliance with all current air quality regulations.

AIR DF-2 Prior to issuance of building permits, the following features shall be demonstrated on the Project's building and landscape plans to the extent feasible.

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.

d. Install rainwater collection systems where feasible.

AIR DF-3 Prior to issuance of building permits, the following features shall be demonstrated on the Project's building and landscape plans to the extent feasible. Installation shall be verified by the City prior to issuance of a certificate of occupancy.

a. Install rooftop solar panels to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid.

b. Install Energy Star-rated heating, cooling, lighting, and appliances.

c. Structures shall be equipped with outdoor electric outlets in the front and rear to facilitate use of electrical lawn and garden equipment.

AIR DF-4 Prior to issuance of building permits, the following features shall be demonstrated on the Project's building plans to the extent feasible over minimum California Code of Regulations Title 24 requirements. Installation shall be verified by the City prior to issuance of a certificate of occupancy.

a. For use by employees and visitors conducting business at the building, install automobile electric vehicle (EV) charging stations at the minimum number required by the California Code of Regulations Title 24, or to serve at least 25 percent of the employee parking spaces, whichever is greater. All charging stations shall be equipped with Level 2 or faster chargers. Signs shall be posted indicating that the charging stations are for exclusive use by the building's employees and by visitors conducting business at the building.

b. Install appropriate electrical infrastructure sufficiently sized to accommodate the potential installation of additional auto and truck EV charging stations in the future.

c. Install raceways for conduit to tractor trailer parking areas in logical, gated 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. The charging station location(s) are to be located inside the gated and secured truck courts.

AIR DF-5 Cold storage warehouse operations (chilled, refrigerated, or freezer warehouse space) shall be prohibited. The City shall not approve any cold storage warehouse spaces as part of implementing building plans.

AIR DF-6 Prior to issuance of a certificate of occupancy, legible, durable, weather-proof signs shall be installed 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 the following:

a. Instructions for truck drivers to shut off engines when not in use.

b. Instructions for drivers of diesel trucks to restrict idling to no more than five minutes once the vehicle is stopped, the transmission is set to "neutral" or "park" and the parking brake is engaged.

c. Telephone numbers of the building facilities manager and CARB to report violations.

AIR DF-7 Prior to issuance of a certificate of occupancy, the following language shall be included within tenant lease agreements in order to reduce operational air pollutant emissions to the extent feasible:

a. Information about energy efficiency, energy-efficient lighting and lighting control systems, energy management, and existing energy incentive programs.

b. Information about funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment.

c. Requirements 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.

d. Requirements to exclusively use zero-emission light and medium-duty delivery trucks and vans, when economically feasible.

e. Requirements to operate in compliance with, and to monitor compliance with, all current and applicable air quality regulations for on-road trucks including the California Air Resources Board's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation.

f. Requirements and identification of the responsible party to maintain, replace, and upgrade rooftop solar panels per the manufacturer's recommendations for the life of the lease. Should the capacity for solar connections increase, additional solar panels shall be required to be added to the building .

g. Requirements and identification of the responsible party to maintain, replace, and repair the legible, durable, weather-proof signs that were installed at initial building occupancy placed at truck access gates, loading docks, and truck parking areas that identify applicable CARB anti-idling regulations.

h. Requirements that 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. The tenant shall be required to maintain records of haul truck trips to and from the site, and make such records available for review by the City of Palmdale upon request.

i. Requirements for the building owner to provide a Green Cleaning Products and Paint Education Program available to the building tenant, to keep at the building's office, break room, leasing space, or on an accessible website.

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.



Source(s): Urban Crossroads (November 2022)

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: 1) "Biological Resources Technical Report," dated January 2023, included as *Technical Appendix C1* (Psomas, 2023); 2) "Results of the Focused Special Status Plant/Desert Native Plant Survey", dated September 16, 2022, included as *Technical Appendix C2* (Psomas, 2022a); 3) "Results of a Focused Survey for Blainsville's Horned Lizard", dated September 15, 2022, included as T*echnical Appendix C3* (Psomas, 2022b); 4) Results of Focused Survey for Burrowing Owl" dated September 14, 2022, included as *Technical Appendix C4* (Psomas, 2022c); and 5) Jurisdictional Delineation Report, dated August 29, 2022, included as *Technical Appendix C5* (Psomas, 2022d). The study area discussed in the technical studies and in this Subsection, includes the Project site plus a 50-foot buffer area. All references used in this Subsection are included in EIR Section 7.0, *References*.

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 but was heavily disturbed by grading activities that, according to historical aerial photography, occurred on the site sometime between 2009 and 2011. The site contains several piles of gravel and road base. An unnamed graded channel runs from west to east along the southern boundary of the Project site.

A. Vegetation Types and Other Areas

As summarized in Table 4.3-1, *Vegetation Types in the Study Area*, vegetation on the Project site is comprised mostly of disturbed rubber rabbitbrush scrub, with a small patch of developed/disturbed rubber rabbitbrush scrub in the eastern portion of the site and big sagebrush (rubber rabbitbrush scrub) in the channel that runs along the southern boundary of the site. Soil types in the survey area include Hesperia fine sandy loam, (0 to 2 percent slopes) and Rosamond loam. (Psomas, 2023, pp. 15-16)

Table 4.3-1 Vegetation Types in the Study Area

Vegetation Types and Other Areas	Project Site (Acres)*	Threat Ranking
big sagebrush – rubber rabbitbrush scrub	0.73	G5, S5
disturbed rubber rabbitbrush scrub	0.31	G5, S5
developed/disturbed rubber rabbitbrush scrub	16.98	- / G5, S5
Total	**18.02**	

G: Global; S: State.

Threat Ranking:
"5" Secure
- No threat rank

* The Project site is described as approximately 18.05 acres in this EIR but for purposes of calculating impacts to biology the more precise 18.02 acres is used. The precise acreage will be determined at final engineering.

(Psomas, 2023, Table 3)

B. Wildlife Populations and Movement Patterns

Wildlife movement is generally unconstrained surrounding the Project site. While the areas of the Project site are comprised of developed/partially developed land and roadways, it is still feasible for wildlife to move through the Project site and through the open area directly to the south of the Project site. The open land to the south contains some saltbush-big sage scrub that could support a wildlife corridor extending from the Project site. While surrounding development in the area is apparent, it is low-density, meaning that many wildlife species (e.g., coyotes, foxes, etc.) can move through this type of development to surrounding open areas of land. (Psomas, 2023, p. 20)

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 or in adjacent off-site areas 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, 2023, p. 20)

1. Special Status Vegetation Species

Disturbed rubber rabbitbrush scrub, big sagebrush (rubber rabbitbrush scrub), and developed/rubber rabbitbrush scrub are considered "secure" by the California Department of Fish and Wildlife (CDFW) on a global and State level (see Table 3 in *Technical Appendix C1*). None of these vegetation types are considered special status by the CDFW. (Psomas, 2023, p. 23)

2. Special Status Plants/Desert Native Plants

Table 5 of *Technical Appendix C1* provides a summary of the special status plant species reported to occur in the region of the Project site and includes information on the status, species background, potential for occurrence, and results of focused survey efforts. Table 5 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, 2023, p. 24)

No special status plant species were observed on the Project site by Psomas. In addition, the 2022 focused plant surveys identified no plants protected by the California Desert Native Plants Act (CDNPA) as occurring in the survey area. (Psomas, 2023, p. 26)

3. *Special Status Wildlife Species*

Table 6 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 6 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, 2023, p. 26)

Twenty-six special status wildlife species have been reported from the study area vicinity. Suitable or marginally suitable habitat for 15 of these species occurs on or adjacent to the Project site. Special status wildlife species reported from the study area vicinity include species of raptors and other birds, bats, mammals and reptiles as discussed below. (Psomas, 2023, p. 41)

❑ Special Status Raptor Species

Seven special status raptor species have the potential to forage throughout the Project site: 1) Cooper's hawk; 2) short-eared owl; 3) northern harrier; 4) burrowing owl; 5) merlin; 6) American peregrine falcon; and 7) prairie falcon. Potentially suitable foraging habitat occurs throughout the Project site. (Psomas, 2023, p. 41)

❑ 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 throughout the site. (Psomas, 2023, p. 41)

Two additional special status bird species have the potential to 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 foraging during the initial site reconnaissance surveys on the Project site. Psomas determined that potentially suitable nesting habitat for this species is located on the southern edge of the Project site and potentially suitable foraging habitat occurs throughout the biological study area. LeConte's thrasher prefers to nest in large thorny shrubs in sandy substrate which is marginally available in the boxthorn shrubs located offsite and immediately adjacent (north and south) of the Project site. LeConte's thrasher may forage throughout the site. (Psomas, 2023, pp. 34, 41)

❑ 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) cactus wren; 2) greater roadrunner; 3) mountain bluebird (wintering); 4) vesper sparrow; 5) western meadowlark; and 6) black-throated sparrow. None of these species have the potential to nest on the Project site. The cactus wren and the western meadowlark were both observed offsite, adjacent to the site; however, breeding habitat (cactus and grasslands) for neither

species occurs on the Project site. Although not recognized by State or federal agencies, the Los Angeles County Department of Regional Planning considers these species worth of consideration as sensitive. (Psomas, 2023, pp. 41-42)

- **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, 2023, p. 42)

- **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. Due to the lack of potentially suitable denning habitat (compacted soils) on the Project site, desert kit fox is not expected to occur for denning on the Project site. However, desert kit fox may occur for denning offsite within 200 feet of the Project site, as large mammal burrows were observed offsite under box-thorn shrubs. (Psomas, 2023, p. 42) (Psomas, 2023, Table 6)

- **Special Status Reptile Species**

One special status reptile species, the northern legless lizard, may occur on the Project site. The northern legless lizard is typically found in moist areas underground. Therefore, the species may occur near the roots of large shrubs near the southern border of the site where moisture content is highest. (Psomas, 2023, p. 42)

4. Jurisdictional Resources

The Project site contains an unnamed graded channel that flows from west to east at the southern edge of the site. Water conveyed through this channel originates from urban runoff and passes under Sierra Highway and the Union Pacific Railroad (UPRR) track before reaching the Project site. Historic aerial photos of the area show that the natural path of the stream was diverted slightly northward around an agricultural field sometime prior to 1948. The current pathway for this channel was established in approximately 2005 and is maintained to allow water to pass eastward. Currently, the channel bed is mostly unvegetated with sparse native desert scrub species growing along the channel banks. Vegetation along the channel consists of big sagebrush, four-wing saltbush, creosote bush, and rubber rabbitbrush. A summary of information related to this channel is provided in Table 4 of *Technical Appendix C1* and photographs are provided in Appendix F, Attachment B, of *Technical Appendix C1* that illustrate the general biological conditions of the Project site. (Psomas, 2023, p. 23)

Jurisdictional resources considered include wetlands and non-wetland "waters of the United States" (WOTUS) regulated by the US 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, 2022d, 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, 2022d, ES-1)

As summarized in Table 4.3-2, *Summary of Jurisdictional Resources on the Project Site*, 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:

- 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: 0.35 acre
- CDFW Jurisdictional Streambeds:
  - Streambeds/Riparian Habitat: 0.72 acre

Table 4.3-2 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		
Unanamed Channel	34.597591°, -118.119875°	34.598033°, -118.116617°	1,050	13–17	0.00	0.35	27-33	0.72
				Totals	**0.00**	**0.35**		**0.72**
OHWM: Ordinary High Water Mark; USACE: RWQCB; CDFW								

(Psomas, 2022d, Table 1)

❑ Waters of the United States Determination

Water that passes through the unnamed channel on the southern edge of the Project site flows under 8th Street East and continues in a northeasterly direction. Water flows through a drainage feature that proceeds northerly along 10th Street East and later 15th Street East before reaching United States Air Force (USAF) Plant 42. The drainage is then directed underground in a concrete culvert before resurfacing along 15th Street East on the northern side of USAF Plant 42. The drainage contains two grade control structures before reaching Avenue M / East Columbia Way and turning directly eastward. The drainage transitions to a series of interconnected basins that allow water to percolate into the soil with no connection to downstream waters. Based on a review of aerial photographs, the

drainage originally flowed northeasterly from the Project site and flows eventually dissipated in upland areas that are in the approximate location of USAF Plant 42. Therefore, the on-site drainage feature has no connection to downstream waters and would therefore not be considered a WOTUS. (Psomas, 2022d, p. 8)

❑ Wetlands Determination

A wetland sampling point was located in the bottom of the on-site drainage feature to determine if wetland conditions are present on the Project site. This sampling point was chosen due to the presence of potential wetland hydrology, though no hydrophytic vegetation was observed on the Project site. A wetland data form that documents conditions at this location is provided in Attachment D and the information collected is summarized in Table 2 of the Project's Jurisdictional Delineation Report included as *Technical Appendix C5* to this EIR. (Psomas, 2022d, pp. 8-9)

Vegetation in the vicinity of each of the sampling locations consisted of Great Basin sagebrush, four-wing saltbush, and rubber rabbitbrush, all of which are upland plant species. No hydric soil indicators were observed, while secondary indicators of wetland hydrology were noted (e.g., presence of sediment deposits and drainage patterns). Due to the lack of hydrophytic vegetation and hydric soils, Psomas determined that wetland conditions do not exist on the Project site. (Psomas, 2022d, pp. 8-9)

❑ Regional Water Quality Control Board Jurisdiction

Though the onsite channel is not considered to be WOTUS, the RWQCB has broad latitude to regulate waters via the Porter-Cologne Act. The limits of non-wetland "waters of the state" were defined by the well-established bed and bank with evidence of scour along the banks and sediment deposition. Based on this boundary, Psomas determined that the Project site contains 0.35-acre of non-wetland "waters of the State" (Psomas, 2022d, p. 9)

❑ California Department of Fish and Wildlife Jurisdiction

The limits of CDFW jurisdiction on the Project site were mapped to the top of the bank on each side of the unnamed channel. There is no adjacent riparian habitat present along the channel, thus CDFW's jurisdiction is limited to the top of the channel's banks. Psomas determined that the total amount of CDFW's jurisdictional area is 0.72-acre. (Psomas, 2022d, p. 9)

❑ Joshua Tree and Native Desert Vegetation Preservation

No western Joshua trees or California juniper trees were documented by Psomas as occurring within the Project site. (Psomas, 2023, p. 40)

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, 2023, p. 1)

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, 2023, 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, 2023, 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, 2023, 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, 2023, p. 2)

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, 2023, p. 2)

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, 2023, 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, 2023, 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, 2023, 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); *Pandionidae* (ospreys); 4) *Strigidae* (typical owls); and 5) *Tytonidae* (barn owls). The provisions of the 1972 amendment to the MBTA protect all species and subspecies of these families. (Psomas, 2023, 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, 2023, p. 3)

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, 2023, p. 3)

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, 2023, 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, 2023, 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, 2023, 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, 2023, p. 4)

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. 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, 2023, p. 4)

3. 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, 2023, p. 4)

4. 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, 2023, pp. 5-6)

❑ 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, 2023, 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, 2023, p. 6)

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, 2023, p. 6)

❑ 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, 2023, p. 6)

❑ 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, 2023, p. 6)

❑ **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, 2023, pp. 6-7)

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, 2023, 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, 2023, p. 7)

5. 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, 2023, p. 7)

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, 2023, p. 7)

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, 2023, pp. 7-8)

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, 2023, p. 8)

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, 2022a, p. 291)

2. Joshua Tree and Native Desert Vegetation Preservation

The City of Palmdale has a native desert vegetation ordinance (Chapter 14.04 of the Palmdale Municipal Code) designed to protect western Joshua trees and California Junipers in the City. The Ordinance was originally adopted in 1992 and was amended by Emergency Ordinance No. 1556 in 2020 in response to the California Fish and Game Commission's vote to list the western Joshua tree as a candidate species under the CESA. Per the Ordinance, western Joshua trees and California Juniper trees shall not be removed from any parcel of land unless a permit has been obtained from the City. Furthermore, any development proposal on a parcel of land containing native desert vegetation requires a desert vegetation preservation plan prepared in compliance with the Palmdale Municipal Code. Listing of the western Joshua tree under the CESA gives that species additional legal protections, such that any take of the species (including removal of western Joshua tree or similar actions) requires a permit from CDFW. (City of Palmdale, 2022a, p. 277) As disclosed above in Subsection 4.3.1, there are no western Joshua trees or California Junipers on the Project site under existing conditions.

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, Littlerock, Alpine Butte, Lancaster East, Lancaster West, and Ritter Ridge 7.5-minute quadrangles that generally extends north to East Avenue F, east to 140th Street East, south to the north slope San Gabriel Mountains, and west to 70th Street West. (Psomas, 2023, p. 37)

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, 2023, p. 37)

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, 2023, p. 35)

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, 2023, p. 35)*

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, 2023, p. 35)

[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.

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. Vegetation Types

Vegetation types and other areas that would be impacted by the Project are shown in Table 4.3-3, *Project-Related Vegetation Types Impacts* and Figure 4.3-1, *Project Impacts.*

Table 4.3-3 Project-Related Vegetation Types Impacts

Vegetation Types and Other Areas	Existing (Acres)*	Impacted (Acres)	Unimpacted (Acres)
big sagebrush – rubber rabbitbrush scrub	0.73	0.73	0
disturbed rubber rabbitbrush scrub	0.31	0.31	0
developed/disturbed rubber rabbitbrush scrub	16.98	16.98	0
Total	**18.02**	**18.02**	**0**

G: Global; S: State;
"–": not applicable.
* The Project site is described as approximately 18.05 acres in this EIR but for purposes of calculating impacts to biology the more precise 18.02 acres is used. The precise acreage will be determined at final engineering.

(Psomas, 2023, Table 7)

Implementation of the Project would impact all 0.73 acres of big sagebrush – rubber rabbitbrush scrub on the Project site. This vegetation type is ranked as G5, SS and is considered secure by the CDFW. Because the acreage impacted would be a relatively small percentage of the regional acreage of this vegetation type, impacts would be less than significant and no mitigation is required. (Psomas, 2023, p. 38)

Implementation of the Project would impact 0.31 acres of disturbed rubber rabbitbrush scrub on the Project site. This vegetation type is ranked as G5, SS and is considered secure by the CDFW. Because the acreage impacted would be a relatively small percentage of the regional acreage of this vegetation type, impacts would be less than significant and no mitigation is required. (Psomas, 2023, p. 38)

The Project would impact 16.98 acres of developed/disturbed rubber rabbitbrush scrub on the Project site. "Developed" is not a vegetation type and is therefore not ranked by CDFW. Disturbed rubber rabbitbrush scrub is ranked as G5, SS and is considered secure by the CDFW. Because the acreage impacted is a relatively small percentage of the regional acreage of this vegetation type, impacts would be less than significant; thus, no mitigation is required. (Psomas, 2023, p. 38)

B. Special Status Vegetation Species

Psomas determined that no special status vegetation types (i.e., CDFW sensitive communities) occur in the study area. Therefore, because no special status vegetation types occur in the Project area; no

impact on special status vegetation would occur as a result of implementation of the Project; thus, no mitigation is required. (Psomas, 2023, p. 39)

C. *Special Status Plants/Desert Native Plant*

Psomas determined that no special status plant species were observed in the survey area during focused plant surveys. Therefore, because no special status plants were observed and are not expected to occur on the Project site, no impact on special status plant species would occur as a result of implementation of the Project; thus, no mitigation is required. (Psomas, 2023, p. 40)

In addition, the 2022 focused plant surveys identified no plants protected by the CDNPA occurring in the survey area. (Psomas, 2022a, p. 26) Therefore, because no plants protected by the CDNPA occur in the survey area, no impact would occur as a result of implementation of the Project; thus, no mitigation is required.

D. *Wildlife*

To assess impacts on wildlife, the total impact on particular vegetation types that provide habitat for wildlife was assessed by Psomas. The following discussion of wildlife impacts focuses on the common wildlife species occurring in the study area. (Psomas, 2023, p. 38)

1. General Habitat and Wildlife Loss

Native and non-native vegetation provides valuable nesting, foraging, roosting, and denning opportunities for a variety of wildlife species. As indicted on Table 4.3-3, implementation of the Project would permanently impact 1.04 (0.73 + 0.31) acres of native vegetation types (big sagebrush – rubber rabbitbrush scrub, and disturbed rubber rabbitbrush scrub) and 16.98 acres of a partially developed land (developed/disturbed rubber rabbitbrush scrub) on the Project site. (Psomas, 2023, p. 38)

Removing or altering habitats on the Project site would likely result in the loss of small mammals, reptiles, amphibians, and other slow-moving wildlife that live in the direct impact area of the Project. More mobile wildlife species that are using the Project site under existing conditions would be forced to move into the remaining areas of open land, which could consequently increase competition for available resources in those areas. This situation could result in the loss of individuals that cannot successfully compete; the loss of native and partially developed vegetation that provides wildlife habitat is considered an adverse impact. However, because the loss of habitat on the Project site would not be expected to reduce populations of common wildlife species below self-sustaining levels in the Project region, impacts would be less than significant; thus, no mitigation is required. (Psomas, 2023, pp. 38-39)

Several common bird species have the potential to nest 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 the California Fish and Game Code. The MBTA and California Fish and Game Code prohibits the taking of migratory birds, nests, and eggs; therefore, the potential

loss of an active nest would be considered potentially significant. (Psomas, 2023, p. 39) Accordingly, the Project has the potential to impact nesting migratory birds if active nests were disturbed during the nesting season (February 1 and September 15).

E. Special Status Wildlife Species

Twenty-six special status wildlife species have been reported from the study area vicinity. Suitable or marginally suitable habitat for 15 of these species occurs on or adjacent to the Project site. Special status wildlife species reported from the study area vicinity include species of raptors and other birds, bats, mammals and reptiles as discussed below.

1. Special Status Raptor Species

Implementation of the Project would permanently impact 18.02 acres of potentially suitable foraging habitat for the seven special status raptor species that have the potential to forage throughout the Project site: 1) Cooper's hawk, 2) short-eared owl, 3) northern harrier, 4) burrowing owl, 5) merlin, 6) American peregrine falcon, and 7) prairie falcon. None of the seven raptor species that may forage at the Project site are expected to nest on or adjacent to the Project site. Because implementation of the Project would impact a limited amount of habitat relative to the amount of foraging habitat available in the region, impacts would be considered adverse but less than significant; thus no mitigation is required. (Psomas, 2023, p. 42)

2. 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 Project would result in the direct removal of 18.02 acres of potentially suitable foraging habitat (e.g., big sagebrush – rubber rabbitbrush scrub, disturbed rubber rabbitbrush scrub, developed/disturbed rubber rabbitbrush scrub) utilized by the mountain plover. Although the Project site provides potentially suitable foraging habitat for the mountain plover throughout the site, because implementation of the Project would impact a limited amount of habitat relative to the amount of habitat available for the species in the region, impacts would be less than significant, thus no mitigation is required. (Psomas, 2023, p. 41)

Two additional special status bird species have the potential to forage on the Project site: the loggerhead shrike and the LeConte's thrasher. Approximately 0.73-acre of potentially suitable nesting habitat (e.g., big sagebrush – rubber rabbitbrush scrub) for the loggerhead shrike would be permanently impacted and 18.02 acres of potentially suitable foraging habitat (e.g., all vegetation types) for both species would be permanently impacted. 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 due to the loss of habitat for these species would be less than significant; thus no mitigation would be required for the loss of habitat. (Psomas, 2023, p. 41)

The following bird species that the Los Angeles Audubon Society considers "at-risk" in the region may forage on the Project site: 1) cactus wren; 2) greater roadrunner; 3) mountain bluebird (wintering);

4) vesper sparrow; 5) western meadowlark; and 6) black-throated sparrow. None of these species have the potential to nest on the Project site. The cactus wren and the western meadowlark were both observed adjacent to the site; however, breeding habitat site (cactus and grasslands) for neither species occurs on the site. 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. Approximately 18.02 acres of marginal foraging habitat (e.g., all vegetation types) for each species would be permanently impacted. 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 significant; thus, no mitigation is required for the loss of habitat. (Psomas, 2023, p. 42)

3. 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. Approximately 18.02 acres of potentially suitable foraging habitat (e.g., all vegetation types) for these species would be permanently impacted through Project implementation. However, because implementation of the Project would impact a limited amount of foraging habitat relative to the amount of foraging habitat available for these species in the region, impacts would be less than significant; thus, no mitigation is required for the loss of foraging habitat. (Psomas, 2023, p. 42)

4. Desert Kit Fox and American Badger

Desert kit fox and American badger may occur offsite adjacent to the Project site. The Project would not directly impact potentially suitable denning habitat for these two species. However, vibration from construction equipment could cause burrows in offsite adjacent habitat to collapse, potentially entombing individuals in their burrows. Individuals could also potentially move through the Project construction area and be hit by construction vehicles. 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 considered adverse but less than significant.

The desert kit fox is protected by the California Fish and Game Code, which prohibits the take of individuals of this species. While American badgers are not afforded the same protection under the California Fish and Game Code, 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. Because the construction activities of the Project could indirectly impact these species, impacts would be potentially significant and require mitigation. (Psomas, 2023, p. 42) This potentially significant impact will be addressed by Mitigation Measure BIO MM-2, which outlines the process of conducting pre-construction burrow surveys for desert kit fox and American badger and implementing mitigation if survey results are positive. With implementation of Mitigation Measure BIO MM-2, potential direct and indirect impacts to these species would be less than significant.

5. *Special Status Reptile Species*

One special status reptile species, the northern legless lizard, may occur on the Project site. The northern legless lizard is typically found in moist areas underground. Therefore, the species may occur near the roots of large shrubs near the southern border of the site where moisture content is highest. The Project would result in the loss of 0.73-acre of potentially suitable habitat (e.g., big sagebrush – rubber rabbitbrush scrub) for this species. 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 significant; thus, no mitigation is required. (Psomas, 2023, p. 42)

F. *Indirect Impacts*

Indirect impacts, often called "edge effects," are those that affect the quality of nearby wildlife habitat resulting from disturbance by construction (such as noise, night lighting, and human activity) and/or the long-term use of the Project site and utility alignment. It is anticipated that some indirect impacts may result from the Project construction and operation; these are described below. (Psomas, 2023, p. 43)

1. *Water Quality*

Drainages in the vicinity of the Project site could be impacted as a result of changes in water quality. During construction, runoff carrying excessive silt or petroleum residues from construction equipment could potentially impact water quality and, in turn, affect plant and wildlife species using habitat adjacent to the Project site. With the implementation of best management practices (BMPs) that would reduce construction-related pollutants, potential indirect impacts to water quality would be reduced to less than significant. (Psomas, 2023, p. 43)

2. *Noise and Vibration*

During active construction of the Project, temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and/or denning activities for a variety of wildlife species. Construction noise could deter wildlife from using habitat adjacent to construction. However, because a substantial amount of similar habitat occurs in the vicinity of the Project site, animals may disperse into similar habitat; thus indirect impacts would be less than significant; thus no mitigation is required. (Psomas, 2023, p. 43)

The Project site would change from vacant undeveloped land to land developed with a warehouse, thereby introducing a new source of noise and vibration to the site. Wildlife species that could be stressed by noise may disperse from the habitat immediately offsite adjacent to the Project site. However, because new noise sources would occur in a limited area and a substantial amount of similar habitat remains in the adjacent areas where the animals may disperse, indirect impacts would be less than significant; thus, no mitigation is required. (Psomas, 2023, p. 43)

3. *Night Lighting*

The introduction of night lighting on the site could impact the behavioral patterns of nocturnal and crepuscular (i.e., active at dawn and dusk) wildlife adjacent to such ancillary lighting. Of greatest concern is the effect on small, ground-dwelling animals that use the darkness to hide from predators and/or owls, which are specialized night foragers. Although the introduction of additional light sources could negatively affect wildlife in the offsite open areas of land; with mandatory compliance with PMC Section 17.86.030, Lighting Requirements, impacts would be less than significant; thus no mitigation is required. (Psomas, 2023, p. 43)

4. *Invasive Exotic Plant Species*

Landscaping that includes the installation of non-native, invasive plant species (e.g., species listed in the California Invasive Plant Council's (Cal-IPC's) invasive plant inventory)) could be detrimental to surrounding native habitat. Invasive species have the potential to spread into the surrounding areas of open land and displace native species, hybridize with native species (thereby impacting the genetic integrity of the native species), alter biological communities, or alter ecosystem processes (e.g., tamarisk affects hydrology). This could degrade the quality of the adjacent vegetation, including vegetation communities that provide suitable habitat for special status species. A Design Feature is included in subsection 4.3.8 that would prohibit the use of non-native, invasive plant species in landscaping associated with the Project. (Psomas, 2023, p. 44)

Construction activities create disturbance, which in turn provides a place for non-native weedy species to spread. Additionally, construction equipment could introduce non-native weed seeds to the area if equipment is not properly cleaned. Weeds from the construction could then spread to adjacent offsite areas of habitat, which would degrade habitat quality for native species. In addition to the negative effects on habitat quality, non-native weeds could also increase the potential for large fires to spread. A Design Feature is included in subsection 4.3.8 that would require the use of Best Management Practices (BMPs) associated with the prevention of the spread of weed seeds so that non-native weedy species would not spread to open areas of land. (Psomas, 2023, p. 44)

5. *Human Activity*

Construction activities would increase the amount of human activity on the Project site. This increased human activity could potentially disrupt foraging, nesting, roosting, and/or denning activities for a variety of wildlife species. Increased human activity could also deter wildlife from using habitat adjacent to construction. However, because a substantial amount of similar habitat occurs in the vicinity where the animals may disperse to, impacts would be less than significant; thus no mitigation is required. (Psomas, 2023, p. 44)

Common and special status bird species have the potential to nest in habitat adjacent to the Project site. Human activity in the vicinity of an active nest could result in the loss of an active bird nest. This would be considered a violation of the MBTA and California Fish and Game Code (Sections 3503,

3503.5, and 3513). However, with mandatory compliance with the MBTA, impacts would be less than significant. (Psomas, 2023, p. 44)

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

Psomas determined that the unnamed graded channel that flows from west to east on the southern edge of the Project site has no connection to downstream waters and would therefore not be considered "waters of the United States" (WOTUS). Therefore, because no impacts to WOTUS would occur as a result of implementation of the Project, impacts would be less than significant and no mitigation is required. (Psomas, 2023, pp. 23, 39)

2. Regional Water Quality Control Board and California Department of Fish and Wildlife Jurisdiction

Psomas determined that approximately 0.35-acre of waters of the State assumed to fall under the jurisdiction of the RWQCB occur in the study area and approximately 0.72-acre of waters assumed to be under the jurisdiction of the CDFW occur in the study area. Psomas calculated that 1,050 linear feet of jurisdictional resources on the Project site would be impacted by the construction activities associated with the Project. Additionally, 0.35-acre of RWQCB waters of the State and 0.72-acre of potential CDFW jurisdictional resources on the Project site would be permanently impacted by construction activities. (Psomas, 2023, p. 39). These impacts would be significant and mitigation is required. These potentially significant impacts will be addressed by Mitigation Measure BIO MM-3, which outlines the jurisdictional permitting process necessary prior to any impacts on waters under the regulatory authority of the RWQCB or the CDFW. With implementation of Mitigation Measure BIO MM-3, potential direct and cumulatively considerable impacts to jurisdictional resources would be reduced to less than significant. Impacts to jurisdictional resources are identified on Figure 4.3-1, Project Impacts to Jurisdictional Resources, and summarized in Table 4.3-4, *Impacts to Jurisdictional Resources*. (Psomas, 2023, p. 39)

Table 4.3-4 Impacts to Jurisdictional Resources

Jurisdiction	Existing	Impacted	Unimpacted
Total USACE waters of the United States			
Acres	0.000	0.000	n/a
Linear Feet	0.000	0.000	n/a
Total RWQCB waters of the State*			
Acres	0.35	0.35	0.00
Linear Feet	1,050	1,050	0.00

Total Potential CDFW Jurisdictional Resources			
Acres	0.72	0.72	0.00
Linear Feet	1,050	1,050	0.00

* RWQCB jurisdictional boundaries are defined as those determined for the USACE under waters of the United States; however, the RWQCB also takes jurisdiction over isolated waters.

(Psomas, 2023, Table 8)

Impacts are considered significant according to the significance criteria and would require regulatory authorization from the applicable agencies. Thus, the following permits/agreements are required from resource agencies prior to initiation of Project activities that involve impacts to jurisdictional waters (Psomas, 2023, p. 40):

- RWQCB Report of Waste Discharge for issuance of Waste Discharge Requirements under the State's Porter-Cologne Water Quality Control Act; and
- CDFW Section 1602 Notification of Lake or Streambed Alteration for a Lake or Streambed Alteration Agreement between CDFW and the Project Applicant/Developer.

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?***

Due to the lack of hydrophytic vegetation and hydric soils, Psomas determined that wetland conditions do not exist on the Project site. Therefore, because no State or federally protected wetlands occur on the Project site, implementation of the Project would have no potential 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; thus, no impact would occur and no mitigation is required.

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.

Implementation of the Project would remove 18.02 acres of habitat suitable for wildlife along with open land that wildlife currently uses to move through the area of the Project site. Under existing conditions, wildlife can move through the Project site and through the open area directly offsite and to the south of the Project site. During construction and operation of the Project wildlife could continue to be able to move around the Project site and in offsite areas of open land, therefore, impacts would be less than significant and no mitigation is required. (Psomas, 2023, p. 39)

As discussed in the analysis for Threshold (a), several common bird species have the potential to nest 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 the California Fish and Game Code. The MBTA and California Fish and Game Code prohibits the taking of migratory birds, nests, and eggs; therefore, the potential loss of an active nest of a migratory bird species would be considered potentially significant. (Psomas, 2023, p. 39) Accordingly, if active nests are disturbed during the nesting season (February 1 through September 15), the Project has the potential to impact nesting migratory birds which is considered a potentially significant impact. This potentially significant impact will be addressed by BIO MM-1, which outlines measures to avoid impacts to active nests for common and special status birds and raptors and implementing mitigation if active nests are found. 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. (City of Palmdale, 2022a, p. 291) 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 or a floodplain, does not contain wetlands or natural drainage courses (the drainage channel along the southern edge of the Project site is a graded, man-made channel), and is not targeted for open space preservation.

Prior to the approval of a development project, the City requires biological assessments and reports for projects in known or suspected natural habitat areas. Through the preparation of site-specific biological surveys and reports, the Project complies with the biological goals and policies of the City of Palmdale General Plan including Goal CON-1 and its applicable policies. Therefore, implementation of the Project would not conflict with any local policies protecting biological resources; thus, no impact would occur and no mitigation is required.

PMC Chapter 14.04, *Native Desert Vegetation Preservation*, is designed to protect western Joshua trees and California Juniper trees in the City. No western Joshua trees or California juniper trees were documented by Psomas as occurring on the Project site; thus, no impact would occur and no mitigation is required.

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, 2023, pp. 42-43)

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, Littlerock, Alpine Butte, Lancaster East, Lancaster West, and Ritter Ridge 7.5-minute quadrangles that generally extends north to East Avenue F, east to 140th Street East, south to the north slope San Gabriel Mountains, and west to 70th Street West. (Psomas, 2023, p. 37)

Candidate, Sensitive, or Special Status Species

Because the Project site does not contain any special status vegetation types or special status plants/desert native plant species, no cumulatively considerable impact would occur as a result of implementation of the Project.

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. 0.73-acre of potentially suitable nesting habitat (e.g., big sagebrush – rubber rabbitbrush scrub) for the loggerhead shrike would be permanently impacted through Project

implementation and 18.02 acres of potentially suitable foraging habitat (e.g., all vegetation types) for both species would be permanently impacted. 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, 2023, p. 41)

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) mountain bluebird (wintering); 4) vesper sparrow; 5) western meadowlark; and 6) black-throated sparrow. None of these species have the potential to nest on the Project site. 18.02 acres of marginal foraging habitat (e.g., all vegetation types) for each species would be permanently impacted through Project implementation. 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.

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. 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.

The Project would not directly impact potentially suitable denning habitat for Desert kit fox and American badger. However, vibration from construction equipment could cause burrows in offsite adjacent habitat to collapse, potentially entombing them in their burrows. Desert kit fox and American badger individuals could also potentially move through the Project construction area and be hit by construction vehicles. 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. Desert kit fox is protected by the California Fish and Game Code, which prohibits the take of individuals of this species. While American badgers are not afforded the same protection under the California Fish and Game Code, 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. Because the construction activities of the Project could indirectly impact these species, impacts would be potentially significant and require mitigation. This potentially significant impact will be addressed by Mitigation Measure BIO MM-2, which outlines the process of conducting pre-construction burrow surveys for desert kit fox and American badger and implementing mitigation if survey results are positive. With implementation of Mitigation Measure BIO MM-2, potential direct and indirect impacts to these species would be less than significant.

Potentially suitable habitat of 0.73-acre of (e.g., big sagebrush – rubber rabbitbrush scrub) for one special status reptile species, the northern legless lizard, would be permanently impacted by 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.

Riparian Habitat or Other Sensitive Natural Community

The Project would impact 1,050 linear feet of jurisdictional resources, including 0.35-acre of RWQCB waters of the State and 0.72-acre of CDFW jurisdictional resources. The loss of jurisdictional waters on the Project site would be a direct and cumulatively considerable impact.

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

Implementation of the Project would remove 18.02 acres of habitat suitable for wildlife along with open land that wildlife currently uses to move through the area of the Project site. Under existing conditions, wildlife can move through the Project site and through the open area directly offsite and to the south of the Project site. During construction and operation of the Project wildlife could continue to be able to move around the Project site and in offsite areas of open land, therefore, impacts would be less than cumulatively considerable.

