PALMDALE LOGISTICS CENTER

INITIAL STUDY

Lead Agency:
City of Palmdale
38300 Sierra Highway
Palmdale, CA 93550

Project Applicant:
Transwestern Development Company
3501 Jamboree, Suite 4400
Newport Beach, CA 92660

September 2023

E | P | D Solutions, Inc.

This page is intentionally left blank.

Table of Contents

1 INTRODUCTION 6
1.1 PURPOSE OF THE INITIAL STUDY 6
1.2 DOCUMENT ORGANIZATION 7
1.3 INITIAL STUDY FINDINGS 7

2 ENVIRONMENTAL SETTING 8
2.1 PROJECT LOCATION 8
2.2 EXISTING PROJECT SITE 8
2.3 EXISTING LAND USE AND ZONING 8
2.4 SURROUNDING GENERAL PLAN AND ZONING DESIGNATIONS 9

3 PROJECT DESCRIPTION 23
3.1 PROJECT OVERVIEW 23
3.2 PROJECT FEATURES 23
3.3 CONSTRUCTION AND PHASING 25
3.4 OPERATIONAL CHARACTERISTICS 25
3.5 DISCRETIONARY APPROVALS, PERMITS, AND STUDIES 25

4 ENVIRONMENTAL CHECKLIST 37
4.1 BACKGROUND 37
4.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED 38
4.3 DETERMINATION: 38
4.4 EVALUATION OF ENVIRONMENTAL IMPACTS 40

5 ENVIRONMENTAL ANALYSIS 42
5.1 AESTHETICS 42
5.2 AGRICULTURE AND FOREST RESOURCES 44
5.3 AIR QUALITY 46
5.4 BIOLOGICAL RESOURCES 47
5.5 CULTURAL RESOURCES 51
5.6 ENERGY 53
5.7 GEOLOGY AND SOILS 54
5.8 GREENHOUSE GAS EMISSIONS 59
5.9 HAZARDS AND HAZARDOUS MATERIALS 60
5.10 HYDROLOGY AND WATER QUALITY 62
5.11 LAND USE AND PLANNING 64
5.12 MINERAL RESOURCES 65
5.13 NOISE 66
5.14 POPULATION AND HOUSING 67
5.15 PUBLIC SERVICES 68
5.16 RECREATION 69
5.17 TRANSPORTATION 70
5.18 TRIBAL CULTURAL RESOURCES 71
5.19 UTILITIES AND SERVICE SYSTEMS 72
5.20 WILDFIRE 73
5.21 MANDATORY FINDINGS OF SIGNIFICANCE 75

6 REFERENCES 78

TABLES

TABLE 2-1: SURROUNDING EXISTING LAND USE AND ZONING DESIGNATIONS 9
TABLE BIO-1: SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR ON PROJECT SITE 48
TABLE BIO-2: SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR ON PROJECT SITE 49

FIGURES

FIGURE 2-1: REGIONAL LOCATION 10
FIGURE 2-2: LOCAL VICINITY 13
FIGURE 2-3: AERIAL VIEW 15
FIGURE 2-4: SITE PHOTOS 17
FIGURE 2-5: EXISTING LAND USE 19
FIGURE 2-6: EXISTING ZONING 21
FIGURE 3-1: CONCEPTUAL SITE PLAN 27
FIGURE 3-2: ELEVATIONS 29
FIGURE 3-3: PROPOSED LANDSCAPE PLAN 33

ACRONYM LIST

AB	Assembly Bill
APN	Assessor's Parcel Number
CBC	California Building Code
CEQA	California Environmental Quality Act
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
GHG	Greenhouse Gas
I-15	Interstate 15
SB	Senate Bill
SR	State Route
SP	Specific Plan

1 INTRODUCTION

1.1 PURPOSE OF THE INITIAL STUDY

This Initial Study has been prepared in accordance with the following:

- California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Sections 21000 et seq.); and
- California Code of Regulations, Title 14, Division 6, Chapter 3 (State CEQA Guidelines, Sections 15000 et seq.) as amended and approved on December 28, 2018.

Pursuant to CEQA, this Initial Study has been prepared to analyze the potential for significant impacts on the environment resulting from implementation of the proposed industrial Project described in greater detail in Section 3.0 below. As required by State CEQA Guidelines ("Guidelines") Section 15063, this Initial Study is a preliminary analysis prepared by the Lead Agency, the City of Palmdale ("City"), in consultation with other jurisdictional agencies, to determine if a Mitigated Negative Declaration or an Environmental Impact Report is required for the Project.

This Initial Study informs City of Palmdale decision-makers, affected agencies, and the public of potentially significant environmental impacts associated with the implementation of the Project. A "significant effect" or "significant impact" on the environment means "*a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project*" (Guidelines Section 15382). As such, the Initial Study's intent is to adhere to the following CEQA principles:

- Provide meaningful early evaluation of site planning constraints, service and infrastructure requirements, and other local and regional environmental considerations. (Public Resources Code Section 21003.1)
- Encourage the applicant to incorporate environmental considerations into Project conceptualization, design, and planning at the earliest feasible time. (Guidelines Section 15004[b][3])
- Specify mitigation measures for reasonably foreseeable significant environmental effects and commit the City and applicant to future measures containing performance standards to ensure their adequacy when detailed development plans and applications are submitted. (Guidelines Section 15126.4)

1.2 DOCUMENT ORGANIZATION

This Initial Study includes the following sections:

Section 1. Introduction
Provides information about CEQA and its requirements for environmental review and explains that an Initial Study was prepared by the City to evaluate the proposed Project's potential impact to the physical environment, and to determine if an Environmental Impact Report (EIR) is required.

Section 2. Environmental Setting
Provides information about the proposed Project's location.

Section 3. Project Description
Includes a description of the proposed Project's physical features and characteristics.

Section 4. Environmental Checklist
Includes the Environmental Checklist from the CEQA Guidelines and evaluates the proposed Project's potential to result in significant adverse effects to the physical environment and identifies if an EIR is required, and if so, what environmental topics need to be analyzed in the EIR.

Section 5. Environmental Analysis
This section provides evidence to substantiate the conclusions in the environmental checklist.

Section 6. References
Includes a list of the references in this Initial Study pursuant to State CEQA Guidelines Section 15150.

1.3 INITIAL STUDY FINDINGS

Section 4.0 of this document contains the Environmental Checklist that was prepared for the proposed Project pursuant to CEQA requirements. The Environmental Checklist indicates that the proposed Project would result in no impacts or less than significant environmental effects under the issue areas of cultural resources, geology and soils, mineral resources, recreation, and wildfire. Therefore, these issues will not be evaluated further within an EIR.

The Environmental Checklist indicates that the proposed Project would potentially result in significant environmental effects under the issue areas of aesthetics, agriculture and forestry resources, air quality, biological resources, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use, noise, population and housing, public services, transportation, tribal cultural resources, and utilities and service systems. Therefore, these subjects are recommended for further evaluation in an EIR.

2 ENVIRONMENTAL SETTING

2.1 PROJECT LOCATION

The proposed Project site is located in the northwestern portion of the City of Palmdale, within Los Angeles County. Regional access to the Project site is provided by State Route 14 and State Route 138. Local access to the site is provided from 30th Street East, a designated major arterial, and East Avenue M, a designated regional arterial. The Project site is northeast of the 30th Street East and East Avenue M intersection. The Project site and surrounding area is shown in Figure 2-1, *Regional Location*, and Figure 2-2, *Local Vicinity*.

2.2 EXISTING PROJECT SITE

The Project site comprises one parcel encompassing approximately 150.18 acres. This parcel is identified as Assessor's Parcel Number (APN) 3170-018-081 and consists of vacant and undeveloped land. The site is relatively flat with a gentle slope in the northwestern direction. The Project site contains sparse vegetation consisting of grasses and weeds. The Project site's existing conditions are shown in Figure 2-3, *Aerial View* and Figure 2-4, *Site Photos*.

2.3 EXISTING LAND USE AND ZONING

The Project site has a City of Palmdale General Plan land use designation of Industrial (IND) and a zoning designation of Heavy Industrial (HI) as shown on Figure 2-5, *Existing Land Use* and Figure 2-6, *Existing Zoning*. The Industrial (IND) land use designation is intended to allow a variety of industrial uses including manufacturing, warehousing distribution, and similar uses. The HI zone provides for a range of medium to high intensity industrial uses such as manufacturing, assembly, warehousing, and distribution and allows a maximum Floor Area Ratio (FAR) of 0.5 (Palmdale Municipal Code 17.66.010). The HI zone is regulated per the Palmdale Municipal Code Chapter 17.66.010.

2.4 SURROUNDING GENERAL PLAN AND ZONING DESIGNATIONS

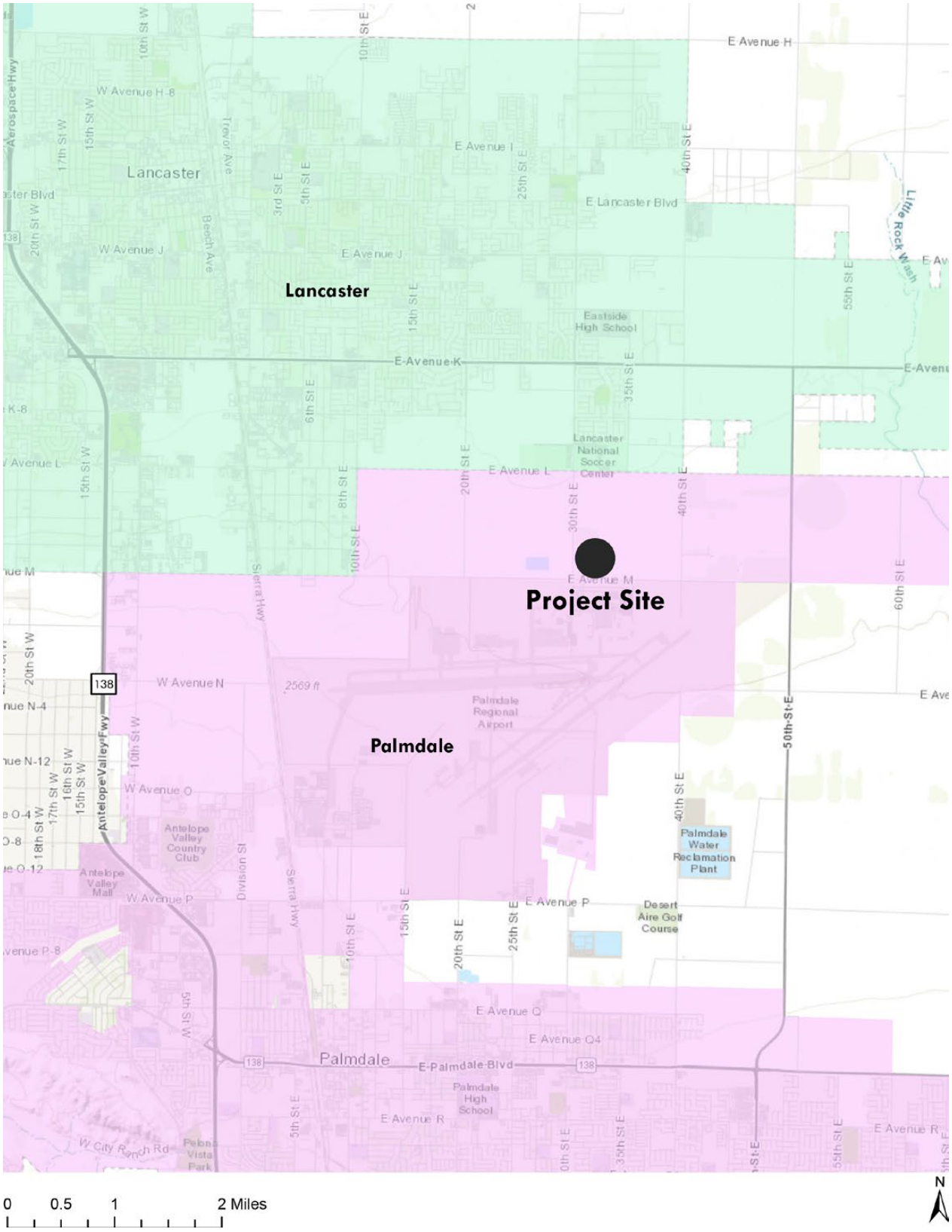
The Project site is located within a predominately vacant area. The surrounding land uses are described in Table 2-1.

Table 2-1: Surrounding Existing Land Use and Zoning Designations

	Existing Land Use	**General Plan Designation**	**Zoning Designation**
North	Vacant and undeveloped land (Future vehicle storage facility SPR 19-012 to the northeast)	Industrial (IND)	Heavy Industrial (HI)
West	30th Street East followed by a solar farm	Industrial (IND)	Heavy Industrial (HI)
South	East Avenue M followed by airport logistics	Aerospace Industrial (AI)	Aerospace Industrial (AI)
East	Vacant and undeveloped land	Industrial (IND)	Heavy Industrial (HI)

This page is intentionally left blank.

Regional Location

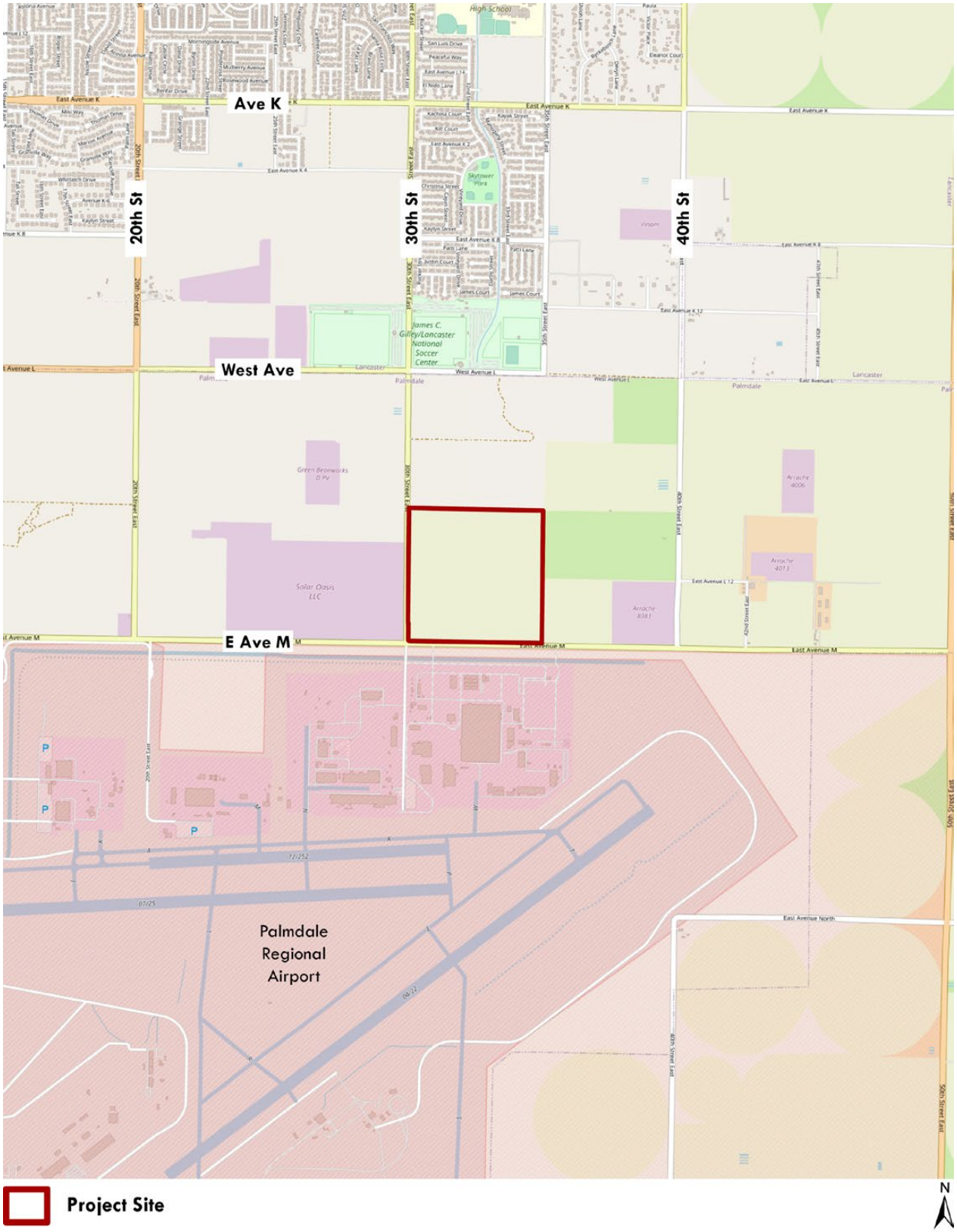


Palmdale Logistics Center
City of Palmdale

Figure 2-1

This page is intentionally left blank.

Local Vicinity



Palmdale Logistics Center
City of Palmdale

Figure 2-2

This page is intentionally left blank.

Aerial View

Palmdale Logistics Center
City of Palmdale

Figure 2-3

This page is intentionally left blank.

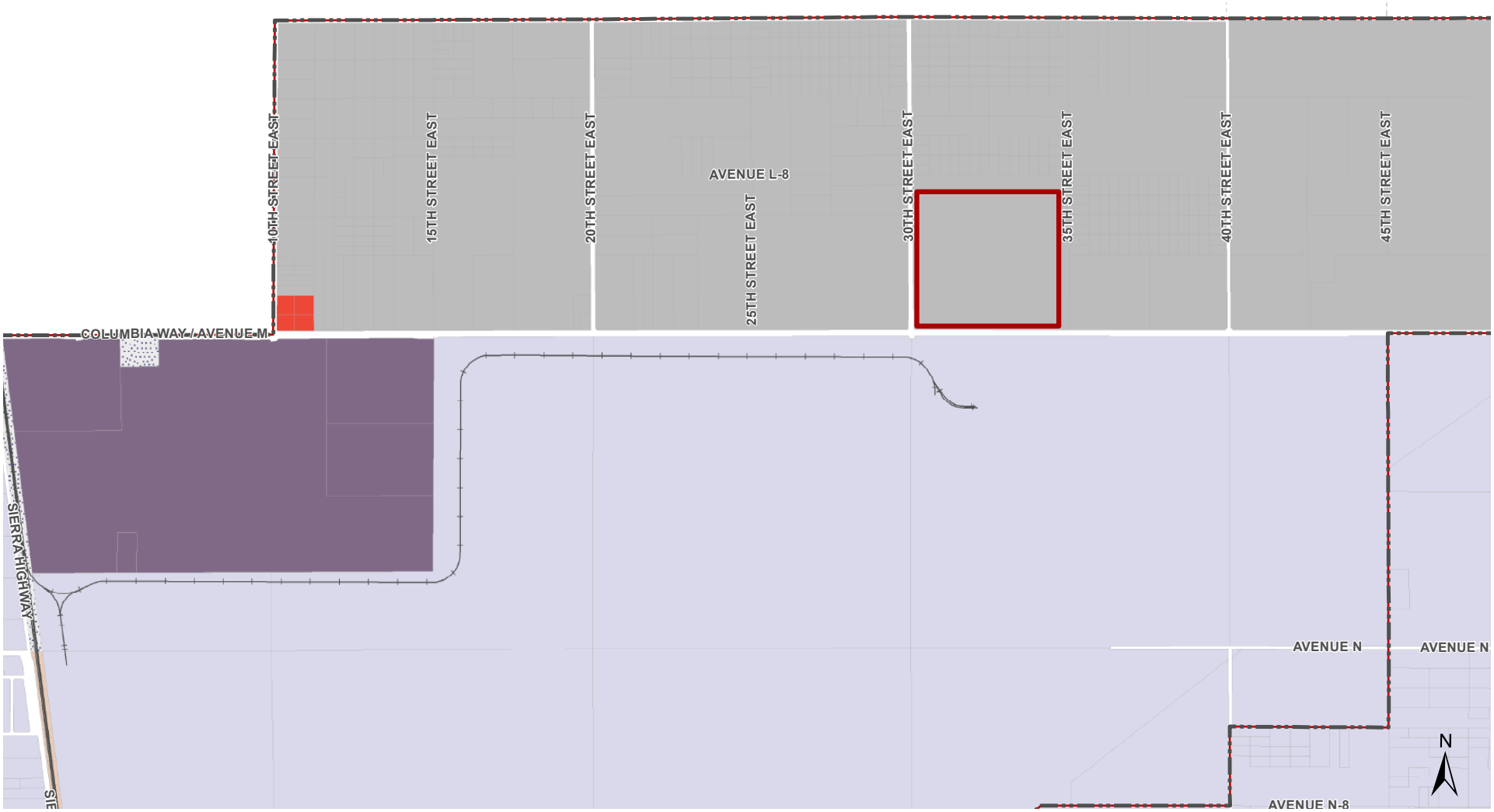
Existing Site Photos

View of the southwest corner from the intersection of East Ave M and 30th St.

Looking westward along East Ave M from the southeast corner of the site.

This page is intentionally left blank.

Existing Land Use

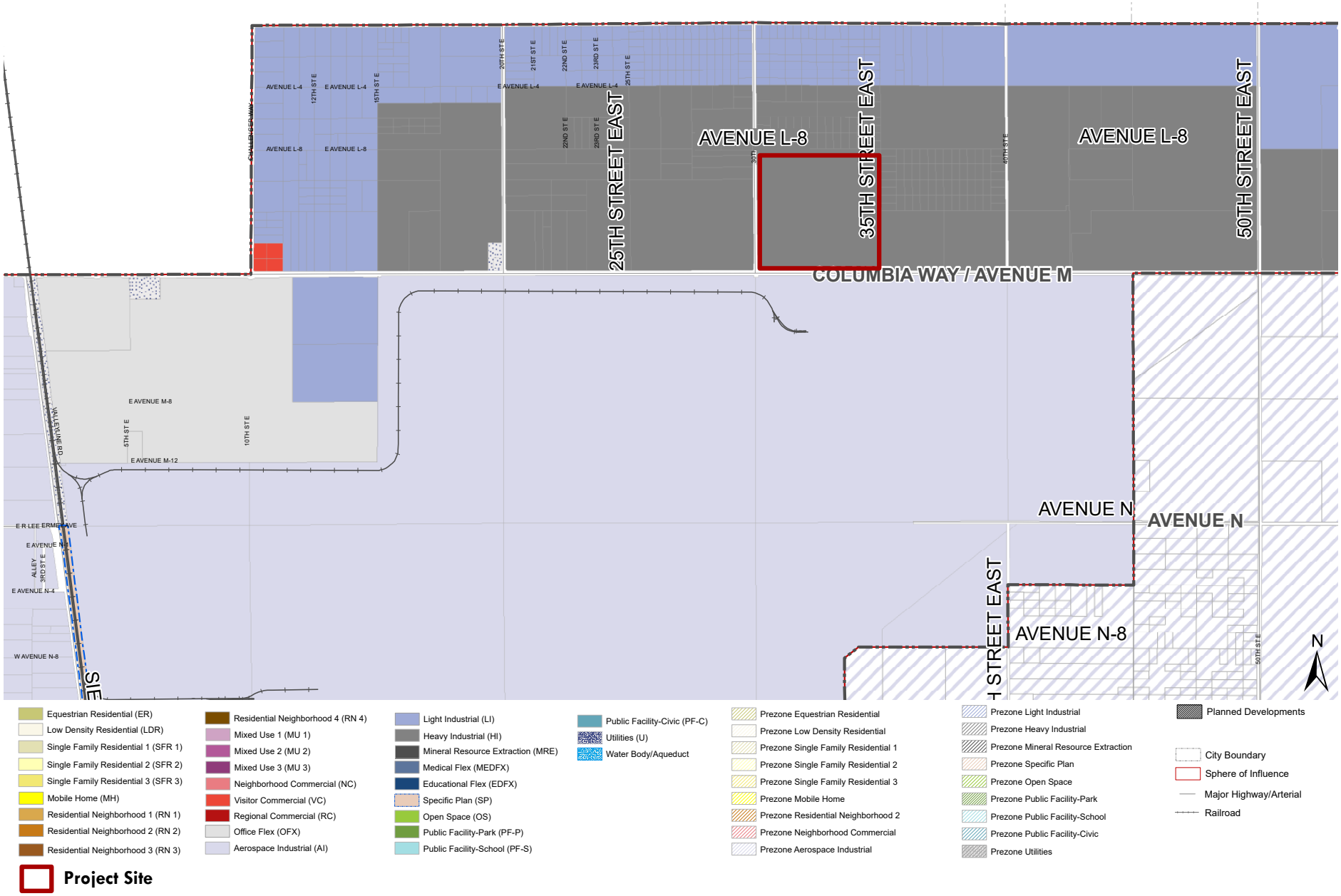


Palmdale Logistics Center
City of Palmdale

Figure 2-5

This page is intentionally left blank.

Existing Zoning



Palmdale Logistics Center
City of Palmdale

Figure 2-6

This page is intentionally left blank.

3 PROJECT DESCRIPTION

3.1 PROJECT OVERVIEW

The Project proposes to divide the existing APN 3170-018-081 into three parcels through approval of a Tentative Parcel Map (TPM). The Project applicant is proposing to construct two industrial warehouses, each on a proposed parcel, totaling 3,001,712 square feet (SF). The Project proposes two buildings with 1,500,856 SF each. The Project would include parking, associated infrastructure, and landscape corresponding with each building. The Project would also construct a detention basin of approximately 11 acres for stormwater collection, on the last proposed parcel in the northern portion of the site. In addition, the Project would construct two new roadways, Avenue L-8 (north of property line) and 35th Street East (east of property line). Approvals required for the Project include a TPM to divide the existing APN into three parcels, a Site Plan Review to construct two industrial buildings, a Conditional Use Permit for additional building height and a Minor Site Plan Review for additional screening wall height. Figure 3-1, *Conceptual Site Plan*, illustrates the proposed site plan.