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

Implementation of the Project would not conflict with any local policies protecting biological resources therefore, 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. The Project has the potential to directly and indirectly impact nesting migratory birds protected by the MBTA and the CDFW if vegetation is removed during the nesting season (February 1 through September 15). The Project has the potential to indirectly impact desert kit fox that may be located offsite near the Project site boundary.

Threshold b: Significant Direct and Cumulatively Considerable Impact. The Project would impact 0.35-acre of RWQCB waters of the State and 0.72-acre of CDFW jurisdictional resources, comprising 1,050 linear feet of jurisdictional resource.

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: No Impact. The Project complies with the applicable biological goals and policies of the City of Palmdale General Plan. Therefore, implementation of the Project would not conflict with any local policies protecting biological resources. In addition, no western Joshua trees or California juniper trees are present on the site under existing conditions; therefore, implementation of the Project would not conflict with PMC Chapter 14.04, Native Desert Vegetation Preservation.

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 Measure addresses potential impacts to nesting birds and raptors as discussed under Thresholds (a) and (d).

BIO MM-1 **Nesting Birds/Raptors**. To avoid impacts on active nests for common and special status birds and raptors, the Project Contractor shall schedule vegetation clearing and blasting 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 qualified 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 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 qualified biologist determines that nesting activity has ended. Construction may proceed within the buffer once the qualified 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 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 qualified biologist shall then prepare a formal Letter describing methods used, results of the survey, recommended buffers, and/or justification for buffer reductions. The Letter 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 shall include a map showing the designated protective buffer.

The following Mitigation Measure addresses potential impacts to sensitive wildlife species as discussed under Threshold (a).

BIO MM-2 **Desert Kit Fox Burrows/American Badger**. 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 prior to the initiation of the breeding season (i.e., February 1) 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 Environmentally Sensitive Area (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 will 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 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 shall include a description of the protective buffer that has been designated and a summary of any additional correspondence with the CDFW.

The following Mitigation Measure addresses potential impacts to jurisdictional resources as discussed under Threshold (b).

BIO MM-3 **Jurisdictional Permits**. Prior to any impacts on waters under the regulatory authority of the RWQCB or the CDFW, the Project Applicant shall prepare and process a RWQCB Report of Waste Discharge and a CDFW Section 1602 Notification of Lake or Streambed Alteration, as applicable. As part of the permitting process, the Project Applicant shall schedule a pre-application meeting with RWQCB and CDFW staff to discuss site conditions, the Project, biological and jurisdictional resources, impacts to jurisdictional resources resulting from implementation of the Project, proposed avoidance and minimization measures, the proposed compensatory mitigation program to offset Project impacts, and the regulatory permit process.

The Project Applicant shall implement and comply with all measures required by the RWQCB and CDFW permits. Compensatory mitigation may include 1) restoration (i.e., re-establishment or rehabilitation), 2) establishment (i.e., creation), 3) enhancement, 4) and/or preservation of jurisdictional resources. Compensatory mitigation may occur through 1) permittee-responsible mitigation, 2) payment to an in-lieu fee program, or 3) purchase of compensatory mitigation credits from an approved mitigation bank. Mitigation ratios (i.e., the amount of mitigation acreage compared to the amount of impacted habitat) shall be determined by the regulatory agencies, but shall be no less than a ratio of 1:1, replacing impacted jurisdictional resources with jurisdictional resources of equivalent or higher quality habitat value.

4.3.8 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 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. 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.

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.** 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.

4.3.9 Significance of Impacts After Mitigation

Threshold a: Less than Significant with Mitigation Incorporated. With implementation of Mitigation Measures BIO MM-1 and BIO MM-2, the direct and indirect impacts of the Project to sensitive wildlife species would be reduced to less than significant.

Threshold b: Less than Significant with Mitigation Incorporated. With implementation of Mitigation Measure BIO MM-3, the direct and cumulative considerable impacts of the Project to jurisdictional resources would be reduced to less than significant.

Threshold d: Less than Significant with Mitigation Incorporated. 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 reduced to less than significant.



Source(s): Psomas (10-24-2022)

Figure 4.3-1

Not to Scale

Project Impacts to Jurisdictional Resources

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 Palmdale 8th Street Project," dated May 10, 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 site 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*.

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 in light of 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)

❑ 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)

❑ 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 neighbors, the Serrano, 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, there is little 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 site. 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. 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 Tatavian 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 also held the streams on the rear side of the Tehachapi Mountains, the small creeks draining the rear slope of the Liebre and Sawmill Range, with Antelope Valley and the westernmost part of the Mojave

Desert. 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. (PaleoWest, 2022a, p. 12)

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, which he named Lancaster after his Pennsylvania hometown. 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. A number of non-native expeditions transversed 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 7 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. Harold, also known as Alpine Station and Trejo Post Office, was established at the crossroads of the Southern Pacific Railroad and Fort Tejon Road (now Barrel Springs Road). It was essentially abandoned when the railroad moved the site of its booster engine station to another location north of Harold. (PaleoWest, 2022a, p. 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. 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, p. 16)

The military has played an important role in the modern history of the Mojave Desert. In 1933, Rogers Dry Lake (located between Barstow and Boron) was used as a gunnery and bombing range. In 1942, the first US jet airplane was tested at Muroc Army Airfield. This installation became Muroc Air Force Base in 1948 and was renamed Edwards Air Force Base in 1981. In 1940, the Palmdale Airport was used as the Palmdale Army Air Field to serve as an emergency landing strip and for B-25 support training during World War II. In 1946, the Army Air Field was declared a surplus facility and Los Angeles County purchased it to serve as a municipal airport. The USAF again took over the airport in 1950 (purchased in 1951) to use in final assembly and flight testing of jet aircraft. In 1951, Lockheed Aircraft was contracted to develop a master plan for the site, which involved the construction of a facility "that would meet the requirements of full war mobilization and augment the industrial production potential of the major airframe manufacturing industry in southern California." The plan was approved in 1953, and the site became officially known as USAF Plant 42. The Federal Government took over ownership of the facility in 1954. USAF Plant 42 is the home of the B-1 and B-2 bombers, along with the Space Shuttle. Palmdale has often been referred to as the Aerospace Capitol of the United States, with Boeing, Northrop Grumman, and Lockheed Martin, maintaining production facilities at USAF Plant 42. The Federal Aviation Administration's (FAA) Air Route Traffic Control Center, which handles air traffic for the Western Region of the United States, is also located in Palmdale. In 1998, the Joe Davies Heritage Airpark was opened at USAF Plant 42. Several aircraft that were flown, tested, designed, produced, or modified at USAF Plant 42 are on display at the Heritage Airpark. (PaleoWest, 2022a, pp. 16-17)

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. 17)

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, on February 24, 2022. 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 period cultural resources previously recorded within the study area during prior cultural resource investigations. (PaleoWest, 2022a, p. 17)

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 are provided below.

2. Previous Cultural Resources Investigations

The records search results indicate that 38 previous cultural resource investigations have been completed within the Project study area since 1986 (refer to Table 4-1 of the Project's CRI, included as EIR *Technical Appendix D*). Nine of these studies include or intersect the Project site. As a result, it appears that approximately 95-100 percent of the Project site has been previously inventoried for cultural resources. (PaleoWest, 2022a, p. 18)

The records search indicated that 28 cultural resources were previously documented within the study area (refer to Table 4-2 of the Project's CRI, included as EIR *Technical Appendix D*). Of the 28 resources, 27 are historic period resources consisting primarily of historic period refuse scatters and single-family residences, and one resource is a prehistoric period resource comprised of an isolated projectile point. None of the cultural resources were previously documented within the Project site. (PaleoWest, 2022a, p. 20)

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 Archaeological Determinations of Eligibility, and the Office of Historic Preservation Built Environment Resources Directory (BERD). There are no resources previously listed within the Project site but there are six built environment resources previously recorded within 0.5-mile of the Project site that have been evaluated for the National Register of Historic Places; only one of the six resources (P-19-180638, Union Pacific Railroad) was determined eligible for the NRHP. (PaleoWest, 2022a, p. 21)

Aerial imagery indicates that in 1948 the Project site and its immediate vicinity were undeveloped except for sparse roads that were built in the vicinity during the early twentieth century, a segment of the UPRR and Sierra Highway to the west, and four to five structures located near the southeast edge of the Project site. The USGS maps do not identify any structures within the Project site. Additionally, a search of the US Department of the Interior Bureau of Land Management's General Land Office Records did not identify any homesteads or land patents for the Project site. (PaleoWest, 2022a, p. 22)

The Project site lacks many of the natural resources (e.g., water) that were exploited by prehistoric inhabitants of the region. One seasonal drainage, Amargosa Creek, is located approximately one mile west of the Project site. No other natural hydrological features are present near the Project site. Rosamond and Rogers Dry Lake are located approximately 11 miles to the north. 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 Early and Middle Holocene quaternary alluvium comprising the unconsolidated fill of the Antelope Valley and has an estimated thickness of 100 feet or more. The 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. Given the lack of natural resources in the Project site and the low density of prehistoric sites identified in the records search area (only one isolated artifact), the Project site has a low sensitivity for preserving buried archaeological sites. (PaleoWest, 2022a, p. 22)

4. Native American Heritage Commission Sacred Lands File Search

PaleoWest contacted the Native American Heritage Commission (NAHC) on February 1, 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 six recommended tribal groups on March 25, 2022. These letters were followed up by phone calls on April 1, 2022. Five responses were received, including responses from the Quechan Historic Preservation Department, a Tribal Historic and Cultural Preservation Officer for the Fernandeño Tataviam Band of Mission Indians, the Cultural Resources Analyst for the San Manuel Band of Mission Indians, the Co-Chairman for the Serrano Nation of Mission Indians, and the Chairperson of the San Fernando Band of Mission Indians. (PaleoWest, 2022a, pp. 22-23)

In addition, in compliance with Assembly Bill (AB 52), on November 10, 2022, the City emailed 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
- 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:

- Fernandeño Tataviam Band of Mission Indians
- Morongo Band of Mission Indians

At time of this Draft EIR publication, the Fernandeño Tataviam Band of Mission Indians has not provided further substantive comment during the consultation process. The Morongo Band of Mission Indians stated that the proposed Project is located within the ancestral territory and traditional use area of the Cahuilla and Serrano people of the Morongo Band of Mission Indians and recommended tribal monitoring during ground disturbing activities. Refer to Subsection 4.13, *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 on March 28, 2022. The fieldwork effort included an intensive pedestrian survey of the entire Project site, totaling approximately 18 acres. The survey was conducted by walking a series of parallel transects running north/south spaced at 15-meter (49-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. 23)

2. *Field Results*

No prehistoric or historic period (i.e., 45 years or older) archaeological resources were identified on the surface of the Project site during the archaeological survey (PaleoWest, 2022a, p. 23).

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 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 the 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, 2022c)

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 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. 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.)

6. 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?

No prehistoric or historic period (i.e., 45 years or older) archaeological resources were identified on the surface of the Project site during the archaeological survey conducted in 2022 (PaleoWest, 2022a, p. 23).

The records search indicated that 28 cultural resources were previously documented within 0.5-mile of the Project site. Of the 28 resources, 27 are historic period resources consisting primarily of historic period refuse scatters and single-family residences, and one resource is a prehistoric period resource comprised of an isolated projectile point. None of the cultural resources were previously documented within the Project site. There are no resources previously listed within the Project site but there are six built environment resources previously recorded within 0.5-mile of the Project site that have been evaluated for the National Register of Historic Places; only one of the six resources (P-19-180638, UPRR) was determined eligible for the NRHP. (PaleoWest, 2022a, pp. 20-21) The Project would have no physical impact on the UPRR.

The depositional (gravels) environment found on and around the Project site is generally not conducive to the preservation of buried cultural deposits due to the high energy involved in the transportation of sand and gravel. The Project site is vacant and undeveloped but was heavily disturbed by grading activities that, according to historical aerial photography, occurred on the site sometime between 2009 and 2011. Based on the amount of modern disturbance that has occurred on the Project site, the site has a low 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. (PaleoWest, 2022a, p. 22) This potentially significant impact will be addressed by Mitigation Measures CUL MM-1 and CUL MM-2, 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 and CUL MM-2 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 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?

The records search indicated that 28 cultural resources were previously documented within 0.5-mile of the Project site. Of the 28 resources, 27 are historic period resources consisting primarily of historic period refuse scatters and single-family residences, and one resource is a prehistoric period resource comprised of an isolated projectile point. None of the cultural resources were previously documented within the Project site. There are no archaeological resources previously listed within the Project site.

The depositional (gravels) environment found on and around the Project site is generally not conducive to the preservation of buried cultural deposits due to the high energy involved in the transportation of sand and gravel. Given the lack of natural resources on the Project site, the grading activity that occurred on the property sometime between 2009 and 2011, and the low density of prehistoric sites identified in the records search area (only one isolated artifact within a 0.5-mile radius of the site), the Project site has a low sensitivity for buried archaeological sites. (PaleoWest, 2022a, p. 22) However, although unlikely, there is a remote potential that archaeological 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 archaeological 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 and CUL MM-2, 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 and CUL MM-2 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 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 (PaleoWest, 2022a). Further, the site was graded sometime between 2009 and 2011, which would have unearthed human remains had they been present. 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 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 pre-historic and historical 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. No known historical resources are present on the Project site and the site has a low 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 archaeological resources are present on the property and the Project site has a low 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 historical and archaeological resources that may be buried beneath the site as discussed under Thresholds (a) and (b).

CUL MM-1 Prior to construction and as needed throughout the construction period involving ground-disturbing construction activities, a construction worker cultural resource awareness training program shall be provided to all new construction workers within one week of employment at the project site. The training shall be prepared and conducted by a qualified cultural resources specialist retained by the construction contractor or by the Project Applicant. 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 If suspected cultural resources are encountered during ground disturbance activities, all work within 100 feet of the find shall immediately cease and the area cordoned off

until a qualified cultural resource specialist that meets the Secretary of the Interior's Professional Qualification Standards can evaluate the find and make recommendations. This requirement shall be noted on all grading plans and construction documents that authorize ground-disturbing construction activities. If the discovery proves to be California Register of Historical Resources (CRHR) eligible, additional work such as data recovery excavation, Native American consultation, and archaeological monitoring may be warranted to mitigate any adverse effects, as determined by the qualified cultural resource specialist. If cultural resources are discovered that may have relevance to Native Americans, the cultural resources specialist or Project Applicant must provide written notice to the City, Native American Heritage Commission, and any other appropriate individuals, agencies, and/or groups as determined by the cultural resource specialist in consultation with the City to receive input regarding treatment and disposition of the resource, which may include avoidance, testing, and/or excavation to prevent destruction of the resource and/or to allow documentation of the resource for research potential. All measures recommended by the cultural resource specialist and the NAHC and concurred with by the City shall be implemented. Work within the 100-foot cordoned off area shall be permitted to resume when the cultural resource specialist confirms that resources have be removed and/or mitigated to less than significant levels. All reports, correspondence, and determinations regarding the discovery shall be submitted to the California Historical Resources Information System's South-Central Coastal Information Center at California State University Fullerton.

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 and CUL MM-2 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, "8th Street Industrial Energy Analysis," dated January 13, 2023, prepared by Urban Crossroads and included as *Technical Appendix E* (Urban Crossroads, 2023c). It is noted that the technical studies analyzed the Project as a 384,800 square foot (s.f.) cross-dock building which is 4,390 s.f. larger than the proposed building at 380,410 s.f. and is a design that positions loading docks on the north and south sides of the building rather than only on the north side of the building as is proposed in the current Project design; therefore, the analysis herein represents a Project design scenario that would consume more energy than would actually occur under the current Project design, which is a smaller building with dock doors on only the north side of the building. 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 2020, released by the United States (US) Energy Information Administration (EIA) in published California State Profile and Energy Estimates (Urban Crossroads, 2023c, p. 8).

- In 2020, approximately 6,923 trillion British Thermal Unit (BTU) of energy was consumed;
- In 2020, approximately 524 million barrels of petroleum was consumed;
- In 2020, approximately 2,075 billion cubic feet of natural gas was consumed; and
- In 2020, approximately 1 million short tons of coal was consumed

The California Energy Commission's (CEC's) Transportation Energy Demand Forecast 2018-2030 was released to support the 2017 Integrated Energy Policy Report. The Transportation Energy Demand Forecast 2018-2030 lays out graphs and data supporting CEC's projections of California's future transportation energy demand. The projected inputs consider expected variable changes in fuel prices, income, population, and other variables. Predictions regarding fuel demand included:

- Gasoline demand in the transportation sector is expected to decline from approximately 15.8 billion gallons in 2017 to between 12.3 billion and 12.7 billion gallons in 2030;
- Diesel demand in the transportation sector is expected to rise, increasing from approximately 3.7 billion diesel gallons in 2015 to approximately 4.7 billion in 2030; and
- Data from the Department of Energy indicates that approximately 3.9 billion gallons of diesel fuel were consumed in 2019 (Urban Crossroads, 2023c, p. 8).

The most recent data provided by the EIA for energy use in California is reported from 2020 and provided by demand sectors as follows (Urban Crossroads, 2023c, p. 8):

- Approximately 34.0 percent - transportation sector;
- Approximately 24.6 percent - industrial sector;
- Approximately 21.8 percent - residential sector; and
- Approximately 19.6 percent - commercial sector

In 2021, total system electric generation for California was 277,764 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 194,127 GWh which accounted for about 70 percent of the electricity it uses; the rest was imported from the Pacific Northwest (12 percent) and the US Southwest (18 percent). Natural gas is the main source for electricity generation at 50.2 percent of the total in-state electric generation system power as shown in Table 2-1 of *Technical Appendix E*. (Urban Crossroads, 2023c, p. 8)

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 2018 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. 11)

Table 4.5-1, *SCE 2020 Power Content Mix*, summarizes SCE's specific proportional shares of electricity sources in 2020. As indicated in Table 4.5-1, the 2020 SCE power mix has renewable energy at 30.9 percent of the overall energy resources. Geothermal resources are at 5.5 percent, wind power is at 9.4 percent, large hydroelectric sources are at 3.3 percent, solar energy is at 15.1 percent, and coal is at zero percent. (Urban Crossroads, 2023c, p. 11)

Table 4.5-1 SCE 2020 Power Content Mix

Energy Resources	2020 SCE Power Mix
Eligible Renewable	**30.9%**
-Biomass & Waste	0.1%
-Geothermal	5.5%
-Eligible Hydroelectric	0.8%
-Solar	15.1%
-Wind	9.4%
Coal	**0.0%**
Large Hydroelectric	**3.3%**
Natural Gas	**15.2%**

Nuclear	**8.4%**
Other	**0.3%**
Unspecified Sources of power*	42.0%
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 10 percent of the nation's total consumption. California is the largest U.S. consumer of motor gasoline and jet fuel, and 85 percent of the petroleum consumed in California is used in the transportation sector. (Urban Crossroads, 2023c, p. 15)

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. 18)

1. *Intermodal Surface Transportation Efficiency Act of 1991*

The Intermodal Surface Transportation Efficiency Act (ISTEA) promoted the development of inter-modal 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. 18)

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. 18)

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. 18)

The 2021 IEPR was adopted in February 2022, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2021 IEPR provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining reliability and controlling costs. (Urban Crossroads, 2023c, pp. 18-19)

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. 19)

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. 19)

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. 19)

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 33 percent of total retail sales by 2020. (Urban Crossroads, 2023c, p. 19)

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. 20)

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, 2022a)

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. Output from the model runs for both construction and operational activity are provided in Appendices 4.1 through 4.2 of *Technical Appendix E*. (Urban Crossroads, 2023c, p. 22)

California Building Energy Code Compliance (CBECC) software is used specifically for Title 24 compliance at the time of a project's physical building construction when construction drawings are available. Construction drawings are not available for the Project at this time and will not be available until after the Project is entitled. As such, this analysis correctly use CalEEMod to estimate energy demand based on average intensity factors for similar land use types based on the Project's proposed SRP 22-012 provided to the City for entitlement. Since the occupants of the Project's buildings are unknown at this time, and information about the future building user's energy use is also not available at this time, it is appropriate to rely upon the CalEEMod default assumptions which have been derived by the California Air Pollution Control Officers Association (CAPCOA) based on survey data.

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 2023 and 2024 analysis years were utilized to determine the average vehicle fuel economy used throughout the duration of the Project. (Urban Crossroads, 2023c, pp. 22-23)

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 July 2023 and conclude in July 2024. The expected construction schedule used in the analysis, previously shown on Table 3-1, *Expected Construction Schedule,* in EIR Section 3.0*, Project Description*, represents a worst-case analysis scenario should construction commence any time after July 2023, 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. 23)

Based on the 2022 National Construction Estimator, the typical power cost per 1,000 square feet (s.f.) of construction per month is estimated to be $2.41. 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 $22,701.19. (Urban Crossroads, 2023c, p. 23)

The total Project construction electricity usage is the summation of the products of the power cost (estimated in Table 4.5-2) by the utility provider cost per kilowatt hour (kWh) of electricity. (Urban Crossroads, 2023c, p. 23)

The SCE's general service rate schedule was used to determine the electrical usage of the Project. As of October 1, 2022, 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 171,059 kWh. (Urban Crossroads, 2023c, p. 24)

Table 4.5-2 Construction Power Cost

Land Use	Power Cost (per 1,000 square feet of construction per month)	Size of Project (1,000 square feet)	Construction Duration (months)	Project Construction Power Cost
High-Cube Fulfillment (Non-Sort)	$2.41	384.800	12	$11,128.42
Parking	$2.41	31.752	12	$918.27
Landscape	$2.41	84.488	12	$2,443.39
Other Asphalt Surfaces	$2.41	283.925	12	$8,211.11
			Construction Power Cost	**$22,701.19**

(Urban Crossroads, 2023c, Table 4-2)

Table 4.5-3 Construction Electricity Usage

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
High-Cube Fulfillment (Non-Sort)	$0.13	83,855
Parking	$0.13	6,919
Landscape	$0.13	18,412
Other Asphalt Surfaces	$0.13	61,873
Construction Electricity Usage		**171,059**

(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 52,302 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, pp. 25-27)

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
Site Preparation (10)	Rubber-tired dozers	367	3	8	0.40	3,523	1,904
	Crawler Tractors	87	4	8	0.43	1,197	647
Grading (30)	Excavators	36	2	8	0.38	219	355
	Graders	148	1	8	0.41	485	787
	Rubber Tired Dozers	367	1	8	0.40	1,174	1,904
	Scrapers	423	2	8	0.48	3,249	5,268
	Crawler Tractors	87	2	8	0.43	599	971
Building Construction (300)	Cranes	367	1	8	0.29	851	13,807
	Forklifts	82	3	8	0.20	394	6,383
	Generator Sets	14	1	8	0.74	83	1,344
	Welders	46	1	8	0.45	166	2,685
	Crawler Tractors	87	3	8	0.43	898	14,560
Paving (20)	Pavers	81	2	8	0.42	544	588
	Paving Equipment	89	2	8	0.36	513	554
	Rollers	36	2	8	0.38	219	237
Architectural Coating (40)	Air Compressors	37	1	8	0.48	142	307
Construction Fuel Demand (Gallons Diesel Fuel)							**52,302**

(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. 27)

Table 4.5-5 Construction Trips and VMT

Phase Name	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Site Preparation	18	2	0
Grading	20	6	20
Building Construction	162	56	0
Paving	15	0	0
Architectural Coating	32	0	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 948,865 VMT during the 12 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. 27)

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 2023 and 2024 calendar years. Data from EMFAC2021 is shown in Appendix 4.3 of the Project's Energy Analysis (*Technical Appendix E*) prepared for the Project. (Urban Crossroads, 2023c, p. 27)

As shown in Table 4.5-6, *Construction Worker Fuel Consumption Estimates*, the estimated annual fuel consumption resulting from Project construction worker trips is 34,924 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, pp. 27-28)

Table 4.5-6 Construction Worker Fuel Consumption Estimates

Year	Construction Activity	Duration (Days)	Worker Trips/ Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2023	LDA						
	Site Preparation	10	9	18.5	1,665	30.32	55
	Grading	30	10	18.5	5,550	30.32	183
	Building Construction	104	81	18.5	155,844	30.32	5,140
	LDT1						
	Site Preparation	10	5	18.5	925	24.35	38
	Grading	30	5	18.5	2,775	24.35	114
	Building Construction	104	41	18.5	78,884	24.35	3,240
	LDT2						
	Site Preparation	10	5	18.5	925	23.69	39
	Grading	30	5	18.5	2,775	23.69	117
	Building Construction	104	41	18.5	78,884	23.69	3,330
2024	LDA						
	Building Construction	196	81	18.5	293,706	31.04	9,463
	Paving	20	8	18.5	2,960	31.04	95
	Architectural Coating	40	16	18.5	11,840	31.04	381
	LDT1						
	Building Construction	196	41	18.5	148,666	24.70	6,020
	Paving	20	4	18.5	1,480	24.70	60
	Architectural Coating	40	8	18.5	5,920	24.70	240
	LDT2						
	Building Construction	196	41	18.5	148,666	24.35	6,104
	Paving	20	4	18.5	1,480	24.35	61
	Architectural Coating	40	8	18.5	5,920	24.35	243
Total Construction Worker Fuel Consumption							**34,924**

(Urban Crossroads, 2023c, Table 4-7)

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 185,400 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), 50 percent of all vendor trips are from heavy-heavy duty trucks (HHD), and 100 percent of all hauling trips are from HHDs. 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 2023 and 2024 calendar years. Data from EMFAC2021 is shown in Appendix 4.3 of *Technical Appendix E*. (Urban Crossroads, 2023c, p. 29)

As shown in Table 4.5-7, *Construction Vendor Fuel Consumption Estimates*, it is estimated that 25,954 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. 29)

Table 4.5-7 Construction Vendor Fuel Consumption Estimates

Year	Construction Activity	Duration (Days)	Vendor Trips/Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2023	MHD						
	Site Preparation	10	1	10.2	102	8.32	12
	Grading	30	3	10.2	918	8.32	110
	Building Construction	104	28	10.2	29,702	8.32	3,572
	HHD (Vendor)						
	Site Preparation	10	1	10.2	102	6.28	16
	Grading	30	3	10.2	918	6.28	146
	Building Construction	104	28	10.2	29,702	6.28	4,733
	HHD (Hauling)						
	Grading	30	20	20	12,000	6.28	1,912
2024	MHD						
	Building Construction	196	28	10.2	55,978	8.39	6,672
	HHD (Vendor)						
	Building Construction	196	28	10.2	55,978	6.37	8,781
Total Construction Vendor/Hauling Fuel Consumption							**25,954**

(Urban Crossroads, 2023c, Table 4-8)

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. 30)

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. 30)

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. 30)

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. 30)

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 $22,701.19. 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 171,059 kWh. (Urban Crossroads, 2023c, p. 33)

Construction equipment used by the Project would result in single event consumption of approximately 52,302 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. 33)

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. 33)

Construction worker trips for full construction of the Project would result in an estimated fuel consumption of 34,924 gallons of fuel. Additionally, fuel consumption from construction vendor trips (MHDs and HHDs) would total approximately 25,954 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 2021 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. 33)

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. 31)

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 2024 calendar year. Data from EMFAC2021 is shown in Appendix 4.3 of *Technical Appendix E*. As shown in Table 4.5-8, *Total Project-Generated Traffic Annual Fuel Consumption*, it is estimated that the Project would result in a 2,098,414 annual VMT and an estimated annual fuel consumption of 119,055 gallons of fuel. (Urban Crossroads, 2023c, p. 31)

Table 4.5-8 Total Project-Generated Traffic Annual Fuel Consumption

Vehicle Type	Average Vehicle Fuel Economy (mpg)	Annual VMT	Estimated Annual Fuel Consumption (gallons)
LDA	31.04	1,029,846	33,180
LDT1	24.70	81,604	3,304
LDT2	24.35	317,728	13,046
MDV	15.93	231,183	14,514
MCY	15.93	43,272	2,717
LHD1	16.19	54,914	3,391
LHD2	15.93	15,278	959
MHD	8.39	78,956	9,410
HHD	6.37	245,633	38,533
Total (All Vehicles)		**2,098,414**	**119,055**

(Urban Crossroads, 2023c, Table 4-9)

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 up to one 175 horsepower (hp), natural gas-powered cargo handling equipment – port tractor operating four hours per day for 365 days of the year. As shown in Table 4.5-9, *On-Site Cargo Handling Equipment Fuel Consumption Estimates*, Project on-site equipment would consume an estimated 4,642 gallons of natural gas. (Urban Crossroads, 2023c, pp. 31-32)

Table 4.5-9 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	1	4	365	17,909	5,633	4,642
On-Site Cargo Handling Equipment Fuel Demand (Gallons Fuel)						**4,642**

(Urban Crossroads, 2023c, Table 4-10)

3. Facility Energy Demands

Project building operations and activities would result in the consumption of electricity, which would be supplied to the Project by SCE. As summarized on Table 4.5-10, *Project Annual Operational Energy Demand Summary*, the Project would result in 1,828,860 kWh/year of electricity. (Urban Crossroads, 2023c, p. 32)

Table 4.5-10 Project Annual Operational Energy Demand Summary

Land Use	Electricity Demand (kWh/year)
High-Cube Fulfillment (Non-Sort)	1,801,004
Parking	27,856
Landscape	0
Other Asphalt Surfaces	0
Total Project Energy Demand	**1,828,860**

(Urban Crossroads, 2023c, Table 4-11)

Based on information provided by the Project Applicant, the Project would not use natural gas for the building envelope. As such, natural gas consumption was not analyzed in the Energy Analysis (*Technical Appendix E*) prepared for the Project. (Urban Crossroads, 2023c, p. 32)

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. 32)

5. Enhanced Vehicle Fuel Efficiencies

Project annual fuel consumption estimates presented previously in Table 4.5-8 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. 33)

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. 33)

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 119,055 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 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, p. 34)

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. 34)

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. 34)

- CARB's Mobile Source Strategy focuses on reducing greenhouse 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. 34)

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 a sidewalk along its 8th Street East frontage 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, p. 35)

2. On-Site Cargo Handling Equipment Fuel Demands

On-site cargo handling equipment used by the Project would result in approximately 4,642 gallons of natural gas. 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. 35)

3. Facility Energy Demands

Project facility operational energy demands are estimated to be 1,828,860 kWh/year of electricity, which would be supplied by SCE. The Project proposes conventional industrial 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. 35) 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 the 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. 37)

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. 37)

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 2021 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 2021 IEPR. (Urban Crossroads, 2023c, p. 37)

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. 38)

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. 38)

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. 38)

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. 38)

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. 38)

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. 38)

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. (Urban Crossroads, 2023c, p. 38)

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.

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 Section is based in part on information from the report titled, "Geotechnical Investigation, Proposed Warehouse, 8th Street, South of Rancho Vista Boulevard," prepared by Southern California Geotechnical (herein, "SCG"), dated March 1, 2022, and included as EIR *Technical Appendix F* (SCG, 2022). 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 Palmdale 8th Street Project, Los Angeles County, California," dated May 10, 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, 2022b, p. 4.7-1)

B. *Local Geologic Setting*

SCG conducted subsurface exploration at the Project site consisting of five borings (identified as Boring Nos. B-1 through B-5) advanced to depths of approximately 20 to 25 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 Project's Geotechnical Investigation (EIR *Technical Appendix F*). Based on the results of the analysis, the Project site contains the following geotechnical conditions:

- Artificial Fill: Artificial fill soils were encountered at the ground surface at Boring No. B-3. These fill soils extend to a depth of approximately three feet below the existing site grades. The fill soils generally consist of medium dense fine sandy silts with a varying amount of clay. The fill soils possess a disturbed appearance and mottled appearance resulting in their classification as artificial fill. (SCG, 2022, p. 6)

- Alluvium. Native alluvium was encountered below the fill soils at Boring No. B-3 and at the ground surface of all of the remaining boring locations, extending to at least the maximum depth explored of approximately 25 feet below existing site grades. The alluvium generally consists of medium-dense to dense-fine to coarse sands and silty fine sands with varying gravel

content. Boring No. B-4 encountered a layer of very dense clayey fine sands to fine sandy clays at depths of approximately 17 to 22 feet below the existing site grades. (SCG, 2022, p. 6)

C. Site Topography

Overall site topography is perceived as flat and gently slopes downward to the east at a gradient of approximately one percent. The surface of the site was disturbed sometime between 2009 and 2011 and the central and eastern regions of the site appear to have been cut approximately one to three feet below natural site grades. The depths of the graded drainage course that is present along the southern boundary of the site range from approximately one to nine feet lower than the surrounding elevations. (SCG, 2022, p. 4)

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, 2022, p. 10)

E. Groundwater

Free water was not encountered during the drilling of any of the exploratory borings on the Project site. Based on the lack of any water within the borings and the moisture content of the recovered soil samples, the static groundwater is considered to have existed at a depth in excess of approximately 25 feet at the time of the subsurface exploration.

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) Open File Report 105, the Seismic Hazard Zone Report for the Palmdale 7.5-Minute Quadrangle, which indicated that the historic high groundwater level for the site was more than 40 feet below the ground surface. (SCG, 2022, p. 7)

The nearest water monitoring well is located approximately 0.3-mile northeast of the site. Water level readings within the monitoring well indicate a high groundwater level of 445 feet (April 1982) below the ground surface. (SCG, 2022, 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 (d50) 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, 2022, p. 12)

The Earthquake Zones of Required Investigation, Palmdale Quadrangle, published by the CGS indicates that 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 static groundwater table within the upper approximately 25 feet, and the mapping performed by the SCG, it was determined that liquefaction is not a concern for future development on the Project site. (SCG, 2022, p. 12)

G. Expansive Soils

Laboratory testing performed on a representative sample of the near surface soils indicates that the materials possess a very low expansion potential (EI=0). Therefore, expansive soils are not considered to be a design constraint for future development on the Project site. (SCG, 2022, p. 13)

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. Due to the lack of water bodies on the site or in the vicinity of the Project site, the potential for seiches affecting the site is considered low to null. (SCG, 2022, p. 10)

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, approximately 73.9 percent of the Project site has a slow rate of runoff and a slight susceptibility to erosion, while the remaining 26.1 percent of the site contain soils that have a very slow rate of runoff and a slight susceptibility to erosion. (USDA, n.d.; USDA, 1970, pp. 30, 49)

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]
HkA	Hesperia fine sandy loam, 0 to 2 percent slopes	Slow	Slight	13.4	73.9%
Rp	Rosamond loam	Very Slow	Slight	4.7	26.1%
	Totals:	--	--	**18.1**	**100.0%**

[1] AOI = Area of Interest.
[2] Values reflect rounding.
(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, pp. 5-6)

- 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 fossil localities as close as 0.5-mile from the Project site, at a depth of less than three meters, suggests paleontological resources could be present beneath the ground surface at the Project site. As a result, the surficial sediments (Qa) underlying the Project are considered to have a "High Sensitivity" for containing paleontological resources. (PaleoWest, 2022b, p. 10)

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, p. 7)

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 within 0.5 mile of the boundaries of the Project site. Southeast of the Project site at the intersection of East Avenue S and 90th Street East, LA County Museum Vertebrate Paleontology (LACM VP) 5946 produced remains of a lizard (*Gambelia wislizenii*) between zero and three meters (m) below ground surface (bgs). Further to the southeast, LACM VP 5947 produced remains of a pocket gopher (*Thomomys*) between zero and three m bgs, and LACM VP CIT451 produced remains of Mastodon (*Mammutidae*) and horse (*Equidae*) at an unknown depth. To the north, LACM VP 7884 produced remains of camel (*Camelops hesternus*) at four feet (ft) bgs, and LACM VP 7853 produced abundant remains of multiple large and small mammals and squamates between three and 11 ft bgs. 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 also 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, 2020e)

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, 2022d)

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 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 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, 2022a)

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, 2022b, 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. (City of Palmdale, 2022b, p. 4.7-12)

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, 2022, p. 10). As such, the Project would not be subject to the rupture of a known earthquake fault; therefore. 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 F*) 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 static groundwater table within the upper approximately 25 feet, and the mapping performed by the SCG, SCG determined that the Project would not be subject to seismic-related ground failure, including liquefaction; therefore, impacts would be less than significant. (SCG, 2022, p. 12)

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 two 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), implementation of the Project nonetheless 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.

Pursuant to the requirements of the SWRCB, the Project Applicant is required to obtain a NPDES permit for construction activities, including proposed grading. The NPDES permit is required for all projects that include construction activities such as clearing, grading, and/or excavation that disturb at least one acre of total land area. The City's Municipal Separate Storm Sewer System (MS4) NPDES Permit requires the Project Applicant to prepare and submit to the City for approval, a Project-specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would identify a combination of erosion control and sediment control measures (i.e., Best Management Practices [BMPs]) to reduce or eliminate sediment discharge to surface water from stormwater and non-stormwater source discharges during construction.

In addition, 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 addition, proposed construction activities would be required to comply with applicable City ordinances (i.e., PMC Section 8.04.265 Chapter 70, Excavation and Grading) to preclude potential erosion hazards, which requires the Project Applicant to prepare a Stormwater Management Plan (SWMP) to be used during the rainy season. With mandatory compliance to the requirements noted in the Project's SWPPP and/or SWMP, as well as mandatory compliance to applicable regulatory requirements including but not limited to AVAQMD Rule 403 and Section 8.04.265 Chapter 70 of the PMC, 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 a storm drain system. With implementation of the proposed Project, on-site stormwater would be captured through a series of catch basins and storm drains which would be routed to various underground chambers located along the northern and southern areas of the site. The captured stormwater would be pre-treated through a hydrodynamic separator prior to entering the chambers. In the event of high flows, stormwater would bypass the pretreatment within the hydrodynamic separator and flow directly into the underground chambers. The proposed underground infiltration chambers would discharge directly into the proposed culverts beneath 8th Street that will run under 8th Street and drain to the existing channel located northeast of the Project site. No runoff from the developed portions of the site would discharge directly off site. (Langan, 2023a, p. 1)

In addition, the existing unnamed graded channel that runs along the southern boundary of the site would be redesigned into an earthen channel per the MDP. The channel is designed to maintain its existing flow path, which flows from west to east. The purpose of the earthen channel is to collect off-site flows from the west and convey water through the site where the flow would discharge into the proposed culverts. The earthen channel will have stabilized side slopes to prevent erosion. The proposed culverts will discharge on the east side of 8th Street and a headwall and rip rap will be installed to decrease the velocity of the flows and reduce the potential for significant erosion downstream of the improvements. (Langan, 2023a, p. 1)

The proposed underground chambers, lack of discharge from the Project site, and design of the earthen channel 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, subsidence, and collapse is considered low (SCG, 2022, p. 10). 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, subsidence, or collapse. Impacts 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 static groundwater table within the upper approximately 25 feet, 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, 2022, p. 12)

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 possess a very low expansion potential (EI=0) (SCG, 2022, p. 13). 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?***

Public sewer systems that would provide service to the proposed Project are owned and maintained by the City of Palmdale Public Works, Sewer Maintenance Division (COPSM). 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 surficial sediments (Qa) underlying the Project site are considered to have a "High Sensitivity" for containing paleontological resources. 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, p. 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 a "High" paleontological sensitivity from the surface. As such, ground-disturbing activities conducted at depths below previously disturbed 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 less than significant.

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/or SWMPs. 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 local ordinances 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 a "High Sensitivity" for containing paleontological resources, therefore, 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

Threshold a: Less than Significant Impact. The Project site is not located within an Alquist-Priolo Earthquake Fault Zone and 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 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 static groundwater table within the upper approximately 25 feet, and the mapping performed by the 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. The Project would not result in substantial soil erosion or loss of topsoil. The soils on the Project site are not highly susceptible to erosion. Additionally, the Project Applicant would be required to obtain a NPDES permit for construction activities and adhere to a SWPPP as well as AVAQMD Rule 403 and Section 8.04.265 Chapter 70 of the PMC. 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, as 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, subsidence, and collapse is considered low, resulting in less than significant impacts. In addition, based on the lack of a static groundwater table within the upper approximately 25 feet, and the mapping performed by the CGS, 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 possess a very low expansion potential (EI=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 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 Los Angeles County Sanitation District (LACSD) treatment plant.

Threshold f: Significant Direct and Cumulatively Considerable Impact. The surficial sediments (Qa) underlying the Project site are considered to have a "High Sensitivity" for containing paleontological resources. As such, ground-disturbing activities at depths below already disturbed portions of the Project 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 given in Section 6.0 of the

March 1, 2022 "Geotechnical Investigation, Proposed Warehouse, 8th Street, South of Rancho Vista Boulevard Palmdale, California" prepared by Southern California Geotechnical and included as Technical Appendix F 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, and the Project's SWPPP SWMP. Compliance with the NPDES permit and the SWPPP/SWMP 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 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, "8th Street Industrial Greenhouse Gas Analysis" (herein, "GHGA"), dated January 16, 2023, and included as EIR *Technical Appendix H* (Urban Crossroads, 2023d). It is noted that the technical study analyzed the Project as a 384,800 s.f. cross-dock building which is 4,390 s.f. larger than the proposed building at 380,410 s.f. and is a design that positions loading docks on the north and south sides of the building rather than only on the north side of the building as is proposed in the current Project design; therefore, the analysis herein represents a Project design scenario that would produce more GHG emissions than would actually occur under the current Project design, which is a smaller building with dock doors on only the north side of the building. 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.

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.

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 radioactive heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

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, p. 10)

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. 10-11)

❑ 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

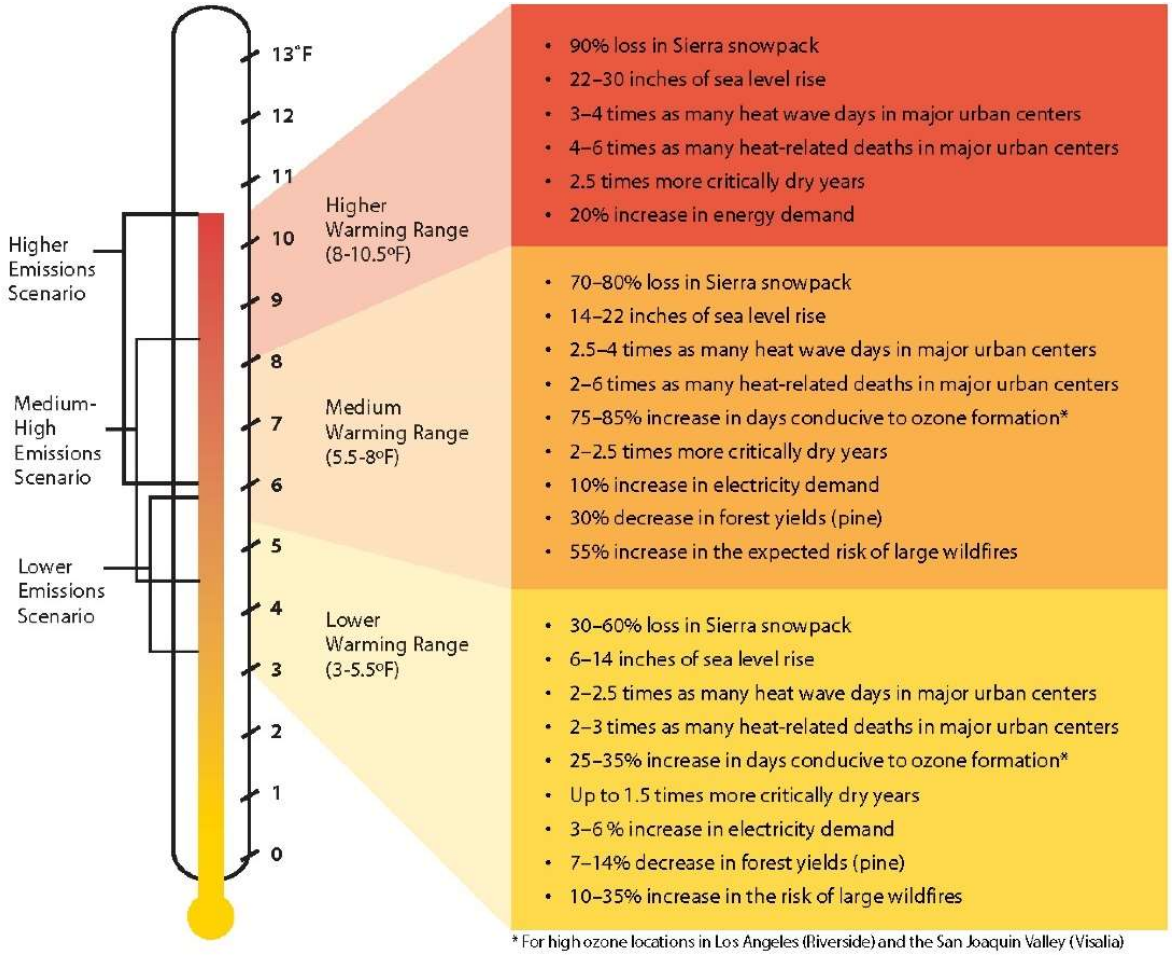
The potential health effects related directly to the emissions of CO_2, CH_4, and N_2O as they relate to development projects such as the proposed Project are still being debated in the scientific community. Their cumulative effects to GCC have the potential to cause adverse effects to human health. 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. 16)

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. 17)

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 2nd Assessment Report, the Intergovernmental Panel on Climate Change (IPCC) scientific and socio-economic assessment on climate change, range from one for CO_2 to 23,900 for SF_6 and GWP for the IPCC's 5th Assessment Report range from one for CO_2 to 23,500 for SF_6. (Urban Crossroads, 2023d, p. 17)

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)		
		2nd Assessment Report	4th Assessment Report	5th Assessment Report
CO_2	See*	1	1	1
CH_4	12 .4	21	25	28
N_2O	121	310	298	265
HFC-23	222	11,700	14,800	12,400
HFC-134a	13.4	1,300	1,430	1,300
HFC-152a	1.5	140	124	138
SF_6	3,200	23,900	22,800	23,500
NF_3	740	-	17,200	16,100

*As per Appendix 8.A. of IPCC's 5th Assessment Report, no single lifetime can be given.
Source: IPCC Fourth Assessment Report: https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html
IPCC Fifth Assessment Report:
https://www.ipcc.ch/pdf/assessmentreport/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf
(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 2018. Based on the latest available data, the sum of these emissions totaled approximately 28,768,440 gigagram (Gg) CO_2e as summarized in Table 4.7-2, *Top GHG Producing Countries and the European Union*.

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	6,676,650
European Union (28-member countries)	4,232,274
Russian Federation	2,220,123
India	2,100,850
Japan	1,238,343
Total	**28,768,440**

(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 2018 (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 2020 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2019 GHG emissions period, California emitted an average 418.1 million metric tons of CO_2e per year ($MMTCO_2e$ per yr) or 418,100 Gg CO_2e (6.26 percent of the total United States GHG emissions). (Urban Crossroads, 2023d, p. 18)

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. 18)

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, pp. 18-19)

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. 19)

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. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding. (Urban Crossroads, 2023d, p. 19)

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. 19)

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. 19)

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. 19)

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. 20)

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. 20)

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, 2022a; EPA, 2022k)

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 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030. (Urban Crossroads, 2023d, p. 29)

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, pp. 29-30)

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.

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."*

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 CO_2e ($MTCO_2e$) or less per capita by 2030 and $MTCO_2e$ 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. 30)

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, 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. 32)

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:

- 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 plans, 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.

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, p. 34)

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. 31)

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. 31)

Covered entities that emit more than 25,000 $MTCO_2e$/yr must comply with the Cap-and-Trade Program. Triggering of the 25,000 $MTCO_2e$/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. 31)

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. 31)

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, pp. 31-32)

> *"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. 32)

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% 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 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:

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.

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.

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).

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.

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.

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. 46)

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 MTCO2e 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 3.2 of the GHGA (*Technical Appendix H*) prepared for the Project. (Urban Crossroads, 2023d, p. 29)

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 3-1, *Estimated Construction Schedule* in EIR Section 3.0, provides 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 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. (Urban Crossroads, 2023d, p. 44)

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. 46)

Table 4.7-3 Amortized Annual Construction Emissions

Year	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	Refrigerants	Total CO_2e[1]
2023	462.75	0.02	0.01	0.35	468.94
2024	621.58	0.02	0.03	0.60	632.84
Total GHG Emissions	1,084.33	0.04	0.04	0.95	1,101.78
Amortized Construction Emissions	**36.14**	**1.33E-03**	**1.33E-03**	**0.03**	**36.73**

(Urban Crossroads, 2023d, Table 3-3)

B. Operational Emissions

Project operations would generate CO_2, CH_4, and N_2O 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); on-site cargo handling equipment emissions; solid waste; water supply, treatment, and distribution; and refrigerants. (Urban Crossroads, 2023d, p. 46)

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. 46)

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.[2] GHGs also are emitted during the generation of electricity from fossil fuels, which occurs before the energy reaches a building for use; these

[1] CalEEMod reports the most common GHGs emitted which include CO_2, CH_4, and N_2O. These GHGs are then converted into the CO_2e by multiplying the individual GHG by the GWP.
[2] 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.

emissions are considered to be indirect emissions associated with the building's operation. Natural gas and electricity usage associated with the Project were calculated by CalEEMod using default parameters. (Urban Crossroads, 2023d, p. 47)

❑ 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 Scoping Agreement (refer to EIR *Technical Appendix K1*) prepared for the Project were utilized in the analysis. (Urban Crossroads, 2023d, p. 47)

In order to determine emissions from passenger car vehicles, CalEEMod defaults for trip length and trip purpose were utilized. Default vehicle trip lengths for primary trips were populated using data from the local Metropolitan Planning Organizations/Regional Transportation Planning Agencies (MPO/RTPA). Trip type percentages and trip lengths provided by the MPO/RTPAs truncate data at their demonstrative borders. This analysis assumes that passenger cars include Light-Duty-Auto vehicle (LDA), Light-Duty-Truck (LDT1[3] and LDT2[4]), Medium-Duty-Vehicle (MDV), and Motorcycles (MCY) vehicle types. In order to account for emissions generated by passenger cars, the fleet mix in Table 3-4 of the GHGA (*Technical Appendix H*) prepared for the Project was utilized. (Urban Crossroads, 2023d, p. 47)

To determine emissions from trucks, the analysis incorporated the SCAQMD recommended truck trip length of 15.3 miles for two-axle (LHDT1, LHDT2), 14.2 miles for three-axle (MHDT) trucks, and 40 miles for four+-axle (HHDT) trucks and weighting the average trip lengths using traffic trip percentages. The trip length function for the proposed Project was revised to 30.39 miles and an assumption of 100 percent primary trips was assumed. Trucks are broken down by truck type. 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[5] and LHDT2[6])/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 3-5 of the GHGA (*Technical Appendix H*) prepared for the Project was utilized. (Urban Crossroads, 2023d, pp. 47-48)

❑ 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 on-site operational equipment modeled for use by the Project includes one

[3] 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.
[4] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.
[5] Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.
[6] Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

200 horsepower (hp) compressed natural gas or gasoline-powered tractors/loaders/backhoes operating for four hours per day for 365 days of the year. (Urban Crossroads, 2023d, p. 48)

❑ 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. 48)

❑ 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. 48)

❑ 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. (Urban Crossroads, 2023d, p. 49)

C. *Emissions Summary*

Direct and indirect operational emissions associated with the Project are compared with the screening threshold of 3,000 $MTCO_2e$ per year. Without accounting for applicable regulatory requirements and project design features, as shown on Table 4.7-4, *Project GHG Emissions Summary*, the annual GHG emissions associated with the operation of the Project area calculated to be 1,840.64 $MTCO_2e$ per year of GHG emissions, which is below the screening threshold of 3,000 $MTCO_2e$ per year. Accordingly, the proposed Project would not generate GHGs, either directly or indirectly, that may have a significant impact on the environment. Therefore, impacts would be less than significant and no mitigation is required.

Table 4.7-4 Project GHG Emissions Summary

Emission Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	Refrigerants	Total CO_2e
Annual construction-related emissions amortized over 30 years	36.14	1.33E-03	1.33E-03	0.03	36.73
Mobile Source	1,048.00	0.03	0.09	1.75	1,078.00
Area Source	5.62	0.00	0.00	0.00	5.64
Energy Source	289.00	0.03	0.00	0.00	291.00
Water Usage	110.00	2.90	0.07	0.00	204.00
Waste	32.30	3.23	0.00	0.00	113.00
Refrigerants	0.00	0.00	0.00	64.90	64.90
On-Site Equipment					47.37
Total CO_2e (All Sources)	**1,840.64**				

Source: CalEEMod output, see Appendices 3.1 through 3.2 of the Project's GHGA (*Technical Appendix H*) for detailed model outputs.
(Urban Crossroads, 2023d, Table 3-6)

Threshold b: ***Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?***

Because the Project does not exceed the established annual screening threshold of 3,000 $MTCO_2e$ per year, the Project is considered less than significant, does not require further GHG emissions calculations or analysis, and is presumed to be consistent with the City's General Plan.

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. 54)

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 Design Features that would further reduce GHG emissions. Additionally, the Project includes design features related to water and solid conservation that will further reduce Project GHG emissions. As such, the Project would not be inconsistent 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 not be inconsistent with the 2022 Scoping Plan. (Urban Crossroads, 2023d, p. 54)

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.

Although Project impacts due to GHG emissions would be less than significant due to consistency of the Project with the CARB 2022 Scoping Plan, the Project Applicant has nonetheless implemented design features that would serve to further reduce the Project's level of GHG emissions. As summarized below in Subsections 4.7.7 and 4.7.8, energy-saving and sustainable design features and operational programs would be incorporated into the proposed Project. These measures would help

with the City's goal in reducing emissions and make Palmdale more sustainable. Accordingly, the Project would not conflict with the GHG reduction goals of the City's General Plan, and impacts would therefore be less than significant. (Urban Crossroads, 2023d, p. 55)

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), the Project would result in approximately 1,840.64 $MTCO_2e$ per year of GHG emissions. The level of GHG emissions for the Project would be below the SCAQMD screening threshold of 3,000 $MTCO_2e$ per year. Accordingly, Project impacts due to GHG emissions would be less than significant on a cumulatively considerable basis.

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: Less than Significant Impact. The Project would result in approximately 1,840.6 $MTCO_2e$ per year of GHG emissions, which is below the SCAQMD screening threshold of 3,000 $MTCO_2e$ per year. Accordingly, the Project would not generate GHGs, either directly or indirectly, that may have a significant impact on the environment, and impacts would therefore be less than significant.

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 design features and regulatory requirements specified below in subsection 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

Although the analysis herein demonstrates that the Project's impacts due to GHG emissions would be less than significant, design features and regulatory requirements, as presented below in subsection 4.7.8 as well as those presented in EIR Section 4.2, *Air Quality*, would further reduce the Project's

GHG emissions. As a conservative measure, no credit has been assumed from implementation of the conditions of approval in the analysis provided above in Subsection 4.7.4.

4.7.8 Design Features (DF) and Regulatory Requirements (RR)

Although GHG emissions from the Project would be less than significant, 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 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-2 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 City of Palmdale, Water Efficient Landscape Ordinance, contained as PMC Chapter 14.05. 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.

4.8 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, 17.94 Acre Tract (Vacant), 8th Street East" (herein, "Phase I ESA"), prepared by Consolidated Consulting Group, LLC (herein, "CCG"), dated October 25, 2021, and included as *Technical Appendix I* to this EIR (CCG, 2021). 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." (CCG, 2021, p. 5)

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." (CCG, 2021, p. 5)

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." (CCG, 2021, p. 5)

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." (CCG, 2021, p. 5)

B. Historical Review, Prior Investigations, Regulatory Review, and Field Reconnaissance

As part of the Project's Phase I ESA (*Technical Appendix I*), CCG conducted a site walk to document the current condition of the Project site and neighboring facilities; a review of a regulatory databases; a review of historic aerial photographs, City directories, 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 was undeveloped and covered primarily by native grasses and shrubs, from at least 1940 until 2009. However, in the aerial photograph dated 2011 the Project site is largely devoid of vegetation as the result of human activity. From at least 2011 until 2013, a small fenced lot containing a portable building/trailer and open-top dump truck were visible in the northeast corner of the Project site. Multiple apparent piles of sand/gravel or other fill material were visible to the west (rear) of this fenced area during this time period, and two shallow depressions/excavations had been created on the central and northeast portions of the Project site respectively. CCG considers the potential presence of undocumented and/or environmentally suspect fill material to represent a BER in connection with the Project site. (CCG, 2021, p. 5)

CCG did not observe any evidence of current or historic landfills on the Project site. However, several debris piles/dump sites and scattered windblown debris were observed throughout the Project site, with the most concentrated area of debris/waste being observed in a low-lying depression near the center of the Project site. Observed debris generally consisted of municipal waste (paper, plastic, etc.) and construction debris (lumber, concrete, asphalt/gravel, etc.); several scrap tires were also observed. No staining or other obvious evidence of petroleum product/hazardous substance releases was observed in or around the debris. CCG considers the observed debris (including scrap tires) to represent a de minimis (of little importance) condition in connection with the subject property. (CCG, 2021, p. 6)

The Project's Phase I ESA did not identify any evidence of HRECs, CRECs, or RECs on the Project site, thereby indicating that there are no known hazardous materials associated with the Project site under existing conditions (CCG, 2021, p. 5).

C. *Airport-Related Hazards*

As discussed in Section 2.0 *Environmental Setting*, located to the north and northeast of the Project site is a Lockheed Martin Aeronautics facility and the inactive Palmdale Regional Airport. The Palmdale Regional Airport property is owned by the City of Los Angeles Department of Airports and operated under a joint agreement with United States Air Force (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. The Project site is located approximately 1.6 miles (8,448 feet) southwest of Runway 4 of USAF Plant 42. This places the Project site outside of the Airport Influence Area (AIA) according to the Los Angeles County Airport Land Use Commission (ALUC). (Google Earth, 2022) (Urban Crossroads, 2022e, p. 16)

The Los Angeles County ALUC is responsible for establishing land use policy to mitigate potential noise and safety hazards in regards to the fifteen airports in its jurisdiction. Under existing State law, any action under consideration by a local public agency or airport operator is subject to ALUC review if such actions take place within the Planning Boundary/Airport Influence Area. (Los Angeles ALUC, 2004, p. 15)

According to mapping information available in the Los Angeles County Airport Land Use Plan (ALUP), the Project site occurs south of the Planning Boundary/AIA for the inactive Palmdale Regional Airport. Additionally, according to mapping information available from Los Angeles County Enterprise GIS, the Project site is not located within any of the runway protection zones or inner safety zones for the Palmdale Regional Airport. Because the Project site is not within the ALUC Planning Boundary/Airport Influence Area, development on the Project site is not subject to review by the ALUC. (Los Angeles ALUC, 2004, p. 15)(LA County, 2020) (Google Earth, 2022).

To protect aviators and persons on the ground, the FAA evaluates proposals for construction of objects greater than 199 feet above ground level (AGL) or within 20,000 feet of an airport and the object to be constructed would exceed a slope of 100:1 horizontally, (i.e., 100 feet horizontally for each foot vertically) from the nearest point of the nearest runway (Los Angeles ALUC, 2004, p. 4-36). As discussed above, the Project site is located approximately 1.6 miles (8,448 feet) southwest of Runway 4 of USAF Plant 42. As previously discussed in EIR Section 2.0, *Environmental Setting*, elevations on the Project site range from approximately 2,618 feet above mean sea level (amsl) in the northwest corner of the site to 2,606 feet amsl within the unnamed graded channel near the southeast corner of the Project site. As discussed in EIR Section 3.0, *Project Description*, the Project's proposed building would have a variable roofline ranging in height from 41 feet to 45 feet. Therefore, because the Project site would not be constructed at a height greater than 199 feet AGL and is not located within 20,000 feet of an airport, FAA review is not required for the Project.

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, 2022g)

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, 2022g)

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, 2022h)

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)

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, 2022a)

2. *Palmdale Municipal Code*

Palmdale Municipal Code (PMC) Chapter 15.28, Floodplain Management, in Title 15 – Buildings and Construction, enforces regulations to minimize the loss of life and property within the City. PMC Chapter 17.100, Hillside Management, in Title 17 – Zoning, 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 Waste Facilities, in Title 17 – Zoning, 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, 2022b, 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, 2022b, 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, 2022c) (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?***

Implementation of the Project would result in the construction and long-term operation of a 384,800 square-foot (s.f.) non-refrigerated fulfillment warehouse building. 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 RECs, HRECs, or CRECs (CCG, 2021, p. 5). 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 EPA and 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 building are not yet known. However, the Project Applicant expects that the building would be occupied by a non-refrigerated high cube fulfillment center (non-sort facility) and it is possible that hazardous materials could be used during the course of daily operations for a future building user. 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?

The nearest school is Head Start Palmdale District, located approximately 1,300 feet (0.246 miles) southeast of the Project site. 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. With mandatory regulatory compliance, the 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, would be less than significant; this no mitigation is required.

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 (CCG, 2021). 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 Project site is located approximately 1.6 miles southwest of the inactive Palmdale Regional Airport. 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. However, the Project site is not located within the AIA for the Palmdale Regional Airport, indicating that review by the ALUC is not required (Los Angeles ALUC, 2004). Additionally, the Project site is not located within any of the runway protection zones or inner safety zones for the inactive Palmdale Regional Airport (LA County, 2020). Furthermore, the proposed building on site would have a maximum height of 45 feet, which would not interfere with operations at the inactive Palmdale Regional Airport and USAF Plant 42 would not result in any unusual safety hazards for future occupants of the Project site. Accordingly, impacts would be less than significant. (Refer also to EIR subsection 4.10, *Noise*, for a discussion of potential airport-related noise impacts).

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 portion of 8th Street East 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 2.8 miles south of the Project site. In addition, the Project site is not located in a portion of the City that is subject to wildland fire hazards; the nearest such area occurs approximately 2.8 miles southwest of the Project site. Furthermore, the proposed new warehouse building would be in compliance with all applicable Building and Fire Codes and includes 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 / Release 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

Although the Project site occurs within 0.25-mile of a Palmdale School District (PSD) facility that offers early education services ("Head Start"), 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, hazardous materials impacts affecting nearby schools would be less than significant on a cumulatively considerable basis.

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

According to the Airport Land Use Plan (ALUP) from the Los Angeles County ALUC, the Project site is located outside of the planning boundary/AIA for the inactive Palmdale Regional Airport. Additionally, the Project site is not located within any airport-related runway protection zones or inner safety zones. Accordingly, the Project has no potential to result in cumulatively-considerable impacts due to airport-related hazards.

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, including 8th Street East. Thus, 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, 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: Less than Significant Impact. The use of and transport of hazardous substances or materials to and from the Project site during construction and long-term operational activities would occur within 0.25 mile of a PSD Head Start facility, but would be required to comply with applicable federal, State, and local regulations that would preclude substantial public safety hazards. With mandatory regulatory compliance, implementation of the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Therefore, impacts would be less than significant and no mitigation is required.

Threshold d: No Impact. 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. Therefore, no impact would occur and no mitigation is required.

Threshold e: Less than Significant Impact. The Project site is not located within any of the runway protection zones or inner safety zones for the inactive Palmdale Regional Airport. Furthermore, the proposed building would have a maximum height of 45 feet, which would not interfere with operations at the inactive Palmdale Regional Airport and would not result in any unusual safety hazards for future occupants of the Project site. Accordingly, impacts would be less than significant and no mitigation is required.

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 Operations 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. The Project site is not located in close proximity to wildlands or areas with high fire hazards. Thus, the Project would not expose people or structures to a 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 two technical studies prepared by Langan Engineering and Environmental Services, Inc. (herein, "Langan"). The first report is titled, "Preliminary Hydrology Report," is dated March 2023, and is included as EIR *Technical Appendix J1* (Langan, 2023a). The second report is entitled, "Preliminary LID Report," dated March 2023, and is included as EIR *Technical Appendix J2* (Langan, 2023b). All references used in this Section 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, 2022b, p. 4.10-1; LADPW, n.d.)

B. *Site Hydrology*

No groundwater wells exist in the site under existing conditions. The existing hydrologic conditions of the Project site were previously depicted on Figure 2-8, *Existing Conditions Hydrology*. An existing privately-maintained earthen drainage channel located along the southern edge of the site captures off-site runoff from the west and flows water through the site towards the east where it flows under 8th Street and discharges to an existing channel on the opposite side of 8th Street. (Langan, 2023a, p. 1)

For analysis purposes, based on existing flow patterns, Langan subdivided into 6 drainage areas (Areas A-F), and determined flow lengths and slopes within each area. Under existing conditions, the runoff generally flows from the western property line towards the east. The pre-development condition analyzed for the 25-year storm generates a total flow of 1.54 cubic feet per second (cfs), and a water volume of 21,638 cubic feet (cf). Table 4.9-1, *Pre-Development Flows for 25-Year Storm,* summarizes the drainage areas and their respective flows and volumes. (Langan, 2023a, p. 2)

Table 4.9-1 Pre-Development Flows for 25-Year Storm

Area ID	Area (in square feet)	Area (acre)	Impervious Ratio	Q25 (cubic feet per second (CFS)	V25 (CF)
A	260,328	5.98	0	0.51	7,145
B	201,574	4.63	0	0.39	5,532
C	131,776	3.03	0	0.26	3,620
D	62,407	1.43	0	0.12	1,709
E	72,686	1.67	0	0.14	1,995
F	59,891	1.37	0	0.12	1,637
TOTAL	**784,965**	**18.11**	**-**	**1.54**	**21,638**

(Langan, 2023a, Table 3.2.1)

C. *Flood Hazards*

As shown on Figure 4.9-1, *FEMA Flood Insurance Rate Map*, according to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06037C0700F, a majority of the Project site is mapped within Zone X, 0.2 percent Annual Chance Flood Hazard, Areas of one percent chance flood with average depth less than one foot or with drainage areas of less than one quarter mile. The northwestern portion of the Project site is located within Zone X (Unshaded), Area of Minimal Flood Hazard, indicating that this portion of the site is within a 500-year flood zone. (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 ground water 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. Ground waters 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, 2022b, 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, 2022b, 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, 2022b, 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 18 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, 2022b, 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. 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, 2020e)

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, 2022)

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, 2022b, 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, 2022b, p. 4.10-10)

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 an industrial use, 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. (Langan, 2023b, p. 2)

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 2.8 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 2,606 feet amsl to 2,618 feet amsl. Accordingly, the Project has no potential to contribute to any existing water quality impairments in any receiving waters. (SWRCB, n.d.; Google Earth, 2022)

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 also requires operators of a construction site one acre or larger to prepare a stormwater pollution prevention plan (SWPPP) and 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.

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 would be required to obtain a NPDES Municipal Storm Water Permit (MS4) for construction activities. The NPDES permit is required for all projects that include construction activities, such as clearing, soil stockpiling, grading, and/or excavation that disturb at least one acre of total land area. In addition, the Project would be required to comply with the Lahontan RWQCB's Basin Plan. Compliance with the NPDES Permit and the Basin Plan involves the preparation and implementation of a SWPPP for construction-related activities, including grading. The SWPPP would specify the 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. Mandatory compliance with the SWPPP would ensure that the Project does not violate any water quality standards or waste discharge requirements during construction activities. Therefore, water quality impacts associated with construction activities would be less than significant.

Mandatory compliance with the CWA, PMC, the MS4 Permit, LID goals and the goals and policies of the General Plan would reduce the potential for water quality degradation.

B. Post-Development Water Quality Impacts

As previously described in EIR Section 3.0, *Project Description*, with development of the Project site as proposed, on-site stormwater would be captured through a series of catch basins and storm drains which would be routed to various underground chambers located along the northern and southern areas of the site. The captured stormwater would be pre-treated through a hydrodynamic separator prior to entering the chambers. In the event of high flows, stormwater would bypass the pretreatment within the hydrodynamic separator and flow directly into the underground chambers. The proposed underground infiltration chambers would discharge directly into the proposed culverts beneath 8th Street East. No runoff from the developed portions of the site would discharge off site (Langan, 2023a, p. 1)

In addition, as part of the proposed Project, the existing graded earthen channel along the southern boundary of the site would be redesigned. The channel would maintain its existing flow path, which flows from west to east., The earthen channel is designed to collect off-site flows from the west and

flow water through the site where it will discharge into the proposed culverts underneath 8th Street East and connect to an existing channel located on the opposite side of 8th Street East. (Langan, 2023a, p. 1)

Because no runoff from the developed portions of the Project site would discharge off-site, and the purpose of the redesigned earthen channel is to convey off-site flows as occurs under existing conditions, 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, captured stormwater would be pre-treated through a hydrodynamic separator prior to entering the proposed underground chambers. In the event of high flows, first flushes with the potential to contain water pollutants would be addressed by the hydrodynamic separator and subsequent high flow stormwater would bypass the pretreatment within the hydrodynamic separator and flow directly into the underground chambers. The proposed hydrodynamic separator and infiltration chambers would ensure that runoff generated on the developed portions of 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 PWD, and the Project would not involve direct groundwater extraction via existing or proposed groundwater wells. Although PWD obtains approximately 40 percent of its water supply from local groundwater wells within the Antelope Valley Groundwater Basin, PWD's Urban Water Management Plan (UWMP) demonstrates that the total projected water supplies available to the PWD during normal, single-dry, and multiple-dry water years over the next 20 years will be sufficient to meet the projected water demands within its service area. The UWMP bases its projected water demand estimates on extensive data on existing land use and water demands, as well as projected land uses based on the General Plans of jurisdictions within the PWD service area. The Project is fully consistent with the General Plan land use designation of IND (Industrial); therefore, it can be concluded that the Project's water demand is accounted for by the UWMP. 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. (PWD, 2021a, p. 7-6; KEC Engineers, 2022, p. 14)

On-site captured stormwater would be pre-treated through a hydrodynamic separator prior to entering the chambers. In the event of high flows, first flushes with the potential to contain water pollutants would be addressed by the hydrodynamic separator and subsequent high flow stormwater would bypass the pretreatment within the hydrodynamic separator and flow directly into the underground chambers. Because all runoff generated on the developed portions of 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. Although the existing earthen graded channel along the southern boundary of the site would be redesigned, the channel is a privately-maintained man-made channel and is not a stream or a river. Development of the site would, however, result in the introduction of impervious surfaces on the 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. 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, pursuant to requirements of the SWRCB, the Project Applicant would be required to obtain a NPDES permit for construction activities on-site. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one acre of total land area. Compliance with the NPDES permit involves the preparation and implementation of a SWPPP for construction related activities. The SWPPP 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 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 a storm drain system. With implementation of the proposed Project, on-site stormwater would be captured through a series of catch basins and storm drains which would be routed to various underground chambers located along the northern and southern areas of the site. The captured stormwater would be pre-treated through a hydrodynamic separator prior to entering the chambers. In the event of high flows, stormwater would bypass the pretreatment within the hydrodynamic separator and flow directly into the underground chambers. The proposed underground infiltration chambers would discharge directly into the proposed culverts beneath 8th Street East that will run under 8th Street East and drain to the existing channel located northeast of the Project site. No runoff from the developed portions of the site would discharge directly off site. (Langan, 2023a, p. 1)

In addition, the existing unnamed graded channel that runs along the southern boundary of the site would be redesigned into an earthen channel per the MDP. The channel is designed to maintain its existing flow path, which flows from west to east. The purpose of the earthen channel is to collect off-site flows from the west and convey water through the site where the flow would discharge into the proposed culverts. The earthen channel will have stabilized side slopes to prevent erosion. The proposed culverts will discharge on the east side of 8th Street East and a headwall and rip rap will be installed to decrease the velocity of the flows and reduce the potential for significant erosion downstream of the improvements. (Langan, 2023a, p. 1)

Therefore, because all runoff generated on the developed portions of the Project site would be routed to proposed infiltration chambers, 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 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 developed portions of the Project site and would infiltrate into the groundwater table. 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 developed portions of 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. The proposed redesigned drainage channel with the purpose of conveying off-site flows through the site would have the same capacity as occurs in the existing condition. 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 FEMA FIRM No. 06037C0700F, a majority of the Project site is mapped within Zone X (Shaded), while the northwestern portion of the Project site is located within Zone X (Unshaded). Thus, under existing conditions, the northwestern portion of the Project site is not subject to flood hazards, although the remaining portions of the Project site are identified as being subject to inundation during 500-year flood events. However, FEMA FIRM No. 06037C0700F does not appear to account for the fact that the existing privately-maintained earthen channel was constructed along the southern edge of the Project site to convey flood flows to downstream areas. QAs discussed above, AS discussed above, the Project design includes redesign of the existing channel into an earthen channel, which would preclude the potential for flood hazards on-site. (FEMA, 2008) 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 FEMA FIRM No. 06037C0700F, a majority of the Project site is mapped within Zone X (Shaded), while the northwestern portion of the Project site is located within Zone X (Unshaded). Thus, under existing conditions, the northwestern portion of the Project site is not subject to flood hazards, although the remaining portions of the Project site are identified as being subject to inundation during 500-year flood events. However, FEMA FIRM No. 06037C0700F does not appear to account for the fact that the existing privately-maintained earthen channel was constructed along the southern edge of the Project site to convey flood flows to downstream areas. As discussed above, the Project's design includes redesign of the existing channel into an earthen channel, which would preclude the potential for flood hazards on site. As such, the Project would not risk release of pollutants due to inundation from floods; therefore, no impact would occur. (FEMA, 2008)

The Project site is located approximately 46 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, 2022)

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, 2022b, 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. PWD 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 applicable 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 developed portions of the Project site. Runoff generated would be pre-treated via a hydrodynamic separator and then allowed to infiltrate into the groundwater table within the proposed infiltration basin. The Project would not result in any surface runoff from the developed portions of the Project site. While existing runoff within the proposed redesigned channel along the southern boundary of the Project site would continue to flow downstream from the Project site, the Project would not contribute any runoff to the channel. 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 Municipal Stormwater Permit for construction activities. Compliance with the NPDES permit and the Basin Plan 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. Other cumulative developments within the cumulative study area also would be required to comply with the NPDES Municipal Stormwater Permit and would be required to implement BMPs during construction activities to preclude water quality impacts that could impair downstream waters or groundwater. 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 developed portion of the Project site and the proposed redesigned earthen channel would mitigate erosion and other water quality pollutants of concern. As discussed above, the existing unnamed graded channel that runs along the southern boundary of the site would be redesigned into an earthen channel per the MDP. The channel is designed to maintain its existing flow path, which flows from west to east. The purpose of the earthen channel is to collect off-site flows from the west and convey water through the site where the flow would discharge into the proposed culverts. The earthen channel will have stabilized side slopes to prevent erosion. The proposed culverts will discharge on the east side of 8th Street and a headwall and rip rap will be installed to decrease the velocity of the flows and reduce the potential for significant erosion downstream of the improvements. (Langan, 2023a, p. 1)

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 PWD and the Project would not entail any direct groundwater extraction. Additionally, PWD's UWMP demonstrates that PWD has sufficient water supplies during normal, single-dry, and multiple-dry water years over the next 20 years, and the UWMP accounts for the water demand of the Project. 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's construction contractors would be required to comply with the applicable NPDES Municipal Stormwater Permit for construction activities, requiring 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 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. 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 infiltration chambers 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 Municipal Stormwater Permit for construction activities. Compliance with the NPDES permit and the Basin Plan 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. Other cumulative developments within the cumulative study area also would be required to comply with the

NPDES Municipal Stormwater 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. With respect to long-term impacts to water quality, the Project would not discharge any surface waters from the developed portion of the Project site and the proposed hydrodynamic separators and infiltration chambers 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 Lahontan RWQCB Basin Plan and NPDES permit, an approved 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 developed portion of the Project site, and the proposed hydrodynamic separators and infiltration chambers 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 PWD, and the Project would not involve direct groundwater extraction via existing or proposed groundwater wells. PWD's UWMP accounts for development of the Project site as proposed and demonstrates PWD's ability to provide water service within its service area during normal, single-dry, and multiple-dry water years over the next 20 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 developed portions of 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's construction contractors would be required to comply with the applicable NPDES permit and prepare and implement 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), Palmdale Water District (PWD) 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.