3.2 PROJECT FEATURES

Building Summary and Architecture

The two proposed industrial warehouse buildings would be single-story and approximately 52 feet tall each with a mezzanine, loading docks, and associated vehicle and truck trailer parking spaces. Each building would provide approximately 1,480,856 SF of warehouse space, 10,000 SF of mezzanine office space, and 10,000 SF of ground floor office space.

Building 1 covers 1,500,856 SF of the 2,987,292-SF (68.58-acre) total Building 1 site area, resulting in a FAR of 0.50. Building 2 covers 1,500,856 SF of the 3,059,048-SF (70.23-acre) total Building 2 site area resulting in a FAR of 0.49.

As shown in Figure 3-2, *Elevations*, the proposed Project would establish an architectural presence through emphasis on building finish materials and consistent material usage and color scheme of blue and grays. Building 1 would be set back approximately 441 feet from Avenue L-8, 196 feet from 35th Street East, and 208 feet from 30th Street East. Building 2 would be set back 275 feet from East Avenue M, 205 feet from 35th Street East, and 203 feet from 30th Street East.

Additionally, a 35-foot landscape setback would be implemented along East Avenue M. A 10-foot landscape setback would also be implemented along 30th Street East and 35th Street East. Trees would be incorporated within the perimeter landscaping in order to screen buildings and loading docks. The use of landscaping, building layout, finish materials, and accenting on the Project site would create a quality architectural presence along East Avenue M and 30th Street East.

Parking and Loading Dock Summary

Truck loading docks would be located along both the north and south sides of Building 1 and Building 2. Each building would include 258 loading dock doors, totaling 516 doors for the Project. The Project would also provide 990 trailer stalls situated along the southern property line adjacent to East Avenue M and in the northern portion of the site bordering the Master Basin. Auto parking consisting of 1,517 stalls would be located along the eastern and western property lines of the Project site.

Building 1 would provide 753 total parking stalls consisting of 586 standard parking stalls, 12 accessible standard parking stalls, four accessible van parking stalls, 151 EV capable parking stalls and bike parking for 120 bikes.

Building 2 would provide 764 parking stalls which would consist of 593 standard parking stalls, 12 accessible standard parking stalls, four accessible van parking stalls, 155 EV capable parking stalls and bike parking for 120 bikes.

Both buildings would be consistent with the City parking requirements.

Landscaping and Fencing

The proposed Project includes approximately 951,135 SF of ornamental landscaping that would cover approximately 25.55 percent of the parking area and 15 percent of the overall site, thus exceeding the 15 percent requirement of parking area and 10 percent requirement for the overall site as shown in Figure 3-3a and 3-3b, *Landscape Plan*. Project landscaping would be consistent with the City landscaping standards per the City of Palmdale Municipal Code Section 17.86.010, Landscaping Requirements.

A 6-foot wrought iron fence is proposed on the northern Project boundary around the detention basin along Avenue L-8. An 8-foot wrought iron fence is proposed adjacent to the trailer stall parking area in the center of the Project site between Building 1 and Building 2. An 8-foot wrought iron fence is proposed adjacent to the trailer stall parking area along the southern Project boundary. In addition, 12-foot screening walls would be implemented to the east and west of the trailer stall parking areas to screen building operations from offsite views. Proposed landscaping would include 36-inch and 24-inch box trees, 15-gallon trees, various shrubs, and succulents to screen the proposed building, infiltration/detention basin, and parking and loading areas from off-site viewpoints on 30th Street East and East Avenue M.

Access and Circulation

Local access to the proposed Project site would be provided via 30th Street East and 35th Street East. The proposed new roadway, 35th Street East would run along the east side of the Project site and would connect to Avenue L-8 and East Avenue M. Site access would be provided from eight driveways, four of which would be from 30th Street East and four would be from 35th Street East.

Building 1 would be accessible via four driveways: two on 30th Street East and two on 35th Street East along the east side of the Project. The driveways located to the west of the building on 30th Street East would be 40-feet-wide and 26-feet-wide. The driveways located to the east of the building on 35th Street East would be 40-feet-wide and 26-feet-wide. There would also be two 50-foot-wide shared driveways located between Building 1 and 2, one on 30th Street East and one on 35th Street East. Internal circulation would be provided via 28-foot-wide drive aisles that would also serve as fire lanes.

Building 2 would be accessible via two driveways: one on 30th Street East and one on 35th Street East along the east side of the Project. The driveway located to the west of the building on 30th Street East would be 50-feet-wide. The driveway located to the east of the building on 35th Street East would be 50-feet-wide. As mentioned previously, there would also be two 50-foot-wide shared driveways located between Building 1 and 2 on 30th Street East and 35th Street East. Internal circulation would be provided via 28-foot-wide drive aisles that would also serve as fire lanes.

Access to trailer stalls and loading dock areas would be controlled by gates.

Infrastructure Improvements

Water and Sewer Improvements

The Project would connect to the existing onsite water lines that connect to the existing 30-inch diameter water line in East Avenue M and the 16-inch diameter water line in Avenue L-8. The proposed onsite sewer system would connect to the existing 15-inch diameter sewer line in 30th Street East.

Drainage Improvements

The Project would install new onsite storm drain connections. Stormwater would be collected using a system of catch basins and roof drains that route flows to underground pipes. All stormwater runoff would be conveyed to a proposed detention basin of approximately 11 acres at the north end of the Project site spanning the width of the site from 30th Street East to 35th Street East. Overflow would drain north into an existing City stormwater drainage channel north of Avenue L and east of 30th Street East.

Sidewalk Improvements

The proposed Project would include construction of a sidewalk along the entire Project's property line along Avenue L-8, East Avenue M, 30th Street East and 35th Street East.

3.3 CONSTRUCTION AND PHASING

Construction activities would occur over one phase and include demolition, site preparation, grading, building construction, paving, and architectural coatings. Grading work of soils is expected to result in approximately 412,631 cubic yards (CY) of cut and 412,631 CY of fill soils, and therefore, the site earthwork would be balanced. Construction is expected to occur over 11 months and would occur within the hours allowable by the Palmdale Code Section 8.28.030, which states that construction shall occur only between the hours of 6:30 AM and 8:00 PM, except on Sundays.

3.4 OPERATIONAL CHARACTERISTICS

The Project would operate as speculative industrial warehouses with no cold storage. The Project would include one diesel generator per building. Typical operational characteristics include employees traveling to and from the site, delivery of materials and supplies to the site, and truck loading and unloading. Operation is assumed to be 24 hours a day, 7 days a week.

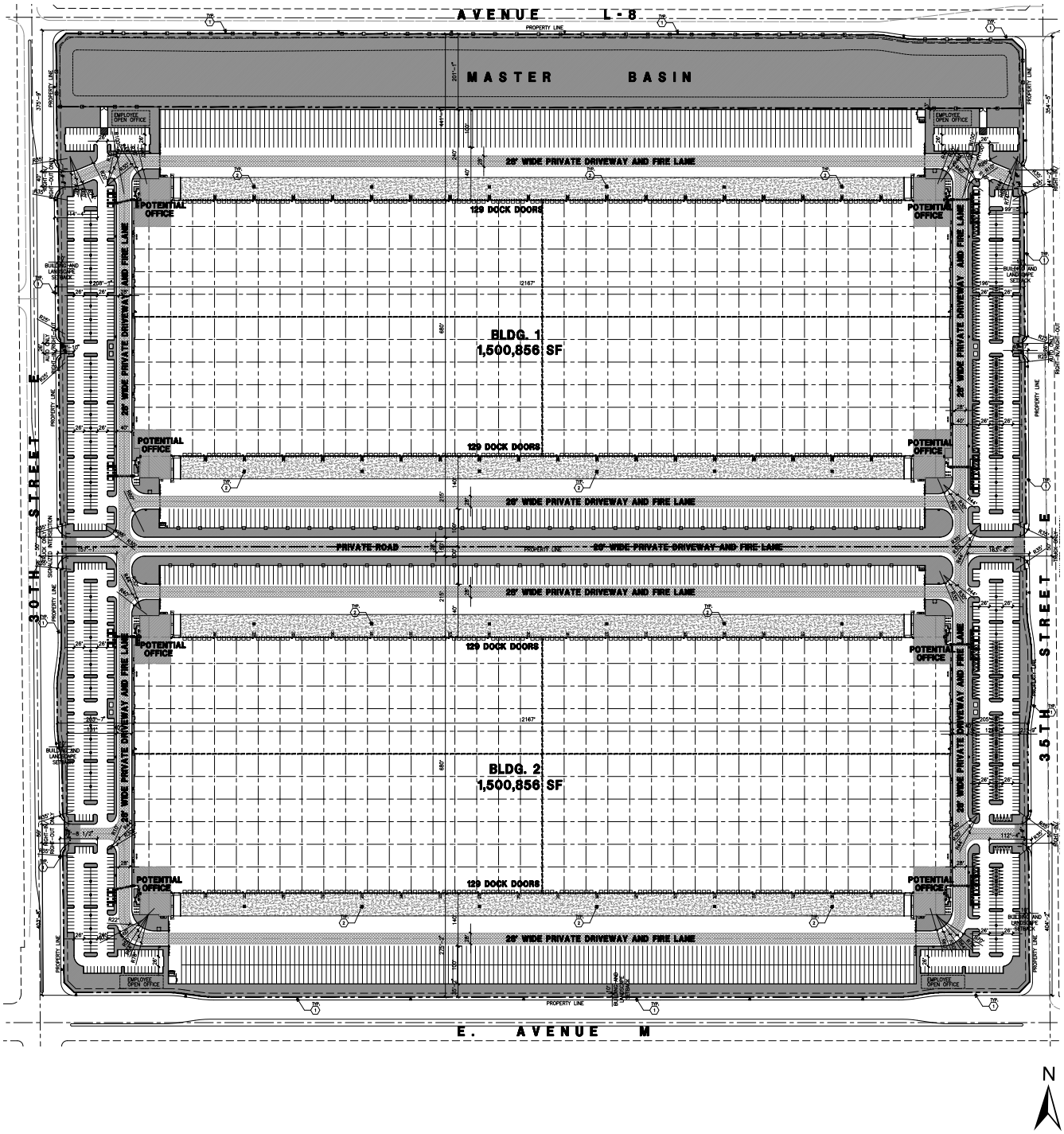
3.5 DISCRETIONARY APPROVALS, PERMITS, AND STUDIES

The City of Palmdale and the following responsible agencies are expected to use the information contained in this Initial Study for consideration of approvals related to and involved in the implementation of this Project. These include, but may not be limited to, the permits and approvals described below.

As part of the proposed Project, the following discretionary actions and subsequent approvals are being requested by the Project proponent:

- Site Plan Review (SPR 23-001)
- Tentative Parcel Map (TPM 84077)
- Conditional Use Permit (CUP 23-003)
- Minor Site Plan Review
- Certification of the Environmental Impact Report
- Approvals and permits necessary to execute the proposed Project, including but not limited to, grading permit, building permit, etc.

Conceptual Site Plan

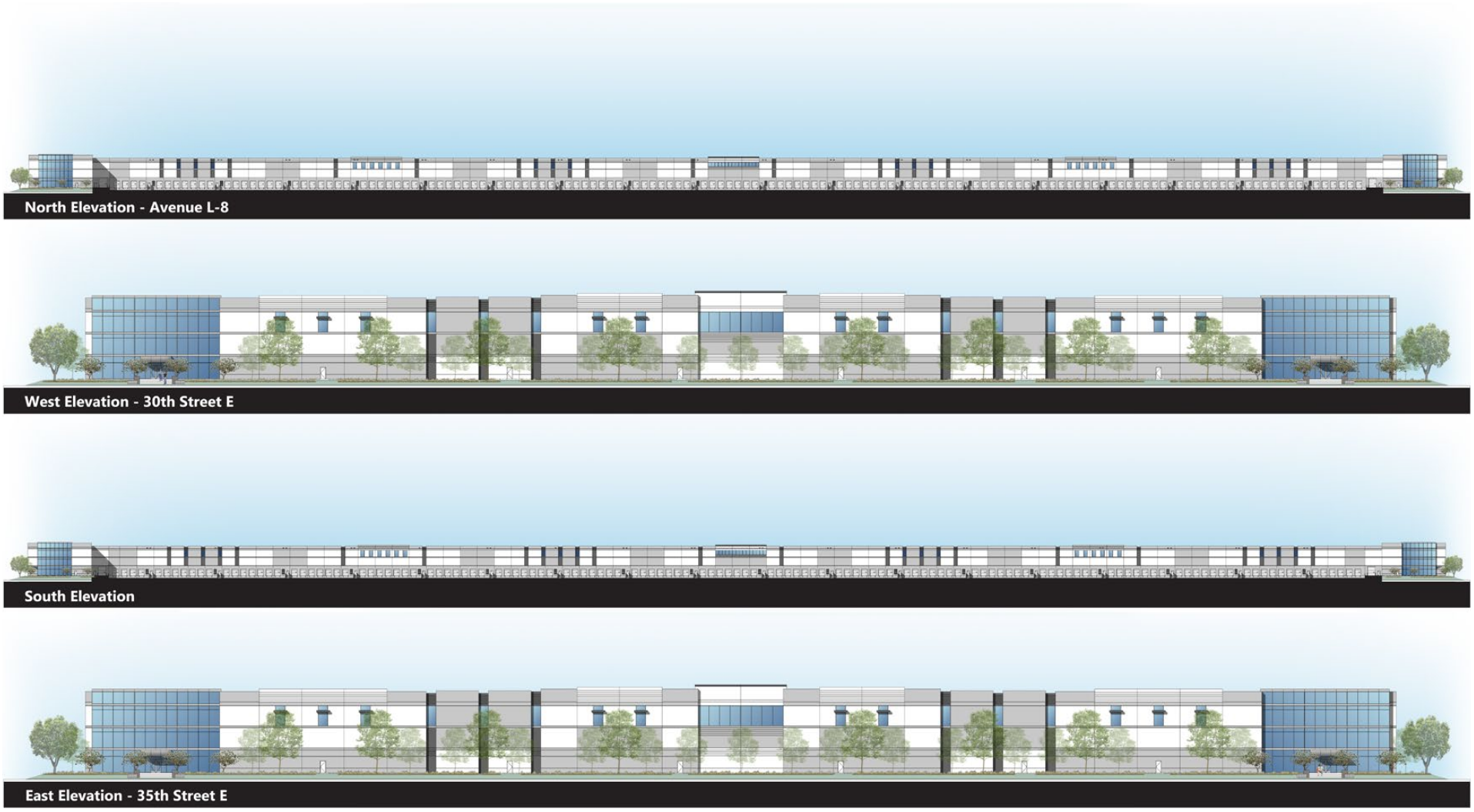


Palmdale Logistics Center
City of Palmdale

Figure 3-1

This page is intentionally left blank.

Elevations 1



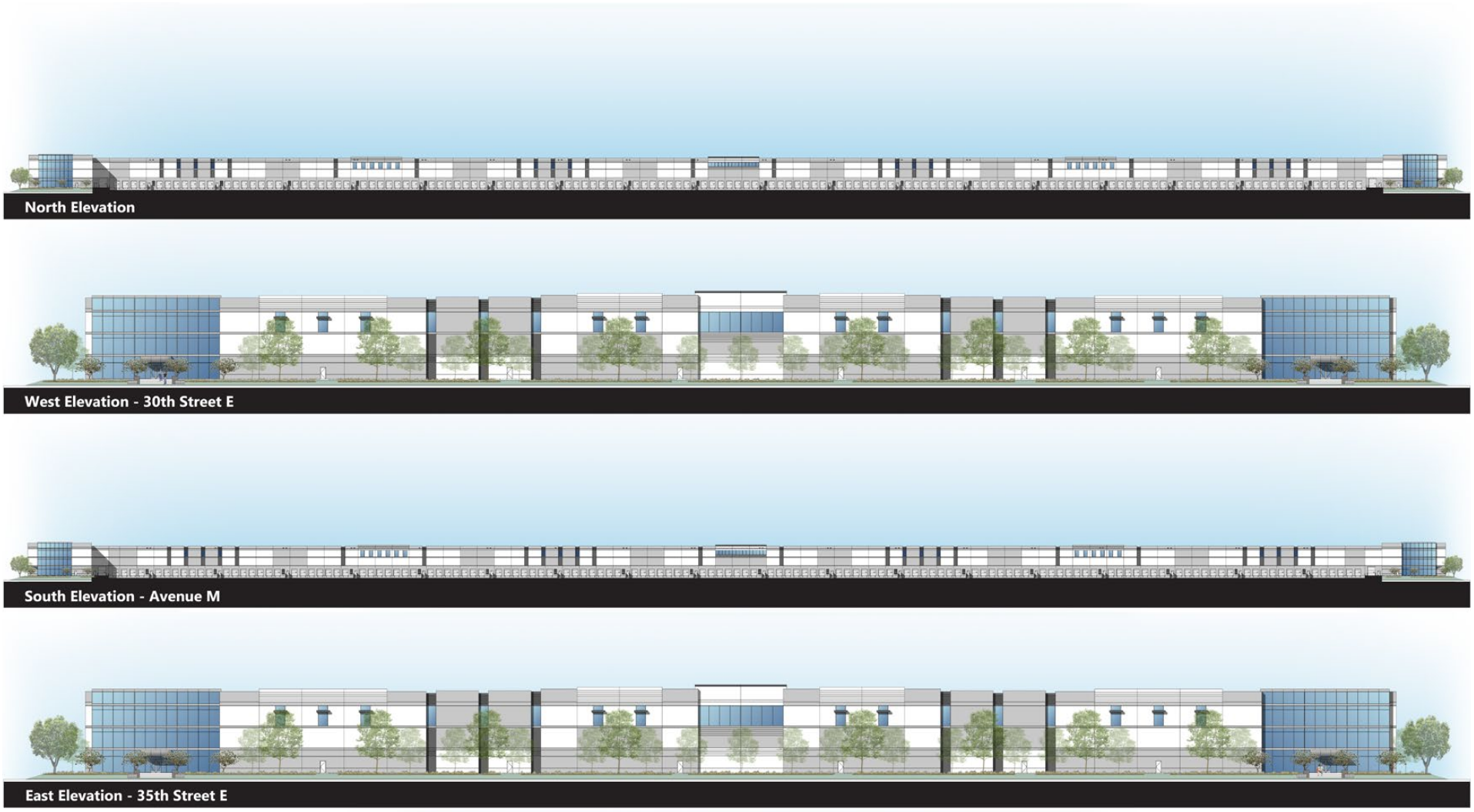
Conceptual Elevations of Building 1 – 42ft clear

Palmdale Logistics Center
City of Palmdale

Figure 3-2a

This page is intentionally left blank.

Elevations 2



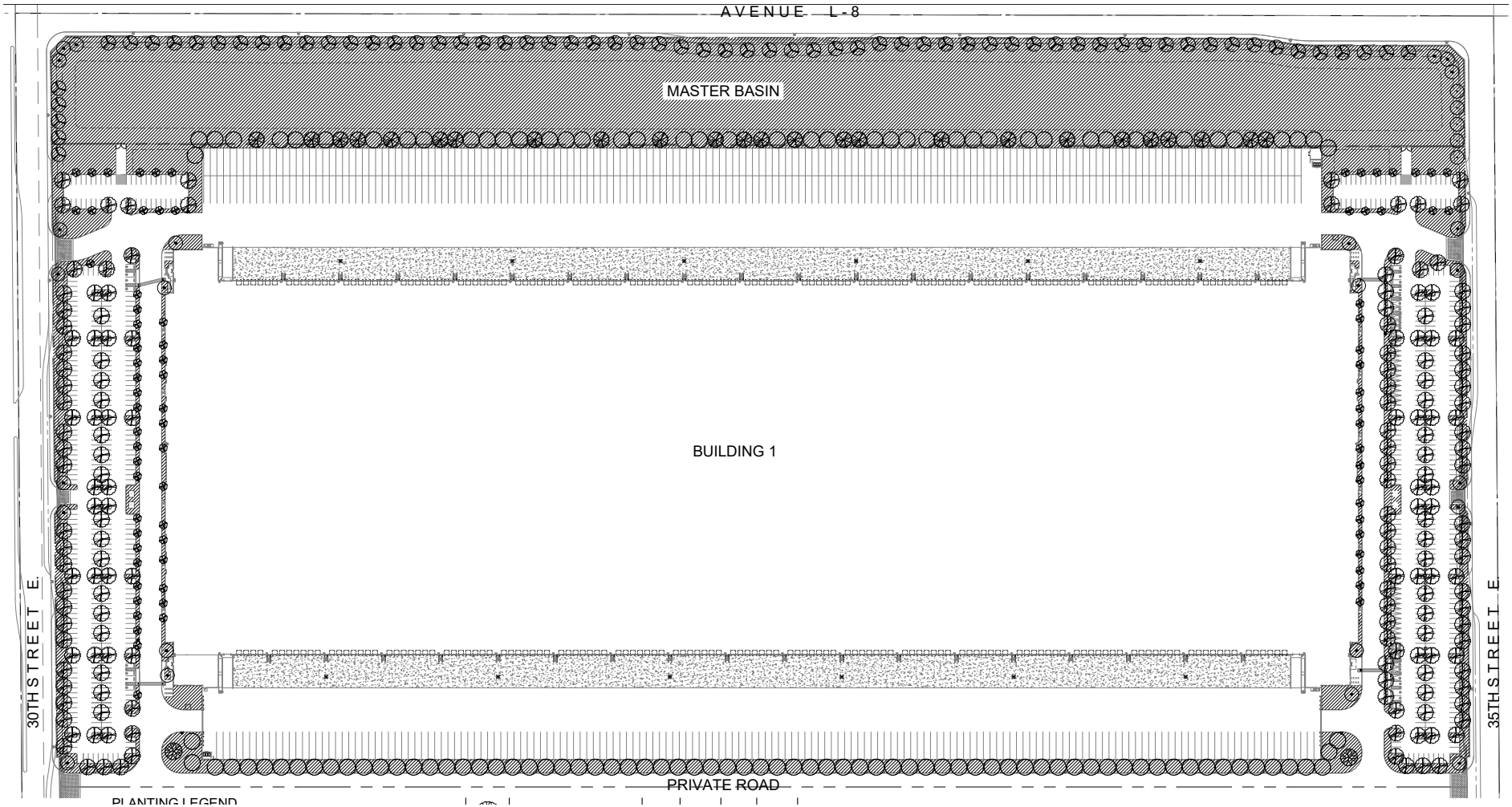
Conceptual Elevations of Building 2 – 42ft clear

Palmdale Logistics Center
City of Palmdale

Figure 3-2b

This page is intentionally left blank.

Landscape Plan 1



PLANTING LEGEND

TREES

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Cercidium 'Desert Museum' Blue Palo Verde	36" Box	43	L	Multi
	Fraxinus greggii Little Leaf Ash	15 Gal	129	L	Standard
	Fraxinus a. 'Raywood' Raywood Ash	24" Box	67	M	Standard
	Gleditsia tricanthos Honey Locust	24" Box	7	M	Standard
	Pinus eldarica Afghan Pine	24" Box	230	L	Standard
	Pistachia chinensis Chinese Pistache	15 Gal	393	L	Standard
	Prosopis chilensis Chilean Mesquite	15 Gal	62	L	Multi
	Quercus ilex Holly Oak	15 Gal	4	L	Standard

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 jasminioides Star Jasmine	1 Gal	24" O.C.	M	
	Tulbaghia violacea Society Garlic	1 Gal	24" O.C.	M	

SHRUBS

SYMBOL	BOTANICAL/COMMON NAME	SIZE		WUCOLS	REMARKS
	Acca sellowiana Pineapple Guava	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. 'Compiacta' 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	

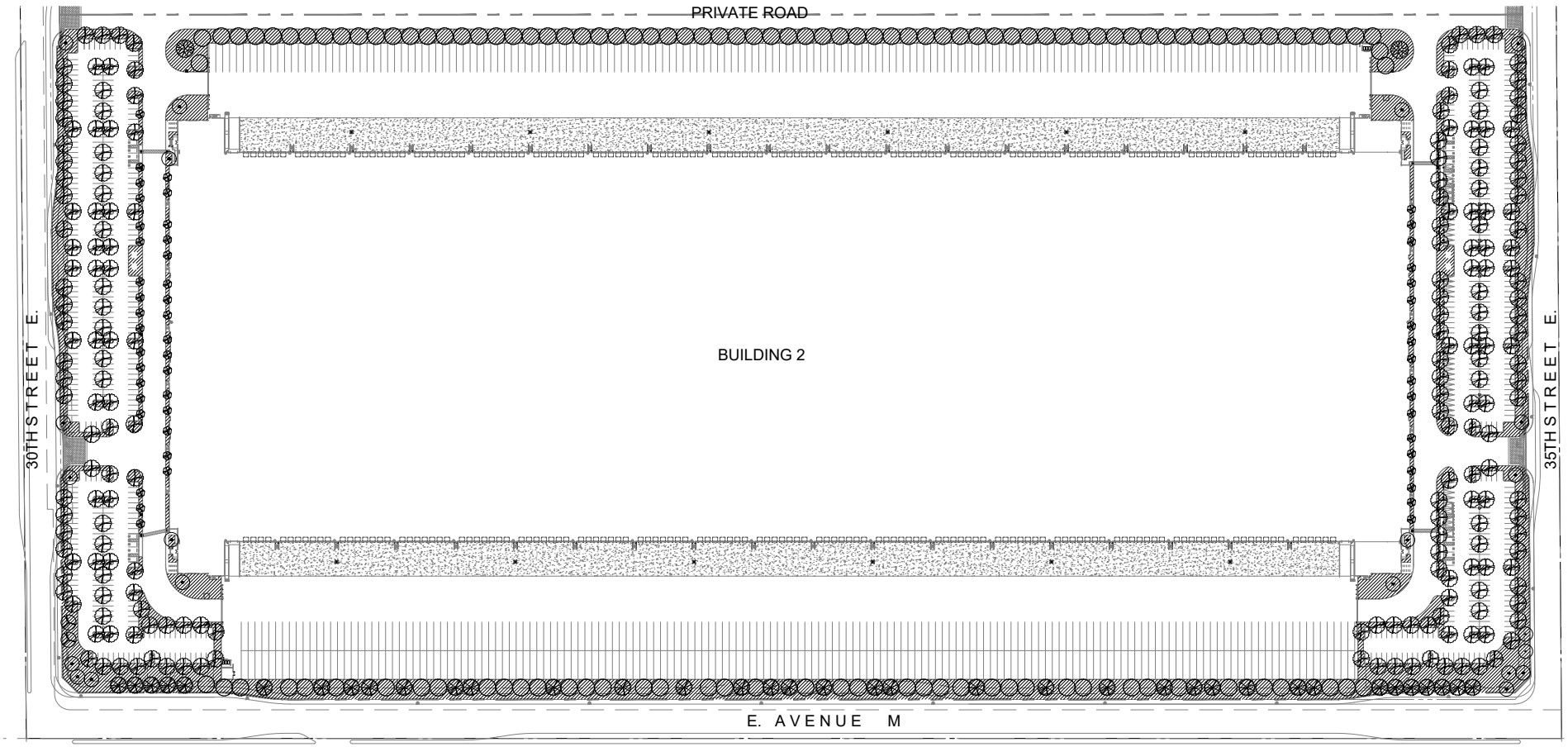
N

Palmdale Logistics Center
City of Palmdale

Figure 3-3a

This page is intentionally left blank.

Landscape Plan 2



TREES

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Cercidium 'Desert Museum' Blue Palo Verde	36" Box	43	L	Multi
	Fraxinus oregoli Little Leaf Ash	15 Gal	129	L	Standard
	Fraxinus a. 'Raywood' Raywood Ash	24" Box	67	M	Standard
	Gleditsia tricanthos Honey Locust	24" Box	7	M	Standard
	Pinus eldarica Afghan Pine	24" Box	230	L	Standard
	Pistachia chinensis Chinese Pistache	15 Gal	393	L	Standard
	Prosopis chilensis Chilean Mesquite	15 Gal	62	L	Multi
	Quercus ilex Holly Oak	15 Gal	4	L	Standard

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 jasminoides Star Jasmine	1 Gal	24" O.C.	M	
	Tulbaghia violacea Society Garlic	1 Gal	24" O.C.	M	

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. 'Compacta' 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 oregoli 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	

N

Palmdale Logistics Center
City of Palmdale

Figure 3-3b

This page is intentionally left blank.

4 ENVIRONMENTAL CHECKLIST

4.1 BACKGROUND

Project Title: Palmdale Logistics Center
Lead Agency: City of Palmdale 38300 Sierra Highway Palmdale, CA 93550
Lead Agency Contact: Brenda Magaña, Planning Division bmagana@cityofpalmdale.org (661) 267-5293
Project Location: The proposed Project site is located within Los Angeles County in the northeastern portion of the City of Palmdale, northeast of the 30th Street East and East Avenue M intersection. Regional access to the Project site is provided by State Route 14 and State Route 138. Local access to the site is provided from 30th Street East, a connector road/Crosstown Street and East Avenue M, a Regional Street. The Project site and surrounding area is shown in Figure 2-1, *Regional Location*, and Figure 2-2, *Local Vicinity*.
Project Sponsor's Name and Address: Transwestern Development Company 3501 Jamboree, Suite 4400 Newport Beach, CA 92660
General Plan and Zoning Designation: The Project site has a General Plan Land Use designation of Industrial (IND) and a zoning designation of Heavy Industrial (HI) as shown on Figure 2-5, *Existing Land Use*. The Industrial (IND) Land Use designation is intended to allow a variety of industrial uses including manufacturing, warehousing distribution and similar uses. The HI zone provides for a range of medium to high intensity industrial uses such as manufacturing, assembly, warehousing, and distribution and allows a maximum Floor Area Ratio (FAR) of 0.5.
Project Description: The proposed Project would include development of two industrial warehouse buildings on a 150.18-acre site. The proposed buildings would be approximately 1,500,856 SF each, inclusive of 1,480,856 SF of warehouse space and 20,000 SF of office space. Additional improvements would include landscaping, sidewalks, utility connections, implementation of stormwater facilities, and pavement of parking areas and drive aisles.
Surrounding Land Uses and Setting: North: Vacant and undeveloped land. (Future vehicle storage facility SPR 19-012 to the northeast) West: 30th Street East followed by a Solar Farm. South: East Avenue M followed by airport logistics. East: Vacant and undeveloped land.
Other Public Agencies Whose Approval is Required: Los Angeles Airport Land Use Commission

4.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below (☒) would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☒	Aesthetics	☒	Agriculture & Forest Resources	☒	Air Quality
☒	Biological Resources	☐	Cultural Resources	☒	Energy
☒	Geology /Soils	☒	Greenhouse Gas Emissions	☒	Hazards & Hazardous Materials
☒	Hydrology / Water Quality	☒	Land Use / Planning	☐	Mineral Resources
☒	Noise	☒	Population / Housing	☒	Public Services
☐	Recreation	☒	Transportation	☒	Tribal Cultural Resources
☒	Utilities / Service Systems	☐	Wildfire	☒	Mandatory Findings of Significances

4.3 DETERMINATION:

On the basis of this initial evaluation

☐ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARACTION will be prepared.

☒ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed Project MAY have a "potentially significant" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier analysis pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Signature	Date
Name and Title	Lead Agency

4.4 EVALUATION OF ENVIRONMENTAL IMPACTS

A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the Project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on Project-specific factors as well as general standards (e.g., the Project will not expose sensitive receptors to pollutants, based on a Project-specific screening analysis).

All answers must take account of the whole action involved, including offsite as well as on-site, cumulative as well as Project-level, indirect as well as direct, and construction as well as operational impacts.

Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

"Negative Declaration: Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analysis," as described in (5) below, may be cross-referenced).

Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. (Guidelines Section 15063 (c)(3)(d)). In this case, a brief discussion should identify the following, as provided by CEQA Guidelines Appendix G, *Evaluation of Environmental Impacts*:

Paragraph 5(a): Earlier Analysis Used. Identify and state where they are available for review.

Paragraph 5 (b): Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

Paragraph 5(c): Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the Project.

Paragraph 6: Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

Paragraph 7: Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

Paragraph 8: This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a Project's environmental effects in whatever format is selected.

Paragraph 9: The analysis of each issue should identify: (a) the significance criteria or threshold used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance.

5 ENVIRONMENTAL ANALYSIS

This section provides evidence to substantiate the conclusions in the environmental checklist.

5.1 AESTHETICS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 nonurbanized 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?	☒	☐	☐	☐

Responses a) c) & d).

Potentially Significant Impact. The City of Palmdale's General Plan does not identify scenic resources however, Conservation Element Goal 2 identifies the following ridgelines as contributors to the aesthetic character of the Antelope Valley: Ritter Ridge, Portal Ridge, Verde Ridge, the Ana Verde Hills, the Sierra Pelona Mountains, and the lower foothills of the San Gabriel Mountains. The 150.18-acre Project site is currently undeveloped and vacant. The Project is located in a sparsely developed area with light industrial uses. The proposed Project would develop the site with two 1,500,856-SF one-story industrial warehouse buildings, which would provide a total of 3,001,712 SF of new warehouse space. Additional improvements would include landscaping, sidewalks, utility connections, implementation of stormwater facilities, and pavement of parking areas and drive aisles. Scenic views from the Project site include distant views of the San Gabriel Mountains, located west, southwest and southeast of the site as well as views of the Mojave Desert to the north. Given that the current viewshed from the Project site consists primarily of open space and San Gabriel Mountains, the Project has the potential to hinder or alter scenic views as well as potentially degrade the existing visual character or quality of public views of the site and its surroundings. Additionally, the proposed Project would introduce new sources of lighting which may adversely affect day or nighttime views in the area. Therefore, impacts related to aesthetics resources will be discussed further in the EIR.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?

No Impact. According to the California Department of Transportation (Caltrans), the Project site is not located within a state scenic highway corridor and implementation of the proposed Project

would not impact scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway corridor. Additionally, the closest scenic highway is Route 2, located approximately 40 miles away. Thus, there are no officially designated State scenic highways adjacent to the Project site. Therefore, the Project would not result in any impacts, and this topic will not be evaluated in the EIR.

5.2 AGRICULTURE AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☒	☐	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☒	☐	☐	☐

Responses a) & e).

Potentially Significant Impact. The Project site is designated as Prime Farmland by the California Department of Conservation's California Important Farmland Finder (FMMP, 2022). Therefore, implementation of the proposed Project would involve the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to urban and non-agricultural uses. As a result, this Project could result in potentially significant impacts to agricultural resources and therefore impacts related to agricultural resources will be further discussed in the EIR.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Williamson Act (California Land Conservation Act of 1965) restricts the use of agricultural and open space lands to farming and ranching by enabling local governments to contract with private landowners for indefinite terms in exchange for reduced property tax assessments.

The Project site is currently zoned as Heavy Industrial (HI), which allows for agricultural support, sales, services, and storage, and horticultural production. However, the HI zone also allows for light manufacturing and processing, heavy manufacturing and processing, and warehousing and distribution. As mentioned previously, the Project would consist of the development of two 1,500,856-SF one-story industrial warehouse buildings, consistent with existing zoning. In addition, development of the Project would not conflict with a Williamson Act contract. As a result, no impact would occur, and this topic will not be evaluated in the EIR.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The Project site is currently vacant and undeveloped. There are no forest lands or resources in proximity to the Project site. Additionally, the Project site is designated Industrial (IND) and is not zoned for forest land, timberland, or TPZ. Therefore, the proposed Project would not result in impacts to forest land, timberland, or TPZ and this topic will not be evaluated in the EIR.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Project site is currently vacant and undeveloped. The Project site contains sparsely scattered shrubs, grasses and vegetation that would not qualify as forest land. In addition, the Project site is zoned as Heavy Industrial (HI), and no forest land exists in the vicinity of the Project site. Therefore, the proposed Project would not result in the loss or conversion of forest land to non-forest use, and this topic will not be evaluated in the EIR.

5.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☒	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☒	☐	☐	☐

Response a) through d).

Potentially Significant Impact. The Project site is located within the Mojave Desert Air Basin (MDAB), in which the Antelope Valley Air Quality Management District is responsible for administration and implementation of the Air Quality Management Plan (AQMP). Development of the Project could result in the production of additional criteria air pollutants which may interfere with, or obstruct, implementation of the AQMP. Development of the proposed Project also involves construction and operational activities that would generate both short-term and long-term criteria pollutant and other emissions. Additionally, localized concentrations of construction-source and operational-source emissions could adversely affect sensitive receptors. During construction, emissions from construction equipment, architectural coatings, and paving activities may generate odors while during operations, trucks and vehicles operating at the loading docks may emit odor. These odors may adversely affect people surrounding the Project site. Further analysis will be required to determine whether the Project would result in potentially significant air quality impacts. A Project-specific Air Quality Impact Analysis will be prepared for the Project as part of the Draft EIR. These impacts will be further analyzed in the EIR.

5.4 BIOLOGICAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
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 Game or US 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?	☐	☐	☐	☒

The following section is based on the General Biological Assessment completed by ELMT Consulting (ELMT) in November 2022 (Appendix A). The biological assessment consisted of a literature review and review of aerial photographs and topographic maps of the Project site and surrounding areas. A query was conducted to identify sensitive species information for the Project area using the CDFW's Biogeographic Information and Observation System (BIOS), California Natural Diversity Data Base (CNDDB), Calflora Database, the U.S. Fish and Wildlife Service (USFWS) Endangered Species Lists, and the California Native Plant Society (CNPS) rare plant lists. ELMT also conducted a field survey of the Project site on November 15, 2022. The findings of the biological assessment are discussed below.

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

Less than Significant Impact. Biological resources on the Project site were evaluated in the Biological Resources Assessment (Appendix A) to analyze potential impacts to candidate, sensitive, and special-status species and associated habitat. Additionally, the Biological Resources Assessment included a field survey conducted on November 15, 2022. The Biological Assessment describes the

Project site as consisting of vacant land that has been heavily impacted by historic land uses associated with agricultural operations, off-road vehicular access, and illegal dumping.

A query with the California Natural Diversity Data Base (CNDDB), the U.S. Fish and Wildlife Service (USFWS) Endangered Species Lists, and the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California was conducted to identify sensitive and special-status species within and surrounding the Project site. According to the CNDDB and CNPS, a total of seven special-status plant species and 11 special-status wildlife species of animals have the potential to occur on or within the vicinity of the Project site. All seven of the identified special status plants were not found to be present on the Project site nor to have suitable habitat present on the Project site. Table BIO-1 below lists these species, their listing status and their presence on site.

Table BIO-1: Sensitive Plant Species with Potential to Occur on Project Site

Species Name	Listing Status	Presence on Project Site
Lancaster milk-vetch (*Astragalus preussii var. laxiflorus*)	Ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
alkali mariposa-lily (*Calochortus striatus*)	Ranked 1B.2 in the CNPS 1B.2 Rare Plant Inventory	Not Present
white pygmy-poppy (*Canbya candida*)	Ranked 4.2 in the CNPS Rare Plant Inventory	Not Present
Parry's spineflower (*Chorizanthe parryi var. parryi*)	Ranked 1B.1 in the CNPS Rare Plant Inventory	Not Present
Mojave spineflower (*Chorizanthe spinosa*)	Ranked 4.2 in the CNPS Rare Plant Inventory	Not Present
golden goodmania (*Goodmania luteola*)	Ranked 4.2 in the CNPS Rare Plant Inventory	Not Present
western Joshua tree (*Yucca brevifolia*)	State Candidate-Endangered Species	Not Present

The field survey did not identify suitable habitat for any of the above plant species present on the Project site. Therefore, implementation of the Project would have a less than significant impact on sensitive plant species.

Of the 11 special-status wildlife species, 10 are listed as state and/or federal Threatened, Endangered, or Candidate. These species, their listing status, and their presence on site are listed in Table BIO-2 below. The field survey did not identify suitable habitat for any of the below animal species present on the Project site, including any suitable habitat for burrowing owl. Therefore, implementation of the Project would have a less than significant impact on sensitive wildlife species.

Table BIO-2: Sensitive Animal Species with Potential to Occur on Project Site

Species Name	Listing Status	Presence on Project Site
Cooper's hawk (*Accipiter cooperii)*	CDFW Watch List	Not Present
northern California legless lizard (*Anniella pulchra*)	CDFW Species of Special Concern	Not Present
burrowing owl (*Athene cunicularia*)	CDFW Species of Special Concern	Not Present
ferruginous hawk (*Buteo regalis*)	CDFW Watch List	Not Present
Swainson's hawk (*Buteo swainsoni*)	State listed Threatened Species	Not Present
mountain plover (*Charadrius montanus*)	CDFW Species of Special Concern	Not Present
loggerhead shrike (*Lanius ludovicianus*)	CDFW Species of Special Concern	Not Present
coast horned lizard (*Phrynosoma blainvillii*)	CDFW Species of Special Concern	Not Present
Le Conte's thrasher (*Toxostoma lecontei*)	CDFW Species of Special Concern	Not Present
Mohave ground squirrel (*Xerospermophilus mohavensis*)	State listed Threatened Species	Not Present

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?

No Impact. Riparian habitats occur along the banks of rivers, streams, or wetland areas. Sensitive natural communities are natural communities that are considered rare in the region by regulatory agencies or are known to provide habitat for sensitive animal or plant species. As described in the General Biological Assessment (Appendix A), the Project site does not contain or support any streams, drainages or riparian habitats. Thus, no impacts related to riparian habitat or other sensitive natural communities identified in local or regional plans would result from Project implementation.

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?

No Impact. Wetlands are defined under the federal Clean Water Act as land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include areas such as swamps, marshes, and bogs. The Project site does not contain natural wetlands (ELMT 2022). Therefore, the Project would not result in impacts to wetlands.

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?

Potentially Significant Impact. Wildlife corridors are areas where wildlife movement is concentrated due to natural or anthropogenic constraints and corridors provide access to resources such as food, water, and shelter. Animals use these corridors to move between different habitats and provide avenues for wildlife dispersal, migration, and contact between other populations. The Project site consists of flat, vacant land that has been heavily disturbed and historically used for agricultural practices. Additionally, the surrounding area is partially developed and highly fragmented from any wildlife connectivity areas. However, the Project site contains some shrubs that can be utilized by nesting birds during the nesting bird season of February 1 through August 31. As such, impacts related to the movement of any native resident or migratory fish or wildlife species could be potentially significant and will be further evaluated in the EIR.

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

No Impact. Implementation of the Project is subject to all applicable federal, State, and local policies and regulations related to the protection of biological resources and tree preservation. Additionally, the Project is required to comply with the Joshua Tree and Native Desert Vegetation Preservation Standards and Mitigation Fees as listed in Section 14.04 of the City Municipal Code. No trees exist on the Project site; therefore, the Project will not be subject to the City of Palmdale's tree preservation policy. Implementation of the proposed Project would not conflict with any local policies or ordinances protecting biological resources therefore the Project would have no impact on local tree policies.

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?

No Impact. The Project is located within the California Desert Conservation Area Plan planning area, which includes the West Mojave Plan (Palmdale General Plan) and is administered by the Bureau of Land Management (BLM). The West Mojave Plan spans 9.4 million acres, including most of Palmdale, and is dedicated to conserving numerous plants, animals, and natural communities across the Mojave. The Project would not conflict with the conservation criteria associated with the California Desert Conservation Area Plan. The California Desert Conservation Area Plan is applicable to the management of public lands. The Project site is privately owned, and therefore, the plan would not apply. The Project would result in no impact on an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Existing Plans, Programs, or Policies

None.

5.5 CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

A Phase I Cultural Resources Assessment was conducted by Brian F. Smith and Associates (BFSA) in January 2022 for the proposed Project (see Appendix B). Discussion from the assessment has been incorporated into the analysis below.

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

No Impact. According to the State CEQA Guidelines, a historical resource is defined as something that meets one or more of the following criteria: (1) listed in, or determined eligible for listing in, the California Register of Historical Resources; (2) listed in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k); (3) identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g); or (4) determined to be a historical resource by the Project's Lead Agency.

The Project site is currently vacant and undeveloped. Search results from the Phase I Cultural Report completed for the Project indicated that a total of 32 cultural resources have been recorded within a one-mile radius of the Project, none of which are within the Project site. Prior to the arrival of homesteaders in the Antelope Valley, the foothills of the Palmdale area were occupied by Native American and Spanish families, but the review of historic aerial photographs indicates that no historic structures or homesteads have ever existed within the Project boundaries. Additionally, a field survey was conducted on December 22 and 23, 2021, in which no cultural resources were identified within the Project site. Therefore, the Project site does not contain a historical resource as defined in §15064.5, and the Project would result in no impact.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less than Significant Impact. The Project site is currently undeveloped and vacant and has not been previously disturbed. Project construction would require excavation at depths of approximately seven feet. As part of the Phase I Cultural Resources Assessment, an archaeological records search for the Project site and surrounding area was conducted through the South Central Coastal Informational Center at California State University Fullerton on December 21, 2021. The records search indicated that 21 previous studies have been conducted within a mile of the Project site and 32 resources have been identified within a mile of the Project site, however, no resources have been recorded within the boundaries of the Project site or

immediate vicinity. Prior to the arrival of homesteaders in the Antelope Valley, the foothills of the Palmdale area were occupied by Native American and Spanish families, but the review of historic aerial photographs indicates that no historic structures or homesteads have ever existed within the Project boundaries. Additionally, a field survey was conducted on December 22 and 23, 2021, in which no cultural resources were identified within the Project site. Based upon the results of the cultural resources study and field survey, the potential to encounter unknown archeological resources was determined to be minimal. Therefore, the Project would not result in impacts to archaeological resources pursuant to § 15064.5.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant Impact. The Project site has not been previously disturbed, as described above, and has not been previously used as a cemetery. It is not anticipated that implementation of the proposed Project would result in the disturbance of human remains. Existing regulation under the California Health and Safety Code, included as PPP CUL-1, outlines the procedures to undertake if human remains are found on the Project site. In the event of inadvertent discovery of human remains during Project construction, the State Health and Safety Code Section 7050.5 states that no further disturbance may occur in the vicinity of the body until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. Compliance with existing regulations would ensure impacts related to potential disturbance of human remains would be less than significant.

Existing Plans, Programs, or Policies

PPP CUL-1: Human Remains. Should human remains be discovered during Project construction, the Project will be required to comply with State Health and Safety Code Section 7050.5, which states that no further disturbance may occur in the vicinity of the body until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine the identity of and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD must complete the inspection within 48 hours of notification by the NAHC.

5.6 ENERGY

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☒	☐	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☒	☐	☐	☐

Responses a) and b).

Potentially Significant Impact. The Project site is currently undeveloped and vacant. The proposed Project would develop the site with two 1,500,856-SF one-story industrial warehouse buildings, which would provide a total of 3,001,712 SF of new warehouse space. Additional improvements would include landscaping, sidewalks, utility connections, implementation of stormwater facilities, and pavement of parking areas and drive aisles. Project construction would require consumption of energy resources through operation of construction vehicles and equipment, as well as worker vehicles. Additionally, Project operation of the proposed industrial facility would require consumption of energy resources to power the facility, as well as fuel trucks and worker vehicles. The Project could result in wasteful, inefficient, or unnecessary consumption of energy resources and/or conflict with a state or local energy plan. An energy study would be conducted to determine the significance of the Project's energy consumption and to identify mitigation measures as appropriate to reduce potential impacts. Therefore, the Project could result in potentially significant impacts to energy resources and will be discussed further in the EIR.

5.7 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to 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?	☐	☐	☐	☒
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 offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☒	☐	☐	☐

a) Expose people or structures to 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?

Less Than Significant Impact. A Preliminary Geotechnical Investigation was conducted by Southern California Geotechnical (SCG) in January 2022 for the Project site (see Appendix C). As described in the Geotechnical Investigation, the Project site is within a seismically active zone. Because the Project site is in a seismically active region of Southern California, occasional seismic ground shaking is likely to occur within the lifetime of the proposed Project. However, according to the California Department of Conservation, the California Geologic Survey, the Project site is not within an Alquist-Priolo Earthquake Fault Zone. The closest active fault zone is the Little Rock Fault in the San Andreas Fault Zone, which is located approximately 6.5 miles southwest of the site. Therefore, the Project would result in less than significant impacts on exposure of people or structures to risk of loss, injury,

or death involving rupture of an earthquake fault on a state-designated Alquist-Priolo Earthquake Fault Zone.

ii. Strong seismic ground shaking?

Less Than Significant Impact. As mentioned previously, the Project site is located within a seismically active region of Southern California. The closest active fault is the Little Rock Fault in the San Andreas Fault Zone, which is located approximately 6.5 miles southwest of the site. Thus, strong seismic ground shaking has a high likelihood of occurring at the site. The amount of motion can vary depending upon the distance to the fault, the magnitude of the earthquake, and the local geology. Greater movement can be expected at sites located closer to an earthquake epicenter, which consist of poorly consolidated material such as alluvium, and in response to an earthquake of great magnitude.

Structures built in the city are required to be built in compliance with the California Building Code (CBC [California Code of Regulations, Title 24, Part 2]), included in the Municipal Code as Chapter 8.04.201. Compliance with the CBC would ensure earthquake safety based on factors including occupancy type, the types of soils onsite, and the probable strength of the ground motion. Compliance with the CBC would include the incorporation of: 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structures so that it would withstand the effects of strong ground shaking. Therefore, with CBC compliance, the proposed Project would not expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking more than other developments in Southern California. Impacts would therefore be less than significant.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction occurs when soils are transformed from a solid state into a liquefied state due to increased pressure from a seismic event. Liquefaction is most likely to occur with soils of higher porosity (i.e., clay) becoming saturated and subjected to seismic activity. Areas where the groundwater table is within approximately 50 feet below ground surface are also more susceptible to liquefaction. The Geotechnical Investigation (included as Appendix C) conducted for the Project site found that groundwater underlying the site is at a depth of greater than 300 feet. Furthermore, according to the City of Palmdale General Plan Safety Element Figure 13.2: *Palmdale Liquefaction Risk*, the Project site is not located in an area mapped as a seismic hazard liquefaction zone. Therefore, the soils underlying the Project site would not be considered at risk for liquefaction. Additionally, all structures built in the City are required to be developed in compliance with the CBC (California Code of Regulations, Title 24, Part 2) adopted under Chapter 8.04.201of the City Code. The Project will defer to the most recent building code, the 2022 CBC, effective January 1, 2023 to comply with state law. Compliance with the CBC is included as a condition of approval and verified by the City's review process which would ensure that impacts related to liquefaction would be less than significant.

iv. Landslides?