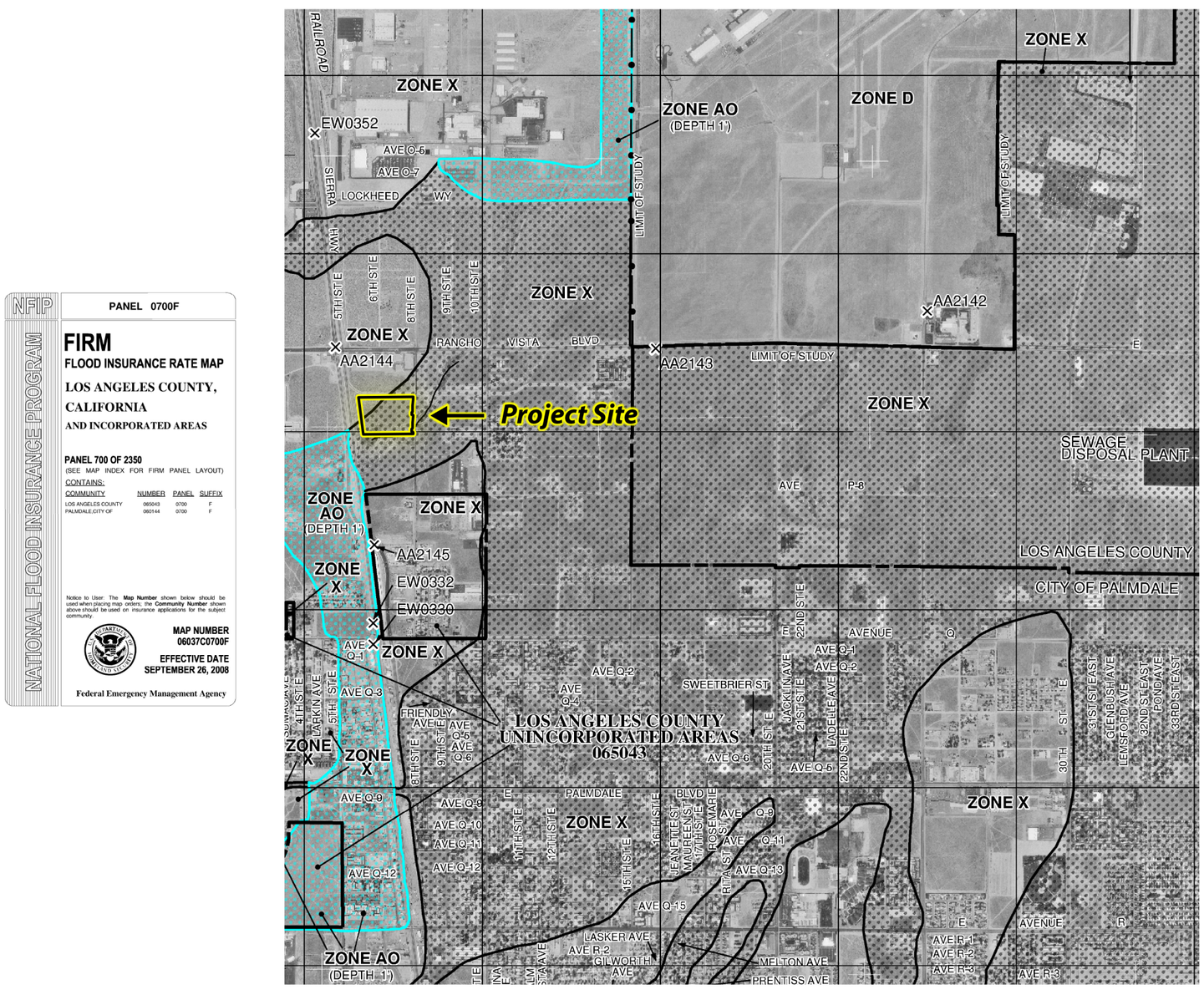
4.9.7 Mitigation

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's construction contractors will be required to implement a 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)

- A—A Cross section line
- 23—23 Transect line
- 97°07'30", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4275000mN 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.

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

LEGEND

- PROJECT DRAINAGE BOUNDARY
- SUB-AREA BOUNDARY
- FLOW PATH
- SUB-DRAINAGE AREA ID
- X / X — SUB-DRAINAGE AREA IDENTIFIER
- SUB-DRAINAGE SURFACE AREA (ACRE)
- XXX — SURFACE FLOW NODE
- 100.00 EG — APPROXIMATE EXISTING GROUND ELEVATION

PROJECT SUMMARY

SITE AREA (GROSS):	18.11 ACRES
SITE AREA (NET):	17.90 ACRES
IMPERVIOUS COVERAGE:	80% (POST-DEVELOPMENT)
SOIL GROUP:	134
ISOHYETALS:	3.5-INCHES (50-YEAR, 24-HOUR)
FREQUENCY:	25-YEAR (FOR STORM DRAIN ANALYSIS)
METHOD:	LOS ANGELES COUNTY HYDROLOGY MANUAL

GENERAL NOTES:

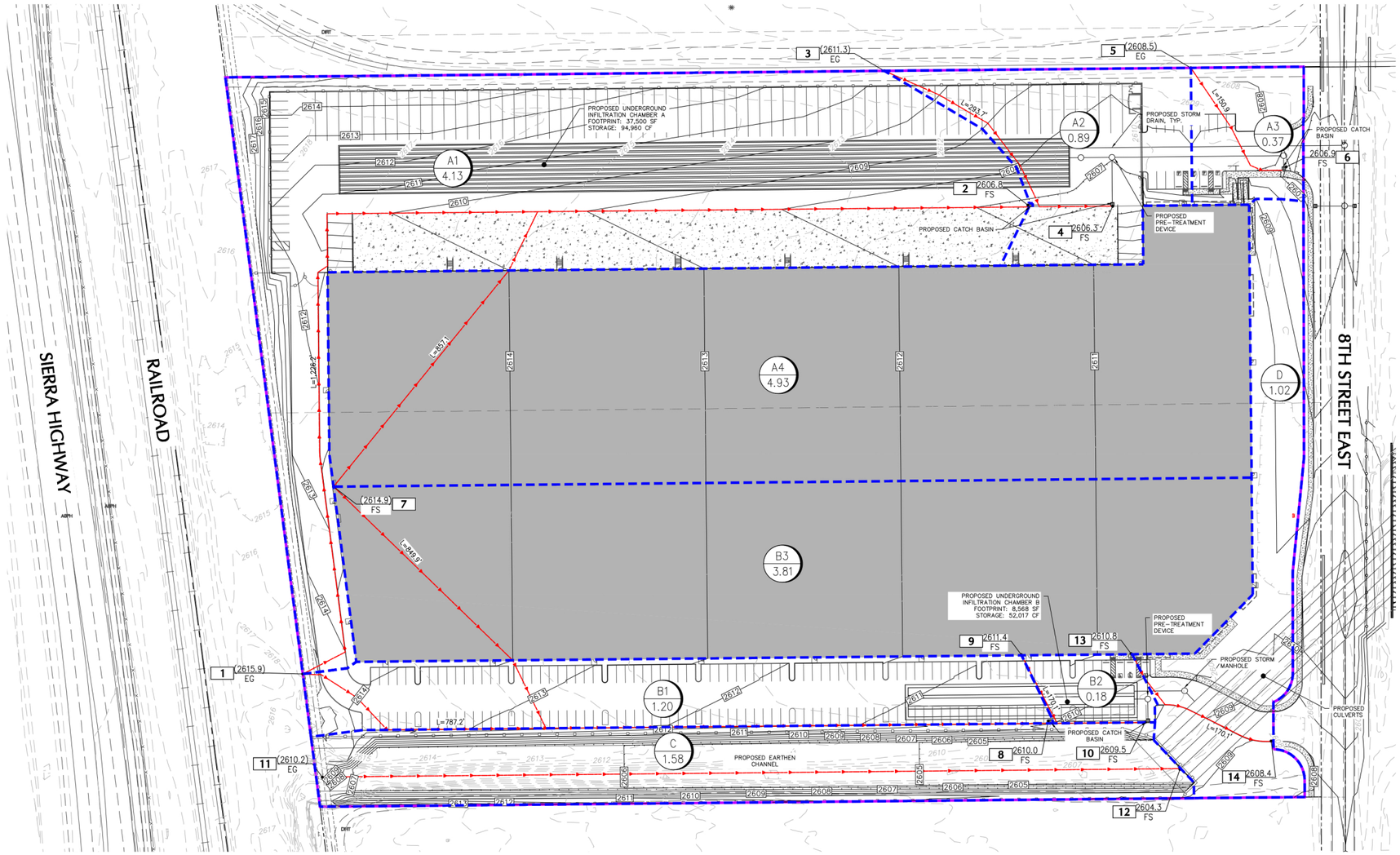
1. SEE PRELIMINARY HYDROLOGY REPORT PREPARED BY LANGAN ENGINEERING FOR THE COMPLETE POST DEVELOPMENT HYDROLOGY CALCULATIONS.
2. CALCULATIONS WERE BASED ON THE CITY AND COUNTY REQUIREMENTS FOR THE 25-YEAR STORM.
3. PROPOSED ON-SITE DRAINAGE SYSTEM LAYOUT IS PRELIMINARY.
4. ALL EXISTING ELEVATIONS ARE APPROXIMATE.

ABBREVIATIONS:

EG – EXISTING GRADE

FS – FINISHED SURFACE

L – LENGTH OF FLOW



Source(s): Langan (03-28-2023)

Figure 4.9-2

Not to Scale

Proposed Hydrology

4.10 NOISE

The information and analysis in this Subsection is based primarily on a technical study titled, "8th Street Industrial Noise and Vibration Analysis," dated April 5, 2023, prepared by Urban Crossroads, Inc. (Urban Crossroads), and included as *Technical Appendix K* to this EIR. (Urban Crossroads, 2023e) It is noted that the technical study analyzed the Project as a 384,800 s.f. cross-dock building which is 4,390 s.f. larger than the proposed building at 380,410 s.f. and is a design that positions loading docks on the north and south sides of the building rather than only on the north side of the building as is proposed in the current Project design; therefore, the analysis herein represents a Project design scenario that would produce more noise, particularly on the south side of the building, than would actually occur under the current Project design, which is a smaller building with dock doors on only the north side of the building. All references used in this Subsection are included in EIR Section 7.0, *References*.

4.10.1 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, 2023e, pp. 7-9).

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, 2023e, p. 9).

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, 2023e, p. 9)

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, 2023e, 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, 2023e, 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, 2023e, 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. 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, 2023e, 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, 2023e, 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, 2023e, 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, 2023e, p. 11).

4.10.2 Existing Noise Conditions

A. *Existing Study Area Ambient Noise Conditions*

On Wednesday October 5, 2022, Urban Crossroads recorded 24-hour noise readings at seven locations near the Project site. The noise measurement locations are identified in Figure 4.10-1, *Noise Measurement Locations.* The long-term noise level measurements were positioned as close to the nearest sensitive 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 sensitive 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, 2023e, pp. 23-24).

The noise measurements shown in Table 4.10-1, *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 4.10-1 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 4.10-1 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, 2023e, p. 24).

Table 4.10-1 24-Hour Ambient Noise Level Measurements

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]	
		Daytime	Nighttime
L1	Located northwest of the Project site near single-family residence at 274 E Ave P-1.	62.8	59.2
L2	Located northwest of the Project site near single-family residence at 275 Pictorial St.	60.8	58.1
L3	Located North of the Project site near industrial building at 520 E Rancho Vista Blvd.	72.2	68.1
L4	Located North of the Project site near retail plaza at 654 E Rancho Vista Blvd.	59.8	59.1
L5	Located East of the Project site near residence at 39342 10th St E.	65.1	59.5
L6	Located East the Project site near the residence at 39362 10th St E	66.3	61.3

L7	Located southeast of the corner of the Project site near a residence at 39149 8th St E	62.7	58.5

[1]See Figure 4.10-1 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, 2023e, Table 5-1)

B. Sensitive Receiver Locations

To assess the potential for long-term operational and short-term construction noise impacts, sensitive receiver locations, as shown on Figure 4.10-2, *Sensitive 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, 2023e, p. 31).

To describe the potential off-site Project-generated noise levels, seven 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, 2023e, p. 31)

Sensitive receiver locations are described below:

- **R1: Location R1** represents an existing noise sensitive residence located at 274 East Avenue P-1, approximately 1,626 feet northwest of the Project site and west of Sierra Highway. Receiver R1 is placed at the private outdoor living area in the rear yard facing the Project site. A 24-hour noise measurement was taken near Location L1 to describe the existing ambient noise environment.

- **R2: Location R2** represents the existing noise sensitive residence located at 274 Pictorial Street, approximately 1,696 feet northwest of the Project site and west of Sierra Highway. Receiver R2 is placed at the private outdoor living area in the rear yard facing the Project

site. A 24-hour noise measurement was taken near Location L2 to describe the existing ambient noise environment.

- **R3: Location R3** represents the commercial land use located at 520 East Rancho Vista Boulevard, approximately 470 feet northwest of the Project site. Since there are no private outdoor living areas associated with the commercial building that faces the Project site, receiver R3 is placed at the building façade of the commercial building. A 24-hour noise measurement was taken near Location L3 to describe the existing ambient noise environment.

- **R4: Location R4** represents the commercial land use located at 644 East Rancho Vista Boulevard, approximately 417 feet north of the Project site. Since there are no private outdoor living areas associated with the commercial land use that faces the Project site, receiver R4 is placed at the building façade of the commercial building. A 24-hour noise measurement was taken near Location L4 to describe the existing ambient noise environment.

- **R5: Location R5** represents existing noise sensitive residence located at 39337 10th Street East, approximately 707 feet east of the Project site. Since there are no private outdoor living areas facing the Project site, receiver R5 is placed at the building façade. A 24-hour noise measurement was taken near Location L5, to describe the existing ambient noise environment.

- **R6: Location R6** represents an existing noise sensitive residence located at 39362 10th Street East, approximately 1,399 feet east of the Project site. Since there are no private outdoor living areas facing the Project site, receiver R6 is placed at the building façade facing 10th Street East. A 24-hour noise measurement was taken near Location L6 to describe the existing ambient noise environment.

- **R7: Location R7** represents existing noise sensitive residence located at 39149 8th Street East, approximately 1,131 feet south of the Project site and south of East Avenue P-8. Since there are no private outdoor living areas facing the Project site, receiver R7 is placed at the building façade. A 24-hour noise measurement was taken near Location L7 to describe the existing ambient noise environment. (Urban Crossroads, 2023e, pp. 31-32)

2. Existing Railroads

Railroad noise is present near the Project site associated with the active Union Pacific Railroad (UPRR) to the immediate west of the Project site. The estimated railroad noise levels from the UPRR mainline tracks located offsite and 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 (750643P) for Rancho Vista Boulevard/Avenue P, as shown in Table 4.10-2, *On-Site Railroad Parameters* and included in Appendix 6.1 of the Noise and Vibration Analysis (*Technical Appendix K*) prepared for the Project. (Urban Crossroads, 2023e, p. 27)

Table 4.10-2 On-Site Railroad Parameters

Railroad Activities	Modeled Train/ Engine Type	Speed (mph)	Daily Train Volumes/Events	
			Daytime	Nighttime
Metrolink[1]	Diesel	79	14	6
Freight[2]	Diesel	60	8	8

1 Metrolink Antelope Valley Line Schedule.
2 Based on the U.S. Department of Transportation Crossing Inventory Form 750643P at Rancho Vista Boulevard / Avenue P
(Urban Crossroads, 2023e, Table 6-1)

C. *Existing Airports*

The Project site is located approximately 1.6 miles southwest of Runway 4 of the United States Air Force (USAF) Plant 42. This places the Project site outside of 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. The Project site is located well outside the 65 dBA CNEL aircraft noise level contour boundaries. Therefore, according to the Noise Land Use Compatibility Criteria, the proposed industrial land use at the Project site is considered *normally acceptable*. (Urban Crossroads, 2023e, p. 16)

4.10.3 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, 2022d).

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). The purpose of a Noise Element is to limit the exposure of the community to excessive noise levels. (Urban Crossroads, 2023e, 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, 2022a, 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 4.10-3, *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, a detailed analysis of the noise reduction requirements must be made and required noise insulation features shall be included in the design. (Urban Crossroads, 2023e, pp. 13-14, Exhibit 3-A) (City of Palmdale, 2022a, Figure 16.1).

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, and truck movements, are typically evaluated against standards established under a jurisdiction's municipal code. (Urban Crossroads, 2023e, p. 15)

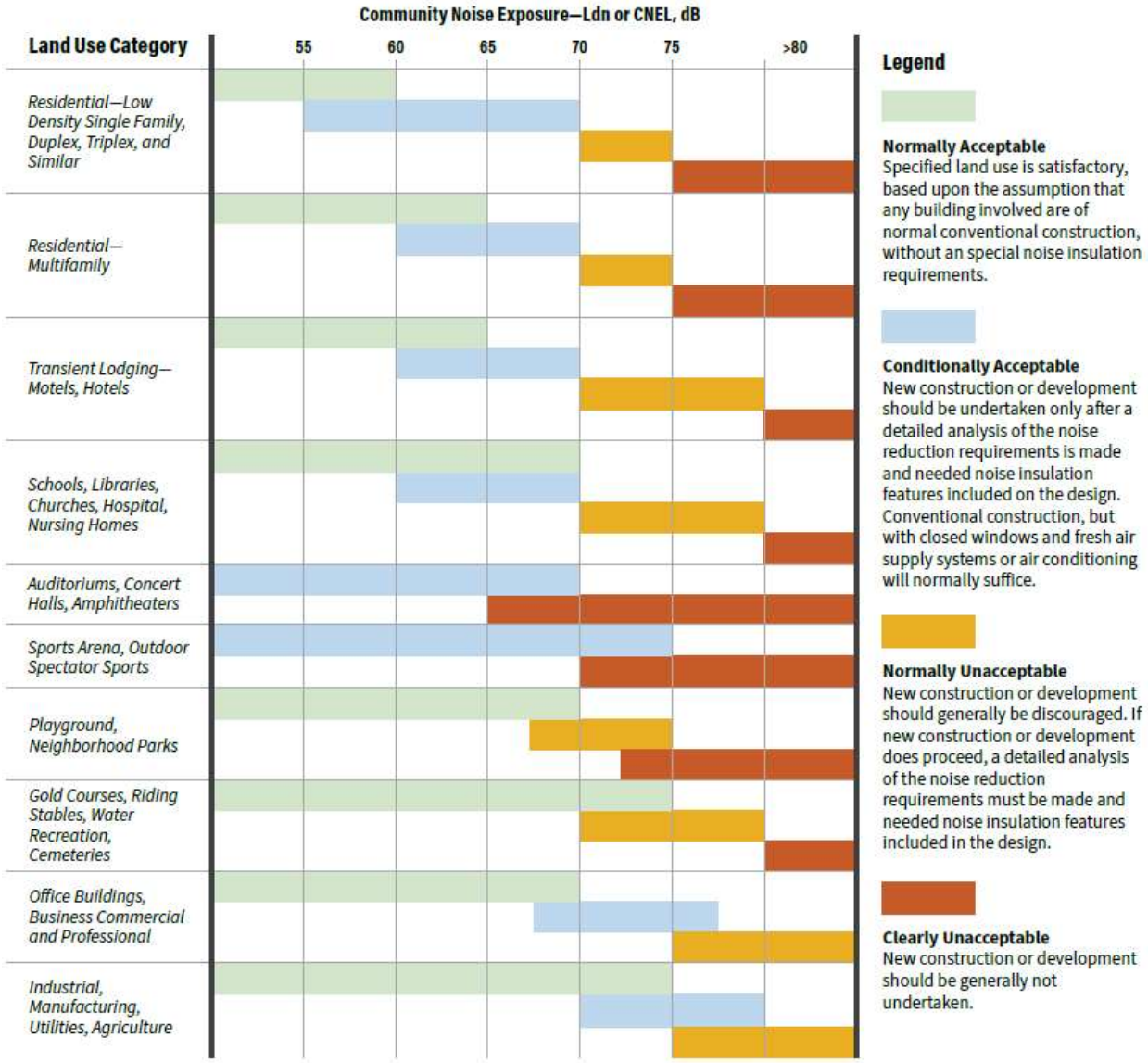
Palmdale Municipal Code (PMC) Section 9.18.010 makes it unlawful for any person to willfully make or continue, or cause or permit to be made or continued, any loud, unnecessary, or unusual noise which unreasonably disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance 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 shown on Figure 2-5, *Existing Zoning Classifications*, under existing conditions, the Project site is zoned for General Industrial (M-2) land uses. The City is updating its Zoning Code and zoning map to be consistent with the City's newly adopted General Plan, Palmdale 2045. Pursuant to the Palmdale Zoning

Code update, the Project site will be zone Light Industrial (LI), consistent with its General Plan industrial designation. (City of Palmdale, 2022a) (PMC, 2022)

As shown in Figure 4.10-2 and discussed above in Section 4.10.2, 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, 2023e, p. 15)

Table 4.10-3 Land Use Noise Compatibility Criteria



(City of Palmdale, 2022a, Figure 16.1)
(Urban Crossroads, 2023e, Exhibit 3-A)

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 of the Project could potentially impact adjacent 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, 2023e, p. 15)

4.10.4 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 4.10-4, *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 4.10-4 Significance Criteria Summary

Analysis	Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Operational	Residential	Exterior Noise Level Limit[1]	50 dBA L_{eq}	45 dBA L_{eq}
	Noise-Sensitive[2]	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[3]	80 dBA L_{eq}	70 dBA L_{eq}
		Vibration Level Threshold[4]	0.3 PPV in/sec	n/a

[1] Los Angeles County Code, Chapter 12.08 Noise Control, Section 12.08.390[A] (Appendix 3.2 of the Project's noise study).
[2] FICON, 1992.
[3] FTA, Transit Noise and Vibration Impact Assessment Manual.
[4] 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, 2023e, 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. (Urban Crossroads, 2023e, pp. 15-16)

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, 2023e, 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 adjacent building locations. The nearest noise sensitive buildings to the Project site can best be described as "older residential structures" with a maximum acceptable continuous vibration threshold of 0.3 peak particle velocity (PPV) (in/sec). (Urban Crossroads, 2023e, 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, and truck movements, 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, 2023e, 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 general industrial land use of the Project 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, 2023e, p. 15)

4.10.5 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?***

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} (Urban Crossroads, 2023e, p. 45)

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, 2023e, p. 45). 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, 2023e, p. 45)

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. Consistent with FTA guidance for general construction noise assessment, Table 4.10-5, *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 4.10-6, *Construction Equipment Noise Level Summary*, the construction noise levels are expected to range from 49.3 to 65.1 dBA L_{eq} at the nearby receiver locations. (Urban Crossroads, 2023e, p. 47)

Table 4.10-5 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	Crawler Tractors	78	80	112
	Hauling Trucks	72		
	Rubber Tired Dozers	75		
Grading	Graders	81	83	115
	Excavators	77		
	Compactors	76		
Building Construction	Cranes	73	81	113
	Tractors	80		
	Welders	70		
Paving	Pavers	74	83	115
	Paving Equipment	82		
	Rollers	73		
Architectural Coating	Cranes	73	77	109
	Air Compressors	74		
	Generator Sets	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. Sound power levels calibrated using the CadnaA noise model at the reference distance to the noise source.
(Urban Crossroads, 2023e, Table 9-1)

Table 4.10-6 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	52.7	55.7	53.7	55.7	49.7	55.7
R2	52.3	55.3	53.3	55.3	49.3	55.3
R3	60.9	63.9	61.9	63.9	57.9	63.9
R4	62.1	65.1	63.1	65.1	59.1	65.1
R5	58.6	61.6	59.6	61.6	55.6	61.6
R6	54.2	57.2	55.2	57.2	51.2	57.2
R7	56.0	59.0	57.0	59.0	53.0	59.0

[1] Construction noise source and receiver locations are shown on Exhibit 8-A of the Project's noise study.
[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 8.1 of the Project's noise study.
(Urban Crossroads, 2023e, Table 9-2)

2. Construction Noise Analysis - Daytime

As shown on Table 4.10-7, *Construction Noise Level Compliance*, Project-related construction noise levels are expected to range from 55.3 to 65.1 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 4.10-7. Therefore, the noise impacts due to Project construction noise are considered less than significant at all receiver locations. (Urban Crossroads, 2023e, p. 48)

Table 4.10-7 Construction Noise Level Compliance

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels[2]	Threshold[3]	Threshold Exceeded?[4]
R1	55.7	80	No
R2	55.3	80	No
R3	63.9	80	No
R4	65.1	80	No
R5	61.6	80	No
R6	57.2	80	No
R7	59.0	80	No

[1] Construction noise source and receiver locations are shown on Exhibit 8-A of the Project's noise study.

[2] Highest construction noise level calculations based on distance from the construction noise source activity to the nearest receiver locations as shown on Table 4.10-6.
[3] Construction noise level thresholds as shown on Table 4.10-4.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?
(Urban Crossroads, 2023e, Table 9-3)

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 area. Any nighttime construction noise activities shall satisfy the FTA residential 70 dBA L_{eq} noise limit. (Urban Crossroads, 2023e, p. 49)

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, 2023e, p. 49)

As shown on Table 4.10-8, *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 37.8 to 46.9 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 the Project related nighttime concrete pour activities. (Urban Crossroads, 2023e, p. 49)

Table 4.10-8 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	38.2	70	No
R2	37.8	70	No
R3	45.7	70	No
R4	46.9	70	No

R5	43.7	70	No
R6	39.6	70	No
R7	41.7	70	No

[1] Construction noise source and receiver locations are shown on 8-A of the Project's noise study.
[2] Nighttime Concrete Pour noise model inputs are included in Appendix 8.2 of the Project's noise study.
[3] Construction noise level thresholds as shown on Table 4.10-4.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?
(Urban Crossroads, 2023e, Table 9-4)

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, and truck movements (Urban Crossroads, 2023e, p. 35).

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 4.10-9, *Reference Noise Level Measurements*, assume the worst-case noise environment with the loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements all operating at the same time. These sources of noise activity would likely vary throughout the day. *(Urban Crossroads, 2023e, p. 35)*.

Table 4.10-9 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

[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, 2023e, Table 8-1)

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 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, 2023e, pp. 38-39)

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, and truck movements, 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 sensitive receiver locations. (Urban Crossroads, 2023e, p. 39)

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 noise-sensitive receiver locations. As shown on Table 4.10-10, *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, 2023e, p. 40).

Table 4.10-10 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	43.4	43.4	62.8	59.2	No	No
R2	42.9	53.5	60.8	58.1	No	No
R3	48.4	48.3	72.2	68.1	No	No
R4	47.5	43.4	59.8	59.1	No	No
R5	48.4	48.3	65.1	59.5	No	No

R5	48.4	48.3	66.3	61.3	No	No
R6	47.5	43.4	62.7	58.5	No	No

[1] See Figure 4.10-2 for the sensitive receiver locations.
[2] Proposed Project operational noise level calculations are included in Appendix 7-1 of the Project's noise study.
[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 noise study)
[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, 2023e Table 8-4)

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 4.10-11, *Daytime Project Operational Noise Level* Increases and Table 4.10-12, *Nighttime Operational Noise Level Increases*. (Urban Crossroads, 2023e, p. 41)

As indicated in Table 4.10-11, the Project would generate daytime operational noise level increases ranging from 0.0 to 0.2 dBA L_{eq} at the nearest receiver locations. As indicated in Table 4.10-12, the Project would generate nighttime operational noise level increases ranging from 0.0 to 1.3 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 4.10-4, the increases at the sensitive receiver locations would be less than significant (Urban Crossroads, 2023e, p. 41).

Table 4.10-11 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	43.4	L1	62.8	62.8	0.0	5.0	No
R2	42.9	L2	60.8	60.9	0.1	5.0	No
R3	48.4	L3	72.2	72.2	0.0	1.5	No
R4	47.5	L4	59.8	60.0	0.2	5.0	No
R5	48.4	L5	65.1	65.2	0.1	1.5	No
R6	48.4	L6	66.3	66.4	0.1	1.5	No
R7	47.5	L7	62.7	62.8	0.1	5.0	No

[1] See Figure 4.10-2 for the sensitive receiver locations.
[2] Total Project daytime operational noise as shown on Table 7.2 in the Project's noise study.
[3] Reference noise level measurement locations as shown on Figure 4.10-1
[4] Observed daytime ambient noise levels as shown on Table 4.10-1.
[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 4.10-4.
(Urban Crossroads, 2023e, Table 8-2)

Table 4.10-12 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	43.4	L1	59.2	59.3	0.1	5.0	No
R2	53.5	L2	58.1	59.4	1.3	5.0	No
R3	48.3	L3	68.1	68.1	0.0	1.5	No
R4	43.4	L4	59.1	59.2	0.1	5.0	No
R5	48.3	L5	59.5	59.8	0.3	5.0	No
R6	48.3	L6	61.3	61.5	0.2	5.0	No
R7	43.4	L7	58.5	58.6	0.1	5.0	No

[1] See Figure 4.10-2 for the sensitive receiver locations.
[2] Total Project nighttime operational noise levels as shown on Table 7-3 in the Project's noise study.
[3] Reference noise level measurement locations as shown on Figure 4.10-1.
[4] Observed nighttime ambient noise levels as shown on Table 4.10-1.
[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 4.10-4.
(Urban Crossroads, 2023e, Table 8-3)

C. *Off-Site Traffic Noise Analysis*

Traffic generated by the operation of the Project would influence the traffic noise levels in surrounding off-site areas and at the Project site. According to the Project's Traffic Scoping Agreement, (*Technical Appendix L1),* the proposed Project is anticipated to generate 698 two-way trips including 90 truck trips. Because the Project would generate less than 100 peak hour trips during the peak hour, a level of services (LOS) Traffic Impact Analysis was not required for the Project. (Urban Crossroads, 2023e, p. 41).

A doubling of the existing traffic volumes would be required to generate a 3 dBA CNEL increase. For example, the existing 2022 average daily traffic volume (ADT) on Rancho Vista Boulevard / Avenue P west of 8th Street East is 30,417. The existing ADT on 8th Street East south of Rancho Vista Boulevard / Avenue P is 2,479. The incremental Project-related off-site traffic noise levels due to the 698 additional Project trips are estimated at less than 1 dBA CNEL. Therefore, due to the low trip generation

expected from the Project, the Project is not expected to create a "barely perceptible" noise increase of 3 dBA CNEL at nearby noise sensitive land uses adjacent to study area roadways. Thus, the off-site traffic noise levels generated by the Project are considered less than significant and no further analysis of off-site traffic noise is required. (Urban Crossroads, 2023e, p. 42)

D. 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?

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 Table 4.10-13, *Vibration Source Levels for Construction Equipment*. 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, 2023e, p. 51).

Table 4.10-13 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

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual
(Urban Crossroads, 2023e, Table 9-5)

Using the vibration source level of construction equipment provided in Table 4.10-13 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 4.10-14, *Project Construction Vibration Levels*, presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 417 to 1,696 feet from Project construction activities, construction vibration velocity levels are estimated to range

from 0.000 to 0.003 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 sensitive receiver locations. Therefore, the Project related vibration impacts are considered less than significant during typical construction activities at the Project site. As such, vibration levels reported at the sensitive receiver locations are unlikely to be sustained during the entire construction period but would instead occur only during the times that heavy construction equipment is operating adjacent to the Project site perimeter. (Urban Crossroads, 2023e, pp. 51-52).

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 4.10-14 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	1,626’	0.000	0.000	0.000	0.000	0.000	0.000	0.3	No
R2	1,696’	0.000	0.000	0.000	0.000	0.000	0.000	0.3	No
R3	470’	0.000	0.000	0.001	0.001	0.003	0.003	0.3	No
R4	417’	0.000	0.001	0.001	0.001	0.003	0.003	0.3	No
R5	707’	0.000	0.000	0.001	0.001	0.001	0.001	0.3	No
R6	1,399’	0.000	0.000	0.000	0.000	0.001	0.001	0.3	No
R7	1,131’	0.000	0.000	0.000	0.000	0.001	0.001	0.3	No

[1] Receiver locations are shown on Exhibit 8-A of the Project’s noise study.
[2] Distance from receiver location to Project construction boundary (Project site boundary).
[3] Based on the Vibration Source Levels of Construction Equipment, Table 4.10-13.
[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, 2023es, Table 9-6)

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 active airport which would require additional noise analysis under CEQA Guidelines Threshold (c) is the USAF Plant 42 located approximately 1.6 miles southwest of Runway 4. As previously indicated in Subsection 4.10.2, the Project site is located outside the Airport Influence Area (AIA) and the 65 dBA CNEL airport noise impact zone. Because the Project site is located outside of the AIA and

the 65 DBA CNEL airport noise impact zone, airport noise impacts would be less than significant, and no further noise analysis is required under CEQA Guidelines Threshold (c). (Urban Crossroads, 2023e, p. 20)

4.10.6 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*). 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, 2023e, p. 41) 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. Therefore, the Project's permanent stationary noise impacts would not be cumulatively-considerable. It is expected that the nearest sensitive receiver locations may also experience additional background cumulative operational noise impacts due to other project developments near the Project site. However, noise is a localized occurrence and attenuates with distance. Therefore, only future

development projects in the direct vicinity of the Project site could add to the noise generated by the proposed Project and result in a cumulative noise impact. Nearby cumulative projects are typically not sources of substantial noise to the same receivers due to intervening structures, distance, topography, and differences in the frequency and type noise source activities. Therefore, the Project, in combination with other cumulative projects, are considered less than significant at nearby noise-sensitive receiver locations. (Urban Crossroads, 2023e, p. 41)

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. Due to the low Project trip generation as provided in the Traffic Scoping Agreement (*Appendix K1)* prepared for the Project, the City determined that a full traffic analysis would not be required A doubling of the existing traffic volumes would be required to generate a 3 dBA CNEL increase. The incremental Project-related off-site traffic noise levels due to the 698 additional Project trips are estimated at less than 1 dBA CNEL. Therefore, due to the low trip generation expected from the Project, the Project would not create a "barely perceptible" noise increase of 3 dBA CNEL at nearby noise sensitive land uses adjacent to study area roadways on a direct or cumulatively-considerable level. Thus, the off-site traffic noise levels generated by the Project are considered less than significant and no further analysis of off-site traffic noise is required (8th Street Industrial Noise and Vibration Analysis, 2023e, p. 42) Accordingly, due to the low traffic volumes (less than 100 peak hour trips) generated by the Project, Project related traffic noise impacts would be less than significant on a cumulatively considerable basis.

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 sensitive 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 sensitive 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.

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.

Airport Noise

The Project would not involve the construction, operation, or use of any public airports or public use airports. 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.

4.10.7 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 sensitive receptor. On-site operational noise levels would be less than significant at the nearest sensitive receptor. In addition, due to the low traffic volumes generated by the Project, 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 sensitive 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: No Impact. Because the Project site is located outside of the AIA and outside of the 65 dBA CNEL contour boundaries, 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. Therefore, no impact would occur as a result of implementation of the Project. No mitigation is required.

4.10.8 Mitigation

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

4.10.9 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 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 Construction activities are required to comply with PMC Section 8.28.030, which regulates construction-related noise.

NOI RR-2 OSHA requires employers to implement a hearing conservation program when noise exposure is at or above 85 decibels averaged over 8 working hours, or an 8-hour time-weighted average.