No Impact. Landslides are the downhill movement of masses of earth and rock and are often associated with earthquakes; but other factors, such as the slope, moisture content of the soil, composition of the subsurface geology, heavy rains, and improper grading can influence the occurrence of landslides. The elevation of the Project site ranges between 2,452 feet above mean

sea-level to 2,465 feet above mean sea-level (BFSA 2022). The Project site and the adjacent parcels are flat and do not contain any hills or steep slopes, and no landslides on or adjacent to the Project site would occur. Therefore, the Project would have no impact on landslides.

b) Result in soil erosion or the loss of topsoil?

Less Than Significant Impact. The proposed Project includes the construction of a new industrial building consistent with the land use designation of the Project site. The Project would involve earthmoving activities that would disturb soil and leave exposed soil on the ground surface. As such, the proposed Project would be required to comply with the City's grading standards and erosion control measures, included in Municipal Code Section 8.04.265. To comply, all graded areas must be protected from erosion through slope stabilization methods such as erosion-control blankets, soil stabilizers or other means as approved by the City.

The proposed Project would also be subject to the National Pollution Discharge Elimination System (NPDES) permitting regulations, including implementation of a Stormwater Pollution Prevention Plan (SWPPP) and associated Best Management Practices (BMPs) which would be implemented by PPP WQ-1. BMPs may include a combination of mitigative construction methods to reduce, prevent, or minimize soil erosion from Project-related grading and construction activities. Additionally, the Construction General Permit (CGP; Order No. R8-2002-0011) issued by the State Water Resources Control Board (SWRCB), regulates construction activities to minimize water pollution, including sediment. With compliance of City Municipal Code stormwater management requirements, Regional Water Quality Control Board (RWQCB) SWPPP requirements, and installation of BMPs ensured by PPP WQ-1, construction impacts related to erosion and loss of topsoil would be less than significant.

The proposed Project includes installation of landscaping adjacent to the warehouse buildings and throughout the proposed parking areas. With this landscaping, areas of loose topsoil that could erode by wind or water would not exist upon operation of the proposed Project. In addition, implementation of PPP WQ-2 requiring a Water Quality Management Plan (WQMP) would ensure that RWQCB requirements and appropriate operational BMPs would be implemented to minimize or eliminate the potential for soil erosion or loss of topsoil to occur. With implementation of existing requirements and PPP WQ-2, impacts related to substantial soil erosion or loss of topsoil would be less than significant.

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 offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact. As described above, Project site elevations range between 2,452 feet above mean sea-level to 2,465 feet above mean sea-level (BFSA 2022). The Project site is relatively flat and does not contain nor is adjacent to any significant slope or hillside area. The Project would not create slopes. Thus, on or off-site landslides would not occur from implementation of the Project.

Lateral spreading is a type of liquefaction induced ground failure associated with the lateral displacement of surficial blocks of sediment resulting from liquefaction in a subsurface layer. Once liquefaction transforms the subsurface layer into a fluid mass, gravity plus the earthquake inertial forces may cause the mass to move downslope towards a free face (such as a river channel or an embankment). Lateral spreading may cause large horizontal displacements and such movement

typically damages pipelines, utilities, bridges, and structures. Since the Project site is relatively flat and constrained laterally, earthquake-induced lateral spreading and liquefaction would likely not occur on the site.

Subsidence is a general lowering of the ground surface over a large area that is generally attributed to lowering of the ground water levels within a groundwater basin. Localized or focal subsidence or settlement of the ground can occur as a result of an earthquake motion in an area where groundwater in basin is lowered. The depth of groundwater underlying the site was found to be at a depth of greater than 300 feet (SCG 2022). The Project would not pump water from the Project area, however, slight subsidence is anticipated as a result of soil excavation and compaction. Thus, impacts related to subsidence would be less than significant.

As described previously, compliance with the requirements of the CBC and related recommendations in the Geotechnical Investigation related to compaction of soils and development of foundations is required as part of the building plan check and development permitting process, and would reduce potential impacts related to lateral spreading, liquefaction, subsidence, and ground collapse to a less than significant level.

d) Be located on expansive soil, as defined in in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant Impact. Expansive soils contain certain types of clay minerals that shrink or well as the moisture content changes; the shrinking or swelling can shift, crack, or break structures built on such soils. Arid or semiarid areas with seasonal changes of soil moisture experiences, such as southern California, have a higher potential of expansive soils than areas with higher rainfall and more constant soil moisture.

The Geotechnical Investigation, included as Appendix C, found the near-surface soils of the Project site consist of silty sands, sandy silts and fine sands with occasional thin layers of clayey sands, sandy clays and clayey silts. Based on preliminary field investigation and laboratory testing, on-site soils possess a "very low" to "low" expansion potential (expansion index of 5 and 35) (SCG 2022). In addition, as described previously, compliance with the CBC would require specific engineering design recommendations be incorporated into grading plans and building specifications as a condition of construction permit approval to ensure that Project structures would withstand the effects of related to ground movement, including expansive soils. Therefore, impacts would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed Project would connect to existing Los Angeles County Sewer District (LACSD) 15-inch sewer line in 30th Street East, and the Project would not use septic tanks or alternative wastewater disposal systems. As a result, no impacts related to septic tanks or alternative wastewater disposal systems would occur from implementation of the proposed Project.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Potentially Significant Impact. Construction of the proposed Project would include earthmoving activities, such as grading, which have the potential to disturb previously unknown paleontological resources. A paleontological assessment for the Project site was conducted by Brian F. Smith and Associates, Inc. (BFSA) in January 2022 (Appendix C). The paleontological assessment included a locality records search, geological map and literature reviews, and a field project survey. The locality search and the field survey did not identify paleontological resources within the Project site boundaries (BFSA 2022). Underlying soils of the Project site were identified as Holocene to late Pleistocene-aged young alluvial fan deposits (Qyf). Holocene alluvium soils are considered to have low paleontological potential; however, construction activities for the proposed Project may impact underlying Pleistocene-aged young alluvial fan deposits at various depths with the Project site.

The potential for encountering significant paleontological resources within the Project site is considered moderate to high due to the presence of sensitive Pleistocene-aged young alluvial fan deposits within the vicinity of the Project. As such, potential impacts to undiscovered paleontological resources would be potentially significant and this topic will be further addressed in the EIR.

Plans, Programs, or Policies (PPPs)

PPP WQ-1: Prior to grading permit issuance, the project developer shall have a Stormwater Pollution Prevention Plan (SWPPP) prepared by a QSD (Qualified SWPPP Developer) pursuant to the Municipal Code Section 8.04.265. The SWPPP shall incorporate all necessary Best Management Practices (BMPs) and other City requirements to comply with the National Pollutant Discharge Elimination System (NPDES) requirements to limit the potential of polluted runoff during construction activities. Project contractors shall be required to ensure compliance with the SWPPP and permit periodic inspection of the construction site by City of Palmdale staff or its designee to confirm compliance.

PPP WQ-2: Prior to grading permit issuance, the project developer shall have a Water Quality Management Plan (WQMP) approved by the City for implementation. The Project shall comply with the City's Municipal Code Section 8.04.265 and the Municipal Separate Storm Sewer System (MS4) permit requirements in effect for the Regional Water Quality Control Board (RWQCB) at the time of grading permit to control discharges of sediments and other pollutants during operations of the Project.

Mitigation Measures

None.

5.8 GREENHOUSE GAS EMISSIONS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

Responses a) through b).

Potentially Significant Impact. Global climate change is not confined to a particular Project area. A typical Project does not generate enough greenhouse gas (GHG) emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact. GHGs are produced by both direct and indirect emissions sources. Direct emissions include consumption of natural gas, heating and cooling of buildings, landscaping activities and other equipment used directly by land uses. Indirect emissions include the consumption of fossil fuels for vehicle trips, electricity generation, water usage, and solid waste disposal.

Implementation of the proposed Project would generate GHG emissions during both construction and operation of the development. During construction, sources of GHG emissions include operation of construction equipment and worker commutes to and from the Project site. During Project operation, the Project would generate GHG emissions from vehicular trips; water, natural gas, and electricity consumption; and solid waste generation. The Project has the potential to generate a substantial increase in GHG emissions. A Project-specific GHG study would be conducted to determine the significance of the Project's GHG emissions and identify mitigation measures as appropriate to reduce potential impacts. Therefore, the Project could result in potentially significant GHG impacts, and this topic will be discussed further in the EIR.

5.9 HAZARDS AND HAZARDOUS MATERIALS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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, would it create a significant hazard to the public or the environment?	☒	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☒	☐	☐	☐
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☒	☐	☐	☐
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☒	☐	☐	☐

Responses a) through h).

Potentially Significant Impact. The 150.18-acre Project site is currently undeveloped and vacant. The Project site could contain unknown hazardous materials, substances, or waste that could result in a significant hazard to the public or the environment if disturbed during Project construction or operation. The proposed Project would develop the site with two 1,500,856-SF one-story industrial warehouse buildings, which would provide a total of 3,001,712 SF of new warehouse space. Construction and long-term operation of the Project would require transport, use, and disposal of hazardous materials and wastes. A Project-specific Phase I Environmental Site Assessment study would be conducted to determine the potential for impacts related to hazards and hazardous materials and identify mitigation measures as appropriate to reduce potential impacts. Construction and operation of the Project would result in potentially significant impacts to workers and land uses

surrounding the Project site. Therefore, impacts related to hazards and hazardous materials will be analyzed in the EIR.

5.10 HYDROLOGY AND WATER QUALITY

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water 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?	☒	☐	☐	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☒	☐	☐	☐

Responses a) through e).

Potentially Significant Impact. The 150.18-acre Project site is currently undeveloped and vacant. The proposed Project would develop the site with two 1,500,856-SF one-story industrial warehouse buildings, which would provide a total of 3,001,712 SF of new warehouse space. Additional improvements would include landscaping, sidewalks, utility connections, implementation of stormwater facilities, and pavement of parking areas and drive aisles.

Construction of the Project would require grading and excavation of soils, which would loosen sediment, and then have the potential to mix with surface water runoff and degrade water quality. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and transport of sediment downstream compared to existing conditions.

Additionally, the proposed Project would operate an industrial warehouse facility, which would introduce the potential for pollutants such as chemicals from cleaners, pesticides and sediment from

landscaping, trash and debris, and oil and grease from vehicles and trucks. These pollutants could potentially discharge into surface waters and result in degradation of water quality. Development of the Project site would introduce new impervious surfaces, which could result in impacts to the site's existing drainage pattern, the rate and volume of stormwater runoff, and flooding conditions. Such changes could exceed the capacity of existing and planned stormwater drainage systems. Construction and operation of the Project could result in potentially significant impacts to hydrology and water quality. Therefore, impacts related to hydrology and water quality will be addressed in the EIR.

5.11 LAND USE AND PLANNING

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐

a) Physically divide an established community?

No Impact. The Project would not divide an established community. The 150.18-acre Project site is currently undeveloped and vacant. Currently, the Project site is designated as Industrial (IND) and zoned as Heavy Industrial (HI). The surrounding land uses of the Project site include vacant, undeveloped land to the North, South, East and a solar farm to the west. Therefore, the Project would not have an impact on an established community and this topic will not be evaluated in the EIR.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Potentially Significant Impact. The proposed Project would develop the site with two 1,500,856-SF one-story industrial warehouse buildings, which would provide a total of 3,001,712 SF of new warehouse space. Currently, the Project site is designated as IND and zoned as HI. The IND Land Use designation is intended to allow a variety of industrial uses including manufacturing, warehousing distribution, and similar uses. The HI zone provides for a range of medium to high intensity industrial uses such as manufacturing, assembly, warehousing, and distribution and allows a maximum Floor Area Ratio (FAR) of 0.5. Both buildings would provide 1,480,856 SF of warehouse space, a 10,000 SF of mezzanine office space, and 10,000 SF of ground floor office space each. Building 1 covers 2,999,352 SF of the total site area resulting in a FAR of 0.50 and Building 2 covers 3,067,655 SF of the total site area resulting in a FAR of 0.49 consistent with the maximum FAR requirement of 0.5.

However, the Project could result in other impacts that conflict with a land use plan, policy, or regulation adopted by the City or other local or state agency which is applicable to the Project. Therefore, this topic will be further evaluated in the EIR.

5.12 MINERAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The proposed Project would develop the site with two 1,500,856-SF one-story industrial warehouse buildings, which would provide a total of 3,001,712 SF of new warehouse space. According to the Palmdale General Plan Land Use and Community Design Element, the City of Palmdale has limited the extraction and processing of mineral resources such as sand, gravel and decomposed granite to Mineral Resource Zone 2 areas designated by the State Division of Mines and Geology. The Project site is not located in a designated Mineral Resource Extraction (Mineral Resource Zone 2) area. As a result, no impacts to mineral resources would occur and this topic will not be evaluated in the EIR.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on the general plan, specific plan or other land use plan?

No Impact. As stated above, the Project site is not within an area, designated by the State Division of Mines and Geology or City of Palmdale, of a locally important mineral resource and is not planned for future extraction of mineral resources. Therefore, impacts related to known mineral resources would not occur from implementation of the Project, and this topic will not be evaluated in the EIR.

5.13 NOISE

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 groundborne vibration or groundborne 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?	☒	☐	☐	☐

Responses a) through c).

Potentially Significant Impact. The Project site is undeveloped and vacant. The proposed Project would develop the site with two 1,500,856-SF one-story industrial warehouse buildings, which would provide a total of 3,001,712 SF of new warehouse space. Project-related short-term construction activities, as well as long-term operational activities may expose persons in the vicinity to noise levels in excess of standards established by City. Additionally, ground borne vibration and noise level increases would be associated with construction activities at the Project site, including demolition, grading, and building construction, and with associated hardscape and landscape improvements. The Project site is located approximately 1.5 miles from the Palmdale Regional Airport and thus is within the 2-mile radius in which excessive noise levels could have potentially significant impacts to people residing or working in the Project area. A noise impact study would be conducted to determine the significance of noise impacts as a result of the Project and identify mitigation measures as appropriate to reduce potential impacts. The Project could result in potentially significant impacts; therefore, impacts related to noise will be discussed further in the EIR.

5.14 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☒	☐	☐	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) Induce substantial unplanned population growth in an area, either directly or indirectly?

Potentially Significant Impact. The Project would consist of the construction of two 1,500,856-SF one-story industrial warehouse buildings, each on a proposed parcel, totaling 3,001,712 square feet (SF). A detention basin of approximately 11 acres for stormwater collection would also be constructed in the northern portion of the site. Additional improvements to the Project site would include parking, associated infrastructure, and landscape corresponding with each building.

The development of the Project would result in an increase in short-term and long-term employment. Construction of the Project would result in a temporary increased demand for construction workers and Project operations would result in increased demand for long-term employees. As such the Project could require the relocation of employees from the larger region to the surrounding area to accommodate labor demand facilitating the potential development of housing. Therefore, the Project could result in potentially significant impacts related to unplanned population growth and this topic will be further discussed in the EIR.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project site is currently vacant and undeveloped though it has been previously disturbed. No habitable structures exist on the Project site nor are they currently planned for future development of residential uses. Therefore, no impacts would occur, and this topic will not be evaluated in the EIR.

5.15 PUBLIC SERVICES

a) Would the project 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:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	☒	☐	☐	☐
Police protection?	☒	☐	☐	☐
Schools?	☒	☐	☐	☐
Parks?	☒	☐	☐	☐
Other public facilities?	☒	☐	☐	☐

a) Result in substantial adverse physical impacts associated with the provision of 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:

Potentially Significant Impact. The Project would consist of the construction of two 1,500,856-SF one-story industrial warehouse buildings, each on a proposed parcel, totaling 3,001,712 square feet (SF). Additional improvements to the Project site would include parking, associated infrastructure, and landscape corresponding with each building. A detention basin of approximately 11 acres for stormwater collection would also be constructed in the northern portion of the site.

Implementation of the proposed Project would generate new short term and long-term employees as discussed under Section 5.14, *Population and Housing*. As such, the Project could require the relocation of employees from the larger region to the surrounding area to accommodate labor demand facilitating the potential development of housing and additional need for public services within the City. As a result, the demand for, and use of, public services and other public facilities could increase and impacts on acceptable service ratios, response times, and other performance objectives could be potentially significant. Therefore, impacts related to public services will be further discussed in the EIR.

5.16 RECREATION

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would be accelerated?

Less Than Significant Impact. The 150.18-acre Project site is currently undeveloped and vacant. The proposed Project would develop the site with two 1,500,856-SF one-story industrial warehouse buildings, which would provide a total of 3,001,712 SF of new warehouse space. Additional improvements would include landscaping, sidewalks, utility connections, implementation of stormwater facilities, and pavement of parking areas and drive aisles. The closest recreational facility is Lancaster National Soccer Center approximately 0.8 miles north of the Project site located in the City of Lancaster. The closest park within the City of Palmdale however, is William J. McAdam Park, located approximately 8.8 miles south of the Project site. However, because the Project is industrial in nature, the Project would not generate an increase in the use of parks. Although new employees may occasionally use existing local parks, neighborhood and regional parks, employees' limited use would not result in deterioration to facilities such that the construction or expansion of recreational facilities would be necessary. As such, impacts related to the physical deterioration of existing recreation parks or facilities would be less than significant and this topic will not be addressed in the EIR.

b) Require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less Than Significant Impact. The proposed Project would construct a new industrial warehouse facility. As described above, the Project would not result in the use of recreational facilities substantial enough to cause deterioration such that the construction or expansion of recreational facilities would be necessary. Therefore, there would be less than significant impacts associated with recreational facilities and this topic will not be discussed in the EIR.

5.17 TRANSPORTATION

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 § 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?	☒	☐	☐	☐

Responses a) through d).

Potentially Significant Impact. The 150.18-acre Project site is currently undeveloped and vacant. The proposed Project would develop the site with two 1,500,856-SF one-story industrial warehouse buildings, which would provide a total of 3,001,712 SF of new warehouse space. Additional improvements would include landscaping, sidewalks, utility connections, implementation of stormwater facilities, and pavement of parking areas and drive aisles. Development of the Project site with new land uses would result in an increase in vehicle trips from worker vehicles, which may conflict with local plans, policies, or ordinances. A vehicle miles traveled (VMT) assessment will be prepared for the Project to determine potential impacts related to VMT. The Project would include new driveways and transportation improvements that could introduce new geometric design features that may be considered hazardous or incompatible with existing infrastructure or uses. Additionally, the Project would result in on and offsite construction activities that could temporarily obstruct emergency access to the site and surrounding vicinity. The Project could result in potentially significant impacts; therefore, impacts related to transportation will be further addressed in the EIR.

5.18 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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)?	☒	☐	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☒	☐	☐	☐

Potentially Significant Impact. The Project site is currently undeveloped and vacant. The proposed Project would develop the site with two 1,500,856-SF one-story industrial warehouse buildings, which would provide a total of 3,001,712 SF of new warehouse space. Additional improvements would include landscaping, sidewalks, utility connections, implementation of stormwater facilities, and pavement of parking areas and drive aisles. Although currently undeveloped, the Project site could contain significant tribal cultural resources associated with historic uses of the property. Ground disturbance associated with Project construction could result in significant impacts to potential tribal cultural resources. A cultural resource study would be conducted to determine the significance of cultural resources on the Project site and identify mitigation measures as appropriate to reduce potential impacts. Additionally, the City will conduct consultation pursuant to Assembly Bill 52. The results of the project's tribal consultation will be included in the EIR. The Project could result in potentially significant impacts; therefore, impacts to tribal cultural resources will be discussed further in the EIR.

5.19 UTILITIES AND SERVICE SYSTEMS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☒	☐	☐	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☒	☐	☐	☐

Responses a) through e).

Potentially Significant Impact. The Project site is currently undeveloped and vacant. The proposed Project would develop the site with two 1,500,856-SF one-story industrial warehouse buildings, which would provide a total of 3,001,712 SF of new warehouse space. The Project proposes to construct on- and off-site water and sewer lines as well as an on-site drainage system. The Project would require water supplies which would be provided by the LA County Waterworks (LACWD 40). Water demand from the proposed Project would be quantified and compared to the LACWD 40's current and Projected water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Once operational, the Project would generate wastewater via LACSD sewer facilities. To ensure Project wastewater treatment capacity needs can be met, further analysis is required. Solid waste from construction and operation of the Project would be collected and sent to the Antelope Valley Public Landfill at 1200 W. City Ranch Road in Palmdale. To ensure Antelope Valley Public Landfill capacity needs can be met, further analysis is required. Impacts associated with the capacity of existing water, sewer and stormwater drainage facilities, or the required expansion of existing facilities, could be potentially significant and will be evaluated in the EIR. Therefore, impacts related to utilities and service systems will be analyzed in the EIR.

5.20 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. According to the CalFire Fire Hazard Severity Zone Map for Los Angeles County and Figure 13.4 in the City's Safety Element,[1] the Project site is not within a State Responsibility Area (SRA) or a Very High Fire Hazard Severity Zone. The proposed Project would provide adequate emergency access to the site via eight driveways from the existing road, 30th Street East and from the proposed new road 35th Street East that would be constructed along the east side of the Project. In the event Project construction requires temporary roadway closures or obstructions, the applicant would be required to prepare and implement a temporary traffic control plan consistent with the 2012 California Manual on Uniform Traffic Control Devices (MUTCD) per City requirements. Access to and from the Project site for emergency vehicles would be reviewed and approved by the Los Angeles County Fire Department and the City as part of the Project approval process to ensure the proposed Project is compliant with all applicable codes and ordinances for emergency vehicle access. Since the Project is required to comply with all applicable codes, as verified by the City, any potential impacts related to an emergency response or evacuation would be less than significant. This topic will not be further evaluated in the EIR.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

[1] Available at https://palmdale2045gp.org/wp-content/uploads/2022/10/PalmdaleGPU_FinalDraft_102422.pdf

No Impact. As described in the previous response, the Project site is not within a High or Very High Fire Hazard Severity Zone. The areas considered to be within very high fire hazard severity zones in Palmdale consist primarily of open space that is largely vegetated with chaparral, trees, and grassland groundcover, which can provide fuel for wildfires. The Project site and adjacent areas are sparsely vegetated and do not contain trees or other major factors that could exacerbate wildfire risks. Thus, wildfire risks will not be further evaluated in the EIR.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. As described in the previous responses, the Project site is not within a Very High Fire Hazard Severity Zone, and the Project does not include infrastructure that could exacerbate fire risks. Additionally, the Project would connect to existing utilities and would not result in the installation or maintenance of infrastructure that could increase fire risk to the Project site or surrounding area. Therefore, this topic will not be further evaluated in the EIR.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. As described in the previous responses, the Project site is not within a Very High Fire Hazard Severity Zone. In addition, the Project site is located in a flat area that does not contain or is adjacent to large slopes, and the Project would not generate large slopes. Thus, the Project would not result in risks related to wildfires or risks related to downslope or downstream flooding or landslides after wildfires. Thus, this topic will not be further evaluated in the EIR.

5.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact. As previously stated in Section 5.4, Biological Resources, a site-specific field survey study has been conducted to determine potential biological resources impacts. The field survey did not identify sensitive animals or species on site or suitable habitat for sensitive species on site. However, the Project site contains some shrubs that can be utilized by nesting birds during the nesting bird season of February 1 through August 31 thus potentially impacting migratory wildlife corridors or linkages. Therefore, the EIR will include further evaluation of whether the Project has the potential to substantially interfere 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. This topic will be carried forward in the EIR.

The site does not contain any historic resources, and the potential to encounter unknown archeological resources was determined to be minimal. However, PPP CUL-1 has been included to provide procedures to be followed in the event that potential human remains are discovered during grading, excavation, or construction activities. Therefore, impacts related to important examples of the major periods of California history or prehistory would be less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are

considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Potentially Significant Impact. Cumulative impacts are defined as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from several Projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period. The CEQA Guidelines, Section 15130 (a) and (b), states:

Cumulative impacts shall be discussed when the Project's incremental effect is cumulatively considerable. The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the Project. The discussion should be guided by the standards of practicality and reasonableness.

As described above, the Project would construct an industrial warehouse facility consisting of two buildings and related improvements. As presented in this document, potential Project-related impacts are less than significant for the following topics:

- Cultural Resources
- Mineral Resources
- Recreation
- Wildfire

Given that the potential Project-related impacts of the topics listed above would be less than significant or mitigated to a less than significant level, implementation of the proposed Project would not result in impacts that are cumulatively considerable when evaluated with the impacts of other current projects, or the effects of probable future projects for the identified topic areas. Therefore, the proposed Project's contribution to significant cumulative impacts would be less than cumulatively considerable.

Based on the discussion provided in this Initial Study, the Project has the potential to result in significant impacts, and further, could result in cumulative impacts to:

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

The extent and significance of potential cumulative impacts resulting from the combined effects of the proposed Project plus other past, present, and reasonably foreseeable future Projects will be evaluated in the EIR.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. Redevelopment of the site into an industrial warehouse facility could directly or indirectly cause substantial adverse effects on human beings if not properly mitigated. The proposed Project could result in impacts to aesthetics, agricultural resources, air quality, biological resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, transportation, tribal cultural resources, and utilities., which could result in adverse effects on human beings. Therefore, these impacts will be addressed in the EIR, and mitigation measures will be recommended as appropriate.

6 References

Brian F. Smith and Associates. 2022. Phase I Cultural Resource Assessment for the Avenue M Project, City of Palmdale, Los Angeles County, California.

California Department of Conservation. *California Important Farmland Finder*. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/

California Department of Forestry and Fire Protection (CalFire). *Fire Hazard Severity Zone Map for Los Angeles County*. Available at: https://osfm.fire.ca.gov/media/5834/palmdale.pdf

California Department of Transportation (Caltrans). State Scenic Highway Map. Accessed: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways

California Geological Survey (CGS). 2022. *EQ Zapp: California Earthquake Hazards Zone Application*. Accessed: https://www.conservation.ca.gov/cgs/geohazards/eq-zapp

CalRecycle. 2022. SWIS Facility/Site Activity Details - Antelope Valley Public Landfill (19-AA-5624). Accessed: https://www2.calrecycle.ca.gov/SolidWaste/Site/Details/1364

City of Palmdale. 2022. City of Palmdale General Plan Update. Adopted 2022. https://palmdale2045gp.org/wp-content/uploads/2022/10/PalmdaleGPU_FinalDraft_102422.pdf

City of Palmdale. 2022. City of Palmdale Final Draft Environmental Impact Report. Accessed: 2022. https://www.cityofpalmdale.org/277/Environmental-Documents

City of Palmdale. Municipal Code. Available at:

https://www.codepublishing.com/CA/Palmdale/

County of Los Angeles Fire Department (LACoFD). 2022. County of Los Angeles Fire Department List and Map. Available at: https://locator.lacounty.gov/fire

County of Los Angeles Sheriff's Department (LASD). 2022. Available at: https://lasd.org/palmdale/#1553115853635-fe878989-603c

ELMT Consulting. 2022. Biological Resources Assessment for the Proposed Project Located at 3347 East Avenue M within Assessor Parcel Number (APN) 3170-018-081 in the City of Palmdale, Los Angeles County, California.

Federal Emergency Management Agency (FEMA). *Flood Insurance Rate Map (FIRM) 06071C6457H*. Accessed: https://msc.fema.gov/portal/search?AddressQuery=poplar%20street%2C%20hesperia%2C%20ca#searchresultsanchor

SoCal Geotechnical. 2022. Geotechnical Feasibility Study for Proposed Warehouse Development 3347 East Avenue M Palmdale, California.

United States Department of the Interior, Bureau of Land Management. 1980. California Desert Conservation Area Plan 1980, as amended.

United States Department of the Interior, Bureau of Land Management. 2005. West Mojave Plan: A Habitat Conservation and California Desert Conservation Area Plan Amendment.

United States Department of the Interior, Bureau of Land Management. 2016. Desert Renewable Energy Conservation Plan and Record of Decision.

U.S. Fish and Wildlife Service Migratory Bird Treaty Act. Available at:

https://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-birdtreatyact.Php

End of document.

GEOTECHNICAL FEASIBILITY STUDY
PROPOSED WAREHOUSE DEVELOPMENT

3347 East Avenue M
Palmdale, California
For
Transwestern

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

January 14, 2022

Transwestern
3501 Jamboree Road, Suite 4400
Newport Beach, California 92660

Attention: Mr. John Privett
Partner

Project No.: **21G286-1**

Subject: **Geotechnical Feasibility Study**
Proposed Warehouse Development
3347 East Avenue M
Palmdale, California

Gentlemen:

In accordance with your request, we have conducted a geotechnical feasibility study at the subject site. We are pleased to present this report summarizing the conclusions and recommendations developed from our investigation.

We sincerely appreciate the opportunity to be of service on this project. We look forward to providing additional consulting services during the course of the project. If we may be of further assistance in any manner, please contact our office.

Respectfully Submitted,

SOUTHERN CALIFORNIA GEOTECHNICAL, INC.

Ricardo Frias, RCE 91772
Project Engineer

REGISTERED PROFESSIONAL ENGINEER
RICARDO FRIAS
No. 91772
CIVIL
STATE OF CALIFORNIA

Robert G. Trazo, M.Sc., GE 2655
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
ROBERT TRAZO
No. 2655
GEOTECHNICAL
STATE OF CALIFORNIA

Distribution: (1) Addressee

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY 1

2.0 SCOPE OF SERVICES 3

3.0 SITE AND PROJECT DESCRIPTION 4

3.1 Site Conditions 4
3.2 Proposed Development 4

4.0 SUBSURFACE EXPLORATION 5

4.1 Scope of Exploration/Sampling Methods 5
4.2 Geotechnical Conditions 5

5.0 LABORATORY TESTING 7

6.0 CONCLUSIONS AND RECOMMENDATIONS 9

6.1 Seismic Design Considerations 9
6.2 Geotechnical Design Considerations 11
6.3 Preliminary Site Grading Recommendations 14
6.4 Construction Considerations 16
6.5 Preliminary Foundation Design and Construction Recommendations 18
6.6 Preliminary Floor Slab Design and Construction Recommendations 19
6.7 Preliminary Retaining Wall Design and Construction 20
6.8 Preliminary Pavement Design Parameters Recommendations 22

7.0 GENERAL COMMENTS 25

APPENDICES

A Plate 1: Site Location Map
Plate 2: Boring Location Plan
B Boring Logs
C Laboratory Testing
D Grading Guide Specifications
E Seismic Design Parameters

1.0 EXECUTIVE SUMMARY

Presented below is a brief summary of the conclusions and recommendations of this investigation. Since this summary is not all inclusive, it should be read in complete context with the entire report.

It should be noted that this investigation was focused on determining the geotechnical feasibility of the proposed development. **This report is not a design-level investigation. Future studies will be necessary to refine the preliminary design parameters that are presented within this report.**

Preliminary Geotechnical Design Recommendations

- Site stripping of existing vegetated areas should remove include all vegetation, including tree root masses and any organic topsoil.
- The near-surface soils possess very low to low expansion potentials.
- The proposed development is considered to be feasible with respect to the geotechnical conditions encountered at the boring locations at the site. However, remedial grading will be necessary in order to support the proposed structures on conventional shallow foundation systems. Preliminary remedial grading and foundation design recommendations have been provided herein, based on the preliminary site plan, assumed site grading, and assumed foundation loads.
- Based on these preliminary assumptions and the results of our subsurface exploration, laboratory testing, and engineering analysis, remedial grading should be performed within the proposed building areas, to remove the existing upper portion of the alluvial soils, and replace them as structural compacted fill.
- Preliminarily, the overexcavation within the building areas is recommended to extend to a depth of at least 4 to 6 feet below existing and proposed building pad subgrade elevations. The overexcavation should also extend to a depth of at least 3 to 4 feet below bearing grade within the influence zones of any new foundations. These recommendations are subject to review and may be revised based on the results of the design-level geotechnical investigation.
- Preliminarily, the new parking area subgrade soils are recommended to be scarified to a depth of 12± inches, thoroughly moisture conditioned to within 2 to 4 percent above the optimum moisture content and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density.

Preliminary Foundation Design Recommendations

- Conventional shallow foundations, supported in newly placed compacted fill.
- 2,500 to 3,000 lbs/ft^2 maximum allowable soil bearing pressure.
- The design of the foundations will depend in large part on the results of the future design-level geotechnical study. Minimum reinforcement consisting of two (2) to four (4) No. 5 rebars in strip footings. Additional reinforcement may be necessary for structural considerations.

Preliminary Floor Slab Design Recommendations

- Conventional slab-on-grade, minimum 6 to 7 inches thick.

- Minimum slab reinforcement: No. 3 bars at 18-inches on-center, in both directions due to the presence of low expansive soils. Additional expansion index testing should be performed to confirm this recommendation at the time of the design-level investigation. The actual floor slab reinforcement should be determined by the structural engineer, based upon the imposed loading.

Preliminary Pavement Design Recommendations

ASPHALT PAVEMENTS (R = 30)					
Materials	**Thickness (inches)**				
	Auto Parking and Auto Drive Lanes (TI = 4.0 to 5.0)	Truck Traffic			
		TI = 6.0	TI = 7.0	TI = 8.0	TI = 9.0
Asphalt Concrete	3	3½	4	5	5½
Aggregate Base	6	8	10	11	13
Compacted Subgrade	12	12	12	12	12

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 30)				
Materials	**Thickness (inches)**			
	Autos and Light Truck Traffic (TI = 6.0)	Truck Traffic		
		TI = 7.0	TI = 8.0	TI = 9.0
PCC	5	5½	6½	8
Compacted Subgrade (95% minimum compaction)	12	12	12	12

2.0 SCOPE OF SERVICES

The scope of services performed for this project was in general accordance with our Proposal No. 21P509, dated December 10, 2021. The scope of services included a visual site reconnaissance, subsurface exploration, field and laboratory testing, and geotechnical engineering analysis to determine the geotechnical feasibility of the proposed development. The evaluation of the environmental aspects of this site was beyond the scope of services for this geotechnical feasibility study.

3.0 SITE AND PROJECT DESCRIPTION

3.1 Site Conditions

The site is located at the northeast corner of 30th Street East and East Avenue M (also known as Columbia Way) in Palmdale, California. The site is also referenced by the street address 3347 East Avenue M. The site is bounded to the north and east by vacant lots, to the west by 30th Street East, and to the south by East Avenue M (also known as Columbia Way). The general location of the site is illustrated on the Site Location Map, enclosed as Plate 1 in Appendix A of this report.

The site consists of a square-shaped parcel, 160± acres in size. The site is presently vacant and undeveloped. Ground surface cover consists of exposed soil with moderate to dense native grass and weed growth. Several large trees are located at the northeast area of the parcel. A northwest-southeast trending drainage is located in the southeast quarter of the site.

Detailed topographic information was not available at the time of this report. Based on elevations obtained from Google Earth and visual observations made at the time of the subsurface investigation, the overall site slopes downward to the north-northwest at a gradient of less than 1± percent. The southeastern drainage is 1 to 6± feet lower than the surrounding elevation.

3.2 Proposed Development

SCG was provided with a conceptual site plan by the client. Based on this plan, the site will be developed with five (5) new warehouse buildings, ranging in size from 301,468 to 1,247,158± ft^2. Dock-high doors will be constructed along a portion of at least one building wall for each building. The buildings will be surrounded by asphaltic concrete pavements in the parking and drive lanes, Portland cement concrete pavements in the loading dock areas, and limited areas of concrete flatwork and landscape planters throughout.

Detailed structural information has not been provided. It is assumed the buildings will be of tilt-up concrete construction, typically supported on conventional shallow foundations with a concrete slab-on-grade floor. Based on the assumed construction, maximum column and wall loads are expected to be on the order of 100 kips and 4 to 7 kips per linear foot, respectively.

No significant amounts of below grade construction, such as crawl spaces or new basements, are expected to be included in the proposed development. Based on the assumed topography, cuts and fills of up to 5 to 7± feet are expected to be necessary to achieve the proposed site grades.

4.0 SUBSURFACE EXPLORATION

4.1 Scope of Exploration/Sampling Methods

The subsurface exploration for this project consisted of seven (7) borings advanced to depths of 20 to 30± feet below the existing site grades. All of the borings were logged during drilling by a member of our staff.

The borings were advanced with hollow-stem augers, by a conventional truck-mounted drilling rig. Representative bulk and relatively undisturbed soil samples were taken during drilling. Relatively undisturbed soil samples were taken with a split barrel "California Sampler" containing a series of one inch long, 2.416± inch diameter brass rings. This sampling method is described in ASTM Test Method D-3550. In-situ samples were also taken using a 1.4± inch inside diameter split spoon sampler, in general accordance with ASTM D-1586. Both of these samplers are driven into the ground with successive blows of a 140-pound weight falling 30 inches. The blow counts obtained during driving are recorded for further analysis. Bulk samples were collected in plastic bags to retain their original moisture content. The relatively undisturbed ring samples were placed in molded plastic sleeves that were then sealed and transported to our laboratory.

The approximate locations of the borings are indicated on the Boring Location Plan, included as Plate 2 in Appendix A of this report. The Boring Logs, which illustrate the conditions encountered at the boring locations, as well as the results of some of the laboratory testing, are included in Appendix B.

4.2 Geotechnical Conditions

Alluvium

Native alluvium was encountered at the ground surface of all boring locations, extending to at least the maximum depth explored of 30± feet below ground surface. The alluvial soils generally consist of loose to very dense silty fine sands, fine to coarse sands, silty fine to coarse sands, fine sands, fine sandy silts and stiff to hard fine sandy clays and clayey silt. Occasional layers of medium dense clayey fine sands were also encountered. Generally, the alluvial soils possess trace to some iron oxide staining and calcareous nodules and veining. Slight to moderate cementation was observed in some alluvial samples. Boring Nos. B-2, B-4, B-6 and B-7 encountered porous soil samples at depths between 2½ to 8½± feet below ground surface.

Groundwater

Free water was not encountered during the drilling of any of the borings. Based on the lack of any water within the borings, and the moisture contents of the recovered soil samples, the

static groundwater table is considered to have existed at a depth in excess of 30± feet at the time of the subsurface exploration.

Recent water level data was obtained from the California State Water Resources Control Board, GeoTracker, website, https://geotracker.waterboards.ca.gov/. One monitoring wells on record is located 2± miles west of the site. Water level readings within this monitoring wells indicate a high groundwater level of 399± feet below the ground surface in June 2021.

5.0 LABORATORY TESTING

The soil samples recovered from the subsurface exploration were returned to our laboratory for further testing to determine selected physical and engineering properties of the soils. The tests are briefly discussed below. It should be noted that the test results are specific to the actual samples tested, and variations could be expected at other locations and depths.

Classification

All recovered soil samples were classified using the Unified Soil Classification System (USCS), in accordance with ASTM D-2488. The field identifications were then supplemented with additional visual classifications and/or by laboratory testing. The USCS classifications are shown on the Boring Logs and are periodically referenced throughout this report.

Dry Density and Moisture Content

The density has been determined for selected relatively undisturbed ring samples. These densities were determined in general accordance with the method presented in ASTM D-2937. The results are recorded as dry unit weight in pounds per cubic foot. The moisture contents are determined in accordance with ASTM D-2216, and are expressed as a percentage of the dry weight. These test results are presented on the Boring Logs.

Consolidation

Selected soil samples have been tested to determine their consolidation potential, in accordance with ASTM D-2435. The testing apparatus is designed to accept either natural or remolded samples in a one-inch high ring, approximately 2.416 inches in diameter. Each sample is then loaded incrementally in a geometric progression and the resulting deflection is recorded at selected time intervals. Porous stones are in contact with the top and bottom of the sample to permit the addition or release of pore water. The samples are typically inundated with water at an intermediate load to determine their potential for collapse or heave. The results of the consolidation testing are plotted on Plates C-1 through C-6 in Appendix C of this report.

Maximum Dry Density and Optimum Moisture Content

Representative bulk samples were tested to determine their maximum dry density and optimum moisture content. The results have been obtained using the Modified Proctor procedure, per ASTM D-1557, and are presented on Plates C-7 and C-8 in Appendix C of this report. This test is generally used for comparison with the in-situ densities of undisturbed field samples, and for later compaction testing. Additional testing of other soil types or soil mixes may be necessary at a later date.

Soluble Sulfates

Representative samples of the near-surface soils were submitted to a subcontracted analytical laboratory for determination of soluble sulfate content. Soluble sulfates are naturally present in soils, and if the concentration is high enough, can result in degradation of concrete which

comes into contact with these soils. The results of the soluble sulfate testing are presented below, and are discussed further in a subsequent section of this report.

Sample Identification	Soluble Sulfates (%)	Sulfate Classification
B-1 @ 0 to 5 feet	0.001	Negligible (S0)
B-7 @ 0 to 5 feet	0.005	Negligible (S0)

Corrosivity Testing

Representative samples of the near-surface soils were submitted to a subcontracted corrosion engineering laboratory to identify potentially corrosive characteristics with respect to common construction materials. The corrosivity testing included a determination of the electrical resistivity, pH, chloride, and nitrate concentrations of the soils, as well as other tests. The results of some of these tests are presented below.

Sample Identification	Saturated Resistivity (ohm-cm)	pH	Chlorides (mg/kg)	Nitrates (mg/kg)
B-1 @ 0 to 5 feet	8,800	7.3	5.2	12
B-7 @ 0 to 5 feet	2,240	7.3	23	27

Expansion Index

The expansion potential of the on-site soils was determined in general accordance with ASTM D-4829 as required by the California Building Code (CBC). The testing apparatus is designed to accept a 4-inch diameter, 1-in high, remolded sample. The sample is initially remolded to 50± 1 percent saturation and then loaded with a surcharge equivalent to 144 pounds per square foot. The sample is then inundated with water, and allowed to swell against the surcharge. The resultant swell or consolidation is recorded after a 24-hour period. The results of the EI testing are as follows:

Sample Identification	Expansion Index	Expansive Potential
B-2 @ 0 to 5 feet	5	Very Low
B-4 @ 0 to 5 feet	35	Low

Organic Content Testing

Several samples of the near surface soils were tested to determine their organic contents, in accordance with ASTM Test Method D-2974. The results of the testing are presented on the boring logs. All of the tests indicated an organic content of less than 2 percent.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our review, field exploration, laboratory testing and geotechnical analysis, the proposed development is considered feasible from a geotechnical standpoint. **Based on the preliminary nature of this investigation, further geotechnical investigation(s) will be required prior to construction of the proposed development.** The recommendations contained in this report should be taken into the design, construction, and grading considerations. The recommendations are contingent upon all grading and foundation construction activities being monitored by the geotechnical engineer of record.

The Grading Guide Specifications, included as Appendix D, should be considered part of this report, and should be incorporated into the project specifications. The contractor and/or owner of the development should bring to the attention of the geotechnical engineer any conditions that differ from those stated in this report, or which may be detrimental for the development.

6.1 Seismic Design Considerations

The subject site is located in an area which is subject to strong ground motions due to earthquakes. The performance of a site specific seismic hazards analysis was beyond the scope of this investigation. However, numerous faults capable of producing significant ground motions are located near the subject site. Due to economic considerations, it is not generally considered reasonable to design a structure that is not susceptible to earthquake damage. Therefore, significant damage to structures may be unavoidable during large earthquakes. The proposed structures should, however, be designed to resist structural collapse and thereby provide reasonable protection from serious injury, catastrophic property damage and loss of life.

Faulting and Seismicity

Research of available maps indicates that the subject site is not located within an Alquist-Priolo Earthquake Fault Zone. Furthermore, SCG did not identify any evidence of faulting during the geotechnical investigation. 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.

Seismic Design Parameters

Based on standards in place at the time of this report, the proposed development is expected to be designed in accordance with the requirements of the 2019 edition of the California Building Code (CBC), which was adopted on January 1, 2020. The 2019 California Building Code (CBC) provides procedures for earthquake resistant structural design that include considerations for on-site soil conditions, occupancy, and the configuration of the structure including the structural system and height. The seismic design parameters presented below are based on the soil profile and the proximity of known faults with respect to the subject site.

The 2019 CBC Seismic Design Parameters have been generated using the SEAOC/OSHPD Seismic Design Maps Tool, a web-based software application available at the website www.seismicmaps.org. This software application calculates seismic design parameters in accordance with several building code reference documents, including ASCE 7-16, upon which the 2019 CBC is based. The application utilizes a database of risk-targeted maximum considered earthquake (MCE_R) site accelerations at 0.01-degree intervals for each of the code documents. The table below was created using data obtained from the application. The output generated from this program is included as Plate E-1 in Appendix E of this report.

The 2019 CBC requires that a site-specific ground motion study be performed in accordance with Section 11.4.8 of ASCE 7-16 for Site Class D sites with a mapped S_1 value greater than 0.2. However, Section 11.4.8 of ASCE 7-16 also indicates an exception to the requirement for a site-specific ground motion hazard analysis for certain structures on Site Class D sites. The commentary for Section 11 of ASCE 7-16 (Page 534 of Section C11 of ASCE 7-16) indicates that "In general, this exception effectively limits the requirements for site-specific hazard analysis to very tall and or flexible structures at Site Class D sites." **Based on our understanding of the proposed development, the seismic design parameters presented below were calculated assuming that the exception in Section 11.4.8 applies to the proposed structures at this site. However, the structural engineer should verify that this exception is applicable to the proposed structures.** Based on the exception, the spectral response accelerations presented below were calculated using the site coefficients (F_a and F_v) from Tables 1613.2.3(1) and 1613.2.3(2) presented in Section 16.4.4 of the 2019 CBC.

2019 CBC SEISMIC DESIGN PARAMETERS

Parameter		Value
Mapped Spectral Acceleration at 0.2 sec Period	S_S	1.500
Mapped Spectral Acceleration at 1.0 sec Period	S_1	0.600
Site Class	---	D
Site Modified Spectral Acceleration at 0.2 sec Period	S_{MS}	1.500
Site Modified Spectral Acceleration at 1.0 sec Period	S_{M1}	1.020
Design Spectral Acceleration at 0.2 sec Period	S_{DS}	1.000
Design Spectral Acceleration at 1.0 sec Period	S_{D1}	0.680

It should be noted that the site coefficient F_v and the parameters S_{M1} and S_{D1} were not included in the SEAOC/OSHPD Seismic Design Maps Tool output for the 2019 CBC. We calculated these parameters-based on Table 1613.2.3(2) in Section 16.4.4 of the 2019 CBC using the value of S_1 obtained from the Seismic Design Maps Tool, assuming that a site-specific ground motion hazards analysis is not required for the proposed building at this site.

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 which influence the potential for liquefaction include

groundwater table elevation, soil type and grain size characteristics, relative density of the soil, initial confining pressure, and intensity and duration of ground shaking. The depth within which the occurrence of liquefaction may impact surface improvements is generally identified as the upper 50 feet below the existing ground surface. Liquefaction potential is greater in saturated, loose, poorly graded fine sands with a mean (d_{50}) grain size in the range of 0.075 to 0.2 mm (Seed and Idriss, 1971). Clayey (cohesive) soils or soils which possess clay particles (d<0.005mm) in excess of 20 percent (Seed and Idriss, 1982) are generally not considered to be susceptible to liquefaction, nor are those soils which are above the historic static groundwater table.

The Earthquake Zones of Required Investigation, Palmdale Quadrangle map, published by the California Geological Survey (CGS), indicates that the subject site is not located within a designated liquefaction hazard zone. In addition, the subsurface conditions encountered at the subject site, including the lack of water in the upper 30± feet, are not considered to be conducive to liquefaction. Furthermore, our historic high groundwater research performed for this site indicates that the long-term groundwater table is considered to exist at a depth in excess of 300± feet. Based on the conditions encountered at the boring locations, and the mapping performed by the CGS, liquefaction is not considered to be a design concern for this project.

6.2 Geotechnical Design Considerations

General

The near-surface native alluvial soils generally consist of silty sands and sandy clays which possess variable strengths and unfavorable consolidation/collapse characteristics. The deeper alluvium generally possess higher strengths and densities and more favorable consolidation/collapse characteristics. The near-surface alluvial soils were found to be loose and porous and possess varying strengths. These soils, in their present condition, are not considered suitable for support of the foundation loads of the new structure. Therefore, remedial grading is considered warranted within the proposed building area in order to remove the upper portion of the near-surface native alluvial soils, and replace these materials as compacted structural fill soils**.**

Settlement

The recommended remedial grading will remove a portion of the existing near-surface variable strength and variable density native alluvial soils, and replace these materials as compacted structural fill. The native soils that will remain in place below the recommended depth of overexcavation will not be subject to significant load increases from the foundations of the new structures. Provided that the recommended remedial grading is completed, the post-construction static settlements of the proposed structures are expected to be within tolerable limits.

Soluble Sulfates

The results of the soluble sulfate testing, as discussed in Section 5.0 of this report, indicates a soluble sulfate concentration of up to 0.005 percent. This concentration is considered to be negligible with respect to the American Concrete Institute (ACI) Publication 318-05 Building Code Requirements for Structural Concrete and Commentary, Section 4.3. Therefore, specialized concrete mix designs are not considered to be necessary, with regard to sulfate protection purposes. It is, however, recommended that additional soluble sulfate testing be conducted during the design-level geotechnical investigation and at the completion of rough grading to verify the soluble sulfate concentrations of the soils which are present at the proposed building pad grades.

Corrosion Potential

The results of laboratory testing indicate that the on-site soils possess saturated resistivity values of 2,240 and 8,800 ohm-cm, and pH values of 7.3. The test results have been evaluated in accordance with guidelines published by the Ductile Iron Pipe Research Association (DIPRA). The DIPRA guidelines consist of a point system by which characteristics of the soils are used to quantify the corrosivity characteristics of the site. Sulfides, and redox potential are factors that are also used in the evaluation procedure. We have evaluated the corrosivity characteristics of the on-site soils using resistivity, pH, and moisture content. Based on these factors, and utilizing the DIPRA procedure, **the on-site soils are considered to be moderately corrosive to ductile iron pipe. Therefore, polyethylene encasement or some other appropriate method of protection may be required for iron pipes.**

Based on American Concrete Institute (ACI) Publication 318 Building Code Requirements for Structural Concrete and Commentary, reinforced concrete that is exposed to external sources of chlorides requires corrosion protection for the steel reinforcement contained within the concrete. ACI 318 defines concrete exposed to moisture and an external source of chlorides as "severe" or exposure category C2. ACI 318 does not clearly define a specific chloride concentration at which contact with the adjacent soil will constitute a "C2" or severe exposure. However, the Caltrans Memo to Designers 10-5, Protection of Reinforcement Against Corrosion Due to Chlorides, Acids and Sulfates, dated June 2010, indicates that soils possessing chloride concentrations greater than 500 mg/kg are considered to be corrosive to reinforced concrete. The results of the laboratory testing indicate chloride concentrations of 5.2 and 23 mg/kg. Although the soils contain some chlorides, we do not expect that the chloride concentrations of the tested soils are high enough to constitute a "severe" or C2 chloride exposure. Therefore, a chloride exposure category of C1 is considered appropriate for this site.