Source(s): Urban Crossroads (04-05-2023)

Figure 4.10-1

Not to Scale

Noise Measurement Locations

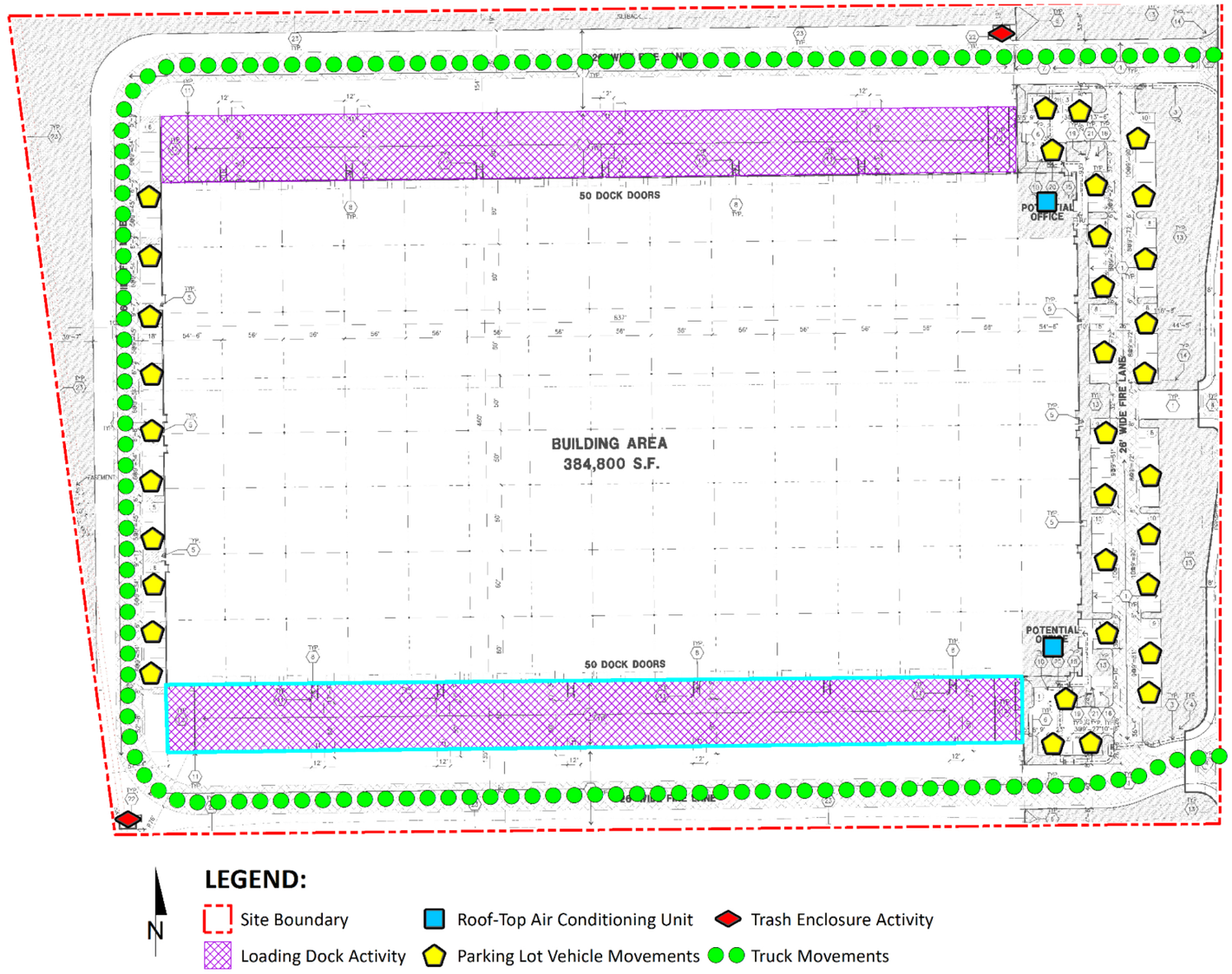


Source(s): Urban Crossroads (04-05-2023)

Figure 4.10-2

Not to Scale

Sensitive Receiver Locations



Source(s): Urban Crossroads (04-05-2023)

Figure 4.10-3

Not to Scale

Operational Noise Source Locations

4.11 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*.

4.11.1 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). The nearest fire station to the Project site is LACFD Station No. 37 located at 38318 9th St. East, approximately 1.5 miles to the southeast of the Project site. The next closest fire station is LACFD Station No. 24 located at 1050 W. Rancho Vista Boulevard/Avenue P, approximately 1.8 miles to the west. (City of Palmdale, 2022b, p. 4.15-1; Google Earth, 2022)

LACFD maintains a response time for emergency fire protection services of four to six minutes. To ensure compliance with the California Fire Code, LACFD conducts site inspections of new construction as well as annual inspections of existing structures. 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, 2022b, pp. 4.15-1 and -2; CalFire, n.d.; Google Earth, 2022)

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 a Sheriff's Station located at 750 East Avenue Q that serves the City of Palmdale and surrounding communities, including the Project site. The Sheriff's Station was constructed in 2006, replacing a previous neighborhood sub-station. The 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, 2022b, p. 4.15-2)

C. Schools

The Project site is located within the service area of the Palmdale School District (PSD) for elementary and middle school services and is within the Antelope Valley Union High School District (AVUHSD) for high school services. Summerwind Elementary School for TK-5 school services is located approximately 2.1 miles west of the Project site, SAGE Academy for grades 6-8 is located approximately 2.0 miles southeast of the Project site, and Palmdale High School is located approximately 1.9 miles southeast of the Project site. A Head Start Palmdale District office, portions of which are used for school bus parking and early childhood education, is located southeast of the

Project site at 975 East Avenue P-8, with the school bus parking lot positioned closest to and facing the Project site. (Google Earth, 2022)

D. Parks

Existing park facilities located within approximately two miles of the Project site include Desert Sands Park; Manzanita Heights Park; and Melville J. Courson Park. Desert Sands Park, located approximately 0.4-mile southwest of the Project site on the opposite side (west side) of Sierra Highway from the Project site. Desert Sands Park is approximately 20 acres and includes a variety of recreational uses, including two baseball fields, two full and one small softball fields, two tennis courts, two full-court basketball courts, a tot lot, and open play areas. Manzanita Heights Park, which is located approximately 1.7 miles southwest of the Project site, is approximately four acres and includes tot lots and a large open play area. Melville J. Courson Park, which is located approximately 1.5 miles southeast of the Project site, is approximately five acres and includes a swimming pool, two full court basketball courts, tot lots, and open play areas. (Google Earth, 2022; City of Palmdale, 2022b, Table 4.16-1)

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 includes 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 E. Avenue Q-9, and Chimbole Cultural Center is located at 38350 Sierra Hwy. (City of Palmdale, 2022b, p. 4.15-5)

The Palmdale City Library is located at 700 East Palmdale Boulevard, approximately 1.3 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, 2022; City of Palmdale, 2022b, p. 4.15-5)

4.11.2 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. 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."*

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, 2022b, 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 an industrial use 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. In particular, 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 an industrial use 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 an industrial use and does not involve a residential proponent; therefore, the Quimby Act is not appliable 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, 2022b, 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, 2022b, p. 4.15-7) (PMC, 2022)

4.11.3 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?

4.11.4 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 one new industrial building to the Project site would place an additional demand on existing LACFD resources. However, the Project is consistent with the growth projections of the General Plan as well as the zoning for the site.

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 building 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 original 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 lane surrounding the proposed building.

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 384,800 s.f. non-refrigerated warehouse fulfillment building, which is estimated to provide jobs for approximately 454 employees. The Project could result in an increased number of emergency and public service calls due to the presence of a new structure, 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, because the Project is consistent with the growth projections of the City and because the nearest existing fire stations to the Project site are LACFD Station No. 37, located only approximately 1.5 miles to the south of the Project site, and

LACFD Station No. 24, located approximately 2.1 miles to the west of the Project site, these stations are at a sufficiently close distance to the Project site such that the Project would be adequately served, and 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 one new industrial building 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, 2022b, 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 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 building user 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 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.

The Project Applicant would be required to contribute fees to the PSD and 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. Although the Project would not result in a direct increase in demand for school services, mandatory payment of school impact fees pursuant to SB 50 still would be required and would ensure that the Project's impacts to school facilities and services are addressed. 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 police protection 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 are proposed as part of the Project. Thus, 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.

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. Although the Project would not directly result in the need for new or expanded park facilities, resulting in no environmental impacts, the Project could result in an incremental indirect increase in demand for parks, should the employees of the Project utilize park facilities in the Project area during their work hours.

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.

4.11.5 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, 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 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 the proposed Project would be adequately served by fire protection services based on the proximity and response times estimated from nearby fire station facilities, the Project would nonetheless 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 one new building, 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 one light industrial building, 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 and/or 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.

4.11.6 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 resident 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 resident 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.

4.11.7 Mitigation

Project impacts to public services would be less than significant; therefore, no mitigation is required.

4.11.8 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) and Antelope Valley Unified School District (AVUHSD) at the rates established by the PSD and AVUHSD, as required by Public Education Code § 17072.10-18.

4.12 TRANSPORTATION

The analysis and information in this Subsection is based primarily on the Project's Traffic Analysis Scoping Agreement dated August 29, 2022, prepared by Urban Crossroads, Inc. (Urban Crossroads) attached to this EIR as *Technical Appendix L1* and the following three technical studies: 1) "8th Street Industrial Vehicle Miles Traveled (VMT) Analysis" dated January 30, 2023, prepared by Urban Crossroads and included as *Technical Appendix L2* to this EIR, 2) "8th Street Industrial Supplemental Vehicle Miles Traveled (VMT) Analysis" dated January 30, 2023 prepared by Urban Crossroads and included as *Technical Appendix L3* to this EIR, and 3) "8th Street Industrial Railroad Safety Evaluation" dated December 21, 2022, prepared by Urban Crossroads and included as *Technical Appendix L4* to this EIR. It is noted that the technical studies analyzed the Project as a 384,800 square foot (s.f.) cross-dock building which is 4,390 s.f. larger than the proposed building at 380,410 s.f. and is a design that includes a third driveway connection with 8th Street and positions loading docks on the north and south sides of the building rather than only on the north side of the building as is proposed in the current Project design; therefore, the analysis herein represents a Project design scenario that would produce more traffic than would actually occur under the current Project design, which is a smaller building with dock doors on only the north side of the building. 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). The City of Palmdale uses 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, 2023e, p. 1)

4.12.1 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 existing year 2022 conditions. The 2040 model contains the planned transportation improvements in the *RTP* and growth projections in the *SCS*. (Urban Crossroads, 2023e, p. 2)

For 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 North 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, 2023e, pp. 2-3)

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 North 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 or in this case 2022. Using the SCAG model base year (2016) and cumulative year (2040), the North Los Angeles County Baseline (2022) VMT was calculated using straight line linear interpolation as 15.9 VMT per employee. To arrive at the adopted impact threshold of 16.8 percent below Baseline North County area VMT per employee the resulting impact threshold used for the analysis is 13.2 VMT per employee (15.9 x 0.832 = 13.2). (Urban Crossroads, 2023e, p. 3)

It is also noted that Los Angeles County is currently updating their VMT guidelines to incorporate a revised Baseline VMT threshold for the entire Los Angeles County area instead of separating the north and South County areas into two areas. The SCAG model has been used to calculate employment VMT per employee for the entire Los Angeles County area for Baseline (2022) conditions resulting in a Baseline VMT per employee of 16.3. To arrive at the impact threshold of 16.8 percent below Baseline Los Angeles County VMT per employee the resulting impact threshold is 13.6 VMT per employee (16.3 x 0.832 = 13.6). For the purposes of this analysis the Project was also compared to this anticipated future impact threshold. (Urban Crossroads, 2023e, p. 3)

B. Study Area Description

The roadway classifications and planned, ultimate roadway cross-sections of the major roadways within the Project's transportation study area, are identified in the City of Palmdale General Plan Circulation and Mobility Element.

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, 2022a, 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 4.12-2, *Designated Truck Route Network*. (City of Palmdale, 2022a, p. 166)

- 10th Street West from Rancho Vista Boulevard / Avenue P to Columbia Way (Avenue M)
- Sierra Highway from State Route (SR-14) to Columbia Way (Avenue M)
- 50th Street East from Palmdale Boulevard to Avenue L
- Columbia Way (Avenue M) from 70th Street West to 90th Street East
- Rancho Vista Blvd / Avenue P from 10th Street West to 90th Street East
- City Ranch Road, Rayburn Road, and Avenue R from the Palmdale Dump 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

As shown on Figure 4.12-2, the closest truck route to the Project site is Sierra Highway from SR-14 to Columbia Way (Avenue M).

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, 2022a, 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 4.12-3, *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 high speed rail (HSR) station, the Palmdale Transportation Center would be relocated south of the existing location to between Avenue Q and Palmdale Boulevard. (City of Palmdale, 2022a, 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, 2022a, 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 HSR. (City of Palmdale, 2022a, 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, 2022a, 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, 2022a, p. 145)

As shown on Figure 4.12-4, *Existing and Planned Bicycle Network Map*, the Sierra Highway Trail is located west of the Project site and immediately west of the Union Pacific Railroad (UPRR) track that is adjacent to the western portion of the Project site. As also shown on Figure 4.12-4, there are limited pedestrian facilities in the vicinity of the Project site.

G. Rail Facilities and At-Grade Rail Crossings

The Project site is located along the west side of 8th Street East, immediately south of an inactive UPRR rail spur, and approximately 95 feet east of the existing active UPRR mainline tracks, which are located adjacent to Sierra Highway. Descriptions of the rail crossings and their existing conditions from a safety perspective are provided below.

1. Rail Crossing - CPUC 001B-412.53.C, DOT No. 750605F

The Project site is located immediately southwest of an existing inactive rail crossing at 8th Street East. According to the California Public Utilities Commission (CPUC) Crossing Inventory, the rail crossing at 8th Street East is identified as CPUC Crossing Number 001B-412.53.C, DOT No. 750605F. Based on a review of field conditions conducted in April 2022 by Urban Crossroads, existing signage states that the tracks are out of service in this location. See Figure 4.12-5, *Existing Rail Crossing*. (Urban Crossroads, 2022i, p. 3) Collision data analysis is based on collision data received from the California Highway Patrol (CHP) during a five-year period. The five-years of collision data from the CHP Statewide Integrated Traffic Records System (SWITRS) indicates that there were no recorded collisions adjacent to the Project site's frontage with 8th Street East or at the rail crossing. (Urban Crossroads, 2022i, p. 6)

2. Rail Crossing - CPUC No. 001B-412.20, 101VY-69.95, DOT 750643P

The Project site is located east of active UPRR mainline tracks adjacent to Sierra Highway. According to the CPUC Crossing Inventory, the rail crossing located approximately 800 feet north of the Project site at Rancho Vista Boulevard / Avenue P is known as CPUC No. 001B-412.20, 101VY-69.95, DOT 750643P. (Urban Crossroads, 2022i, p. 4) Collision data for the intersection Rancho Vista Boulevard / Avenue P is reported below in Table 4.12-1.

3. Collision Data

A collision data analysis prepared for the Project's study area and provided by Urban Crossroads is based on five years of collision data received from the CHP's SWITRS. As shown in Table 4.12-1, *Type of Collisions Summary*, analysis of the five-year records shows a total of 105 collisions at Sierra Highway and Rancho Vista Boulevard / Avenue P and a total of 31 collisions at Rancho Vista Boulevard / Avenue P and 8th Street. There were no recorded collisions adjacent to the Project site's frontage or the 8th Street rail crossing.

Table 4.12-1 Type of Collisions Summary

Head-On	Sideswipe	Rear-End	Broadside	Hit Object	Overturn	Auto-Pedestrian	Other	Not Stated
Sierra Highway & Rancho Vista Boulevard /Avenue P (Total =105 collisions)								
5 (4.7%)	23 (21.9%)	46 (43.8%)	20 (19.1%)	20 (19.1%)	0 (0.0%)	0 (0.0%)	2 (1.9%)	0 (0.0%)
8th Street & Rancho Vista Boulevard/Avenue P (Total: 31 Collisions)								
1 (3.2%)	2 (6.5%)	12 (38.7%)	14 (45.2%)	1 (3.2%)	0 (0.0%)	0 (0.0%)	1 (3.2%)	0 (0.0%)
8th Street & Project Driveways (Total: 0 Collisions); Driveways do not currently exist								
0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

(Urban Crossroads, 2022i, Table 4)

4. City of Palmdale Five-Year Capital Improvement Projects Related to Rail Crossings

The City of Palmdale's Five Year Capital Improvement Projects (2022 – 2027) includes the following street improvement projects, which would improve the conditions at the rail crossings:

- STR-019 Rancho Vista Grade Separation Project – A six-lane grade separation (underpass) of Rancho Vista Boulevard at its intersection with the railroad tracks (east of Sierra Hwy), to include access ramps to Sierra Highway. The Rancho Vista Grade Separation Project is planned to include project study reports, environmental studies, project design, right-of-way acquisition, construction, and construction management. The Rancho Vista Grade Separation project is anticipated to commence in Fiscal Year (FY) 26-27. (Urban Crossroads, 2022i, p. 4)

- STR-037 Rancho Vista Boulevard at Sierra Highway Railroad Safety Crossing Improvements – The CPUC has provided funding to obtain safety improvements at the railroad crossing at Rancho Vista Boulevard and Sierra Highway. The City of Palmdale approved a contract for design professional services on August 17, 2022 for the Rancho Vista Boulevard at Sierra Highway Railroad Safety Crossing Improvements project. (Urban Crossroads, 2022i, p. 4)

4.12.2 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, 2020c, 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, 2020c) 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 thorough

transportation. Circulation and Mobility Element goals are listed below. (City of Palmdale, 2022a, 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)

4.12.3 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);

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 Baseline employment VMT per employee for the North Los Angeles County area are considered to have a significant VMT impact. (Urban Crossroads, 2023e, p. 3)

For trucks, although not specified by County Guidelines, it is reasonable to assume that a project with a total VMT per service population (SP) that exceeds the VMT baseline of 16.8 percent below North Los Angeles County average total VMT per SP would result in a potentially significant impact, consistent with North County regional averages identified in the *Los Angeles County Senate Bill (SB) 743 Implementation and CEQA Updates Report.* (Urban Crossroads, 2022h, p. 2)

4.12.4 Impact Analysis

Similar to the adopted thresholds, the SCAG model was used to calculate the entire Los Angeles County of 13.6 HBW VMT per employee. (Urban Crossroads, 2023e, p. 3)

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. Land use information for the Project has been converted to SED and input into the Project's TAZ to calculate Project generated HBW VMT. Table 4.12-2, *Project Employee Estimates*, summarizes the SED inputs used to reflect the Project. (Urban Crossroads, 2023e, p. 3)

Table 4.12-2 Project Employee Estimates

Land Use	Quantity	Employment Factor[1]	Employees
Industrial	384, 800 s.f.	1.18 employee per 1,000 s.f.	454

[1] City of Palmdale General Plan Update Final EIR Table 2-4.
(Urban Crossroads, 2023e, Table 2)

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 698 daily vehicle trips, exceeding the 110 daily vehicle trip VMT screening threshold (see Attachment B, Tables B-1 and B-2 of the VMT Analysis for the Project included as *Technical Appendix L2*). (Urban Crossroads, 2023e, 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. As shown in Table 4.12-3, *Project Trip Generation Summary*, the proposed Project is anticipated to generate 698 two-way vehicle trip-ends per day with 59 AM peak hour trips and 60 PM peak hour trips. The Project is anticipated to generate 842 two-way passenger car equivalent (PCE) trip-ends per day with 71 PCE AM peak hour trips and 68 PM peak hour trips. Because the Project would generate fewer than 100 peak hour trips during the peak hour, a level of services (LOS) Traffic Impact Analysis is not required for the Project.

Table 4.12-3 Project Trip Generation Summary

		AM Peak Hour			PM Peak Hour			
Land Use	**Quantity Units**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**Daily**
Actual Vehicles:								
High-Cube Fulfillment (Non-Sort)	384.800 TSF							
Passenger Cars:		43	7	50	22	36	58	608
2-axle Trucks:		1	1	1	0	0	1	16
3-axle Trucks:		1	1	2	0	0	1	18
4+-axle Trucks:		2	3	5	1	1	2	56
Total Truck Trips (Actual Vehicles)		4	5	9	1	1	2	90
Total Trips (Actual Vehicles)[1]		**47**	**12**	**59**	**23**	**37**	**60**	**698**
Passenger Car Equivalent (PCE)								
High Cube Fulfillment (Non-Sort)	384.800 TSF							
Passenger Cars:		43	7	50	22	36	58	608
2-axle Trucks:		1	1	2	1	0	1	22
3-axle Trucks:		2	2	4	1	1	2	46
4+-axle Trucks:		7	8	14	3	4	7	166
Total Truck Trips (PCE)		10	11	21	5	5	10	234
Total Trips (PCE)[2]		**53**	**18**	**71**	**27**	**41**	**68**	**842**

[1] TSF= thousand square feet
[2] Total Trips=Passenger Cars + Truck Trips

(Urban Crossroads, Inc., 2022f, Table 2)

***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

The Project is consistent with the site's land use designation of Industrial applied by the City's General Plan (Palmdale 2045). In terms of Project consistency with the goals of the General Plan's Circulation and Mobility Element, the Project is consistent. The Project abuts one public street, which is 8th Street East, and which would be improved and widened to its ultimate half-width standard with an eight-foot-wide parkway including a sidewalk adjacent to the Project site's frontage as part of the Project's construction. The Project's improvement to 8th Street East in compliance with City standards of a Connector Street is 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. 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 just east of the Sierra Highway Bike Trail and approximately 0.5-mile northwest of the Palmdale Metrolink Station. Further, the Project site is located just 0.14-mile south of East Rancho Vista Boulevard / Avenue P, and approximately 800 feet south of the East Rancho Vista Boulevard / Avenue P active UPRR mainline tracks, which are located adjacent to Sierra Highway, and both East Rancho Vista Boulevard / Avenue P and Sierra Highway are designated truck routes. 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, 2022a, p. 166).

B. Transit, Bicycle, and Pedestrian Facilities

As discussed above in Section 4.12.1, AVTA Routes 4, 5, 785 and 786 run along Avenue M and Sierra Highway within the vicinity of the Project site and could potentially serve the Project's employees and visitors. There are limited pedestrian facilities within the Project area. There are no sidewalks along the Project site's frontage, no intersections directly adjacent to the site, and therefore no pedestrian crosswalks adjacent to the site. The Project includes the construction of improvements along 8th Street East along the frontage of the Project site consisting of dedicating additional right-of-way (ROW) of variable width ranging from approximately eight feet in width near the northeast and southeast corners of the site to approximately 30 feet at the proposed entrance driveways. In addition, 8th Street East would be improved along the frontage of the Project site to include additional pavement, curb, gutter,

and an 8-foot-wide parkway that includes a sidewalk. The provision of a new sidewalk would improve pedestrian circulation in the area. The Project would not conflict with any plans or policies regarding existing or proposed pedestrian facilities.

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 in Table 4.12-4, *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 4.12-4, shows how the Project promotes consistency with the guiding principles and policies of the *RTP/SCS*.

Table 4.12-4 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 use (i.e., warehouse use) 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 include the construction and operation of one industrial warehouse building that would be easily accessible to Sierra Highway and SR-14, facilitating the movements 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	Consistent

Goal	Project Consistency Discussion	Project Consistency
	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.	
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 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.	Consistent
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 one light industrial warehouse building 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 would have less than significant air quality and greenhouse gas emissions.	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,* and the Project's air pollutant emissions are concluded to be less than significant. 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,	Consistent

Goal	Project Consistency Discussion	Project Consistency
	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.	
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	Project Consistency Discussion	Project Consistency
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 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. As discussed in EIR Section 4.3*, Biological Resources*, with implementation of mitigation, the Project's impact to jurisdictional resources would be reduced to less than significant. 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

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 proposed Project does not meet any of the screening criteria; therefore, a full VMT analysis was conducted.

B. Home Based Work VMT Analysis

VMT per employee for the Project was calculated for Baseline (2022) conditions using the SCAG travel demand model and is presented in Table 4.12-5, *Project VMT and VMT Threshold of North Los Angeles*, along with the estimated number of Project employees, and the resulting HBW VMT per employee. (Urban Crossroads, 2023e, p. 4)

As shown in Table 4.12-5, Project generated HBW VMT per employee is 10.5, which is 20.45 percent below the currently adopted impact threshold of 13.2 VMT per employee resulting in a less than significant impact. (Urban Crossroads, 2023e, p. 4)

Table 4.12-5 Project VMT and VMT Threshold of North Los Angeles

	Project
Project HBW VMT	4,767
Project Employment	454
Project HBW VMT per Employee	10.5
County Threshold	13.2
Percent Below Threshold	-20.45%
Potentially Significant?	No

(Urban Crossroads, 2023e, Table 3)

In addition, Project generated HBW VMT per employee has also been compared to the County's anticipated future impact threshold of 16.8 percent below Baseline VMT for all of Los Angeles County. As shown in Table 4.12-6, *Project VMT and VMT Threshold of Los Angeles County*, Project HBW VMT per employee is 22.79 percent below the anticipated future threshold of 13.6 VMT per employee resulting in a less than significant VMT impact. (Urban Crossroads, 2023e, p. 4)

Table 4.12-6 Project VMT and VMT Threshold of Los Angeles County

	Project
HBW VMT	4,767
Employment	454
HBW VMT per Employee	10.5
County Threshold	13.6
Percent Change	-22.79%
Potentially Significant?	No

(Urban Crossroads, 2023e, Table 4)

In summary, as discussed above and detailed in the Project's VMT Analysis (*Technical Appendix L2*), based on the results of the HBW VMT analysis, Urban Crossroads determined that the Project does not meet any available screening criteria, and a VMT analysis was performed. Based on the analysis, the Project was determined to generate HBW VMT per employee that is 20.45 percent below the County's Baseline VMT for North Los Angeles County using the currently adopted thresholds and 22.79 percent below 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 less than significant. (Urban Crossroads, 2023e, p. 5)

C. *VMT Evaluation with Trucks*

The State CEQA Guidelines and the OPR Technical Advisory omit heavy duty trucks from the VMT analysis and consideration regarding thresholds of significance. However, in an effort to fully disclose potential VMT impacts, Urban Crossroads also prepared a supplemental VMT evaluation measuring the Project's estimated Total VMT. The Total VMT calculation differs from the County's adopted VMT metric for industrial projects of HBW VMT in that it includes all vehicle trips (i.e., passenger cars and trucks) and all trip purposes (i.e., not just home-based work trips).

Table 4.12-7, *Project Total VMT,* presents an estimation of Total VMT for the Project, which utilizes vehicle trip generation rates consistent with the Project's greenhouse gas analysis, multiplied by the average trip length for each vehicle type. Average trip length for passenger cars was obtained from the SCAG Model, and composition of light heavy-duty trucks (LHDT), medium heavy-duty trucks (MHDT) and heavy heavy-duty trucks (HHDT) was obtained from the South Coast Air Quality Management District's (SCAQMD) Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce emissions (WAIRE) Program. Using trip lengths consistent with the SCAQMD's Rule 2305 provides an average daily total VMT estimate for the Project consistent with the approach used in the Project's greenhouse gas analysis. (Urban Crossroads, 2022h, pp. 1-2)

Table 4.12-7 Project Total VMT

Vehicle Type	Vehicle Trips	Vehicle Trip Length	VMT
Automobile	608	20.69	12,580
LHDT	16	15.3	245
MHDT	18	14.2	256
HHDT	56	39.9	2,234
Total Truck	90	-	2,735
Total	**698**	**-**	**15, 314**

(Urban Crossroads, 2022h, Table 1)

Table 4.12-8, *Project Total VMT Per SP* presents the calculation of the efficiency metric Project generated Total VMT per SP, which is the product of the Project's Total VMT divided by its SP (i.e., estimated number of Project employees). This efficiency metric is a common VMT metric used by many agencies throughout Southern California to evaluate the efficiency of travel for a given project based on Total VMT. (Urban Crossroads, 2022h, p. 2)

Table 4.12-8 Project Total VMT Per SP

	Project
SP	454
Total VMT	15,314
Total VMT per SP	33.73

(Urban Crossroads, 2022h, Table 2)

Table 4.12-9, *Project VMT Per SP Comparison,* identifies a comparison between Project's total VMT per SP to an applicable impact threshold. Although not specified by County Guidelines, it is reasonable to assume that a project with a total VMT per SP that exceeds the baseline 16.8 percent below North Los Angeles County average total VMT per SP would result in a potentially significant impact, consistent with North County regional averages identified in the *Los Angeles County Senate Bill (SB) 743 Implementation and CEQA Updates Report*. For the purposes of this evaluation, the North County regional average total VMT per SP for baseline conditions is 43.1[1] VMT, which is 16.8 percent below the North County threshold which would result in 33.73 VMT per SP. (Urban Crossroads, 2022h, p. 2)

Table 4.12-9 Project VMT Per SP Comparison

	Baseline
Regional Threshold	35.86
Project	33.73
Percent Above Threshold	-5.94%
Potentially Significant?	No

(Urban Crossroads, 2022h, Table 3)

[1] LA County SB 743 Implementation and CEQA Update; Page 16, Table 4.

In summary, as discussed above and detailed in the Project's Supplemental VMT Analysis (*Technical Appendix L3*), based on the results of the Supplemental VMT analysis, Urban Crossroads determined that the Project's VMT analysis including passenger vehicles and trucks would be below the Regional VMT per SP threshold by 5.94 percent and is therefore determined to have a less than significant transportation impact. (Urban Crossroads, 2022h, p. 3)

***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 along the west side of 8th Street East, immediately south of an inactive UPRR rail spur, approximately 0.14-mile south of East Rancho Vista Boulevard / Avenue P, and approximately 800 feet south of the East Rancho Vista Boulevard / Avenue P active UPRR mainline tracks, which are located adjacent to Sierra Highway. The Project site is proposed to be developed with a 384,800 s.f. non-refrigerated fulfillment warehouse building, which is consistent with the site's Industrial land use designation assigned by the City's General Plan. As such, there is no potential for transportation hazard impacts emanating from use of the site with industrial uses, which was previously considered by the City during adopting of its General Plan update (Palmdale 2045) in 2022. The City has planned its transportation system to be supportive of the land uses set forth in the General Plan.

As part of the Project, the Project Applicant would make improvements along 8th Street East along the frontage of the Project site. The Project includes the dedication of additional ROW of variable width, with the proposed ROW dedication ranging from approximately eight feet in width near the northeast and southeast corners of the site to approximately 30 feet at the proposed entrance driveways. In addition, 8th Street East would be improved along the frontage of the Project site to include additional pavement, curb, gutter, and an 8-foot-wide parkway that includes a sidewalk. Access to the site would be accommodated by three proposed driveways along the property's frontage along 8th Street East. The northern and southern driveways would provide access for both trucks and passenger vehicles, while the central driveway would allow access for passenger vehicles only. The driveways are designed to allow for full turning movements into and out of the site and all proposed improvements would be implemented in a manner consistent with the PMC. The Project's proposed improvements have been reviewed by the City for compliance with the PMC, and the City has determined that the Project's proposed improvements are in full compliance with the PMC requirements and would not substantially increase hazards due to a geometric design feature. Trucks traveling to and from the Project would be required to use the City's designated truck routes. No hazardous design conditions associated with the Project's design or truck routing would occur and impacts would be less than significant.

With respect to the proposed warehouse building, according to the Project's Traffic Scoping Agreement (*Technical Appendix L1*) and as indicated in Table 4.12-3, the Project is calculated to generate approximately 698 two-way vehicle trip-ends per day, including 59 truck trips during the meaning peak hour and 60 truck trips during the evening peak hour. Project truck traffic would be directed to designated truck routes and away from residential streets. Urban Crossroads does not

anticipate that the Project would result in a change in traffic patterns due to the number or type of trips generated. 8th Street East would be able to adequately support Project-generated traffic volumes as a Secondary Arterial and East Rancho Vista Boulevard / Avenue P would similarly be able to adequately support Project volumes as a Major Arterial. Vehicles accessing the Project site from 8th Street East are not expected to queue on the main roadway due to the proposed Project's access design, with adequate queuing lengths in the proposed on-site driveways. The driveways would be stop sign controlled at the exit movement and 8th Street East is proposed to have unimpeded flow.

The rail spur to the north of the Project site is not in service; therefore, there is no potential for the Project to result in a hazard due to an incompatible use associated with the existing inactive rail crossing (Urban Crossroads, 2022i, pp. 3, 8). Further, vehicles turning right into the Project would have unimpeded flow into the site and therefore would have no potential to queue to the active rail crossing located to the west of the Project site. (Urban Crossroads, 2022i, p. 7)

As shown previously in Table 4.12-1, *Type of Collisions Summary*, analysis of five years of collision records show a total of 105 collisions at Sierra Highway and Rancho Vista Boulevard / Avenue P and a total of 31 collisions at East Rancho Vista Boulevard / Avenue P and 8th Street. There were no recorded collisions adjacent to the Project site's frontage or the 8th Street rail crossing. Urban Crossroads does not anticipate that the Project or addition of the Project's traffic to the street system would result in a significant change in collisions due to the number of trips generated or vehicle type (e.g. trucks). Based upon Urban Crossroads' review of existing conditions and their experience as a technical expert in transportation safety, the Project's circulation and driveway connections to the public street system would accommodate Project traffic without negatively impacting the rail crossings on 8th Street and East Rancho Vista Boulevard / Avenue P. (Urban Crossroads, 2022i, p. 8)

Based on the preceding analysis, the Project would not result in increased hazards to transportation as a result of incompatible uses. Therefore, impacts would be less than significant and no mitigation is required.

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. A 28-foot wide fire lane would be provided interior to the site and around the circumference of the proposed fulfillment warehouse building for sufficient emergency vehicle and fire truck access. Accordingly, the Project would not result in inadequate emergency access, and impacts would be less than significant.

4.12.5 Cumulative Impact Analysis

This cumulative impact analysis considers development of the proposed Project in conjunction with other planned development in the City of Palmdale.

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 likewise 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*), the Project was determined to generate HBW VMT per employee that is 20.45 percent below the County's Baseline VMT for North Los Angeles County using the currently adopted thresholds and 22.79 percent below 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 less than significant and less than cumulatively considerable. (Urban Crossroads, 2023e, p. 5)

When trucks are considered in the VMT analysis, the Project's VMT per SP would be below the Regional VMT per SP threshold by 5.94 percent. Therefore, with the addition of trucks, impacts would be less than significant and less than cumulatively considerable.

Increase Hazards Due to a Geometric Design Feature or Incompatible Uses

The 8th Street East 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. Additionally, due to the short distance between the Project site and Rancho Vista Boulevard / Avenue P and Sierra Highway, both designated truck routes, Project truck traffic would not result in impacts due to incompatible land uses. As such, the Project would not substantially increase hazards due to a geometric design feature or incompatible use, and impacts would be less than significant on a cumulatively-considerable basis.

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.

4.12.6 Significance of Impacts Before Mitigation

Threshold a: Less than Significant Impact. The Project is consistent with 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: Less than Significant Impact. Project generated VMT per employee was determined to be 20.45 percent below the County's currently adopted impact threshold of 16.8 percent below Baseline VMT for North Los Angeles County. Project generated VMT per employee was found to be 22.79 percent below the County's anticipated to be adopted impact threshold of 16.8 percent below Baseline VMT for Los Angeles County. When trucks are considered, the Project's VMT per SP would be below the Regional VMT per SP threshold by 5.94 percent. Therefore, impacts would be less than significant.

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 route, the Project would not result in increased hazards to transportation as a result of incompatible uses, and impacts would be less than significant.

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.

4.12.7 Mitigation

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

4.12.8 Design Features (DF) and Regulatory Requirements (RR)

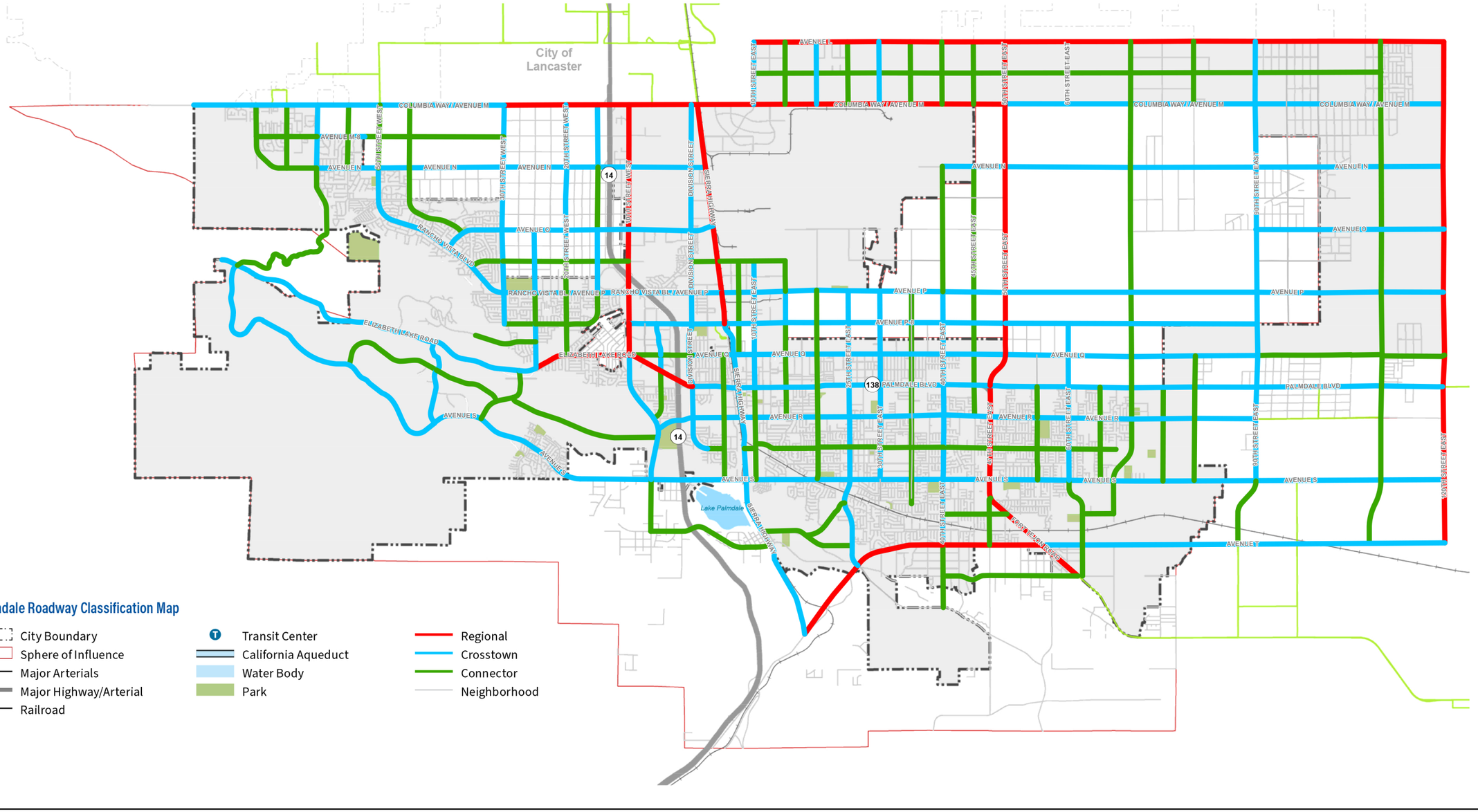
Although the impacts from the Project to transportation would be less than significant, the Project Applicant has agreed to implement the following design features and regulatory requirements. The City of Palmdale is required to assure that implementing development complies with the assumptions relied upon herein and applicable regulatory requirements and design features pertaining to the topic of Transportation, 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.