Nitrates present in soil can be corrosive to copper tubing at concentrations greater than 50 mg/kg. The tested samples possess nitrate concentrations of 12 and 27 mg/kg. Based on the test results, the on-site soils are not considered to be corrosive to copper pipe.

It should be noted that SCG does not practice in the field of corrosion engineering. Therefore, the client may wish to contact a corrosion engineer to provide a more thorough evaluation.

Expansion

The near surface soils at this site generally consist of silty sands, sandy silts and fine sands with occasional thin layers of clayey sands, sandy clays and clayey silts. Laboratory testing indicates that these materials have a very low to low expansion potential (EI = 5 and 35). Based on the presence of expansive soils at this site, care should be given to proper moisture conditioning the building pad subgrade soils to a moisture content of 2 to 4 percent above the ASTM D-1557 optimum during site grading. In addition to adequately moisture conditioning the subgrade soils and fill soils during grading, special care must be taken to maintaining moisture content of these soils at 2 to 4 percent above the optimum moisture content. This will require the contractor to frequently moisture condition these soils throughout the grading process, unless grading occurs during a period of relatively wet weather. Preliminary civil and structural design considerations are presented in Section 6.4 of this report. It is recommended that additional expansion index testing be conducted during design-level geotechnical investigation and at the completion of rough grading to verify the expansion potential of the as-graded building pads.

Organic Content

Organic content testing was performed on samples taken from the exploratory borings within the proposed building pad areas. All of the tests indicated less than 2 percent of organic content. Based on the results of laboratory testing, it is considered feasible to reuse the near surface soils in structural fills.

Shrinkage/Subsidence

Removal and recompaction of the near-surface native fill soils is estimated to result in an average shrinkage of 10 to 20 percent. It should be noted that the potential shrinkage estimate is based on dry density testing performed on small-diameter samples taken at the boring locations. If a more accurate and precise shrinkage estimate is desired, SCG can perform a shrinkage study involving several excavated test-pits where in-place densities are determined using in-situ testing methods instead of laboratory density testing on small-diameter samples. Please contact SCG for details and a cost estimate regarding a shrinkage study, if desired.

Minor ground subsidence is expected to occur in the soils below the zone of removal, due to settlement and machinery working. The subsidence is estimated to be 0.10 feet.

These estimates are based on previous experience and the subsurface conditions encountered at the boring locations. The actual amount of subsidence is expected to be variable and will be dependent on the type of machinery used, repetitions of use, and dynamic effects, all of which are difficult to assess precisely.

Grading and Foundation Plan Review

No grading or foundation plans were available at the time of this report. It is therefore recommended that we be provided with copies of the preliminary plans, when they become available, for review with regard to the conclusions, recommendations, and assumptions contained within this report. These plans should also be made available prior to performance of the design level geotechnical investigation.

6.3 Preliminary Site Grading Recommendations

The preliminary grading recommendations presented below are based on the design details that were available at the time of this report, and the subsurface conditions encountered at our boring locations. These recommendations are general in nature, and should be confirmed as part of the design level geotechnical investigation.

Site Stripping

Initial site preparation should include removal of any surficial vegetation and organic soils. This should include any trees, weeds, grasses, and shrubs. Root masses associated with the existing trees should be removed in their entirety, and the resultant excavations should be backfilled with compacted structural fill soils. The actual extent of site stripping should be determined in the field by the geotechnical engineer, based on the organic content and stability of the materials encountered.

Treatment of Existing Soils: Building Pads

Remedial grading will be necessary within the proposed building pad areas to remove a portion of the existing variable strength and density near-surface alluvial soils and to provide a uniform blanket of compacted fill upon which to support the proposed structures. The depth of overexcavation should be determined during the design level geotechnical investigation. On a preliminary basis, overexcavation to depths of 4 to 6± feet below existing and proposed building pad grades should be anticipated. Additional recommended overexcavation within the foundation areas will likely be 3 to 4± feet below the foundation bearing grades. Please note that adverse geologic conditions encountered during the design level investigation could result in additional overexcavation requirements.

The overexcavation areas should extend at least 5 feet beyond the building perimeters and foundations, and to an extent equal to the depth of fill below the new foundations. If the proposed structures incorporate any exterior columns (such as for a canopy or overhang) the overexcavation should also encompass these areas.

Treatment of Existing Soils: Retaining Walls and Site Walls

Although not indicated on the site plan, it may be necessary to construct some small retaining walls or site walls at or near the existing ground surface. Overexcavation will also be necessary in these areas to remove the variable strength alluvium. The overexcavation depth should be expected to be on the order of 2 to 3 feet below proposed foundation bearing grade, and to depths of 3 to 4 feet below existing grade.

Treatment of Existing Soils: Parking Areas

Based on economic considerations, overexcavation of the existing soils in the new parking areas is not considered warranted, with the exception of areas where lower strength, or unstable soils are identified by the geotechnical engineer during grading.

Subgrade preparation in the new parking areas should initially consist of removal of all soils disturbed during stripping operations. The geotechnical engineer should then evaluate the

subgrade to identify any areas of additional unsuitable soils. The subgrade soils should then be scarified to a depth of 12± inches, moisture conditioned to within 2 to 4 percent above the optimum moisture content, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. Based on the presence of variable strength soils throughout the site, it is expected that some isolated areas of additional overexcavation may be required to remove zones of lower strength, unsuitable soils.

The grading recommendations presented above for the proposed parking and drive areas assume that the owner and/or developer can tolerate minor amounts of settlement within the proposed parking areas. The grading recommendations presented above do not mitigate the extent of variable strength and variable density near-surface alluvial soils in the parking areas. As such, settlement and associated pavement distress could occur. Typically, repair of such distressed areas involves significantly lower costs than completely mitigating these soils at the time of construction. If the owner cannot tolerate the risk of such settlements, the parking and drive areas should be overexcavated to a depth of 2 feet below proposed pavement subgrade elevation, with the resulting soils replaced as compacted structural fill.

Fill Placement

- Fill soils should be placed in thin (6± inches), near-horizontal lifts, moisture conditioned to within 2 to 4 percent above the optimum moisture content, and compacted.
- On-site soils may be used for fill provided they are cleaned of any debris to the satisfaction of the geotechnical engineer.
- All grading and fill placement activities should be completed in accordance with the requirements of the CBC and the grading code of the city of Palmdale.
- All fill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density. Fill soils should be well mixed.
- Compaction tests should be performed periodically by the geotechnical engineer as random verification of compaction and moisture content. These tests are intended to aid the contractor. Since the tests are taken at discrete locations and depths, they may not be indicative of the entire fill and therefore should not relieve the contractor of his responsibility to meet the job specifications.

Imported Structural Fill

All imported structural fill should consist of very low expansive (EI < 20), well graded soils possessing at least 10 percent fines (that portion of the sample passing the No. 200 sieve). Additional specifications for structural fill are presented in the Grading Guide Specifications, included as Appendix D.

Utility Trench Backfill

In general, all utility trench backfill should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density. Compacted trench backfill should conform to the requirements of the local grading code, and more restrictive requirements may be indicated by the city of Palmdale. All utility trench backfills should be witnessed by the geotechnical engineer. The trench backfill soils should be compaction tested where possible; probed and visually evaluated elsewhere.

Utility trenches which parallel a footing, and extending below a 1h:1v plane projected from the outside edge of the footing should be backfilled with structural fill soils, compacted to at least 90 percent of the ASTM D-1557 standard. Pea gravel backfill should not be used for these trenches.

6.4 Construction Considerations

Excavation Considerations

The near surface soils generally consist of silty and sandy soils with occasional clays. These materials will likley be subject to minor caving within shallow excavations. Where caving occurs within shallow excavations, flattened excavation slopes may be sufficient to provide excavation stability. On a preliminary basis, the inclination of temporary slopes should not exceed 2h:1v. Deeper excavations may require some form of external stabilization such as shoring or bracing. Maintaining adequate moisture content within the near-surface soils will improve excavation stability. All excavation activities on this site should be conducted in accordance with Cal-OSHA regulations.

Expansive Soils

The near-surface soils within the subject site have been determined to possess a low expansion potential. Therefore, care should be given to proper moisture conditioning of all subgrade soils to a moisture content of 2 to 4 percent above the Modified Proctor optimum during site grading. All imported fill soils should have very low expansive (EI < 20) characteristics. **In addition to adequately moisture conditioning the subgrade soils and fill soils during grading, special care must be taken to maintain the moisture content of these soils at 2 to 4 percent above the Modified Proctor optimum. This will require the contractor to frequently moisture condition these soils throughout the grading process, unless grading occurs during a period of relatively wet weather**.

Due to the presence of expansive soils at this site, provisions should be made to limit the potential for surface water to penetrate the soils immediately adjacent to the new structure. These provisions should include directing surface runoff into rain gutters and area drains, reducing the extent of landscaped areas around the structure, and sloping the ground surface away from the building. Where possible, it is recommended that landscaped planters not be located immediately adjacent to the proposed building. If landscaped planters around the building are necessary, it is recommended that drought tolerant plants or a drip irrigation system be utilized, to minimize the potential for deep moisture penetration around the structure. Presented below is a list of additional soil moisture control recommendations that should be considered by the owner, developer, and civil engineer:

- Ponding and areas of low flow gradients in unpaved walkways, grass and planter areas should be avoided. In general, minimum drainage gradients of 2 percent should be maintained in unpaved areas.
- Bare soil within five feet of proposed structure should be sloped at a minimum five percent gradient away from the structure (about three inches of fall in five feet), or the same area could be paved with a minimum surface gradient of one percent. Pavement is preferable.

- Decorative gravel ground cover tends to provide a reservoir for surface water and may hide areas of ponding or poor drainage. Decorative gravel is, therefore, not recommended and should not be utilized for landscaping unless equipped with a subsurface drainage system designed by a licensed landscape architect.
- Positive drainage devices, such as graded swales, paved ditches, and catch basins should be installed at appropriate locations within the area of proposed development.
- Concrete walks and flatwork should not obstruct the free flow of surface water to the appropriate drainage devices.
- Area drains should be recessed below grade to allow free flow of water into the drain. Concrete or brick flatwork joints should be sealed with mortar or flexible mastic.
- Gutter and downspout systems should be installed to capture all discharge from roof areas. Downspouts should discharge directly into a pipe or paved surface system to be conveyed off-site.
- Enclosed planters adjoining, or in close proximity to proposed structures, should be sealed at the bottom and provided with subsurface collection systems and outlet pipes.
- Depressed planters should be raised with soil to promote runoff (minimum drainage gradient two percent or five percent, see above), and/or equipped with area drains to eliminate ponding.
- Drainage outfall locations should be selected to avoid erosion of slopes and/or properly armored to prevent erosion of graded surfaces. No drainage should be directed over or towards adjoining slopes.
- All drainage devices should be maintained on a regular basis, including frequent observations during the rainy season to keep the drains free of leaves, soil and other debris.
- Landscape irrigation should conform to the recommendations of the landscape architect and should be performed judiciously to preclude either soaking or excessive drying of the foundation soils. This should entail regular watering during the drier portions of the year and little or no irrigation during the rainy season. Automatic sprinkler systems should, therefore, be switched to manual operation during the rainy season. Good irrigation practice typically requires frequent application of limited quantities of water that are sufficient to sustain plant growth, but do not excessively wet the soils. Ponding and/or run-off of irrigation water are indications of excessive watering.

Other provisions, as determined by the landscape architect or civil engineer, may also be appropriate.

Moisture Sensitive Subgrade Soils

Some of the near-surface soils possess appreciable silt and clay content and may become unstable if exposed to significant moisture infiltration or disturbance by construction traffic. In addition, based on their granular content, some of the on-site soils will also be susceptible to erosion. The site should, therefore, be graded to prevent ponding of surface water and to prevent water from running into excavations.

If the construction schedule dictates that site grading will occur during a period of wet weather, allowances should be made for costs and delays associated with drying the on-site soils or import of a drier, less moisture sensitive fill material. Grading during wet or cool weather may also increase the depth of overexcavation in the pad area.

Groundwater

Based on the conditions encountered in the borings, groundwater is not present within 30± feet of the ground surface. Based on the anticipated depth to groundwater, it is not expected that the groundwater will affect excavations for the foundations or utilities.

6.5 Preliminary Foundation Design and Construction Recommendations

Based on the preceding geotechnical design considerations and preliminary grading recommendations, it is assumed that the new buildings will be underlain by newly placed structural fill soils, extending to depths of at least 3 to 4 feet below foundation bearing grade. Based on this subsurface profile, the proposed structures may be supported on conventional shallow foundations.

The foundation design parameters presented below provide anticipated ranges for the allowable soil bearing pressures. These ranges should be refined during the subsequent design level geotechnical investigation.

Building Foundation Design Parameters

New square and rectangular footings may be designed as follows:

- Maximum, net allowable soil bearing pressure: 2,500 to 3,000 lbs/ft^2.
- Minimum longitudinal steel reinforcement within strip footings: Two (2) to Four (4) No. 5 rebars, due to the presence of low expansive soils

General Foundation Design Recommendations

The allowable bearing pressures presented above may be increased by one-third when considering short duration wind or seismic loads. Additional reinforcement may be necessary for structural considerations. The actual design of the foundations should be determined by the structural engineer.

Estimated Foundation Settlements

Typically, foundations designed in accordance with the preliminary foundation design parameters presented above will experience total and differential settlements of less than 1.0 and 0.5 inches, respectively. A detailed settlement analysis should be conducted as part of the design level geotechnical investigation, once detailed foundation loading information is available.

Lateral Load Resistance

Lateral load resistance will be developed by a combination of friction acting at the base of foundations and slabs and the passive earth pressure developed by footings below grade. The following friction and passive pressure may be used to resist lateral forces:

- Passive Earth Pressure: 250 to 300 lbs/ft^3
- Friction Coefficient: 0.25 to 0.30

6.6 Preliminary Floor Slab Design and Construction Recommendations

Subgrades which will support new floor slabs should be prepared in accordance with the recommendations contained in the ***Site Grading Recommendations*** section of this report. Preliminarily, the floors of the proposed structures may be constructed as conventional slabs-on-grade supported on newly placed structural fill. Based on geotechnical considerations, the floor slab may be designed as follows:

- Minimum slab thickness: 6 to 7 inches.

- Minimum slab reinforcement: No. 3 bars at 18-inches on-center, in both directions due to the presence of low expansive soils. Additional expansion index testing should be performed to confirm this recommendation at the time of the design-level investigation. The actual floor slab reinforcement should be determined by the structural engineer, based upon the imposed loading.

- Slab underlayment: If moisture sensitive floor coverings will be used then minimum slab underlayment should consist of a moisture vapor barrier constructed below the entire area of the proposed slab which will incorporate such coverings. The moisture vapor barrier should meet or exceed the Class A rating as defined by ASTM E 1745-97 and have a permeance rating less than 0.01 perms as described in ASTM E 96-95 and ASTM E 154-88. A polyolefin material such as Stego® Wrap Vapor Barrier or equivalent will meet these specifications. The moisture vapor barrier should be properly constructed in accordance with all applicable manufacturer specifications. Given that a rock free subgrade is anticipated and that a capillary break is not required, sand below the barrier is not required. The need for sand and/or the amount of sand above the moisture vapor barrier should be specified by the structural engineer or concrete contractor. The selection of sand above the barrier is not a geotechnical engineering issue and hence outside our purview. Where moisture sensitive floor coverings are not anticipated, the vapor barrier may be eliminated.

- Moisture condition the floor slab subgrade soils to 2 to 4 percent above the Modified Proctor optimum moisture content, to a depth of 12 inches. The moisture content of the floor slab subgrade soils should be verified by the geotechnical engineer within 24 hours prior to concrete placement.

- Proper concrete curing techniques should be utilized to reduce the potential for slab curling or the formation of excessive shrinkage cracks.

The actual design of the floor slab should be completed by the structural engineer to verify adequate thickness and reinforcement.

6.7 Preliminary Retaining Wall Design and Construction

Although not indicated on the site plan, some small (less than 6 feet in height) retaining walls may be required to facilitate the new site grades. The parameters recommended for use in the design of these walls are presented below.

Retaining Wall Design Parameters

Based on the soil conditions encountered at the boring locations, the following parameters may be used in the design of new retaining walls for this site. The following parameters assume that only the on-site soils will be utilized for retaining wall backfill. The near-surface soils generally consist of silty sands, clayey sands, and sandy silts. However, the clay soils were found to possess low expansive potential. **These clayey materials are not considered suitable for use as retaining wall backfill**. Based on the results of laboratory testing, the near-surface silty sands and clayey sands are expected to possess a friction angle of at least 30 degrees when compacted to at least 90 percent of the ASTM D-1557 maximum dry density.

If desired, SCG could provide design parameters for an alternative select backfill material behind the retaining walls. The use of select backfill material could result in lower lateral earth pressures. In order to use the design parameters for the imported select fill, this material must be placed within the entire active failure wedge. This wedge is defined as extending from the heel of the retaining wall upwards at an angle of approximately 60° from horizontal. If select backfill material behind the retaining wall is desired, SCG should be contacted for supplementary recommendations.

RETAINING WALL DESIGN PARAMETERS

Design Parameter		**Soil Type**
		On-Site Sandy Soils
Internal Friction Angle (ϕ)		30°
Unit Weight		133 lbs/ft^3
Equivalent Fluid Pressure:	Active Condition (level backfill)	45 lbs/ft^3
	Active Condition (2h:1v backfill)	72 lbs/ft^3
	At-Rest Condition (level backfill)	67 lbs/ft^3

The walls should be designed using a soil-footing coefficient of friction of 0.25 to 0.30 and an equivalent passive pressure of 250 to 300 lbs/ft^3. Please note that these values are preliminary and the actual design values will be determined during the design-level geotechnical investigation. The structural engineer should incorporate appropriate factors of safety in the design of the retaining walls.

The active earth pressure may be used for the design of retaining walls that do not directly support structures or support soils that in turn support structures and which will be allowed to deflect. The at-rest earth pressure should be used for walls that will not be allowed to deflect

such as those which will support foundation bearing soils, or which will support foundation loads directly.

Where the soils on the toe side of the retaining wall are not covered by a "hard" surface such as a structure or pavement, the upper 1 foot of soil should be neglected when calculating passive resistance due to the potential for the material to become disturbed or degraded during the life of the structure.

Seismic Lateral Earth Pressures

In addition to the lateral earth pressures presented in the previous section, retaining walls which are more than 6 feet in height should be designed for a seismic lateral earth pressure, in accordance with the 2016 CBC. Based on the current site plan, it is not expected that any walls in excess of 6 feet in height will be required for this project. If any such walls are proposed, our office should be contacted for supplementary design recommendations.

Backfill Material

Retaining wall backfill soils should consist of on-site sands and silty sands possessing an expansion index less than 20. All backfill material placed within 3 feet of the back wall face should have a particle size no greater than 3 inches. The retaining wall backfill materials should be well graded.

It is recommended that a minimum 1 foot thick layer of free-draining granular material (less than 5 percent passing the No. 200 sieve) be placed against the face of the retaining walls. This material should extend from the top of the retaining wall footing to within 1 foot of the ground surface on the back side of the retaining wall. This material should be approved by the geotechnical engineer. In lieu of the 1 foot thick layer of free-draining material, a properly installed prefabricated drainage composite such as the MiraDRAIN 6000XL (or approved equivalent), which is specifically designed for use behind retaining walls, may be used. If the layer of free-draining material is not covered by an impermeable surface, such as a structure or pavement, a 12-inch thick layer of a low permeability soil should be placed over the backfill to reduce surface water migration to the underlying soils. The layer of free draining granular material should be separated from the backfill soils by a suitable geotextile, approved by the geotechnical engineer.

All retaining wall backfill should be placed and compacted under engineering controlled conditions in the necessary layer thicknesses to ensure an in-place density between 90 and 93 percent of the maximum dry density as determined by the Modified Proctor test (ASTM D1557). Care should be taken to avoid over-compaction of the soils behind the retaining walls, and the use of heavy compaction equipment should be avoided.

Subsurface Drainage

As previously indicated, the retaining wall design parameters are based upon drained backfill conditions. Consequently, some form of permanent drainage system will be necessary in conjunction with the appropriate backfill material. Subsurface drainage may consist of either:

- A weep hole drainage system typically consisting of a series of 2-inch diameter holes in the wall situated slightly above the ground surface elevation on the exposed side of the wall and at an approximate 10-foot on-center spacing. Alternatively, 4-inch diameter holes at an approximate 20-foot on-center spacing can be used for this type of drainage system. In addition, the weep holes should include a 2 cubic foot pocket of open graded gravel, surrounded by an approved geotextile fabric, at each weep hole location.

- A 4-inch diameter perforated pipe surrounded by 2 cubic feet of gravel per linear foot of drain placed behind the wall, above the retaining wall footing. The gravel layer should be wrapped in a suitable geotextile fabric to reduce the potential for migration of fines. The footing drain should be extended to daylight or tied into a storm drainage system. The actual design of this type of system should be determined by the civil engineer to verify that the drainage system possesses the adequate capacity and slope for its intended use.

Weep holes or a footing drain will not be required for building stem walls.

6.8 Preliminary Pavement Design Parameters Recommendations

Presented below are preliminary recommendations for pavements that may be required around the perimeters of the proposed structures. Grading recommendations for these pavement areas should be developed during the design level geotechnical investigation.

Pavement Subgrades

It is anticipated that the new pavements will be primarily supported on a layer of compacted structural fill, consisting of scarified, thoroughly moisture conditioned and recompacted existing soils. The near-surface soils generally consist of silty sands, sandy silts and fine sands with occasional clayey fine sands to fine sandy clays. These soils are considered to possess fair to good pavement support characteristics with an estimated R-values ranging from 30 to 40. The subsequent pavement design is based upon an assumed R-value of 30. Any fill material imported to the site should have support characteristics equal to or greater than that of the on-site soils and be placed and compacted under engineering controlled conditions. It is recommended that R-value testing be performed after completion of rough grading. Depending upon the results of the R-value testing, it may be feasible to use thinner pavement sections in some areas of the site.

Asphaltic Concrete

Presented below are the recommended thicknesses for new flexible pavement structures consisting of asphaltic concrete over a granular base. The pavement designs are based on the traffic indices (TI's) indicated. The client and/or civil engineer should verify that these TI's are representative of the anticipated traffic volumes. If the client and/or civil engineer determine that the expected traffic volume will exceed the applicable traffic index, we should be contacted for supplementary recommendations. The design traffic indices equate to the following approximate daily traffic volumes over a 20 year design life, assuming six operational traffic days per week.

Traffic Index	No. of Heavy Trucks per Day
4.0	0
5.0	1
6.0	3
7.0	11
8.0	35
9.0	93

For the purpose of the traffic volumes indicated above, a truck is defined as a 5-axle tractor trailer unit with one 8-kip axle and two 32-kip tandem axles. All of the traffic indices allow for 1,000 automobiles per day.

ASPHALT PAVEMENTS (R = 30)					
Materials	**Thickness (inches)**				
	Auto Parking and Auto Drive Lanes (TI = 4.0 to 5.0)	Truck Traffic			
		TI = 6.0	TI = 7.0	TI = 8.0	TI = 9.0
Asphalt Concrete	3	3½	4	5	5½
Aggregate Base	6	8	10	11	13
Compacted Subgrade	12	12	12	12	12

The aggregate base course should be compacted to at least 95 percent of the ASTM D-1557 maximum dry density. The asphaltic concrete should be compacted to at least 95 percent of the Marshall maximum density, as determined by ASTM D-2726. The aggregate base course may consist of crushed aggregate base (CAB) or crushed miscellaneous base (CMB), which is a recycled gravel, asphalt and concrete material. The gradation, R-Value, Sand Equivalent, and Percentage Wear of the CAB or CMB should comply with appropriate specifications contained in the current edition of the "Greenbook" Standard Specifications for Public Works Construction.

Portland Cement Concrete

The preparation of the subgrade soils within concrete pavement areas should be performed as previously described for proposed asphalt pavement areas. The minimum recommended thicknesses for the Portland Cement Concrete pavement sections are as follows:

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 30)				
Materials	**Thickness (inches)**			
	Autos and Light Truck Traffic (TI = 6.0)	Truck Traffic		
		TI = 7.0	TI = 8.0	TI = 9.0
PCC	5	5½	6½	8
Compacted Subgrade (95% minimum compaction)	12	12	12	12

The concrete should have a 28-day compressive strength of at least 3,000 psi. Any reinforcement within the PCC pavements should be determined by the project structural engineer. The maximum joint spacing within all of the PCC pavements is recommended to be equal to or less than 30 times the pavement thickness.