TRN RR-1 All frontage improvements to 8th Street East shall comply with applicable provisions of the PMC.

TRN DF-2 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 occupancy permit. The TDM plan shall apply to 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

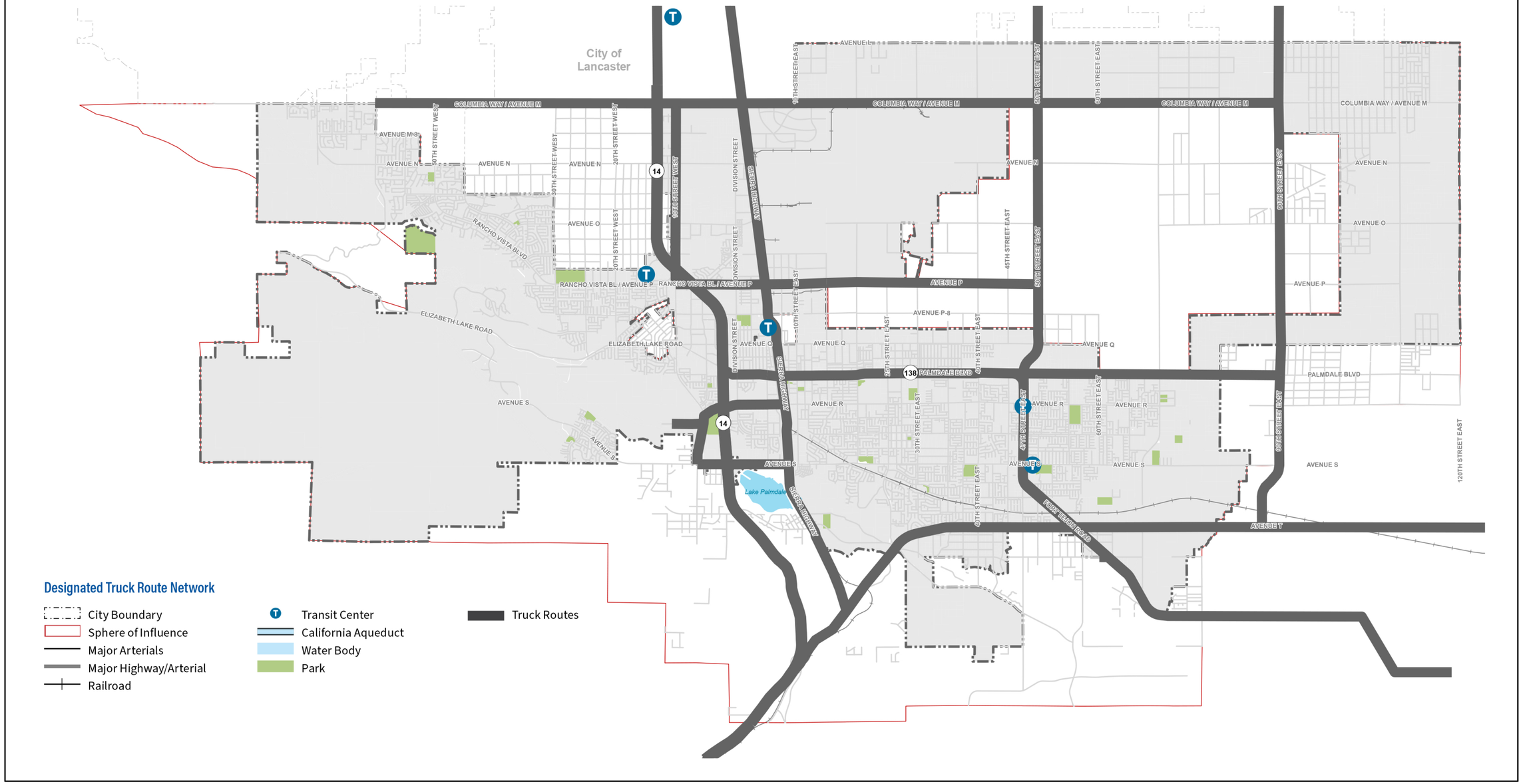


Source(s): City of Palmdale General Plan (10-22-2022)

Not to Scale

Figure 4.12-1

Palmdale Roadway Classification Map

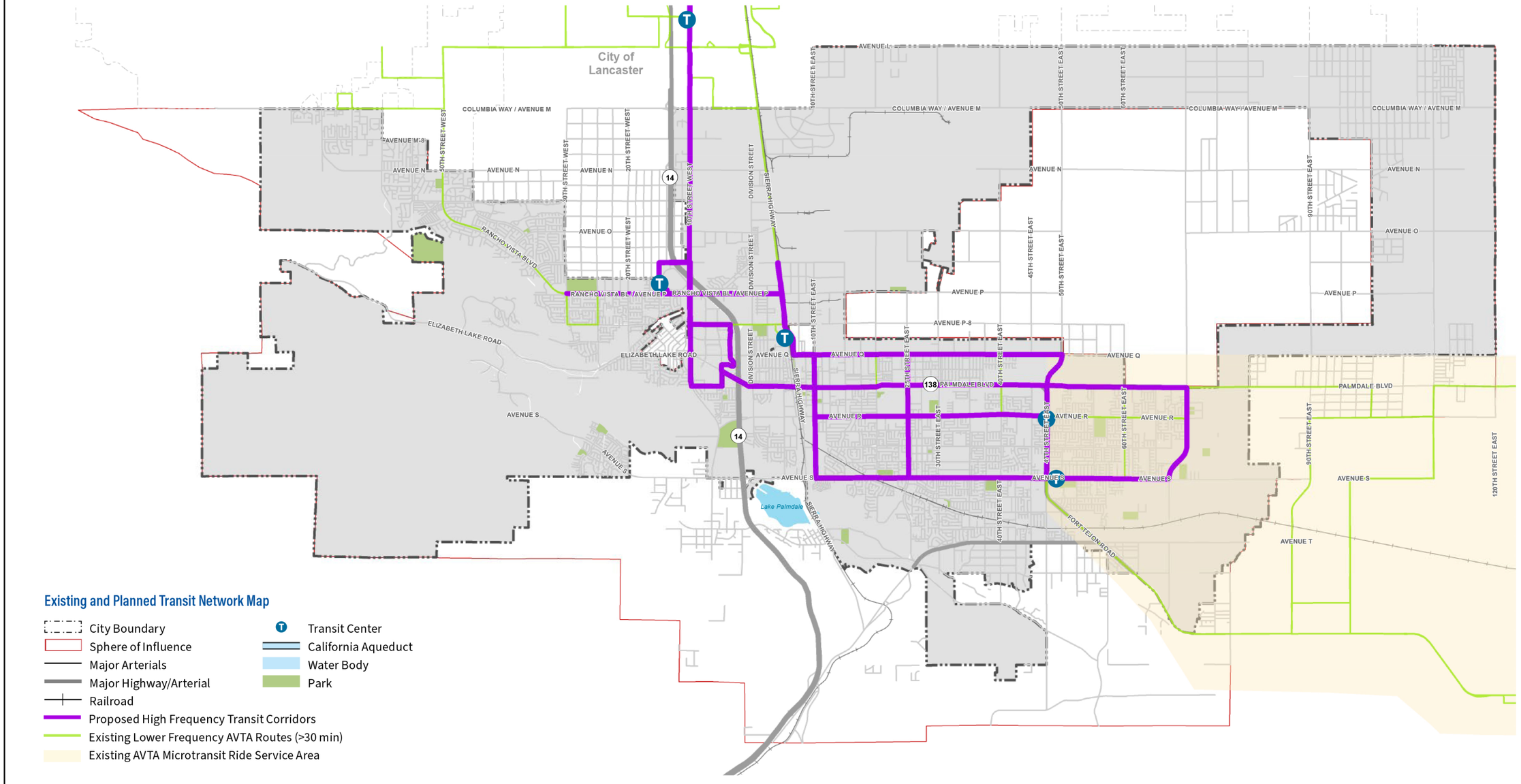


Source(s): City of Palmdale General Plan (10-22-2022)

Not to Scale

Figure 4.12-2

Designated Truck Route Network

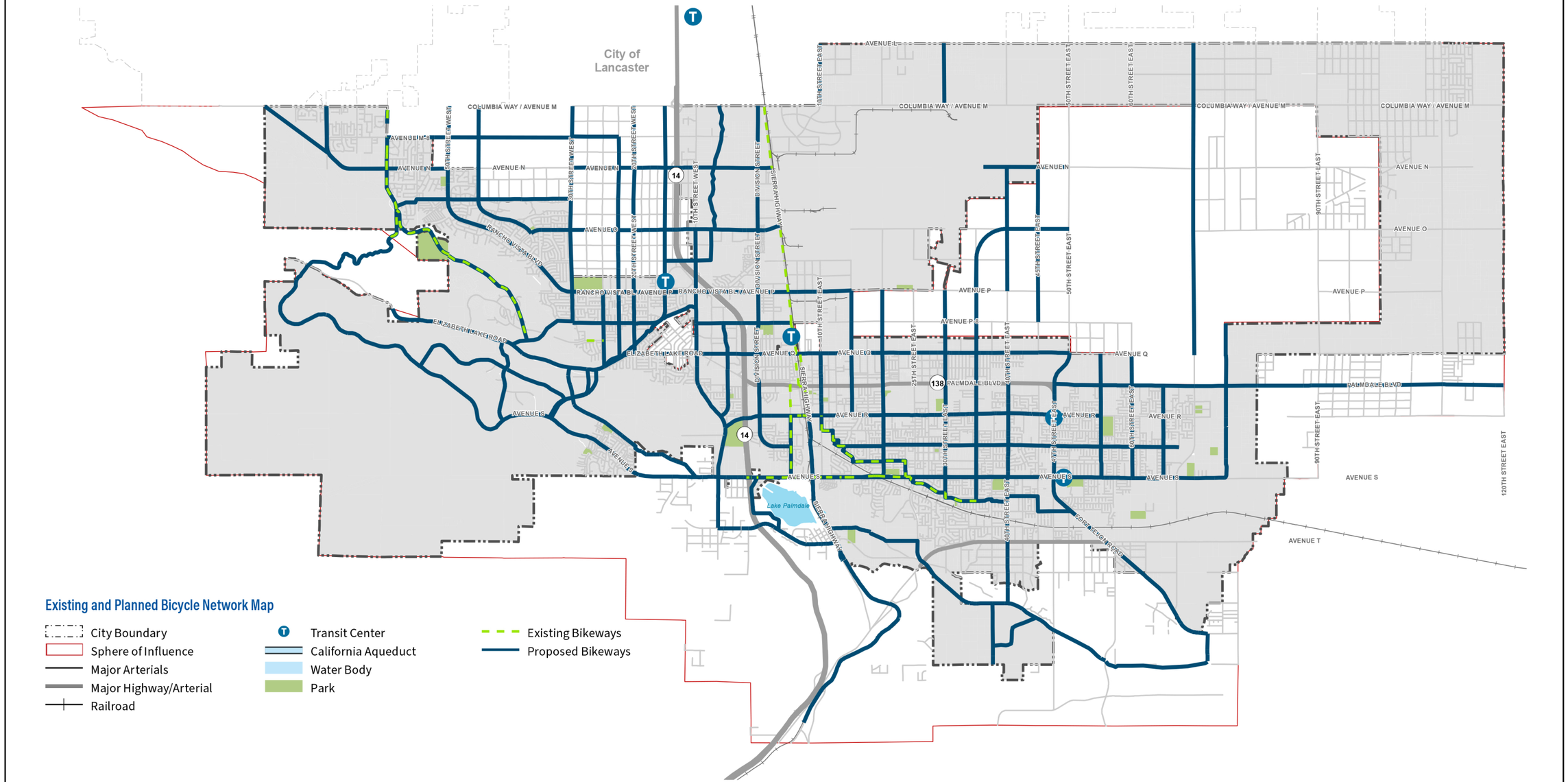


Source(s): City of Palmdale General Plan (10-22-2022)

Figure 4.12-3

Not to Scale

Existing and Planned Transit Network Map



Source(s): City of Palmdale General Plan (10-22-2022)

Figure 4.12-4

Not to Scale

Existing and Planned Transit Network Map



Source(s): Urban Crossroads (12-21-2022)

Figure 4.12-5

Not to Scale

Existing Rail Crossing

4.13 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)).

4.13.1 EXISTING CONDITIONS

Refer to EIR Section 4.4, *Cultural Resources*, for a complete description of the cultural setting, existing site conditions, and the archaeological resources assessment for the Project site.

4.13.2 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 enacted 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." (Public 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 for a project. (Public 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.

4.13.3 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.*

4.13.4 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. 23, 25). To be eligible for the Register, (Public 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, as part of the AB 52 consultation process 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 Assembly Bill (AB 52), on November 10, 2022, the City emailed 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
- San Manuel Band of Mission Indians
- Serrano Nation of Mission Indians

Out of the six Native American tribal groups, the Fernandeño Tataviam Band of Mission Indians (FTBMI) and the Morongo Band of Mission Indians responded and requested to consult on the Project. At time of this Draft EIR publication, the Fernandeño Tataviam Band of Mission Indians has not provided further substantive comment during the consultation process. The Morongo Band of Mission Indians stated that the proposed Project is located within the ancestral territory and traditional use area of the Cahuilla and Serrano people of the Morongo Band of Mission Indians and recommended tribal monitoring during ground disturbing activities. Because no tribe identified any known TCRs on the site under existing conditions, it is not expected that the conclusion of the AB 52 consultation process with the FTBMI will result in the identification of potential impacts to TCRs beyond what is already evaluated and addressed in EIR Subsection 4.4, *Cultural Resources*.

As documented in EIR Subsection 4.4, *Cultural Resources*, and based on a site-specific technical report prepared by PaleoWest titled, "Cultural Resource Investigation in Support of the Palmdale 8_{th} Street Project," dated May 10, 2022, and included as *Technical Appendix D* to this EIR, the Project site does not contain any known archaeological resources. Although Subsection 4.4 notes that there is a potential for uncovering buried archaeological resources including TCRs during Project ground-disturbing activities, Mitigation Measures CUL MM-1 and CUL MM-2 require that a qualified archaeological monitor and a qualified Native American Tribal 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.

4.13.5 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 identified in EIR Subsection 4.4, *Cultural Resources,* to reduce potential impacts 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.

4.13.6 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.

4.13.7 Mitigation

Mitigation Measures CUL MM-1 and CUL MM-2 included in EIR Section 4.4, *Cultural Resources*, shall apply.

4.13.8 Significance of Impacts After Mitigation

Threshold a: Less than Significant with Mitigation Incorporated. Implementation of Mitigation Measures CUL MM-1 and CUL MM-2 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.

4.14 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), Palmdale Industrial Park," dated June 2022, and included as *Technical Appendix M2* to this EIR (KEC, 2022). All references used in this subsection are included in EIR Section 7.0, *References*.

4.14.1 EXISTING CONDITIONS

The Project site is located within the service boundaries of Palmdale Water District (PWD) for water service, the City of Palmdale Public Works, Sewer Maintenance Division 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 PWD. PWD serves a population of 126,062 people. PWD has about 27,000 active water connections and provides water services to the City of Palmdale and some segments of the unincorporated areas within the jurisdiction of Los Angeles County. Approximately 96 percent of PWD customers are residential customers, two and one half percent of the customers are commercial connections, less than one percent of the customers are industrial connections, and the remaining customers are landscape irrigation services. The PWD water distribution system is composed of over 400 miles of pipelines, seven pressure zones, 21 storage reservoirs with a total capacity of about 50 million gallons (MG), 17 booster pump stations, and 23 active groundwater wells. The primary function of PWD is to provide retail water service within its service area. PWD has the power to carry out any act to provide sufficient water for present and future beneficial uses, including construction and operation of facilities to store, regulate, divert, and distribute water for use within its boundaries. (KEC, 2022, pp. 10-11)

1. Water Supply

PWD currently receives water from three sources: groundwater, surface water from Littlerock Dam Reservoir, and imported water from the State Water Project (SWP), as discussed below. PWD anticipated supplies for the years 2020 through 2045 are summarized in Table 4.14-1, *PWD Summary of Current and Projected Supplies*. (PWD, 2021a, p. 55)

Groundwater supply is typically the most reliable source of water supply, especially during drought conditions. PWD has historically used groundwater as its most reliable and consistent water source averaging about 10,300 acre-feet per year (AFY), representing approximately 40 percent of PWD's water supply. PWD's groundwater is pumped from the Antelope Valley Groundwater Basin. However,

due to the excessive groundwater pumping and lack of adequate water replenishment, the Antelope Valley Groundwater Basin was adjudicated by the court in December 2015. As a result, PWD's share of the Antelope Valley Groundwater Basin dropped to 2,770 AFY plus an additional 5,000 AFY of return flow credits for the imported water used. PWD is also entitled to receive approximately 1,370 acre-feet (AF) of the unused portion of federal water share through 2024. (KEC, 2022, pp. 14, 20)

Table 4.14-1 PWD Summary of Current and Projected Supplies

		2020		2025	2030	2035	2040	2045
Detail		**Actual Volume (AF)**	**Level of Treatment**	**Reasonably Available Volume (AF)**	**Reasonably Available Volume (AF)**	**Reasonably Available Volume (AF)**	**Reasonably Available Volume (AF)**	**Reasonably Available Volume (AF)**
Existing Supplies								
Groundwater[a]	Antelope Valley Groundwater Basin	7,600	Drinking Water	4,220	2,770	2,770	2,770	2,770
Groundwater[a]	Return Flow Credit	4,090	Drinking Water	5,000	5,000	5,000	5,000	5,000
Groundwater	Groundwater or Surface Water Augmentation	0	Drinking Water	5,325	5,325	5,325	5,325	5,325
Surface Water[b]	Littlerock Reservoir	4,540	Raw Water	4,000	4,000	4,000	4,000	4,000
Imported Water[c]	SWP Table A	5,695	Raw Water	12,030	11,720	11,400	11,080	11,080
Imported Water	Butte Transfer Agreement[d]	1,320	Raw Water	5,650	5,500	5,350	5,200	5,200
Recycled Water[f]	LACSD[e]	70	Recycled Water	500	1,000	1,500	2,000	2,000
	Total Supplies	**23,315**	**-**	**36,725**	**35,315**	**35,345**	**35,375**	**35,375**

[a] See Section 4.2.1.3 of the PWD Urban Water Management Plan (UMWP) for details.
[b] Projections based on estimated 50 percent of average historical yield (50 percent of 8,000 AFY). See Section 4.2.2.2 of the UWMP.
[c] Supplies are linearly adjusted between "existing" and "future conditions" found in 2019 Delivery Capability Report (DCR) technical addendum.
[d] For details see Section 4.2.3 of the PWD UMWP.
[e] Direct Reuse.
[f] See Section 5 of the UMWP for details.
(PWD, 2021a, Table 4-1)

The Littlerock Creek Dam and Reservoir was constructed in 1922, is located about seven miles southeast of the Palmdale Civic Center, and constitutes PWD's local surface water supply. The San Gabriel Mountains natural run-off is the major contributor to the reservoir's inflow and varies from year to year. This dam and reservoir originally had a storage capacity of about 4,300 AF; however, due to continued sedimentation, its capacity was reduced to 2,800 AF. PWD anticipates supplying up to 4,000 AF of flow from the Littlerock Reservoir through 2025. Depending on the year, PWD has received an average of 2,900 AF of its water supplies from Littlerock Dam and Reservoir. Water from Littlerock Reservoir is conveyed to Lake Palmdale where it mixes with the imported water from the SWP and is subsequently treated at the Leslie O. Carter Water Treatment Plant. (KEC, 2022, pp. 14, 20)

PWD is one of the 29 agencies that have contracts with the State of California for the State Water Project (SWP). The water is conveyed to PWD's Lake Palmdale via a 30-inch metering station. Depending on the availability, PWD receives approximately 1 MG to 19 MG of imported water from the SWP on a daily basis. PWD is also engaged in a long-term lease agreement with Butte County for a percentage of their SWP share up to 10,000 AFY. This lease has been extended through 2031 and they anticipate extending it beyond 2031. In addition, PWD is exploring opportunities to utilize recycled water supplies for its service area customers by actively working with Los Angeles County Sanitation Districts (LACSD). PWD anticipates increasing the use of recycled water supply to 500 AFY by 2025. (KEC, 2022, pp. 15, 21)

PWD's UWMP assesses the supplies available to PWD in an average year, a single dry year, and during multiple dry years. An average year (also called a normal year) is the average supply over a range of years and represents the median water supply available. The single-dry year is the year that represents the lowest water supply available. The multiple-dry year period is the lowest average water supply available for five consecutive dry years. Table 4.14-2 through Table 4.14-4 provide details on supplies anticipated to be available to PWD in normal, single-dry, and multiple-dry years, respectively. (PWD, 2021a, p. 4-1)

Table 4.14-2 PWD Water Supply Estimates – Normal Year (AFY)

	2025	2030	2035	2040	2045
Existing Supplies					
Groundwater	4,220	2,770	2,770	2,770	2,770
Groundwater Return Flow Credits	5,000	5,000	5,000	5,000	5,000
Groundwater or Surface Water Augmentation	5,325	5,325	5,325	5,325	5,325
Local Surface Water	4,000	4,000	4,000	4,000	4,000
Imported SWP Water	12,030	11,720	11,400	11,080	11,080
Butte Transfer Agreement[a]	5,650	5,500	5,350	5,200	5,200
Recycled Water	500	1,000	1,500	2,000	2,000
Total Supplies	**36,725**	**35,315**	**35,345**	**35,375**	**35,375**

[a] For details, see Section 4.3.1 of the PWD UMWP.
(PWD, 2021a, Table 4-13)

Table 4.14-3 PWD Water Supply Estimates – Single-Dry Year (AFY)

	2025	2030	2035	2040	2045
Existing Supplies					
Groundwater	4,220	2,770	2,770	2,770	2,770
Groundwater Return Flow Credits	5,000	5,000	5,000	5,000	5,000
Groundwater or Surface Water Augmentation	5,325	5,325	5,325	5,325	5,325
Local Surface Water	4,000	4,000	4,000	4,000	4,000
Imported SWP Water	1,490	1,705	1,915	2,130	2,130
Butte Transfer Agreement[a]	700	800	900	1,000	1,000
Recycled Water	500	1,000	1,500	2,000	2,000
Total Supplies	**21,235**	**20,600**	**21,410**	**22,225**	**22,225**

[a] For details, see Section 4.3.1 of the PWD UMWP.

(PWD, 2021a, Table 4-14)

Table 4.14-4 PWD Water Supply Estimates – Multiple-Dry Years (AFY)

	2025	2030	2035	2040	2045
Existing Supplies					
Groundwater	4,220	2,770	2,770	2,770	2,770
Groundwater Return Flow Credits	5,000	5,000	5,000	5,000	5,000
Groundwater or Surface Water Augmentation	5,325	5,325	5,325	5,325	5,325
Local Surface Water	4,000	4,000	4,000	4,000	4,000
Imported SWP Water	6,180	5,645	5,110	4,470	4,470
Butte Transfer Agreement[a]	2,900	2,650	2,400	2,100	2,100
Recycled Water	500	1,000	1,500	2,000	2,000
Total Supplies	**28,125**	**26,390**	**26,105**	**25,665**	**25,665**

[a] For details, see Section 4.3.1 of the PWD UMWP.
(PWD, 2021a, Table 4-15)

2. *Water Demands*

PWD's projected water deliveries were estimated considering various factors, including historical and current demands, Southern California Association of Governments (SCAG) population projection data, and land use data. Table 4.14-5, *PWD Projected Water Deliveries (AF)*, depicts PWD's anticipated water deliveries from 2025 through 2045. (PWD, 2021a, pp. 2-5 and 2-6)

Table 4.14-5 PWD Projected Water Deliveries (AF)

Demand Category	2025	2030	2035	2040	2045
Single family	11,460	11,730	12,310	12,970	13,660
Multi-family	1,450	1,480	1,560	1,640	1,730
Commercial[a]	1,170	1,240	1,390	1,550	1,730
Industrial	1,350	1,390	1,480	1,590	1,700
Landscape	1,050	1,130	1,300	1,490	1,690
Other[c]	40	40	40	40	40
Sales to Other Agencies	1,300	1,300	1,300	1,300	1,300
Groundwater Recharge/Storage/Banking	0	0	0	0	0
Long Term System Storage	0	0	0	0	0
Saline Water Intrusion Barrier	0	0	0	0	0
Agricultural Irrigation	0	0	0	0	0
Non-Revenue Water[b]	1,900	2,000	2,100	2,200	2,400
Total	**19,720**	**20,310**	**21,480**	**22,780**	**24,250**

[a] Includes Institutional/Governmental demands.
[b] Based on average non-revenue water from past five years of water audit reports (see Table 2-1) of PWD UMWP.
[c] Other uses include water for street sweeping, construction and other various limited use meters at PWD and school facilities.
[d] Values are rounded.
(PWD, 2021a, Table 2-6)

B. Sewer Service and Treatment

Public sewer systems that would provide service to the proposed Project 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 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 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). (City of Palmdale, 2022b, pp. 4.19-3 and -4)

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, 2022b, p. 4.19-4)

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, 2022b, 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, 2022b, 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, 2022b, 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. EIR Section 2.0, *Environmental Setting*, provides a summary of the current maximum total capacity at each of the solid waste facilities that receive solid waste from the City of Palmdale. Table 4.14-6, *Existing Landfill Maximum Throughput*, provides a summary of the maximum throughput allowed at each of these facilities. (City of Palmdale, 2022b, p. 4.19-4)

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, 2022b, p. 4.19-5)

Table 4.14-6 Existing Landfill Maximum Throughput

Landfill	Maximum Permitted Throughput
Antelope Valley Public Landfill	5,548 tpd
Lancaster Landfill and Recycling Center	5,100 tpd
McKittrick Waste Treatment Site	3,500 tpd
Simi Valley Landfill and Recycling Center	64,750 tpw
El Sobrante Landfill	16,054 tpd
Sunshine Canyon City/County Landfill	12,100 tpd
Chiquita Canyon Sanitary Landfill	12,000 tpd
Victorville Sanitary Landfill	3,000 tpd

Note: tpd = tons per day; tpw = tons per week.
(CalRecycle, n.d.)

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 of Palmdale, the stormwater system remains dry for most of the year and only captures stormwater during rainy periods. (City of Palmdale, 2022b, p. 4.19-4)

As previously shown in Figure 2-8, *Existing Conditions Hydrology*, under existing conditions, the existing drainage channel captures off-site runoff from the west and flows through the site towards the east where it discharges to an existing channel across 8th Street. For analysis purposes, based on

existing flow patterns, Langan subdivided into six drainage areas (Areas A-F), and flow lengths and slopes within each area were determined. Under existing conditions, the runoff generally flows from the western property line towards the east. (Langan, 2023a, pp. 1-2)

Refer to EIR Subsection 4.9, *Hydrology and Water Quality*, for additional information regarding the site's existing drainage conditions. (Langan, 2023a, p. 1 and Appendix A)

4.14.2 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. 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, 2022e)

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, 2022f)

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, 2022)

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, 2020)

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, 2020)

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, 2020)

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 (DWR, 2003; CA Legislative Info, n.d.). 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 (DWR, 2003; CA Legislative Info, n.d.). Because the Project proposes approximately 384.000 square feet of building area for industrial, the Project does not meet the definition of a "project" under SB 610. Although SB 610 does not require a WSA for the Project, a WSA 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, 2022) 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, 2022) 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 January 1, 2020, and the next update will become 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 building 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. (CBSC, 2020)

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, 2022c)

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, 2022)

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, 2022)

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, 2022)

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, 2022)

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. The 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

In June 2021, PWD adopted a WSCP as part of its UWMP. The WSCP serves to guide the actions of PWD during water shortage conditions and aims to improve preparedness for droughts and other impacts on water supplies by describing the process used to address varying degrees of water shortages. Provisions in the California Water Code Section 10632.1 require that an annual assessment of water supply and demand be conducted by PWD on or before July 1 each year beginning in July 2022. The annual assessment must then be submitted to the DWR. (City of Palmdale, 2022b, p. 4.19-9) (PWD, 2021b, pp. 2-1)

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, 2022)

4.14.3 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.*

4.14.4 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 PWD. As shown previously on Figure 3-5, *Conceptual Utility Plan*, the Project will be required to install a 12-inch water line on 8th Street East and connect to the existing City of Palmdale 12-inch water main on East Avenue P-8, this line will be extended and connect to the existing 12-inch main 350 feet south of the East Avenue P intersection. Water lines proposed on-site would connect to the proposed 12-inch water main and would provide domestic water service to the two office locations at the northeast and southeast corners of the building. Water lines for fire hydrants would be

constructed within the drive aisles surrounding the building, with a total of 10 fire hydrants proposed around the building.

Public sewer systems that would provide service to the proposed Project are owned and maintained by the City of Palmdale Public Works, Sewer Maintenance Division (COPSM). As shown previously on Figure 3-5, Conceptual Utility Plan, the Project will extend the sewer from 400 feet south of the 8th Street East – East Avenue P intersection to the southerly project frontage. Sewage within the Project area is discharged to Sanitation Districts of Los Angeles County (LACSD) trunk mainlines and is sent to the Palmdale WRP (LACSD #20) for treatment.

The City of Palmdale Department of Public Works maintains the public stormwater systems. With development of the Project site as proposed, on-site stormwater would be captured through a series of catch basins and storm drains which would be routed to various underground chambers located along the northern and southern areas of the site. The captured stormwater would be pre-treated through a hydrodynamic separator prior to entering the chambers. In the event of high flows, stormwater would bypass the pretreatment within the hydrodynamic separator and flow directly into the underground chambers. The proposed underground infiltration chambers would discharge directly into the proposed culverts beneath 8th Street. No runoff from the developed portions of the site would discharge off site. (Langan, 2023a, p. 1)

In addition, as part of the proposed Project, the existing unnamed graded channel that runs along the southern edge of the site would be redesigned but maintain its existing flow path, which flows from west to east. The earthen channel is designed to collect off-site flows from the west and flow water through the site where it will discharge into proposed culverts that carry the water underneath 8th Street to an existing channel located on the opposite side of 8th Street. (Langan, 2023a, p. 1)

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, industrial uses are anticipated to generate approximately 80 gallons per day (gpd) of wastewater per 1,000 square feet of building area. (City of Palmdale, 2022b, pp. 4.19-20) Accordingly, the Project is anticipated to generate approximately 30,432 gpd of wastewater requiring treatment ([380,410 square feet x 80 gpd] ÷ 1,000 square feet = 30,432 gpd). The Palmdale WRP provides primary, secondary, and tertiary wastewater treatment with a design capacity of 12 mgd. (City of Palmdale, 2022b, pp. 4.19-4) Wastewater generation from the Project would represent approximately one quarter of one percent (approximately 0.25%) (30,432 gpd x 1,000,000 = 0.30432 ÷ 12 mgd x 100 = 0.25%)) of the daily design capacity at the Palmdale WRP. No physical alterations of the Palmdale WRP 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 Palmdale Water District have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

As previously indicated, PWD is responsible for supplying water services in the Project area. PWD's 2020 UWMP provides a framework for long-term water planning and informs the public of PWD'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. PWD's UWMP identifies current and future water demands and supplies, and provides a planning framework for water-related management decisions.

According to the PWD UWMP, industrial uses result in a demand for approximately 4.06 AFY per acre of development. Based on this demand factor, the Project would result in a demand for approximately 73.2 AFY of potable water (18.05 acres x 4.06 AFY/acre = 73.283 AFY), or approximately 65,600 gpd. (PWD, 2021a, Table 2-4)

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 Project is fully consistent with the City's land use designation of IND (Industrial); therefore, it can be concluded that the Project's water demand is accounted for by the UWMP. (PWD, 2021a, p. 2-5)

PWD's anticipated water demands and supplies between 2025 and 2045 during normal year, single dry year, and multiple dry years are summarized in Table 4.14-7 through Table 4.14-9, respectively. As shown in these tables, PWD projects adequate supply to meet demand during normal years throughout the planning period. However, PWD anticipates that during single-dry year conditions, demand will exceed existing supply starting in 2030 and that during multiple-dry year conditions, demand will exceed existing supply starting in 2045. During a consecutive five-year drought, PWD anticipates

demand exceeding supplies in 2021 and 2023. Therefore, additional supply or a reduction in demand are assumed to be needed to meet demand under those conditions. (PWD, 2021a, p. 7-8)

Table 4.14-7 Comparison of PWD Water Supplies and Demands – Normal Year (AFY)

	2025	2030	2035	2040	2045
Existing Supplies					
Groundwater	4,220	2,770	2,770	2,770	2,770
Groundwater Return Flow Credits	5,000	5,000	5,000	5,000	5,000
Groundwater or Surface Water Augmentation	5,325	5,325	5,325	5,325	5,325
Local Surface Water	4,000	4,000	4,000	4,000	4,000
Imported SWP Water	12,030	11,720	11,400	11,080	11,080
Butte Transfer Agreement[a]	5,650	5,500	5,350	5,200	5,200
Recycled Water	500	1,000	1,500	2,000	2,000
Total Supplies	**36,725**	**35,315**	**35,345**	**35,375**	**35,375**
Potable Water Demands	19,720	20,310	21,480	22,780	24,250
Recycled Water Demands	500	1,000	1,500	2,000	2,000
Total Demand[b]	**20,220**	**21,310**	**22,980**	**24,780**	**26,250**
Difference (Supply-Demand)	**16,505**	**14,005**	**12,365**	**10,595**	**9,125**

[a] For details see Section 4.3.1. of PWD's UWMP.

[b] Demands are not expected to change during drought conditions; the region typically receives little rain, and with implementation of the Demand Management Measures (DMMs) water demands for irrigation do not increase in the PWD under single-dry and multiple dry year conditions.

(PWD, 2021a, Table 7-1)

Table 4.14-8 Comparison of PWD Water Supplies and Demands – Single-Dry Year (AFY)

	2025	2030	2035	2040	2045
Existing Supplies					
Groundwater	4,220	2,770	2,770	2,770	2,770
Groundwater Return Flow Credits	5,000	5,000	5,000	5,000	5,000
Groundwater or Surface Water Augmentation	5,325	5,325	5,325	5,325	5,325
Local Surface Water	4,000	4,000	4,000	4,000	4,000
Imported SWP Water	1,490	1,705	1,915	2,130	2,130
Butte Transfer Agreement[a]	700	800	900	1,000	1,000
Recycled Water	500	1,000	1,500	2,000	2,000
Total Supplies	**21,235**	**20,600**	**21,410**	**22,225**	**22,225**
Potable Water Demands	19,720	20,310	21,480	22,780	24,250
Recycled Water Demands	500	1,000	1,500	2,000	2,000
Total Demand[b]	**20,220**	**21,310**	**22,980**	**24,780**	**26,250**
Difference (Supply-Demand)	***1,015***	***-710***	***-1,570***	***-2,555***	***-4,025***

[a] For details see Section 4.3.1. of PWD's UWMP.

[b] Demands are not expected to change during drought conditions; the region typically receives little rain, and with implementation of DMMs water demands for irrigation do not increase in the PWD under single-dry and multiple dry year conditions.

(PWD, 2021a, Table 7-2)

Table 4.14-9 Comparison of PWD Water Supplies and Demands – Multiple-Dry Years (AFY)

	2025	2030	2035	2040	2045
Existing Supplies					
Groundwater	4,220	2,770	2,770	2,770	2,770
Groundwater Return Flow Credits	5,000	5,000	5,000	5,000	5,000
Groundwater or Surface Water Augmentation	5,325	5,325	5,325	5,325	5,325
Local Surface Water (from Table 4-6)	4,000	4,000	4,000	4,000	4,000
Imported SWP Water (from Table 4-9)	6,180	5,645	5,110	4,470	4,470
Butte Transfer Agreement[a]	2,900	2,650	2,400	2,100	2,100
Recycled Water (from Table 5-4)	500	1,000	1,500	2,000	2,000
Total Supplies	**28,125**	**26,390**	**26,105**	**25,665**	**25,665**
Potable Water Demands	19,720	20,310	21,480	22,780	24,250
Recycled Water Demands	500	1,000	1,500	2,000	2,000
Total Demand[b]	**20,220**	**21,310**	**22,980**	**24,780**	**26,250**
Difference (Supply-Demand)	**7,905**	**5,080**	**3,125**	**885**	**-585**

[a] For details see Section 4.3.1. of PWD's UWMP.

[b] Demands are not expected to change during drought conditions; the region typically receives little rain, and with implementation of DMMs water demands for irrigation do not increase in the PWD under single-dry and multiple dry year conditions.

(PWD, 2021a, Table 7-3)

PWD is currently in the process of developing the Palmdale Regional Water Augmentation Project (PRWAP), which is anticipated to provide 5,325 AFY for surface water augmentation or groundwater injection. In addition, PWD has identified numerous short- and long-term transfer and exchange opportunities, which would provide additional supplies to help overcome supply shortages. In addition, the WSCP, provided as Appendix J to the PWD's 2020 UWMP, identifies potential demand reduction actions to reduce shortage gaps. The PWD's current measures for managing the water supplies include the following: water waste prevention ordinances; metering; conservation pricing; public education and outreach; programs to assess and manage distribution system water losses; and water conservation program coordination and staff support. (PWD, 2021a, p. 7-8; KEC, 2022, p. 21)

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 PWD to meet all future water demands under all hydrologic conditions through 2045 (PWD, 2021a, p. 7-8). Accordingly, because the Project's proposed land uses are accounted for by the PWD 2020 UWMP, and because the UWMP demonstrates that the PWD would have sufficient supply to meet projected demand through 2045, it is concluded that the PWD 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), the Palmdale WRP provides primary, secondary, and tertiary wastewater treatment with a design capacity of 12 mgd. The Project's wastewater generation would represent approximately one quarter of one percent (approximately 0.26 percent) of the daily design capacity at the Palmdale WRP. Because the Project's demand for wastewater treatment would be de minimis compared to the capacity of the Palmdale WRP, the Project would not trigger the need for any physical changes or treatment capacity increases at the Plant 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 4.14-6 (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 4.14-10, *Estimated Construction Solid Waste Generation*, provides an estimate of the amount of construction waste that would be generated by the Project, based on non-residential construction waste generation factors provided by the U.S. EPA. Table 4.14-10 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 (by phase) listed in Table 4.14-10.

Table 4.14-10 Estimated Construction Solid Waste Generation

Land Use	Construction Rate[1]	Estimated Building Size	Solid Waste Generation Rate	Total			
				lbs/Day	Tons/ Day	Construction Tons	Construction Cubic Yards
Non-Residential	1,282 s.f./day for 300 days	380,410 s.f.	4.34 lbs/s.f.	5,503.26	2.75	825	589.3

[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 8/8/2023 and 9/30/2024.
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: October 3, 2022.

As presented in Table 4.14-10, and based on an analysis of the Project's expected rate of building construction, the Project is anticipated to generate approximately 5,503.26 pounds per day (lbs/day) (380,410 s.f. X 4.34 lbs/day / 300 days = 5,503.26 lbs/day) of construction waste requiring disposal,

or approximately 2.75 tons per day (tpd) (1 lbs/day = 0.0005 tpd; thus 5,503.26 X 0.0005 = 2.75). In total, construction of the Project would produce a projected 834 tons of construction waste (2.75 tons/day for 300 days = 825 tons), which equates to approximately 595.7 cubic yards (825 tons/1.4 [tons to cubic yards conversion rate] = 589.3 cubic yards).

The expected total amount of construction waste generated by the Project represents the following percentages of the total capacities and total permitted daily throughput capacities for the following landfills:

- 0.0020 percent of the total capacity and 0.05 percent of the total permitted daily throughput capacity at the Antelope Valley Public Landfill;
- 0.0021 percent of the total capacity and 0.05 percent of the permitted daily throughput capacity at the Lancaster Landfill and Recycling Center;
- 0.01 percent of the total capacity and 0.07 percent of the permitted daily throughput capacity at the McKittrick Waste Treatment Site;
- 0.0005 percent of the permitted total capacity and 0.02 percent of the weekly throughput capacity at the Simi Valley Landfill and Recycling Center;
- 0.0003 percent of the total capacity and 0.02 percent of the permitted daily throughput capacity at the El Sobrante Landfill;
- 0.0004 percent of the total capacity and 0.02 percent of the permitted daily throughput capacity at the Sunshine Canyon City/County Landfill;
- 0.0005 percent of the total capacity and 0.2 percent of the permitted daily throughput capacity at the Chiquita Canyon Sanitary Landfill; and
- 0.000.6 percent of the total capacity and 0.9 percent of the permitted daily throughput capacity at the Victorville Sanitary Landfill.

Given the estimated solid waste quantity generated by the Project on a daily basis during construction, it is estimated that the Antelope Valley Public Landfill, Lancaster Landfill and Recycling Center, McKittrick Waste Treatment Site, Simi Valley Landfill and Recycling Center, El Sobrante Landfill, Sunshine Canyon City/County Landfill, Chiquita Canyon Sanitary Landfill, and Victorville Sanitary Landfill 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 4.14-11, *Estimated Operational Solid Waste Generation*, buildout and occupancy of the Project is estimated to produce approximately 2.5 tpd (912.9 tpy / 365 days = 2.5 tpd) of solid waste, or approximately 912.9 tpy (380,410 s.f. / 1,000 X 2.4 = 912.9 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 4.14-11 Estimated Operational Solid Waste Generation

Land Use	Square Footage (s.f.)	Generation Factors	Total Solid Waste Generated	Average Solid Waste per Day
Industrial	380,410 square feet	2.4 tons/1,000 square feet	912.9 tpy	2.5 tpd

Notes: s.f. = square feet; tpy = tons per year; tpd = tons per day.
(City of Palmdale, 2022b, Table 4.19-4)

Waste from the Project would be disposed at one of eight landfills that serve the City of Palmdale. The Project's daily generation of 2.5 tpd represents the following percentages of the maximum daily permitted throughputs for the following landfills:

- 0.05 percent of the maximum daily permitted throughput for the Antelope Valley Public Landfill;
- 0.05 percent of the maximum daily permitted throughput for the Lancaster Landfill and Recycling Center;
- 0.07 percent of the maximum daily permitted throughput for the McKittrick Waste Treatment Site;
- Less than 0.01 percent (<0.01) of the maximum weekly permitted throughput for the Simi Valley Landfill and Recycling Center;
- 0.02 percent of the maximum daily permitted throughput for the El Sobrante Landfill;
- 0.02 percent of the maximum daily permitted throughput for the Sunshine Canyon City/County Landfill;
- 0.02 percent of the maximum daily permitted throughput for the Chiquita Canyon Sanitary Landfill; and
- 0.08 percent of the maximum daily permitted throughput for the Victorville Sanitary Landfill.

Because the Project would generate a relatively small amount of solid waste per day, as compared to the permitted daily capacities for these landfills, it is anticipated that these regional landfill facilities would have sufficient daily capacity to accept solid waste generated by the Project.

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. 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.

4.14.5 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), the analysis in the Project's WSA (*Technical Appendix M2*), which is based on PWD's 2020 UWMP, demonstrates that with implementation of the Project and other cumulative developments, the PWD would have adequate water supplies during normal, dry, and multiple dry years. 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 one quarter of one percent (approximately 0.25 percent) of the daily design capacity at the Palmdale WRP. 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 Palmdale WRP 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 be de minimis compared to the existing capacity (at 0.25 percent) of the Palmdale WRP, the contribution of the Project to the possible future need to expand the capacity of the Palmdale WRP or to build a new treatment plant would not be cumulatively considerable.

Should the existing Palmdale WRP 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, 2022b, Table 4.19-3 and pp. 4.19-20 and -21)

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 of the total/daily/weekly disposal capacities at the Antelope Valley Public Landfill, Lancaster Landfill and Recycling Center, McKittrick Waste Treatment Site, Simi Valley Landfill and Recycling Center, El Sobrante Landfill, Sunshine Canyon City/County Landfill, Chiquita Canyon Sanitary Landfill, and Victorville Sanitary Landfill. 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.

4.14.6 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 will enable PWD to meet all future water demands under all hydrologic conditions through 2045. Accordingly, because the Project's proposed land uses are accounted for by the PWD 2020 UWMP, and because the UWMP demonstrates that the PWD would have sufficient supplies to meet projected demands, it is concluded that the PWD 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 0.25 percent of the daily design capacity at the Palmdale WRP. Because the Project's wastewater treatment capacity need is de minimis compared to the total treatment capacity of the Palmdale WRP, impacts would be less than significant.

Threshold d: Less Than Significant Impact. Solid waste generated by construction and operation of the Project would represent de minimis proportions 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.

4.14.7 Mitigation

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

4.14.8 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, of the City of PMC.

UTIL RR-5 The Project applicant, construction contractors, and operators, shall comply with all applicable provisions of PMC Chapter 14.05, Water Efficient Landscape, of the City of PMC.

4.15 WILDFIRE

4.15.1 EXISTING CONDITIONS

Under existing conditions the 18.05-acre Project site is currently vacant and undeveloped but has been heavily disturbed by grading activities that, according to historical photography, occurred on the site sometime between 2009 and 2011. The site contains several piles of gravel and road base. The Project site contains an unnamed graded channel that flows from west to east along the southern boundary of the site. With the exception of 8th Street East, an inactive Union Pacific Railroad (UPRR) rail spur to the north, and the active UPRR mainline to the east, land immediately abutting the site is vacant and undeveloped. Beyond the immediately abutting features are the Sierra Highway Bike Trail and Sierra Highway, light industrial and retail/commercial uses, United State Air Force (USAF) Plant 42, residential homes, school district facilities, and other uses.

A. Wildfire Susceptibility

According to General Plan Figure 4.20-1, Palmdale Fire Hazard Severity Zones, the Project site and immediately surrounding areas are not located within a portion of the City that is subject to wildland fire hazards. The nearest area subject to wildland fire hazards occurs approximately 2.8 miles southwest of the Project site. (City of Palmdale, 2022b, Figure 4.20-1)(City of Palmdale, 2022c, Figure 4.20-1)

B. Topography

As previously shown on Figure 2-8, *USGS Topographic Map*, the Project site exhibits little topographic variation and generally slopes downward from west to east with an overall topographic relief of approximately 12 feet. Elevations on site range from approximately 2,618 feet above mean sea level (amsl) in the northwest corner of the site to 2,606 feet amsl within the unnamed graded channel near the southeast corner of the Project site. (Westland, 2022a, Appendix A)

C. Existing Vegetation

Vegetation on the Project site consists mostly of disturbed rubber rabbitbrush scrub, with a small patch of developed/disturbed rubber rabbitbrush scrub in the eastern portion of the site and big sagebrush – rubber rabbitbrush scrub in the graded channel that runs along the southern boundary of the site. Most of the site has been previously disturbed (e.g., evidence of heavy machine work such as scraping), and contains many trash piles from illegal dumping. (Psomas, 2022a, pp. 15-16)

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. According to mapping information available from the BFFP, the Project site is located within a Local Responsible Area (LRA), but the Project site and immediately surrounding areas are not located within a SRA. The nearest area located

within an SRA occurs approximately 2.8 miles south of the Project site. (BFFP, n.d.; Goodle Earth, 2022)

4.15.2 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 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, 2022a)

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, 2022b, 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)

4.15.3 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.*

4.15.4 Impact Analysis

Although the Project site is not located in or near a 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 2.8 miles south of the Project site (BFFP, n.d.; Goodle Earth, 2022). 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).

The Project site also is not located in a Very High Fire Hazards Zone. Regardless, 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 nearby segments of 8th Street East. 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.

Because the Project is not located near SRAs or lands classified as a very high wildfire hazard zone, implementation of the Project would not impair implementation of or physically interfere with 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?

Implementation of the proposed Project would result in the conversion of an undeveloped property to a proposed non-refrigerated fulfillment center warehouse having 384,800 s.f. of floor space, along with hardscape and landscape areas.

The Project site is not located within an SRA, and the nearest area subject to an SRA occurs approximately 2.8 miles south of the Project site (BFFP, n.d.; Goodle Earth, 2022). In addition, the Project site is not located in a portion of the City that is subject to wildland fire hazards, with the nearest such area occurring approximately 2.8 miles southwest of the Project site. (BFFP, n.d.; Goodle Earth, 2022; City of Palmdale, 2022b, Figure 4.20-1) Due to the lack of wildfire susceptibility in the areas surrounding the Project site, the Project has no potential to exacerbate wildfire risks in a manner that could 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?

The Project site is not located within an SRA, and the nearest area subject to an SRA occurs approximately 2.8 miles south of the Project site. In addition, the Project site is not located in a portion of the City that is subject to wildland fire hazards, with the nearest such area occurring approximately 2.8 miles southwest of the Project site. Furthermore, because the proposed Project involves construction of a new warehouse building 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. (BFFP, n.d.; Goodle Earth, 2022; City of Palmdale, 2022b, Figure 4.20-1)

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?

The Project site is not located within an SRA; the nearest area subject to an SRA occurs approximately 2.8 miles south of the Project site. In addition, the Project site is not located in a portion of the City that is subject to wildland fire hazards; the nearest such area occurs approximately 2.8 miles southwest of the Project site. Furthermore, the Project would not include any large slopes that could be subject to landslide hazards, and the proposed drainage system for the Project is designed to ensure that the Project would not be subject to flood hazards. As such, the Project would not contribute to 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.

4.15.5 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 Los Angeles County Fire Department (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.

4.15.6 Significance of Impacts Before Mitigation

Threshold a: No Impact. The Project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The Project site does not contain any emergency facilities, nor does it serve as an emergency evacuation route. Additionally, there are no emergency response plans or emergency evacuation plans in effect in the surrounding area. As such, implementation of the proposed Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or an emergency evacuation plan. No impact would occur.

Threshold b: No Impact. The Project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. Due to the lack of wildfire susceptibility in the areas surrounding the Project site, the Project has no potential to exacerbate wildfire risks in a manner that could expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. No impact would occur.

Threshold c: No Impact. The Project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. 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. The Project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The Project site is not located in a portion of the City that is subject to wildland fire hazards; the nearest such area occurring approximately 2.8 miles southwest of the Project site. As such, the Project would not contribute to downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Accordingly, no impact would occur.

4.15.7 Mitigation

The Project would not be developed in or near SRAs or lands classified as very high fire hazard severity zones. Thus, no impact would occur and 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 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 warehouse 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 describe in detail in Section 4.0 of this EIR, after the consideration of Project design features, compliance with applicable federal, State, and local regulations, and the application of feasible mitigation measures identified in this EIR, the Project would not result in any significant and unavoidable impacts.

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 building. 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.

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 light industrial warehouse building. 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 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, 2022b, 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 light industrial warehouse development. 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. In addition, the Project would create jobs, approximately 454 employees, a majority of which would likely be filled by residents within the City of Palmdale and nearby areas. 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 growth in the area.

As discussed 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. With the exception of 8th Street East and railroad tracks as noted below, remaining land that abuts the Project site is vacant undeveloped land.

- North: To the immediate north of the Project site is an inactive rail spur (CPUC Crossing Number 001B-412.53-C) and railroad easement associated with the UPRR. To the north of the inactive Union Pacific Railroad (UPRR) rail spur is vacant and undeveloped land, an existing

light industrial and retail/commercial (AV Graphix, Telesis Collision Center) warehouse development, and East Rancho Vista Boulevard / Avenue P. Further to the north and northeast is a Lockheed Martin Aeronautics facility and the inactive Palmdale Regional Airport. The Palmdale Regional Airport property is owned by the City of Los Angeles Department of Airports and operated under a joint agreement with United States Air Force (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.

- East: 8th Street East forms the eastern boundary of the Project site, which consists of a paved two-lane roadway. To the east of 8th Street East are undeveloped lands, several light industrial uses, sparsely developed residential dwelling units, and 10th Street East. A Head Start Palmdale District office, portions of which are used for school bus parking and early childhood education, is located southeast of the Project site at 975 East Avenue P-8, with the school bus parking lot positioned closest to and facing the Project site. A second Palmdale School District office is located further to the south at 39139 10th Street East.

- South: To the immediate south of the Project site is vacant and undeveloped land. Light industrial uses and single-family dwelling units are situated to the south of Avenue P-8.

- West: Located approximately 95 feet west of the Project site is an active UPRR mainline (CPUC No. 001B-412.20, 101VY-69.95; DOT750643P) that carries heavy freight train traffic and passenger train service from Metrolink trains. Adjacent to the UPRR mainline is the Sierra Highway Bike Trail and Sierra Highway.

Development of the Project site is not expected to place short-term development pressure on abutting vacant properties because the areas beyond the immediate undeveloped parcels are substantially built-out. Furthermore, the improvements necessitated by the proposed Project to the public infrastructure, including 8th Street East, drainage infrastructure, and other utility improvements, are consistent with the City's General Plan and would not indirectly induce substantial and unplanned population growth in the local area.

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 light industrial warehouse development would clearly have no potential to result in significant impacts under the following five environmental issue areas: 1) agriculture and forestry resources; 2) land use and planning; 3) mineral resources; 4) population and housing; and 5) recreation.

These five 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, land use and planning, 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 General Industrial (M-2). In addition, no land zoned for agricultural use or Williamson Act contract is located adjacent to the Project site (CDC, 2018).

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 Land Use and Planning

Threshold a:	***Would the Project physically divide an established community?***

The Project site does not occur within or adjacent to an established community nor is it located near an existing established community. As discussed in Section 2.0, *Environmental Setting*, the area surrounding the Project site consists of undeveloped parcels on all sides. Also see subsection 5.3 herein.

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 use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?***

City staff evaluated the Project for consistency with applicable General Plan (Palmdale 2045) and Palmdale Municipal Code (PMC) policies and concluded that the Project would be consistent with or otherwise would not conflict with the applicable policies of Palmdale 2045 or the PMC.

As discussed in subsection 4.2, *Air Quality,* the Project would conform to local land use plans, comply with all applicable Antelope Valley Air Quality Management District (AVAQMD) Rules and Regulations, and would not exceed applicable regional thresholds. Therefore, the Project is 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).

As discussed in subsection 4.7, *Greenhouse Gas Emissions*, the Project would not conflict with any of the California Air Resources Board (CARB) Scoping Plan elements as any regulations adopted would apply directly or indirectly to the Project. Additionally, the Project would not conflict with the greenhouse gas (GHG) reduction goals of Palmdale 2045.

The Project is consistent with the goals, policies, and objectives of the 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.

5.4.3 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 Extraction in 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, 2022b, p. 4.12-1 and Table 4.12-1 and Table 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 for the Project site is IND (Industrial) and is intended for a variety of industrial uses, including manufacturing and assembly of products and goods, warehousing, distribution, and similar uses. 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.

5.4.4 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 an industrial development 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). 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 454 employees is not expected to draw substantial numbers of new residents to the area. Furthermore, approximately 85 percent of Palmdale residents commute outside of the City for work (SCAG, 2019, p. 21); therefore, the Project would provide local job opportunities for existing and future Palmdale residents.

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 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.

5.4.5 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". Although the Project evaluated in this EIR would not result in any significant and unavoidable impacts on the environment, this Section identifies potential alternatives to the Project 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 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. The Reduced Intensity Alternative is considered the Environmentally Superior Alternative pursuant to CEQA Guidelines § 15126.6.

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 18.05-acre site

would remain vacant and undeveloped for the foreseeable future. The Project site would be subject to routine maintenance (i.e., discing) 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 Reduced Building Size and Trailer Lot Alternative

The Reduced Building Size and Trailer Lot Alternative considers a scenario where the Project site would be redeveloped with two uses: a non-refrigerated fulfillment warehouse and a trailer parking lot. Under this Alternative, a 200,000 square foot (s.f.) non-refrigerated fulfillment warehouse (including related site improvements such as paved areas for vehicle movement and parking, landscaping, and public utility connections) would be developed on the western portion of the Project site and a trailer parking lot would be developed on the eastern portion of the Project site. This alternative was selected to evaluate a scenario that would reduce the total building area on the Project site relative to the Project but still allow productive industrial use of the entire Project site.

6.1.3 Reduced Intensity Alternative

The Reduced Intensity Alternative considers a proposal where a portion of the Project site would be redeveloped with a non-refrigerated general warehouse building with a total square footage of 63,500 s.f. and the remainder of the site would not be developed. This represents an approximately 82 percent reduction in building space compared to the proposed Project. Under this alternative, the graded drainage channel located in the southern portion of the Project site would remain in its existing condition. Access to the site would occur from two driveways connecting with 8th Street East and a proportional reduction in the number of passenger vehicle parking spaces to service the building would occur on the site. The balance of the site would be undeveloped. This alternative was selected to evaluate a scenario that would reduce the total building size in order to allow the development to screen out of the need to conduct a VMT analysis.

6.1.4 Trailer Lot Alternative

The Trailer Lot Alternative considers a scenario where the Project site is developed as a truck and trailer parking lot, accommodating approximately 400 truck trailer parking spaces. The entire Project site would be developed for parking and landscaping would occur around the perimeter of the site for screening purposes. This alternative was selected to evaluate a scenario that allow productive industrial use of the entire Project site while not developing a structure other than security booths at the entrance and exit gates.

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, one alternative was initially considered and, for a variety of reasons, rejected. The alternative was 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 alternative that was considered but rejected is 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 site was graded sometime between 2009 and 2011 and contains few remaining natural resources.

Development of the Project at an alternative location would likely result in similar (or greater) environmental impacts than would occur with implementation of the Project on the proposed Project site. The Project would not result in any significant and unavoidable impacts on the environment as determined through detailed analyses provided in Section 4.0 of this EIR and the technical studies appended to this EIR. Furthermore, an alternative site that is not already developed or developed at an intensity of the Project site may have additional environmental impacts that the Project would not.

In the light of the foregoing reasons, a more detailed analysis of alternative sites is not warranted.

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 6-2 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 of the proposed Project are intended to achieve these underlying purposes:

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

B. 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;

C. 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;

D. To develop an industrial building in the City of Palmdale that is designed to meet contemporary industry standards and be economically competitive with similar industrial buildings in the local area and region;

E. 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;

F. 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; and

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

6.3.1 No Development Alternative

The No Development Alternative (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 undeveloped condition for the foreseeable future. Under existing conditions, the Project site is vacant and undeveloped and where vegetation is present, it consists mostly of disturbed rubber rabbitbrush scrub. The Project site would be subject to routine maintenance (i.e., discing) for weed abatement. Refer to the description of the Project site's existing physical conditions in Section 2.0 of this EIR. 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, which is the No Project Alternative as defined by CEQA.

A. Aesthetics

Under the NDA, the visual character and quality of the Project site would be maintained in its existing condition. No structures, landscaping, or lighting would be introduced on the Project site. The Project site does not contain any unique aesthetic resources, nor does it serve as a prominent scenic vista. As such, impacts to scenic vistas would be less than significant under both the Project and NDA, although impacts would be reduced under the NDA because no new structures that could interfere with distant views of visual resources would be constructed on the site under the NDA. There are no designated or eligible State scenic highways within the Project site's immediate vicinity; thus, 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, and the level of impact would be similar. Because no new development is proposed on site as part of the NDA, the NDA would have no potential to conflict with applicable zoning and other regulations governing scenic quality. Impacts due to a conflict with zoning or other regulations would not occur under either the Project or the NDA, and the level of impact would be similar. Additionally, because no new development would occur on site, the NDA would not result in any new sources of substantial light or glare. Because the Project would introduce new lighting and building materials that have nominal potential to create glare, impacts due to light and glare would be reduced in comparison to the Project with implementation of the NDA.

B. Air Quality

Under the NDA, the Project site would remain vacant and undeveloped for the foreseeable future and no sources of air pollution would be introduced on the Project site. As such, there would be no increase in air quality emissions under the NDA. Accordingly, the NDA has no potential to result in a conflict with the Antelope Valley Air Quality Management District (AVAQMD) Rules and Regulations. Additionally, the NDA has no potential to result in a conflict with the Federal Particulate Matter Attainment Plan or the Ozone Attainment Plan for the Antelope Valley. Because there would be no new development on site under the NDA, implementation of the NDA would reduce the Project's less than significant impacts due to emissions of any criteria pollutants for which the region is non-attainment. The NDA also would not include any land uses with the potential for exposing sensitive receptors to substantial pollutant concentrations; thus, the NDA would avoid the Project's less than

significant localized air quality impacts. Furthermore, because no new development would occur on site, the NDA would avoid the Project's less than significant impacts due to other emissions (such as those leading to odors) that could affect a substantial number of people. Because the site would not be developed, however, the Project site would continue to be subjected to wind-blown dust as occurs under existing conditions, resulting in some emissions of particular matter into the atmosphere.

C. Biological Resources

The NDA would leave the property in its existing condition, which would include periodic disturbances related to discing (for weed abatement), and other routine, on-site maintenance activities. No grading would occur under this alternative beyond the grading that already occurred sometime between 2009 and 2011. Implementation of the NDA would avoid the Project's significant but mitigable impacts to the burrowing owl, desert kit fox, American badger, and nesting birds regulated by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. Implementation of the NDA would avoid the Project's significant but mitigable impacts to RWQCB waters of the State and CDFW jurisdictional resource. Neither the Project nor the NDA would result in impacts to other sensitive natural communities, and the level of impact would be the same. Similarly, because no wetlands are present on the Project site, neither the Project nor the NDA would have the potential to have substantial adverse effects on State- or federally-protected wetlands and the level of impact would be the same. The Project site does not serve as a wildlife movement corridor or a native wildlife nursery site; thus, neither the Project nor the NDA would result in any impacts to wildlife movement corridors or wildlife nursery sites, and the level of impact would be the same. Neither the Project nor the NDA has the potential to conflict with local policies or ordinances protecting biological resources, and the level of impact would be the same.

D. Cultural Resources

The NDA would leave the Project site in its existing condition, which would include periodic ground disturbances related to discing (for weed abatement), and other routine, on-site maintenance activities. No grading would occur under this alternative beyond the existing condition. No historic or prehistoric archaeological resources occur on site under existing conditions. Because no new ground disturbance would occur under the NDA, the NDA would avoid the Project's significant but mitigable potential impacts to significant historic and archaeological resources that may be buried beneath the ground surface. Similarly, because no new ground disturbance would occur, the NDA would avoid the Project's potentially significant but mitigable impacts to human remains that may be uncovered during grading activities.

E. Energy

Under the NDA, there would be no new development on the site, and there would be no increase in demand from the Project site for energy resources. As such, the NDA would completely avoid the Project 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. As such, the NDA would avoid the Project's less than significant impacts due to earthquake faults, strong seismic ground shaking, seismic-related ground failure (including liquefaction), landslides, lateral spreading, subsidence, collapse, and expansive soils. Although the NDA would avoid the Project's less than significant construction-related impacts due to erosion or the loss of topsoil, the NDA would result in increased but less than significant impacts due to soil erosion under long-term conditions because the Project site would not be covered with impervious surfaces under the NDA. Because no ground-disturbing activities would occur under the NDA, the NDA would avoid the Project's significant but mitigable impacts to paleontological resources that may 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 less than significant impacts due to the generation of greenhouse gasses (GHGs) during both 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; thus, no impact would occur, and impacts would be reduced in comparison to the proposed Project. There is a Head Start education center within 0.25-mile of the Project site; thus, the NDA would omit the Project's potential to transport, use, or store hazardous materials within 0.25-mile of school, although impacts would less than significant. 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, and the level of impact would be similar. The Project site is located approximately 1.6 miles southwest of the inactive Palmdale Regional Airport however, the Project site occurs outside of the Planning Boundary/Airport Influence Area (AIA) for the airport. Additionally, the Project site is not located within any of the runway protection zones or inner safety zones of the airport. Airport-related impacts under the Project would be less than significant. Under the NDA, there would be no new development on site. As such, the NDA would avoid the Project's less than significant airport-related impacts.

I. Hydrology and Water Quality

No changes to existing hydrology and drainage conditions would occur under the NDA, and the NDA would not include any land uses with the potential to result in increased impacts to water quality beyond what occurs on the property under existing conditions. As such, the NDA would avoid the Project's less than significant impacts due to the violation of water quality standards or waste discharge requirements, and would avoid the Project's less than significant impacts to surface and groundwater quality. Because the Project site would remain undeveloped under the NDA, the NDA would avoid the Project's less than significant impacts to groundwater supplies, groundwater recharge, and sustainable management of the groundwater basin during both construction and long-term operation. Although the NDA would avoid the Project's less than significant construction-related impacts due to erosion and siltation, the NDA would result in increased but less than significant impacts due to soil erosion under long-term conditions because the Project site would not be covered with impervious surfaces under the NDA as would occur with implementation of the Project. Neither the NDA nor the Project would result in impacts due to increased runoff leading to flooding, or due to runoff that could exceed the capacity of existing or planned stormwater drainage systems since the Project is designed to capture all runoff generated on the developed portions of the site, and the level of impacts would be the same. The northwestern portion of the Project is not subject to flood hazards, although the remaining portions of the Project site are identified as being subject to inundation during 500-year flood events. The existing privately-maintained channel on the Project site would be reconstructed into an underground channel during Project implementation, which would preclude the potential for flood hazards on-site. Thus, impacts associated with impeding or redirecting flood flows would not occur under the NDA or proposed Project, and the level of impact would be the same. Neither the Project nor the NDA would be subject to inundation due to flood hazards, tsunamis, or seiches; thus, no impact would occur, and the level of impact would be similar. The NDA also would avoid the Project's less than significant impacts due to a conflict with a water quality control plan or sustainable groundwater management plan.

J. Noise

Under the NDA, no sources of noise would be introduced on the Project site. Thus, the NDA would avoid the Project's less than significant impacts due to construction-related noise, operational-related noise, and traffic-related noise. Additionally, because there would be no construction activities or long-term operational traffic under the NDA, the NDA would avoid the Project's less than significant impacts due to groundborne vibration and noise during both construction and operation. The Project site is located within the vicinity of the inactive Palmdale Regional Airport however, the Project is located outside of the Airport Influence Area (AIA) and outside of the 65 A-weighted decibels (dBA) Community Noise Equivalent Level (CNEL) CNEL contour boundaries. Thus, the Project would not expose people residing or working in the Project area to airport-related excessive noise levels and no impact is expected. Neither the Project nor the NDA would result in exposing people residing or working in the Project area to airport-related excessive noise levels, although impacts would be reduced under the NDA in comparison to the Project because the NDA would not introduce any new residents or workers to the Project site.

K. Public Services

Under the NDA, there would be no new development on the site therefore, the Project site would not result in any physical impacts associated with new or altered governmental facilities associated with fire protection, police protection, schools, parks or other public facilities. Implementation of the Project would not result in the need for new or altered facilities associated with fire protection, police protection, school services, parks or other public facilities therefore the level of impact would be the same as the NDA alternative.

L. Transportation

Under the NDA, there would be no new development on site, and only nominal amounts of traffic associated with site maintenance and discing activities would occur under the NDA. Because no development would occur, the NDA would avoid the Project's less-than-significant impacts associated with consistency with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. In addition, because no new traffic would be generated under the NDA, the NDA would not add any vehicles to the transportation network and would reduce the Project's less than significant VMT impact. Additionally, there would be no new land uses introduced on site under the NDA, nor would the NDA result in any changes to existing circulation facilities; thus, the NDA would avoid the Project's less-than-significant impacts due transportation design features. Additionally, because there would be no development on site under the NDA, the NDA would avoid the Project's less-than-significant impacts associated with emergency access. No Project site frontage improvements would occur to 8th Street East under the NDA, potentially conflicting with the City's General Plan which calls for the road to be improved.

M. Tribal Cultural Resources

The NDA would leave the Project site in its existing condition, which includes periodic ground disturbances related to weed abatement activities and other routine, on-site maintenance activities. No grading or ground-disturbing activities would occur under the NDA and there would be no potential impacts to subsurface tribal cultural resources that may exist beneath the ground surface. As such, the NDA would completely avoid the Project's less-than-significant (with mitigation) impacts to tribal cultural resources.

N. Utilities and Service Systems

No new development would occur on site under the NDA. As such, the NDA would completely avoid the Project's less than significant impacts due to the construction or expansion of water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. In addition, the NDA would not result in any increases in demand for potable water, and therefore would completely avoid the Project's less than significant impacts to water supply. Similarly, because there would be no new development on site, the NDA would not result in the generation of wastewater requiring treatment; thus, the NDA would completely avoid the Project's less than significant impacts due to wastewater conveyance and treatment capacity. Likewise, the NDA would not result in the

generation of any solid waste requiring disposal at area landfills, and as such the NDA would completely avoid the Project's less than significant impacts due to solid waste generation. The NDA also has no potential to conflict with federal, State, and local management and reduction statutes and regulations related to solid waste; thus, the NDA would avoid the Project's less than significant impacts due to compliance with such statutes and regulations.

O. *Wildfire*

The Project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. Neither the NDA nor the Project 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 NDA or the Project, and the level of impact would be similar. Additionally, neither the NDA nor the Project would require installation or maintenance of associated infrastructure that may exacerbate fire risk or result in impacts to the environment; thus no impact would occur under the NDA or the Project, and the level of impact would be the same. Neither the NDA nor the Project has the potential to exacerbate wildfire risks or expose project occupants to pollutant concentrations from a wildfire or to risk of a wildfire, or expose people or structures to significant risks as a result of wildfires, although the level of impact under the NDA would be slightly reduced because the NDA would not result in the introduction of new residents or workers to the Project site.

P. *Conclusion*

Implementation of the NDA would result in no physical environmental impacts beyond those that have historically occurred on the property. Almost all effects of the proposed Project would be avoided or lessened by the selection of the NDA, with exception of long-term erosion and sedimentation impacts, which would be increased under this alternative. Because this alternative would avoid most of the Project's less than significant or significant but mitigable impacts, it warrants consideration as the "environmentally superior alternative." However, pursuant to CEQA Guidelines § 15126.6(e)(2), 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. Accordingly, the Reduced Intensity Alternative, as discussed in subsection 6.3.3, is identified as the environmentally superior alternative.

The NDA would fail to meet all of the Project's objectives. Specifically, the NDA would fail to diversify the mix of developed land uses in the City of Palmdale to support the growing goods movement supply chain. The NDA would not meet the Project's objective to establish a supply chain use in close proximity to designated truck routes and/or the State highway system and railroads to avoid or shorten vehicular trip lengths on other roadways. The NDA would not expand economic development, facilitate job creation, or increase the tax base for the City of Palmdale by accommodating and diversifying facilities needed to support the goods and movement supply chain. The NDA would also fail to meet the Project's objective to develop a light industrial building in the City of Palmdale that is architecturally and operationally designed to meet contemporary industry

standards and be economically competitive with similar buildings in the region. The NDA would not attract employment-generating businesses to the City of Palmdale to grow the economy and reduce the need for members of the local workforce to commute outside the area for employment, thereby improving the jobs-housing balance in the City and nearby areas beyond the City boundary. Finally, the NDA would not meet the Project's objective of developing a property that has access to readily available infrastructure, including roads and utilities.

6.3.2 Reduced Building Size and Trailer Lot Alternative

The Reduced Building Size and Trailer Lot Alternative allows decision-makers to compare the environmental impacts of approving the Project to the environmental impacts that would occur if the property were developed with a smaller sized warehouse building. Under this Alternative, a 200,000 s.f. non-refrigerated fulfillment warehouse (including related site improvements such as paved areas for vehicle movement and parking, landscaping, and public utility connections) would be developed on the western portion of the Project site and a trailer parking lot to store trailers associated with use of the on-site warehouse would be developed on the eastern portion of the Project site. This alternative was selected to evaluate a scenario that would reduce the total building area on the Project site relative to the Project but still allow productive industrial use of the entire Project site.

A. Aesthetics

Under the Reduced Building Size and Trailer Lot Alternative, the visual character and quality of the Project site would be similar as would occur under the proposed Project, except that a smaller building would be constructed. The Project site does not contain any unique aesthetic resources, nor does it serve as a prominent scenic vista. As such, impacts to scenic vistas would be less than significant under both the Project and Reduced Building Size and Trailer Lot Alternative, although impacts would be reduced under the Alternative because a smaller building at approximately 45 feet in height would occur which has less potential to obstruct distant views of mountains. In regard to the truck trailer parking area, the standard height of a truck trailer is approximately 13.5 feet when attached to a chassis and approximately 8.5 feet when not attached to a chassis. Therefore, truck trailers using the parking area servicing the warehouse would be much shorter in height than the building, the truck trailer parking area and the trailers that would be parked within that area would also not obstruct distant views of the mountains. There are no designated or eligible State scenic highways within the Project site's immediate vicinity; thus, neither the Project nor this Alternative would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway, and the level of impact would be similar. Like the proposed Project, the Reduced Building Size and Trailer Lot Alternative would not conflict with applicable zoning and other regulations governing scenic quality. Impacts due to a conflict with zoning or other regulations would not occur under either the Project or this Alternative, and the level of impact would be similar. Additionally, development of a smaller building and trailer parking lot would occur on site, this Alternative would have the same less than significant impact as would the Project resulting from the introduction of new sources of substantial light or glare.

B. Air Quality

Under the Reduced Building Size and Trailer Lot Alternative, the Project site would be developed with a 200,000 s.f. warehouse building and a truck trailer parking lot, resulting in similar although slightly reduced air quality emissions under the NDA. Neither the proposed Project or the Reduced Building Size and Trailer Lot Alternative would conflict with the AVAQMD Rules and Regulations, the Federal Particulate Matter Attainment Plan or the Ozone Attainment Plan for the Antelope Valley. Both the proposed Project and the Reduced Building Size and Trailer Lot Alternative would have the same potential for exposing sensitive receptors to substantial pollutant concentrations; thus, this Alternative would not avoid or reduce the Project's less than significant localized air quality impacts. Furthermore, both the proposed Project and this Alternative would have less than significant impacts due to other emissions (such as those leading to odors) that could affect a substantial number of people.

C. Biological Resources

The Reduced Building Size and Trailer Lot Alternative would develop the entire Project site and would result in identical impacts to biological resources as the Project. This Alternative would require the same mitigation as the Project and, after mitigation, both the Reduced Building Size and Trailer Lot Alternative and the Project would result in less than significant impacts to biological resources.

D. Cultural Resources

The Reduced Building Size and Trailer Lot Alternative would develop the entire Project site and would result in identical impacts to cultural resources as the Project. This Alternative would require the same mitigation as the Project and, after mitigation, both the Reduced Building Size and Trailer Lot Alternative and the Project would result in less than significant impacts to cultural resources.

E. Energy

Like the proposed Project, development that would occur under the Reduced Building Size and Trailer Lot Alternative would consume energy resources, although energy consumption related to operation of the warehouse building would be less under this Alternative due to the smaller building size. The same or similar amount of fuel consumption would occur related to construction and long-term vehicular travel to and from the Project site. This Alternative would slightly reduce the Project's less than significant impacts associated with the consumption of energy resources during construction and long-term operation. Neither the Project nor this Alternative would conflict with a State or local plan for renewable energy or energy efficiency, although impacts would be reduced under this Alternative in comparison to the Project because Reduced Building Size and Trailer Lot Alternative would result in a slight decrease in the use of energy resources.