7.0 GENERAL COMMENTS

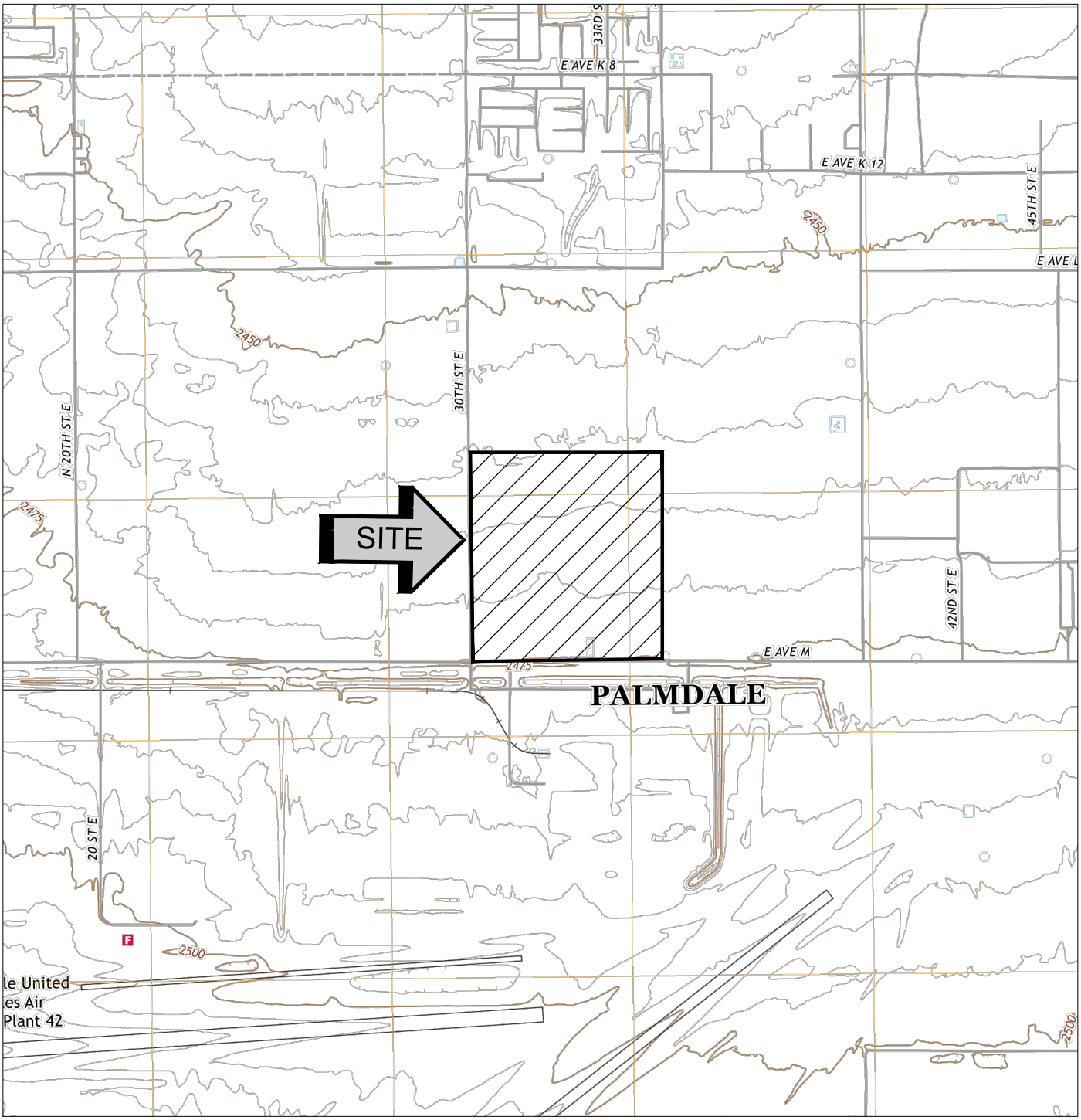
This report has been prepared as an instrument of service for use by the client, in order to aid in the evaluation of this property and to assist the architects and engineers in the design and preparation of the project plans and specifications. This report may be provided to the contractor(s) and other design consultants to disclose information relative to the project. However, this report is not intended to be utilized as a specification in and of itself, without appropriate interpretation by the project architect, civil engineer, and/or structural engineer. The reproduction and distribution of this report must be authorized by the client and Southern California Geotechnical, Inc. Furthermore, any reliance on this report by an unauthorized third party is at such party's sole risk, and we accept no responsibility for damage or loss which may occur. The client(s)' reliance upon this report is subject to the Engineering Services Agreement, incorporated into our proposal for this project.

The analysis of this site was based on a subsurface profile interpolated from limited discrete soil samples. While the materials encountered in the project area are considered to be representative of the total area, some variations should be expected between boring locations and sample depths. If the conditions encountered during construction vary significantly from those detailed herein, we should be contacted immediately to determine if the conditions alter the recommendations contained herein.

This report has been based on assumed or provided characteristics of the proposed development. It is recommended that the owner, client, architect, structural engineer, and civil engineer carefully review these assumptions to ensure that they are consistent with the characteristics of the proposed development. If discrepancies exist, they should be brought to our attention to verify that they do not affect the conclusions and recommendations contained herein. We also recommend that the project plans and specifications be submitted to our office for review to verify that our recommendations have been correctly interpreted.

The analysis, conclusions, and recommendations contained within this report have been promulgated in accordance with generally accepted professional geotechnical engineering practice. No other warranty is implied or expressed.

APPENDIX A



SOURCE: USGS TOPOGRAPHIC MAP OF THE LANCASTER EAST QUADRANGLE, LOS ANGELES COUNTY, CALIFORNIA, 2018.

SITE LOCATION MAP

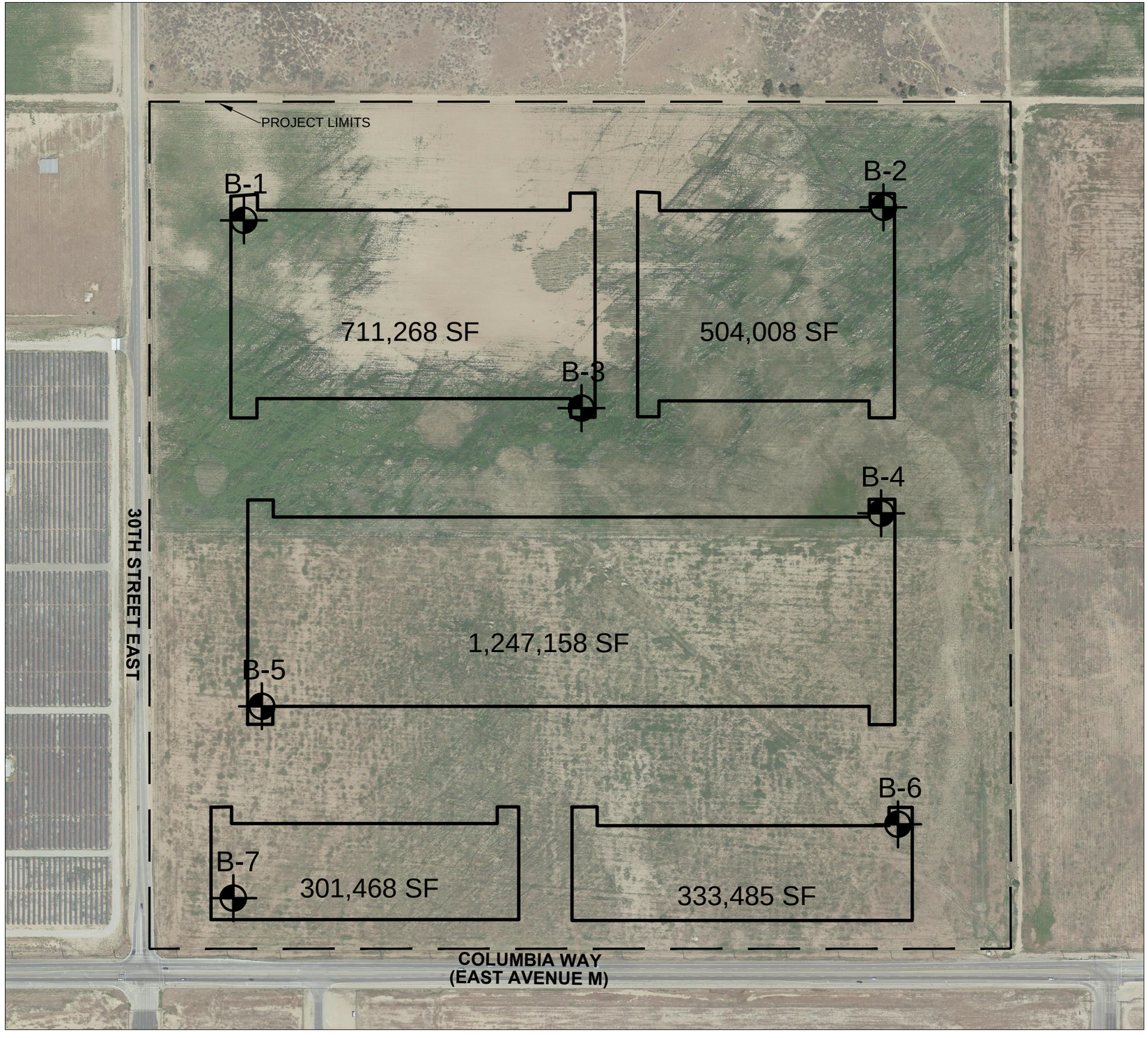
PROPOSED WAREHOUSE DEVELOPMENT

PALMDALE , CALIFORNIA

SCALE: 1" = 2000'	
DRAWN: JAH CHKD: RF	
SCG PROJECT 21G286-1	
PLATE 1	

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



NORTH

SoCalGeo

GEOTECHNICAL LEGEND

APPROXIMATE BORING LOCATION

NOTES: CONCEPTUAL SITE PLAN PROVIDED BY THE CLIENT.
AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH.

BORING LOCATION PLAN

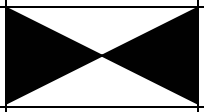
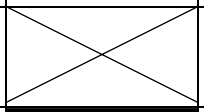
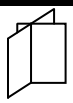
PROPOSED WAREHOUSE DEVELOPMENT

PALMDALE, CALIFORNIA

SCALE: 1" = 320'	SOUTHERN CALIFORNIA GEOTECHNICAL
DRAWN: JAZ CHKD: RGT	
SCG PROJECT 21G286-1	
PLATE 2	

APPENDIX B

BORING LOG LEGEND

SAMPLE TYPE	GRAPHICAL SYMBOL	SAMPLE DESCRIPTION
AUGER		SAMPLE COLLECTED FROM AUGER CUTTINGS, NO FIELD MEASUREMENT OF SOIL STRENGTH. (DISTURBED)
CORE		ROCK CORE SAMPLE: TYPICALLY TAKEN WITH A DIAMOND-TIPPED CORE BARREL. TYPICALLY USED ONLY IN HIGHLY CONSOLIDATED BEDROCK.
GRAB		SOIL SAMPLE TAKEN WITH NO SPECIALIZED EQUIPMENT, SUCH AS FROM A STOCKPILE OR THE GROUND SURFACE. (DISTURBED)
CS		CALIFORNIA SAMPLER: 2-1/2 INCH I.D. SPLIT BARREL SAMPLER, LINED WITH 1-INCH HIGH BRASS RINGS. DRIVEN WITH SPT HAMMER. (RELATIVELY UNDISTURBED)
NSR		NO RECOVERY: THE SAMPLING ATTEMPT DID NOT RESULT IN RECOVERY OF ANY SIGNIFICANT SOIL OR ROCK MATERIAL.
SPT		STANDARD PENETRATION TEST: SAMPLER IS A 1.4 INCH INSIDE DIAMETER SPLIT BARREL, DRIVEN 18 INCHES WITH THE SPT HAMMER. (DISTURBED)
SH		SHELBY TUBE: TAKEN WITH A THIN WALL SAMPLE TUBE, PUSHED INTO THE SOIL AND THEN EXTRACTED. (UNDISTURBED)
VANE		VANE SHEAR TEST: SOIL STRENGTH OBTAINED USING A 4 BLADED SHEAR DEVICE. TYPICALLY USED IN SOFT CLAYS-NO SAMPLE RECOVERED.

COLUMN DESCRIPTIONS

DEPTH: Distance in feet below the ground surface.

SAMPLE: Sample Type as depicted above.

BLOW COUNT: Number of blows required to advance the sampler 12 inches using a 140 lb hammer with a 30-inch drop. 50/3" indicates penetration refusal (>50 blows) at 3 inches. WH indicates that the weight of the hammer was sufficient to push the sampler 6 inches or more.

POCKET PEN.: Approximate shear strength of a cohesive soil sample as measured by pocket penetrometer.

GRAPHIC LOG: Graphic Soil Symbol as depicted on the following page.

DRY DENSITY: Dry density of an undisturbed or relatively undisturbed sample in lbs/ft^3.

MOISTURE CONTENT: Moisture content of a soil sample, expressed as a percentage of the dry weight.

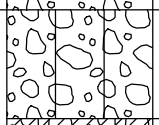
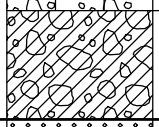
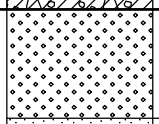
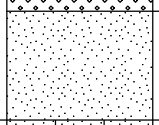
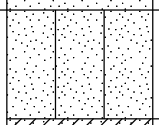
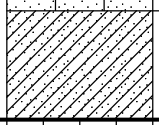
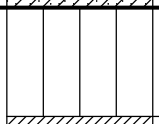
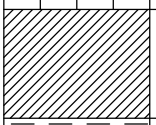
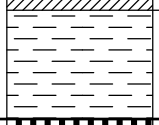
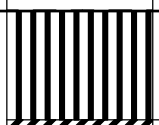
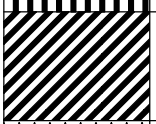
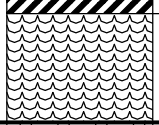
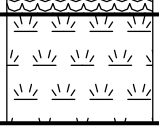
LIQUID LIMIT: The moisture content above which a soil behaves as a liquid.

PLASTIC LIMIT: The moisture content above which a soil behaves as a plastic.

PASSING #200 SIEVE: The percentage of the sample finer than the #200 standard sieve.

UNCONFINED SHEAR: The shear strength of a cohesive soil sample, as measured in the unconfined state.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-1

JOB NO.: 21G286-1
PROJECT: Prop. Warehouse Dev.
LOCATION: Palmdale, California

DRILLING DATE: 12/20/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: Dry
CAVE DEPTH: 28 feet
READING TAKEN: At Completion

FIELD RESULTS					DESCRIPTION	LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		28			ALLUVIUM: Brown Silty fine Sand, trace to little medium to coarse Sand, medium dense-dry to damp	112	2					
		19			Gray Brown fine to coarse Sand, trace fine Gravel, slightly cemented, medium dense-dry to damp	111	3					
5		20										@ 5 feet, No Sample Recovery
		35			Gray Brown Silty fine Sand, little medium to coarse Sand, little Calcareous nodules, slightly cemented, medium dense-dry	103	1					
		82			Gray Brown Silty fine to coarse Sand, trace fine Gravel, cemented, very dense-damp	124	4					
10												
		16			Gray Brown Silty fine Sand, little Clay, little to some Calcareous nodules/veining, medium dense-moist		12					
15												
		10			Gray Brown Silty fine Sand, trace Calcareous nodules, loose to medium dense-moist		9					
20												
		13	3.0		Gray Brown Clayey Silt, little fine Sand, little Iron oxide staining, little Calcareous nodules/veining, stiff-very moist		19					
25												
		19			Gray Brown fine Sandy Silt, little Iron oxide staining, medium dense-very moist		20					
30												
					Boring Terminated at 30'							

TBL 21G286-1.GPJ SOCALGEO.GDT 1/14/22

TEST BORING LOG

PLATE B-1

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-2

JOB NO.: 21G286-1
PROJECT: Prop. Warehouse Dev.
LOCATION: Palmdale, California

DRILLING DATE: 12/21/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: Dry
CAVE DEPTH: 21 feet
READING TAKEN: At Completion

FIELD RESULTS					DESCRIPTION	LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		51	4.5		ALLUVIUM: Gray Brown fine Sandy Clay, cemented, hard-damp	110	3					EI = 5 @ 0 to 5 feet
		34			Light Brown Silty fine Sand, trace medium to coarse Sand, medium dense-damp	111	3					
5		30			@ 5 feet, porous, trace Calcareous nodules	104	5					
		51			Light Gray Brown fine Sand, trace Silt, medium dense to dense-damp	103	3					
10		26					2					@ 9 feet, Disturbed Sample
		15					4					
15					Gray Brown Silty fine to coarse Sand, little Calcareous nodules, medium dense-very moist		17					
		25			Gray Brown fine Sandy Silt, trace to little Clay, little Iron oxide staining, little to some Calcareous nodules, medium dense-moist		13					
20												
		32			Red Brown fine to coarse Sand, trace Clay, slightly cemented, dense-damp		4					
25					Boring Terminated at 25'							

TBL 21G286-1.GPJ SOCALGEO.GDT 1/14/22

TEST BORING LOG **PLATE B-2**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-3

JOB NO.: 21G286-1
PROJECT: Prop. Warehouse Dev.
LOCATION: Palmdale, California

DRILLING DATE: 12/20/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: Dry
CAVE DEPTH: 24 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		17			ALLUVIUM: Brown Silty fine Sand, trace Calcareous veining, slightly cemented, medium dense-damp		7				1.3	
		18			Brown fine Sandy Silt, little to some Calcareous nodules/veining, slightly cemented, medium dense-damp		7				1.2	
5		10			Gray Brown Silty fine Sand, trace medium to coarse Sand, trace fine root fibers, medium dense-dry		1				0.7	
		10			Light Gray fine Sand, trace medium to coarse Sand, trace fine Gravel, medium dense-dry to damp		2				0.4	
10												
		15					1					
15												
		14			Light Gray Brown Clayey fine Sand, little Silt, little to some Calcareous nodules/veining, medium dense-moist		15					
20												
		20			@ 23½ feet, little Iron oxide staining		13					
25					Boring Terminated at 25'							

TBL 21G286-1.GPJ SOCALGEO.GDT 1/14/22

TEST BORING LOG

PLATE B-3

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-4

JOB NO.: 21G286-1
PROJECT: Prop. Warehouse Dev.
LOCATION: Palmdale, California

DRILLING DATE: 12/21/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: Dry
CAVE DEPTH: 23 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
					ALLUVIUM: Brown Silty fine Sand, trace fine root fibers, medium dense-damp							
		44	4.0		Gray Brown fine Sandy Clay, trace medium Sand, cemented, very stiff-damp	99	3				1.7	EI = 35 @ 0 to 5 feet
		22			Brown Silty fine Sand, little to some Calcareous nodules/veining, porous, medium dense-damp	105	4				1.4	
5		38			Brown fine Sand, little Silt, little medium to coarse Sand, medium dense-damp		2				0.6	@ 5 feet, Grab Bag
		26			Gray Brown Silty fine Sand, little Calcareous nodules/veining, slightly cemented, medium dense to dense-damp	100	3				0.9	
		54			@ 9 feet, trace medium to coarse Sand, slightly porous	112	3					
10												
		53	4.5		Gray Brown fine Sandy Clay, little Calcareous nodules/veining, cemented, hard-damp		9					
15												
		24			Brown to Light Brown fine to medium Sand, trace coarse Sand, medium dense-damp		3					
20												
		18			Brown to Red Brown Clayey fine Sand, little Silt, medium dense-moist		11					
25					Boring Terminated at 25'							

TBL 21G286-1.GPJ SOCALGEO.GDT 1/14/22

TEST BORING LOG

PLATE B-4

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-5

JOB NO.: 21G286-1
PROJECT: Prop. Warehouse Dev.
LOCATION: Palmdale, California

DRILLING DATE: 12/20/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: Dry
CAVE DEPTH: 23 feet
READING TAKEN: At Completion

FIELD RESULTS					DESCRIPTION	LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		19			ALLUVIUM: Gray Brown Silty fine Sand, slightly cemented, medium dense-damp		6					
		13					4					
5		28			Light Gray Brown fine Sandy Silt, trace medium to coarse Sand, medium dense-damp		2					
		48			Light Gray Brown Silty fine to coarse Sand, trace fine Gravel, dense-damp		2					
10												
		42			Light Gray Brown Silty fine Sand to fine Sandy Silt, little Calcareous nodules/veining, slightly cemented, dense-damp		7					
15												
		46					5					
20												
					Gray Brown fine to medium Sand, trace coarse Sand, medium dense-dry to damp							
		26					2					
25			4.5		Gray Brown to Brown fine Sandy Clay, trace medium Sand, trace Calcareous veining, very stiff-moist		12					
					Boring Terminated at 25'							

TBL 21G286-1.GPJ SOCALGEO.GDT 1/14/22

TEST BORING LOG

PLATE B-5

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-6

JOB NO.: 21G286-1
PROJECT: Prop. Warehouse Dev.
LOCATION: Palmdale, California

DRILLING DATE: 12/21/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: Dry
CAVE DEPTH: 29 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		35			ALLUVIUM: Brown Silty fine Sand, trace fine root fibers, medium dense-damp	103	3					
		29			Brown fine Sand, little Silt, slightly cemented, medium dense-damp	100	2					
5		24			Gray Brown Silty fine Sand, slightly cemented, medium dense-damp	106	2					
		38			Light Gray Brown fine Sandy Silt, little Calcareous veining, slightly porous, medium dense-damp	109	3					
					Gray Brown fine Sand, trace medium Sand, medium dense-damp							
		48			Light Gray Brown Silty fine to coarse Sand, slightly cemented, dense-damp	103	3					
10					Light Gray Brown fine Sandy Silt, little to some Calcareous nodules/veining, slightly cemented, dense-damp							
		30			Gray Brown Silty fine Sand, trace medium Sand, trace to little Calcareous nodules/veining, slightly cemented, dense-damp		5					
15												
		23			Light Gray Brown fine Sand, trace medium Sand, medium dense-damp		2					
20												
		12	4.0		Gray Brown fine Sandy Clay, trace medium Sand, little Calcareous nodules/veining, trace to little Iron oxide staining, stiff to very stiff-moist		22					
25												
		19	4.5				15					
30					Boring Terminated at 30'							

TBL 21G286-1.GPJ SOCALGEO.GDT 1/14/22

TEST BORING LOG

PLATE B-6

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-7

JOB NO.: 21G286-1
PROJECT: Prop. Warehouse Dev.
LOCATION: Palmdale, California

DRILLING DATE: 12/20/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: Dry
CAVE DEPTH: 17 feet
READING TAKEN: At Completion

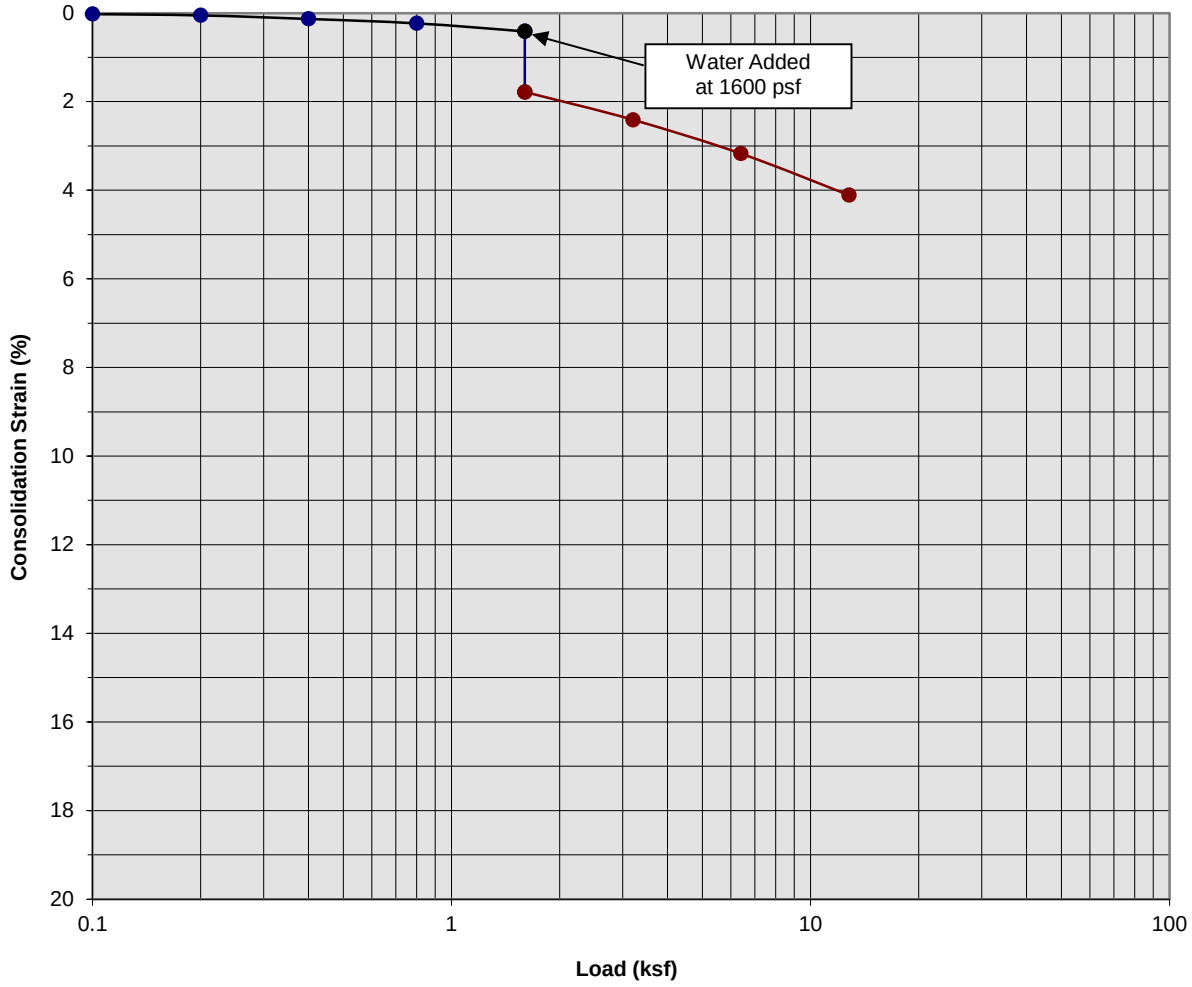
FIELD RESULTS					DESCRIPTION	LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		65			ALLUVIUM: Gray Brown Silty fine Sand, cemented, medium dense to dense-damp	115	3					
		25			Gray Brown fine Sandy Silt, little Calcareous nodules, medium dense-damp	106	3					
5		25			Gray Brown fine to medium Sand, trace to little Silt, trace coarse Sand, slightly cemented, medium dense-damp	111	2					
		96/10"	4.5		Gray Brown fine Sandy Clay, little Calcareous nodules/veining, porous, cemented, hard-damp	116	7					
		52			Gray Brown Silty fine to coarse Sand, dense-damp	108	4					
10												
		18			Brown fine to coarse Sand, trace Silt, medium dense-damp		3					
15												
		26			Brown Silty fine Sand, little Calcareous nodules/veining, little Iron oxide staining, medium dense-moist		11					
20					Boring Terminated at 20'							