F. Geology and Soils

Because a smaller building would be constructed under this Alternative, it would reduce the Project's less than significant impacts associated with seismic events. This Alternative would disturb the same physical area as the Project and would, therefore, have the same potential for soil erosion during the

construction phase as the Project. Soil erosion impacts would be less than significant under both the Project and this Alternative due to mandatory compliance with federal, State, and local water quality standards. The Reduced Building Size and Trailer Lot Alternative would be required to comply with the same mandatory regulatory requirements as the Project to preclude substantial hazards associated with seismic ground shaking and geologic hazards. The Reduced Building Size and Trailer Lot Alternative would result in a similar, less-than-significant impact to geology and soils as the Project.

The Reduced Building Size and Trailer Lot Alternative would develop the entire Project site and would result in identical impacts to paleontological resources as the Project. This Alternative would require the same mitigation as the Project and, after mitigation, both the Reduced Building Size and Trailer Lot Alternative and the Project would result in less than significant impacts to paleontological resources.

G. Greenhouse Gas Emissions

Because the Reduced Building Size and Trailer Lot Alternative would result in less building floor area than the Project, this Alternative is expected to require less energy to construct and operate than the Project and, therefore, would result in a reduction of non-mobile source GHG emissions as compared to the Project. Additionally, this Alternative would result in an incremental reduction in mobile source GHG emissions due to a reduction vehicle traffic. The Reduced Building Size and Trailer Lot Alternative would result in a less-than-significant GHG impact, which is the same conclusion drawn for the Project.

H. Hazards and Hazardous Materials

Because the same physical extent of development would occur, this Alternative would have the same 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 the same 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. There is a Head Start education center within 0.25-mile of the Project site, and this Alternative would have the same potential to transport, use, or store hazardous materials within 0.25-mile of school, although impacts would less than significant. 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 this Alternative have the potential to create a significant hazard to the public or the environment due to existing site conditions, and the level of impact would be similar. The Project site is located approximately 1.6 miles southwest of the inactive Palmdale Regional Airport however, the Project site occurs outside of the Planning Boundary/Airport Influence Area (AIA) for the airport. Additionally, the Project site is not located within any of the runway protection zones or inner safety zones of the airport. Airport-related impacts under the Project would be less than significant. The Reduced Building Size and Trailer Lot Alternative would have the same less than significant airport-related impacts as would the proposed Project.

I. Hydrology and Water Quality

Neither the Project nor the Reduced Building Size and Trailer Lot Alternative would result in substantial alterations to the drainage pattern of the site or would result in substantial erosion effects. Accordingly, implementation of the Project and this Alternative would both result in less-than-significant impacts to existing drainage patterns. During construction, potential hydrology and water quality effects on the Project site would be similar under both this Alternative and the Project due to this Alternative and the Project both disturbing the same physical area. Like the Project, the Reduced Building Size and Trailer Lot Alternative would be required to implement a Stormwater Pollution Prevention Plan (SWPPP(to ensure that stormwater runoff during construction does not contain substantial pollutant concentrations. Both the Project and this Alternative would result in less than significant construction impacts to hydrology and water quality.

In the long-term, potential hydrology and water quality effects on the Project site would be similar under both the Reduced Building Size and Trailer Lot Alternative and the Project due to this Alternative and the Project both providing a similar amount of non-pervious surfaces. Like the Project, this Alternative would be required to implement a drainage plan to ensure that stormwater runoff is adequately treated and retained on site for percolation into the groundwater table. Both the Project and the Reduced Building Size and Trailer Lot Alternative would result in less than significant operational impacts to hydrology and water quality

J. Noise

Noise associated with this Alternative would occur during short-term construction activities and under long term operation. The types of daily construction activities conducted on the Project site would be similar (and less than significant) under both the Reduced Building Size and Trailer Lot Alternative and the Project, although the length of construction activities would be slightly decreased under this Alternative because less building floor area would be constructed on the site. Therefore, it is anticipated that the total duration of noise impacts during the building construction phase would be slightly decreased under this Alternative as compared to the Project and impacts would be less than significant. Under long-term operational conditions, noise impacts from operations on the Project site (i.e., stationary noise) would be similar and less than significant relative to the Project due to relatively similar operational practices (i.e., cargo loading/unloading activities) and similar daily heavy truck traffic volumes.

K. Public Services

Neither this Alternative nor the proposed Project would result in any physical impacts associated with new or altered governmental facilities associated with fire protection, police protection, schools, parks, or other public facilities. The same less than significant impacts would occur.

L. Transportation

Similar to the proposed Project, the Reduced Building Size and Trailer Lot Alternative would not conflict with applicable programs, plans, ordinances or policies addressing the circulation system; would not create hazards through design; and, would not result in inadequate emergency access. As with the Project, these impacts under this Alternative would remain less than significant.

Construction and operation-related vehicle trip volume would be reduced under the Reduced Building Size and Trailer Lot Alternative. Because the trailer lot would serve the building, the trailer lot would not generate any vehicle trips. Trip generation is based on land uses and its associated square footage. This Alternative with a 200,000 s.f. building is expected to generate 364 two-way vehicle trip ends per day (438 two-way passenger car equivalent (PCE) trip-ends per day) calculated by using the same Institution of Engineers (ITE) Land Use Code as was used for the proposed Project (High-Cube Fulfillment Center Warehouse ITE Land Use Code 155 at 1.81 daily trips per 1,000 s.f. of building space). Based on the reduced building size, daily net new vehicle trip-ends per day would be proportionally decreased by approximately 52 percent compared to the proposed Project. Although the total number of trips would be reduced, because the Alternative would employ fewer people at the Project site than would the Project, this Alternative would have a significant and unavoidable VMT impact using a VMT per service population (SP) methodology with truck VMT included. The VMT per SP would exceed the Regional VMT per SP threshold.

M. Tribal Cultural Resources

The Reduced Building Size and Trailer Lot Alternative would develop the entire Project site and would result in identical potential impacts to tribal cultural resources as the Project. This Alternative would require the same mitigation as the Project and, after mitigation, both the Reduced Building Size and Trailer Lot Alternative and the Project would result in less than significant potential impacts to tribal cultural resources.

N. Utilities and Service Systems

Due to a reduced building area, the Reduced Building Size and Trailer Lot Alternative is expected to have a reduced demand for utilities and services systems, including water, sewer, storm water drainage service/facilities, and solid waste collection and disposal, as compared to the Project. However, as with the Project, the Reduced Building Size and Trailer Lot Alternative is expected to result in a less than significant impact to utilities and services systems.

O. Wildfire

The Project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. Neither this Alternative nor the Project 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 this Alternative or the Project, and the level of impact would be similar. Additionally, neither this Alternative nor the Project would require

installation or maintenance of associated infrastructure that may exacerbate fire risk or result in impacts to the environment; thus no impact would occur under this Alternative or the Project, and the level of impact would be the same. Neither the Reduced Building Size and Trailer Lot Alternative nor the Project has the potential to exacerbate wildfire risks or expose project occupants to pollutant concentrations from a wildfire or to risk of a wildfire, or expose people or structures to significant risks as a result of wildfires, although the level of impact under this Alternative would be slightly reduced because fewer workers that could potentially be affected by wildfire would be employed on the Project site.

P. Conclusion

Implementation of the Reduced Building Size and Trailer Lot Alternative would result in the same physical impacts as the Project, resulting in the same impacts to biological resources, cultural resources, geology and soils, paleontological resources, hydrology and water quality, and tribal cultural resources. The Reduced Building Size and Trailer Lot Alternative would result in a significant and unavoidable VMT impact when trucks are included in the VMT methodology using a VMT per SP calculation. The Reduced Building Size and Trailer Lot Alternative would reduce the Project's less-than-significant impacts to air quality, energy, greenhouse gas emissions, and utilities and service systems. All other impacts from this Alternative would be similar to the Project. The Reduced Building Size and Trailer Lot Alternative would meet all of the Project's objectives, but to a lesser degree than the Project.

6.3.3 Reduced Intensity Alternative

The Reduced Intensity Alternative considers a scenario where a portion of the Project site would be redeveloped with a non-refrigerated general warehouse building with a total square footage of 63,500 s.f. and the remainder of the site would not be developed. This represents an approximately 82 percent reduction in building space compared to the proposed Project. Under this alternative, the graded drainage channel located in the southern portion of the Project site would remain in its existing condition. Access to the site would occur from two driveways connecting with 8th Street East and a proportional reduction in the number of passenger vehicle parking spaces to service the building would occur on the site. The balance of the site would be undeveloped. This Alternative was selected to evaluate a scenario that would screen out of VMT.

A. Aesthetics

Under the Reduced Intensity Alternative, the Project site would be developed with a single small warehouse building totaling 63,500 sf at the same height as the Project. It is expected that the overall visual appearance under this alternative on the developed portion of the site would be similar to the Project and would not represent a significant impact. As with the Project, the development associated with the Reduced Intensity Alternative would comply with the PMC. The undeveloped portion of the site would retain its existing visual character and quality and the developed portion of the Project site would be similar as would occur under the proposed Project, except that a smaller building would be constructed. The Project site does not contain any unique aesthetic resources, nor does it serve as a

prominent scenic vista. As such, impacts to scenic vistas would be less than significant under both the Project and Reduced Intensity Alternative, although impacts would be reduced under the Alternative because a smaller building would occur which has less potential to obstruct distant views of mountains. There are no designated or eligible State scenic highways within the Project site's immediate vicinity; thus, neither the Project nor this Alternative would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway, and the level of impact would be similar. Like the proposed Project, the Reduced Intensity Alternative would not conflict with applicable zoning and other regulations governing scenic quality. Impacts due to a conflict with zoning or other regulations would not occur under either the Project or this Alternative, and the level of impact would be similar. Additionally, due to the development of a smaller building and retention of a portion of the site as undeveloped land, this Alternative would have less of an impact resulting from the introduction of new sources of substantial light or glare although both this Alternative and the Project would have less than significant impacts.

B. Air Quality

Under this Alternative, the overall duration of construction would be reduced as compared to the Project, due to the reduction of building area. As such, the total amount of air pollutant emissions generated during the construction phase would be reduced under this Alternative as compared to the Project. However, the peak daily intensity of construction activities at the Project site would be similar under both this Alternative and the Project because both would: 1) disturb the same maximum physical area per day; 2) utilize the same types of construction equipment; and 3) require the same types of construction activities. Therefore, the total daily emissions during the construction phase would be less than significant and similar to the Project.

Because the Reduced Intensity Alternative would result in less building floor area than the Project, this Alternative would require less energy to operate than the Project and, therefore, would result in a reduction of non-mobile source air quality emissions as compared to the Project. The Reduced Intensity Alternative would generate a reduced amount of mobile source air pollutant emissions as the Project from heavy truck traffic and would reduce mobile source air quality emissions from passenger vehicles due to a reduction in employees on the site. In total, the Reduced Intensity Alternative would reduce the Project's operational regional air quality emissions and be less than significant.

Because heavy truck trip traffic would be reduced, this Alternative would result in reduced and less than significant carcinogenic and non-carcinogenic health risk hazards as compared to the proposed Project. Like the Project, this Alternative would generate odors during short-term construction activities and long-term operation; however, and similar to the Project, these odors would occur intermittently, be of short-term duration, and would not be substantial. Long-term operation of this Alternative 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

The Reduced Intensity Alternative would develop a smaller portion of the Project site. Because less land area would be disturbed, this Alternative has a lesser potential for impacts to biological resources than the Project. The Reduced Intensity Alternative would require similar mitigation as the Project although because the drainage channel that occurs along the southern boundary of the site would not be altered under this Alternative, no RWQCB or California Department of Fish and Wildlife (CDFW) permits would be needed and mitigation for impacts to the drainage channel would not be required. For potential impacts to sensitive wildlife species, after mitigation, both the Reduced Intensity Alternative and the Project would result in less-than-significant impacts to biological resources.

D. Cultural Resources

The Reduced Intensity Alternative would develop a smaller portion of the Project site. Because less land area would be subjected to grading, this Alternative has a lesser potential for impacts to cultural resources than the Project. The Reduced Intensity Alternative would require similar mitigation as the Project and, after mitigation, both the Reduced Intensity Alternative and the Project would result in less-than-significant impacts to cultural resources.

E. Energy

Because the Reduced Intensity Alternative would result in less building floor area than the Project, the Reduced Intensity Alternative would require less energy to construct and operate than the Project and, therefore, would result in a reduction of energy usage as compared to the Project. Additionally, the Reduced Intensity Alternative would generate fewer daily passenger vehicle trips than the Project and would reduce transportation energy demands. The Reduced Intensity Alternative would result in a less-than-significant impact, which is the same conclusion drawn for the Project.

F. Geology and Soils

This Alternative would disturb a smaller physical area as the Project and would, therefore, have the same potential for soil erosion during the construction phase as the Project. Soil erosion impacts would be less than significant under both the Project and this Alternative due to mandatory compliance with federal, State and local regulatory requirements as the Project to preclude substantial hazards associated with seismic ground shaking and geologic hazards. The Reduced Intensity Alternative would develop a smaller portion of Project site. Because less land area would be subjected to grading, this Alternative has a lesser potential for impacts to paleontological resources than the Project. The Reduced Intensity Alternative would require similar mitigation as the Project and, after mitigation, both the Reduced Intensity Alternative and the Project would result in less-than-significant impacts to paleontological resources.

G. Greenhouse Gas Emissions

Because the Reduced Intensity Alternative would result in less building floor area than the Project, the Reduced Intensity Alternative would require less energy to construct and operate than the Project and,

therefore, would result in a reduction of non-mobile source GHG emissions as compared to the Project. Additionally, the Reduced Intensity Alternative would result in a reduction in mobile source GHG emissions due to a reduction daily passenger vehicle traffic. The Reduced Intensity Alternative would result in a less-than-significant impact, which is the same conclusion drawn for the Project.

H. Hazards and Hazardous Materials

Neither implementation of the Reduced Intensity Alternative nor the Project would result in a significant impact related to hazards or hazardous materials. The building user would occur on-site under the Reduced Intensity Alternative would have a similar potential to handle and store hazardous materials than the Project although potentially at smaller quantities. With mandatory regulatory compliance, both the Reduced Intensity Alternative and the Project would pose a less-than-significant hazard to the public or the environment related to the use, handling, storage, and/or transport of hazardous materials.

I. Hydrology and Water Quality

Neither the Project nor the Reduced Intensity Alternative would result in substantial alterations to the drainage pattern of the site or would result in substantial erosion effects. Accordingly, implementation of the Project and the Reduced Intensity Alternative would both result in less-than-significant impacts to existing drainage patterns. During construction, potential hydrology and water quality effects on the Project site would be less under the Reduced Intensity Alternative because less land area would be disturbed for development. Like the Project, the Reduced Intensity Alternative would be required to implement a SWPPP to ensure that stormwater runoff during construction does not contain substantial pollutant concentrations. Both the Project and the Reduced Intensity Alternative would result in less than significant construction impacts to hydrology and water quality.

In the long-term, potential hydrology and water quality effects on the Project site would be less under the Reduced Intensity Alternative as compared to the Project due to this alternative having a lesser extent of non-pervious surfaces. Like the Project, the Reduced Intensity Alternative would be required to implement a drainage plan to ensure that stormwater runoff is conveyed to local and regional stormwater drainage facilities with adequate capacity to handle runoff flows from the Project site. Additionally, like the Project, the Reduced Intensity Alternative would be required to implement a long term Water Quality Management Plan (WQMP) to ensure that stormwater runoff leaving the Project site does not contain substantial pollutant concentrations. Both the Project and the Reduced Intensity Alternative would result in less than significant operational impacts to hydrology and water quality.

J. Noise

Noise associated with this Alternative would occur during short-term construction activities and under long term operation. The types of daily construction activities conducted on the Project site would be similar (and less than significant) under both the Reduced Intensity Alternative and the Project, although the length of construction activities would be decreased under this alternative as less building floor area would be constructed on-site. Therefore, it is anticipated that the total duration of noise

impacts during the building construction phase would be decreased under this alternative as compared to the Project and impacts would be less than significant. Under long-term operational conditions, noise impacts from operations on the Project site (i.e., stationary noise) would be reduced and less than significant but less than would occur under the proposed Project due the smaller building and reduced passenger vehicle and heavy truck traffic volumes.

K. Public Services

Neither this Alternative nor the proposed Project would result in any physical impacts associated with new or altered governmental facilities associated with fire protection, police protection, schools, parks or other public facilities. The same less than significant impacts would occur.

L. Transportation

The Reduced Intensity Alternative and the Project would not conflict with applicable programs, plans, ordinances or policies addressing the circulation system; would not create hazards through design; and, would not result in inadequate emergency access. As with the Project, these potential impacts under this Alternative would remain less than significant.

Construction and operational-related vehicle truck trips would be reduced under the Reduced Intensity Alternative. Trip generation is based on land uses and its associated square footage. As shown in Table 6-1, *Trip Generation under the Reduced Building Intensity Alternative* based on the reduced building size, the Reduced Intensity Alternative is calculated to generate 108 daily vehicle trip-ends per day; therefore, net new average daily trips under this alternative would be less than 110 daily vehicle trips. The Reduced Intensity Alternative would meet the Project Type Screening threshold and the Project would be screened out of needing to conduct a VMT analysis because VMT impacts would be clearly less than significant with fewer than 110 daily trips.

Table 6-1 Trip Generation under the Reduced Building Intensity Alternative

Land Use	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Warehousing (Actual vehicles)							
Passenger Cars:	8	2	10	2	7	9	70
2-axle Trucks:	0	0	0	0	0	0	6
3-axle Trucks:	0	0	0	0	0	0	8
4+axle Trucks:	0	0	0	1	1	2	24
Total Truck Trips:	0	0	0	1	1	2	38
Total Trips[1]	**8**	**2**	**10**	**3**	**8**	**11**	**108**

[1] Total Trips = Passenger Cars + Truck Trips.

M. Tribal Cultural Resources

The Reduced Intensity Alternative would develop a smaller portion of the Project site. Because less land area would be subjected to grading, this Alternative has a lesser potential for impacts to tribal cultural resources than the Project. The Reduced Intensity Alternative would require similar mitigation as the Project and, after mitigation, both the Reduced Intensity Alternative and the Project would result in less-than-significant impacts to tribal cultural resources.

N. Utilities and Service Systems

Due to a reduced building area, the Reduced Intensity Alternative is expected to have a reduced demand for utilities and services systems, including water, sewer, storm water drainage service/facilities, and solid waste collection and disposal, as compared to the Project. However, as with the Project, the Reduced Intensity Alternative is expected to result in a less-than-significant impact to utilities and services systems.

O. Wildfire

The Project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. Neither this Alternative nor the Project 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 this Alternative or the Project, and the level of impact would be similar. Additionally, neither this Alternative nor the Project would require installation or maintenance of associated infrastructure that may exacerbate fire risk or result in impacts to the environment; thus no impact would occur under this Alternative or the Project, and the level of impact would be the same. Neither the Reduced Intensity Alternative nor the Project has the potential to exacerbate wildfire risks or expose project occupants to pollutant concentrations from a wildfire or to risk of a wildfire, or expose people or structures to significant risks as a result of wildfires, although the level of impact under this Alternative would be slightly reduced because fewer workers that could potentially be affected by wildfire would be employed on the Project site.

P. Conclusion

The Reduced Intensity Alternative would avoid the Project's significant and unavoidable VMT impact. The Reduced Intensity Area Alternative would reduce the Project's less-than-significant impacts to air quality, energy, greenhouse gas emissions, noise, and utilities and service systems and reduce the potential for impacts to biological, cultural, paleontological, and tribal cultural resources. All other impacts from the Reduced Intensity Alternative would be similar to the Project. The Reduced Intensity Alternative would meet all but one of the Project's objectives (Objective F) and would meet Objectives A, C, D, and E to a lesser degree than the proposed Project and would be the Environmentally Superior Alternative. This alternative would not meet Objective F because its small building design would not have operational characteristics that are compatible with other existing and planned developments in the local area.

6.3.4 TRAILER LOT ALTERNATIVE

The Trailer Lot Alternative allows decision-makers to compare the environmental impacts of approving the Project to the environmental impacts that would occur if the property were developed with a 400-space truck and trailer parking lot serving a local business or businesses. Under this Alternative, the entire Project site would be developed for parking and landscaping would occur around the perimeter of the site for screening purposes. This alternative was selected to evaluate a scenario that allow productive industrial use of the entire Project site while not developing a structure other than security booths at the entrance and exit gates.

A. Aesthetics

Under the Trailer Lot Alternative, the visual character and quality of the Project site would change to a parking surface filled with trucks and trailers. The Project site does not contain any unique aesthetic resources, nor does it serve as a prominent scenic vista. As such, impacts to scenic vistas would be less than significant under both the Project and Trailer Lot Alternative, although impacts would be reduced under the Alternative because only two small guard shacks would occur compared to the large warehouse building of the Project, having much less potential to obstruct distant views of mountains. The standard height of a truck trailer is approximately 13.5 feet when attached to a chassis and approximately 8.5 feet when not attached to a chassis. Therefore, truck trailers using the parking area would be much shorter in height than the 45-foot-tall building proposed under the Project. There are no designated or eligible State scenic highways within the Project site's immediate vicinity; thus, neither the Project nor this Alternative would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway, and the level of impact would be similar. Like the proposed Project, the Trailer Lot Alternative would not conflict with applicable zoning and other regulations governing scenic quality. Impacts due to a conflict with zoning or other regulations would not occur under either the Project or this Alternative, and the level of impact would be similar. Additionally, development of a trailer parking lot would require lighting, so this Alternative would have the same less than significant impact as would the Project resulting from the introduction of new sources of substantial light. This Alternative would have less than significant glare producing potential due to lack of reflective building materials and reflective surfaces. Trailers in California are required to have reflectors only on the tail, brake, and license plate lights and trailers do not contain glass that could be reflective and are most commonly painted in matte non reflective marine grade paint. (freighcourse, 2023)

B. Air Quality

Under the Trailer Lot Alternative, the Project site would be developed with a truck trailer parking lot, resulting in reduced air quality emissions compared to the Project due to lower traffic trip volumes and shorter truck trip lengths to serve a local use. Neither the proposed Project or the Trailer Lot Alternative would conflict with the AVAQMD Rules and Regulations, the Federal Particulate Matter Attainment Plan or the Ozone Attainment Plan for the Antelope Valley. Both the proposed Project and the Trailer Lot Alternative would have the same potential for exposing sensitive receptors to substantial pollutant concentrations; thus, this Alternative would not avoid or reduce the Project's less than significant

localized air quality impacts. Furthermore, both the proposed Project and this Alternative would have less than significant impacts due to other emissions (such as those leading to odors) that could affect a substantial number of people.

C. Biological Resources

The Trailer Lot Alternative would develop the entire Project site and would result in identical impacts to biological resources as the Project. This Alternative would require the same mitigation as the Project and, after mitigation, both the Reduced Building Size and Trailer Lot Alternative and the Project would result in less than significant impacts to biological resources.

D. Cultural Resources

The Trailer Lot Alternative would develop the entire Project site and would result in identical impacts to cultural resources as the Project. This Alternative would require the same mitigation as the Project and, after mitigation, both the Reduced Building Size and Trailer Lot Alternative and the Project would result in less than significant impacts to cultural resources.

E. Energy

Like the proposed Project, development that would occur under the Trailer Lot Alternative would consume energy resources, although energy consumption related to operation of the warehouse building would be omitted and replaced with a less energy use intensive local-serving truck trailer parking lot. Less fuel consumption would occur related to construction and long-term vehicular travel to and from the Project site. This Alternative would reduce the Project's less than significant impacts associated with the consumption of energy resources during construction and long-term operation. Neither the Project nor this Alternative would conflict with a State or local plan for renewable energy or energy efficiency, although impacts would be reduced under this Alternative in comparison to the Project because Trailer Lot Alternative would result in a decrease in the use of energy resources.

F. Geology and Soils

Because a warehouse building would not be constructed under this Alternative, it would reduce the Project's less than significant impacts associated with seismic events. This Alternative would disturb the same physical area as the Project and would, therefore, have the same potential for soil erosion during the construction phase as the Project. Soil erosion impacts would be less than significant under both the Project and this Alternative due to mandatory compliance with federal, State, and local water quality standards. The Trailer Lot Alternative would be required to comply with the same mandatory regulatory requirements as the Project to preclude substantial hazards associated with seismic ground shaking and geologic hazards. The Trailer Lot Alternative would result in a similar, less-than-significant impact to geology and soils as the Project.

The Trailer Lot Alternative would develop the entire Project site and would result in identical impacts to paleontological resources as the Project. This Alternative would require the same mitigation as the

Project and, after mitigation, both the Trailer Lot Alternative and the Project would result in less than significant impacts to paleontological resources.

G. Greenhouse Gas Emissions

Because the Trailer Lot Alternative would not entail the construction of a warehouse building, this Alternative is expected to require less energy to construct and operate than the Project and, therefore, would result in a reduction of non-mobile source GHG emissions as compared to the Project. Additionally, this Alternative would reduce mobile source GHG emissions due to a reduction vehicle traffic and vehicle trip length. The Trailer Lot Alternative would result in a less-than-significant GHG impact, which is the same conclusion drawn for the Project.

H. Hazards and Hazardous Materials

Because the same physical extent of development would occur, this Alternative would have the same 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 the same 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. There is a Head Start education center within 0.25-mile of the Project site, and this Alternative would have the same potential to transport, use, or store hazardous materials within 0.25-mile of school, although impacts would less than significant. 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 this Alternative have the potential to create a significant hazard to the public or the environment due to existing site conditions, and the level of impact would be similar. The Project site is located approximately 1.6 miles southwest of the inactive Palmdale Regional Airport however, the Project site occurs outside of the Planning Boundary/Airport Influence Area (AIA) for the airport. Additionally, the Project site is not located within any of the runway protection zones or inner safety zones of the airport. Airport-related impacts under the Project would be less than significant. The Trailer Lot Alternative would have the same less than significant airport-related impacts as would the proposed Project.

I. Hydrology and Water Quality

Neither the Project nor the Trailer Lot Alternative would result in substantial alterations to the drainage pattern of the site or would result in substantial erosion effects. Accordingly, implementation of the Project and this Alternative would both result in less-than-significant impacts to existing drainage patterns. During construction, potential hydrology and water quality effects on the Project site would be similar under both this Alternative and the Project due to this Alternative and the Project both disturbing the same physical area. Like the Project, the Trailer Lot Alternative would be required to implement a SWPPP to ensure that stormwater runoff during construction does not contain substantial pollutant concentrations. Both the Project and this Alternative would result in less than significant construction impacts to hydrology and water quality.

In the long-term, potential hydrology and water quality effects on the Project site would be similar under both the Trailer Lot Alternative and the Project due to this Alternative and the Project both providing a similar amount of non-pervious surfaces. Like the Project, this Alternative would be required to implement a drainage plan to ensure that stormwater runoff is adequately treated and retained on site for percolation into the groundwater table. Both the Project and the Trailer Lot Alternative would result in less than significant operational impacts to hydrology and water quality

J. Noise

Noise associated with this Alternative would occur during short-term construction activities and under long term operation. The types of daily construction activities conducted on the Project site would be similar (and less than significant) under both the Trai slightly decreased under this Alternative because a warehouse building would not be constructed on the site. Therefore, it is anticipated that the total duration of noise impacts during the building construction phase would be decreased under this Alternative as compared to the Project and impacts would be less than significant. Under long-term operational conditions, noise impacts from operations on the Project site (i.e., stationary noise) would be similar and less than significant relative to the Project due to relatively similar exterior operational practices (i.e., cargo loading/unloading activities) on the Project site. Off-site roadway noise contributions would be less but remain less than significant as would occur under the proposed Project.

K. Public Services

Neither this Alternative nor the proposed Project would result in any physical impacts associated with new or altered governmental facilities associated with fire protection, police protection, schools, parks or other public facilities. The same less than significant impacts would occur.

L. Transportation

Similar to the proposed Project, the Trailer Lot Alternative would not conflict with applicable programs, plans, ordinances or policies addressing the circulation system; would not create hazards through design; and, would not result in inadequate emergency access. As with the Project, these impacts under this Alternative would remain less than significant.

Construction and operation-related vehicle trip volume would be reduced under the Trailer Lot Alternative. The length of truck trips would be reduced to serve a local origins and destinations and this Alternative would thus have the same less than significant VMT impact as would the proposed Project. The Trailer Lot Alternative would reduce the number of generated daily vehicle trips and also reduce VMT trip length. The Reduced Building Size and Trailer Lot Alternative would have similar less-than-significant transportation related impacts as would the proposed Project.

M. Tribal Cultural Resources

The Trailer Lot Alternative would develop the entire Project site and would result in identical potential impacts to tribal cultural resources as the Project. This Alternative would require the same mitigation

as the Project and, after mitigation, both the Trailer Lot Alternative and the Project would result in less than significant potential impacts to tribal cultural resources.

N. Utilities and Service Systems

Because a warehouse building would not be constructed, the Trailer Lot Alternative is expected to have a reduced demand for utilities and services systems, including water, sewer, storm water drainage service/facilities, and solid waste collection and disposal, as compared to the Project. However, as with the Project, the Trailer Lot Alternative is expected to result in a less than significant impact to utilities and services systems.

O. Wildfire

The Project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. Neither this Alternative nor the Project 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 this Alternative or the Project, and the level of impact would be similar. Additionally, neither this Alternative nor the Project would require installation or maintenance of associated infrastructure that may exacerbate fire risk or result in impacts to the environment; thus no impact would occur under this Alternative or the Project, and the level of impact would be the same. Neither the Trailer Lot Alternative nor the Project has the potential to exacerbate wildfire risks or expose site occupants to pollutant concentrations from a wildfire or to risk of a wildfire, or expose people or structures to significant risks as a result of wildfires, although the level of impact under this Alternative would be reduced because fewer workers that could potentially be affected by wildfire would be employed on the Project site.

P. Conclusion

Implementation of the Trailer Lot Alternative would result in the same physical impacts as the Project, resulting in the same impacts to biological resources, cultural resources, geology and soils, paleontological resources, hydrology and water quality, and tribal cultural resources. The Trailer Lot Alternative would reduce the Project's less-than-significant impacts to air quality, energy, greenhouse gas emissions, transportation, and utilities and service systems. All other impacts from this Alternative would be similar to the Project. The trailer Lot Alternative would only meet three of the Project's objectives: Objective A - To diversify the mix of developed land uses in the City of Palmdale to support the growing goods movement supply chain; Objective B - 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; and Objective G - To develop a property that has access to available infrastructure, including roads and utilities.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines § 15126.6 requires the identification of the environmentally superior alternative. As discussed herein, implementation of the NDA would result in no physical environmental impacts

beyond those that have historically occurred on the property. Because the NDA would avoid most of the Project's impacts, it warrants consideration as the "environmentally superior alternative." However, pursuant to CEQA Guidelines § 15126.6(e)(2), 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. Accordingly, the Reduced Intensity Alternative, as discussed above in Subsection 6.3.3, is identified as the Environmentally Superior Alternative pursuant to CEQA Guidelines § 15126.6.

Table 6-2 Alternatives to the Project – Comparison of Environmental Impacts

Environmental Topic	Project Significance of Impacts After Mitigation	Level of Impact Compared to the Proposed Project/Compliance with Project Objectives			
		No Development Alternative (NDA)	Reduced Building Size and Trailer Lot Alternative	Reduce Building Intensity Alternative	Trailer Lot Alternative
Aesthetics	Less than Significant	Reduced	Similar	Reduced	Reduced
Air Quality	Less than Significant	Reduced	Similar	Reduced	Reduced
Biological Resources	Less than Significant	Reduced	Same	Reduced	Same
Cultural Resources	Less than Significant	Reduced	Same	Reduced	Same
Energy	Less than Significant	Reduced	Similar	Reduced	Reduced
Geology and Soils	Less than Significant	Most Issues: Reduced Long-Term Erosion: Increased	Similar	Reduced	Similar
Greenhouse Gas Emissions	Less than Significant	Reduced	Similar	Reduced	Reduced
Hazards and Hazardous Materials	Less than Significant	Reduced	Similar	Reduced	Similar
Hydrology and Water Quality	Less than Significant	Most Issues: Reduced Long-Term Erosion: Increased	Similar	Reduced	Similar
Noise	Less than Significant	Reduced	Similar	Reduced	Similar
Public Services	Less than Significant	Similar	Similar	Reduced	Reduced
Transportation	Less than Significant	Reduced	Increased	Reduced	Similar
Tribal Cultural Resources	Less than Significant	Reduced	Same	Reduced	Same
Utilities and Service Systems	Less than Significant	Reduced	Similar	Reduced	Reduced
Wildfire	Less than Significant	Reduced	Similar	Reduced	Reduced
Ability to Meet Project Objectives					
A. To diversify the mix of developed land uses in the City of Palmdale to support the growing goods movement supply chain.		No	Yes	Yes but to a lesser degree	Yes but to a lesser degree
B. To develop supply chain uses in close proximity to designated truck routes and the		No	Yes	Yes	Yes but to a lesser degree

State highway system to avoid or shorten vehicular trip lengths on other roadways.				
C. 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	Yes	Yes but to a lesser degree	No
D. To develop an industrial building in the City of Palmdale that is designed to meet contemporary industry standards and be economically competitive with similar industrial buildings in the local area and region.	No	Yes but to a lesser degree	Yes	No
E. 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	Yes but to a lesser degree	Yes but to a lesser degree	No
F. 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	Yes but to a lesser degree	No	No
G. To develop a property that has access to available infrastructure, including roads and utilities.	No	Yes	Yes but to a lesser degree	Yes

7.0 REFERENCES

7.1 PERSONS INVOLVED IN THE PREPARATION OF THIS EIR

7.1.1 CITY OF PALMDALE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT

- Brenda Magaña, Planning Manager

7.1.2 T&B PLANNING, INC.

- Tracy Zinn, Principal
- Connie Anderson, Senior Project Manager
- Jerrica Harding, Senior Associate
- Andrea Halfhill, Environmental Analyst
- Cristina Maxey, Graphics/GIS Specialist
- Rhea Smith, GIS Technician

7.2 DOCUMENTS APPENDED TO THIS EIR

The following reports, studies, and supporting documentation were used in preparing the Palmdale 8th Street Project EIR and are bound separately as Technical Appendices and attached to this EIR. A copy of the Technical Appendices is available for review at the City of Palmdale Planning Division at 38250 Sierra Highway, Palmdale, CA, 93550.

Appendix A: Notice of Preparation (NOP) and Written Comments on the NOP

Appendix B1: Urban Crossroads, 2023a. *Air Quality Impact Analysis*. January 13, 2023.

Appendix B2: Urban Crossroads, 2023b. *Mobile Source Health Risk Assessment*. January 13, 2023.

Appendix C1: Psomas, 2023. *Biological Resources Technical Report*. January 2023.

Appendix C2: Psomas, 2022a. *Results of the Focused Special Status Plant/Desert Native Plant Survey*. September 16, 2022.

Appendix C3: Psomas, 2022b. *Results of a Focused Survey for Blainsville's Horned Lizard*. September 15, 2022.

Appendix C4: Psomas, 2022c. *Results of Focused Survey for Burrowing Owl*. September 14, 2022.

Appendix C5: Psomas, 2022d. *Jurisdictional Delineation Report*. August 29, 2022.

Appendix D: PaleoWest, 2022a. *Cultural Resource Investigation in Support of the Palmdale 8th Street Project, City of Palmdale, Los Angeles County, California*. May 10, 2022.

Appendix E : Urban Crossroads, 2023c. *8th Street Industrial Energy Analysis*. January 13, 2023.

Appendix F: Southern California Geotechnical, 2022. *Geotechnical Investigation*. March 1, 2022.

Appendix G: PaleoWest, 2022b. *Paleontological Resource Technical Memorandum for the Palmdale 8th Street Project, Los Angeles County, California*. May 10, 2022.

Appendix H: Urban Crossroads, 2023d. *Greenhouse Gas Analysis*. January 16, 2023.

Appendix I: Consolidated Consulting Group, LLC, 2021. *Phase I Environmental Site Assessment*. October 25, 2021.

Appendix J1: Langan Engineering and Environmental Services 2023a. *Preliminary Hydrology Report*. March 2023.

Appendix J2: Langan Engineering and Environmental Services 2023b. *Preliminary LID Report.* March 2023.

Appendix K: Urban Crossroads, 2023e. *8th Street Industrial Noise and Vibration Analysis*. April 5, 2023.

Appendix L1: Urban Crossroads, 2022b. *8th Street Industrial Traffic Analysis Scoping Agreement*. August 29, 2022.

Appendix L2: Urban Crossroads, 2023d. *8th Street Industrial Vehicle Miles Traveled (VMT) Analysis*. January 30, 2023.

Appendix L3: Urban Crossroads, Inc. 2023e. *8th Street Industrial Supplemental Vehicle Miles (VMT) Analysis*. January 30, 2023.

Appendix L4: Urban Crossroads, Inc. 2022d. 8th Street Industrial Railroad Safety Evaluation. December 21, 2022.

Appendix M1: WestLAND Group, Inc., 2022b. *APN 3022-001-026 Sanitary Sewer Analysis*. June 7, 2022.

Appendix M2: KEC Engineers, Inc., 2022. *Water Supply Assessment Report (WSA)*. June 2022.

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.

Cited As:	***Citation:***
City of Palmdale, 1993	City of Palmdale, 1993. *1993 General Plan*. Available on-line at: https://www.cityofpalmdale.org/279/General-Plan
City of Palmdale, 2019	City of Palmdale, 2019. *City of Palmdale Zoning Map, Adopted by the City Council 12/14/94*. November 13, 2019. Accessed October 13, 2022. Available on-line at: https://cityofpalmdale.org/DocumentCenter/View/516/Zoning-with-street-labels-PDF
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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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