TBL 21G286-1.GPJ SOCALGEO.GDT 1/14/22

TEST BORING LOG **PLATE B-7**

APPENDIX C

Consolidation/Collapse Test Results



Classification: Gray Brown fine Sandy Clay

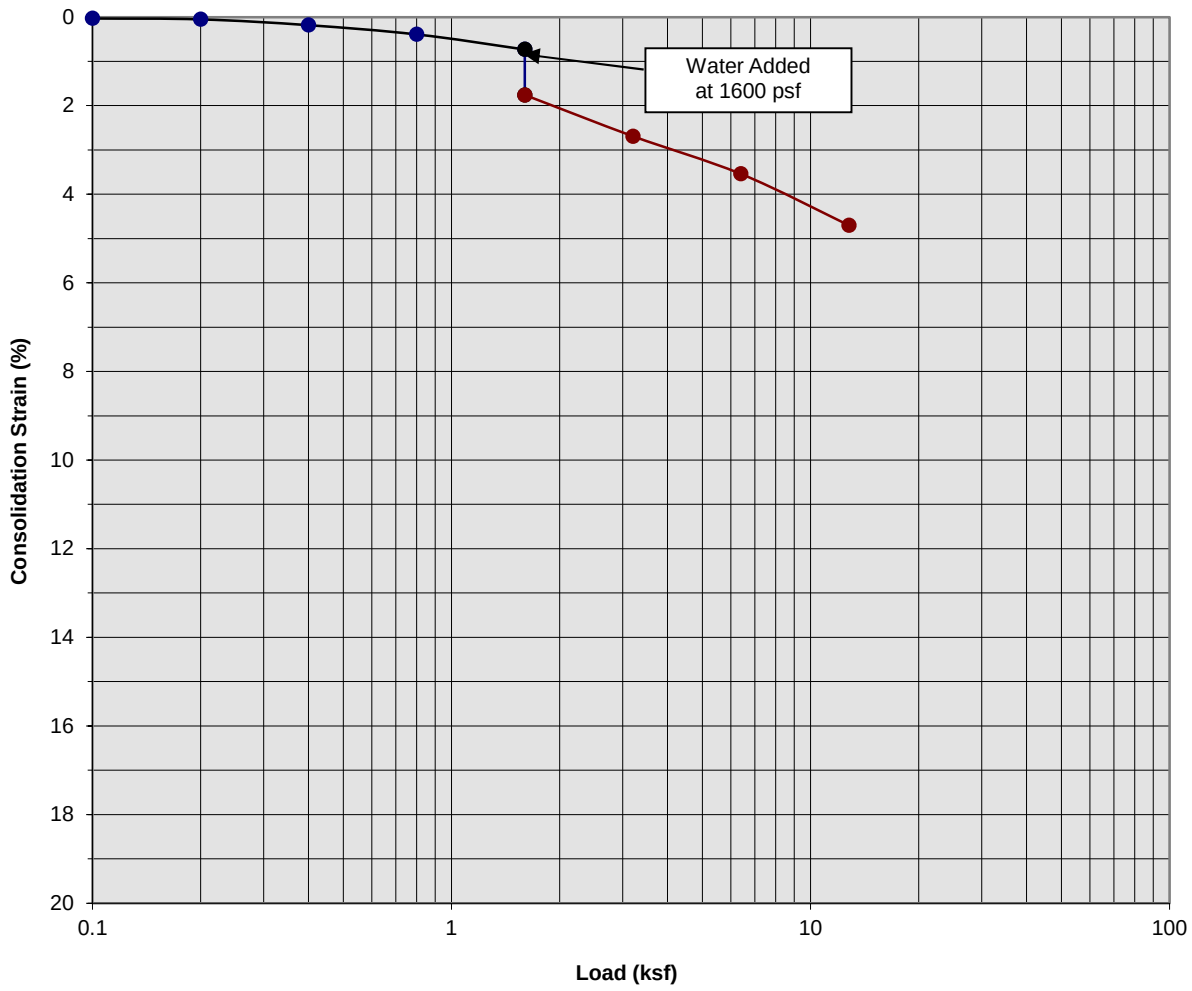
Boring Number:	B-2	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	16
Depth (ft)	1 to 2	Initial Dry Density (pcf)	110.2
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	114.7
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.37

Proposed Warehouse Development
Palmdale, California
Project No. 21G286-1

PLATE C- 1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Light Brown Silty fine Sand, trace medium to coarse Sand

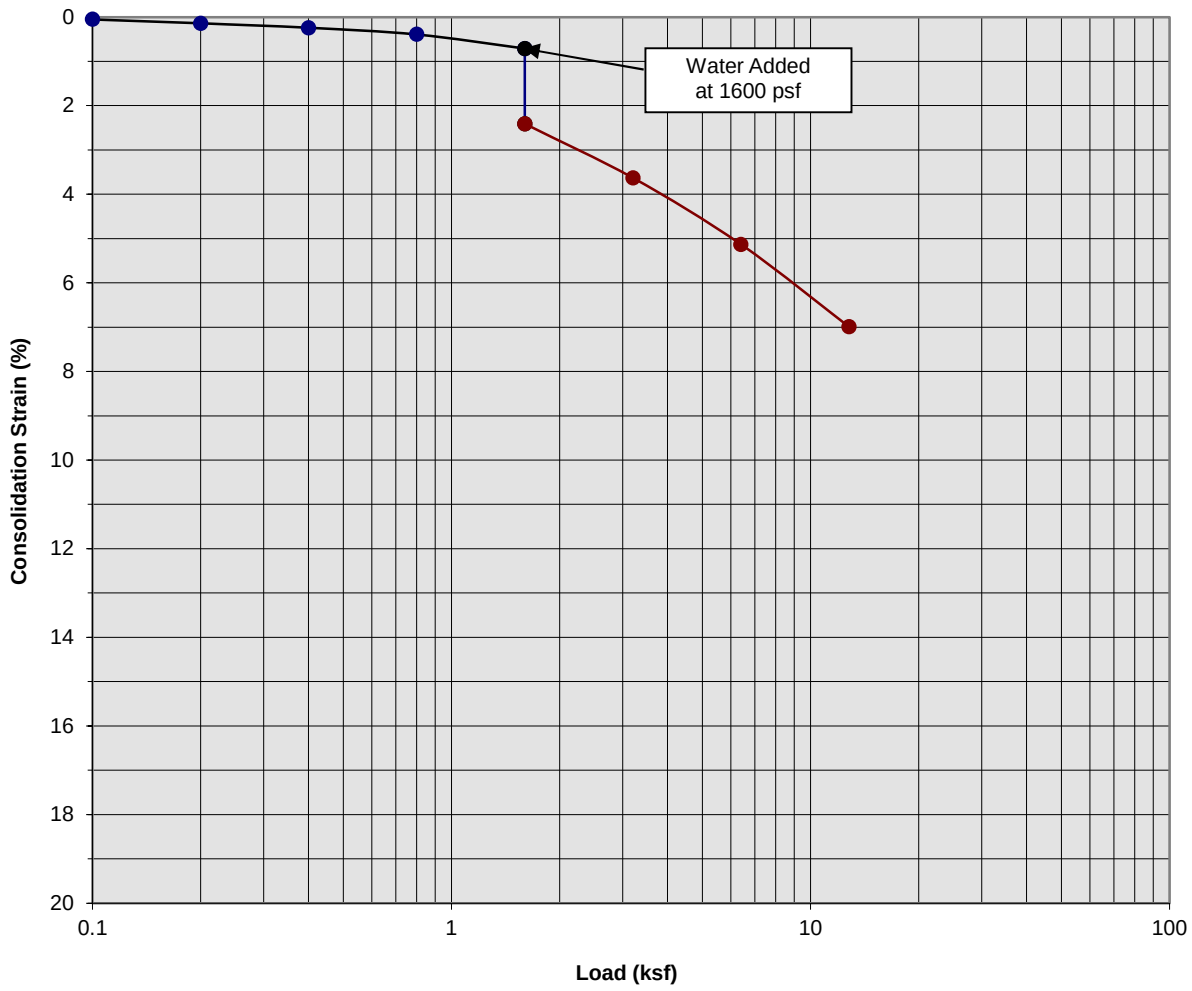
Boring Number:	B-2	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	14
Depth (ft)	3 to 4	Initial Dry Density (pcf)	111.2
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	116.9
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.03

Proposed Warehouse Development
Palmdale, California
Project No. 21G286-1

PLATE C- 2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Light Brown Silty fine Sand, trace medium to coarse Sand

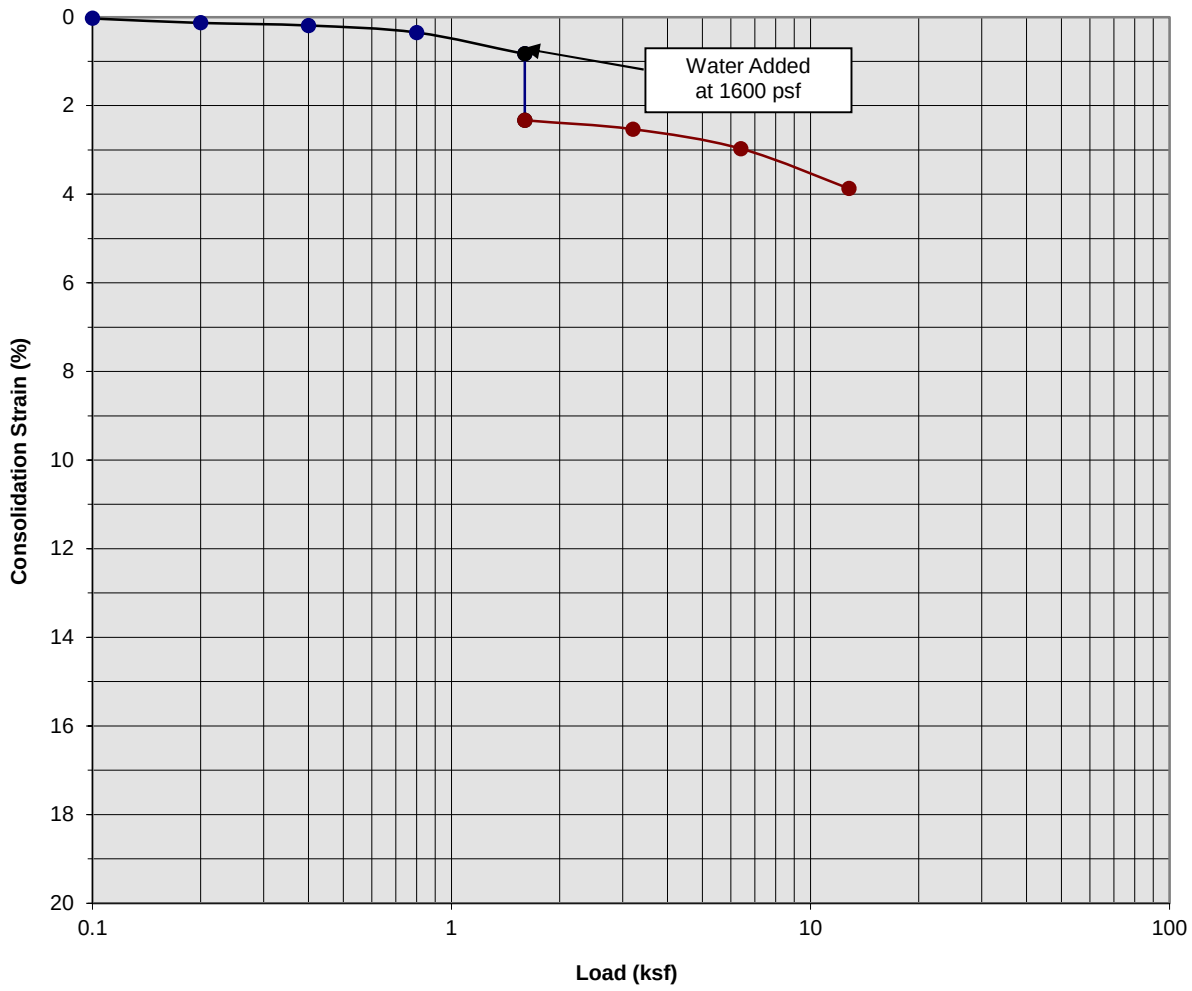
Boring Number:	B-2	Initial Moisture Content (%)	5
Sample Number:	---	Final Moisture Content (%)	19
Depth (ft)	5 to 6	Initial Dry Density (pcf)	104.9
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	112.6
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.70

Proposed Warehouse Development
Palmdale, California
Project No. 21G286-1

PLATE C- 3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Light Gray Brown fine Sand, trace Silt

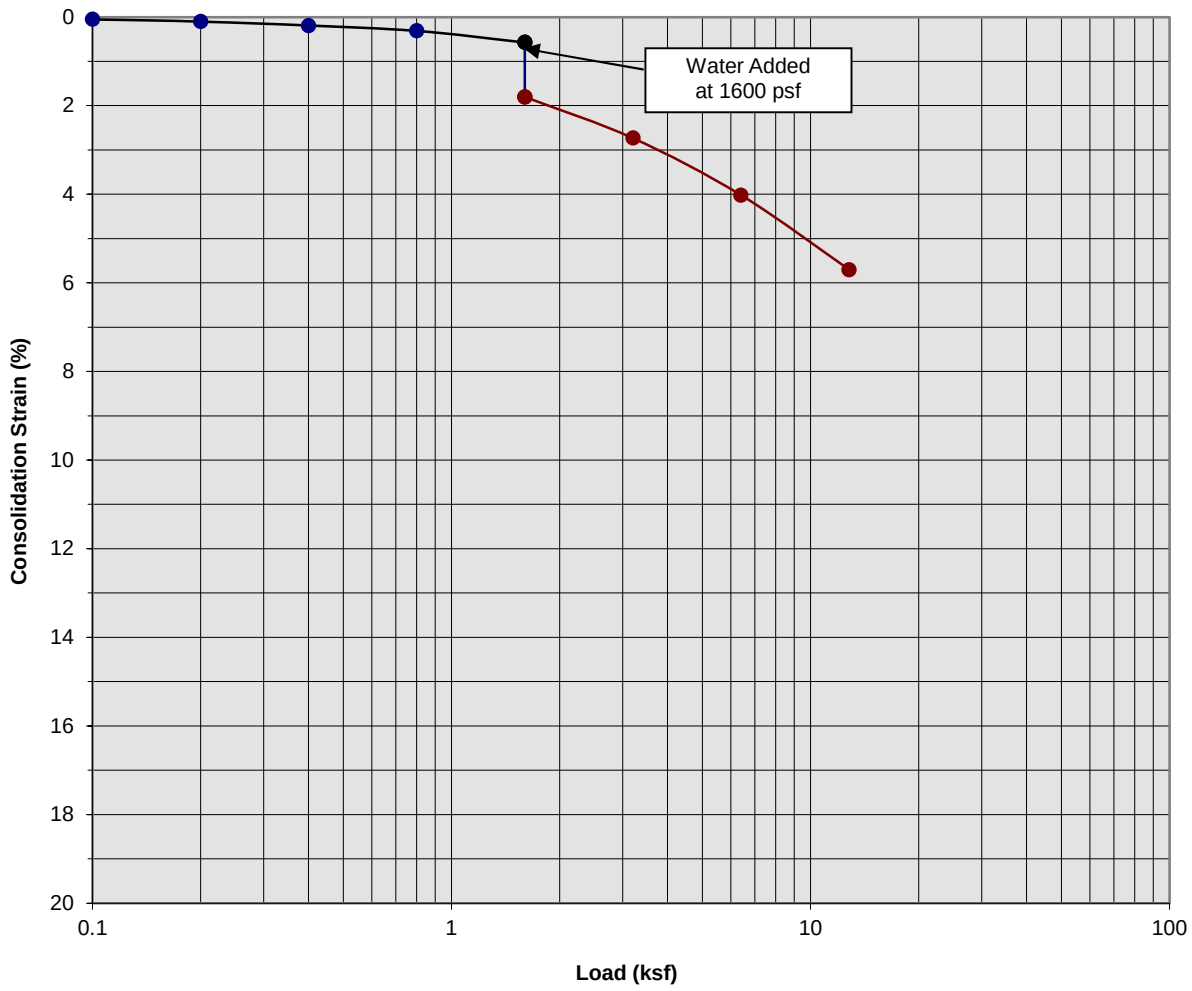
Boring Number:	B-2	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	21
Depth (ft)	7 to 8	Initial Dry Density (pcf)	103.5
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	107.8
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.50

Proposed Warehouse Development
Palmdale, California
Project No. 21G286-1

PLATE C- 4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Gray Brown Silty fine Sand

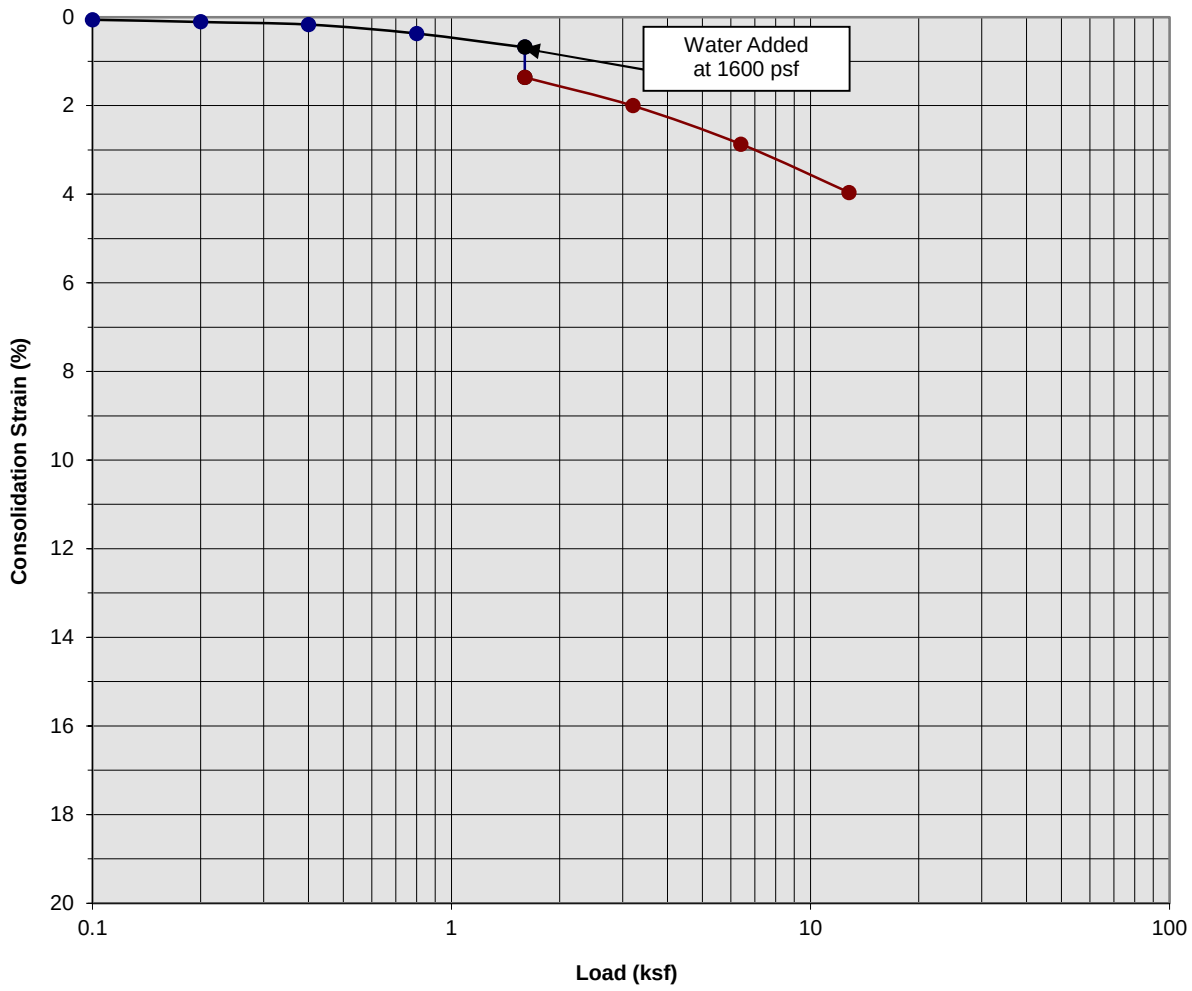
Boring Number:	B-6	Initial Moisture Content (%)	2
Sample Number:	---	Final Moisture Content (%)	18
Depth (ft)	5 to 6	Initial Dry Density (pcf)	106.2
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	113.5
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.23

Proposed Warehouse Development
Palmdale, California
Project No. 21G286-1

PLATE C- 5

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Light Gray Brown fine Sandy Silt

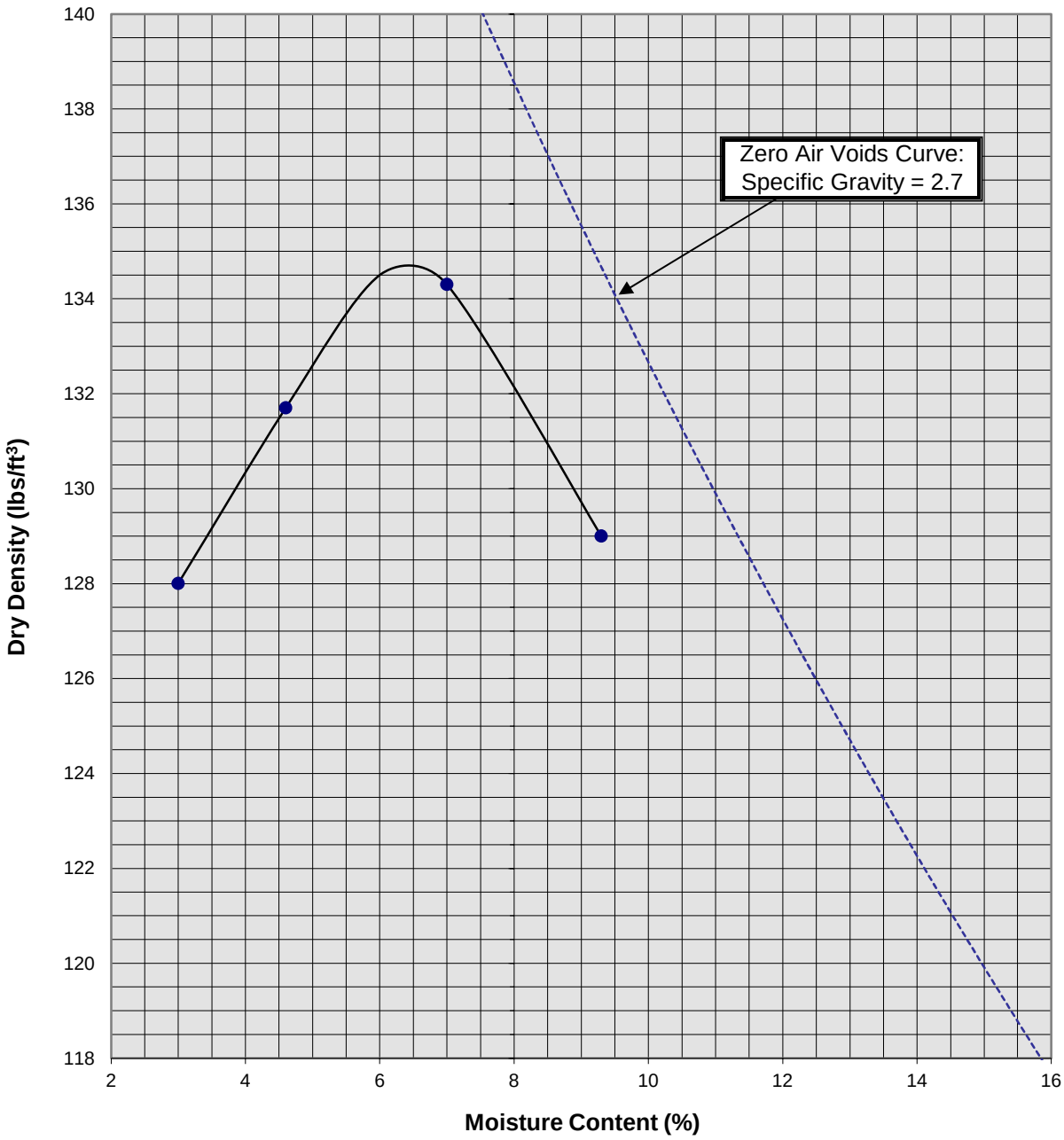
Boring Number:	B-6	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	20
Depth (ft)	7 to 8	Initial Dry Density (pcf)	109.2
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	113.7
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.68

Proposed Warehouse Development
Palmdale, California
Project No. 21G286-1

PLATE C- 6

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Moisture/Density Relationship
ASTM D-1557



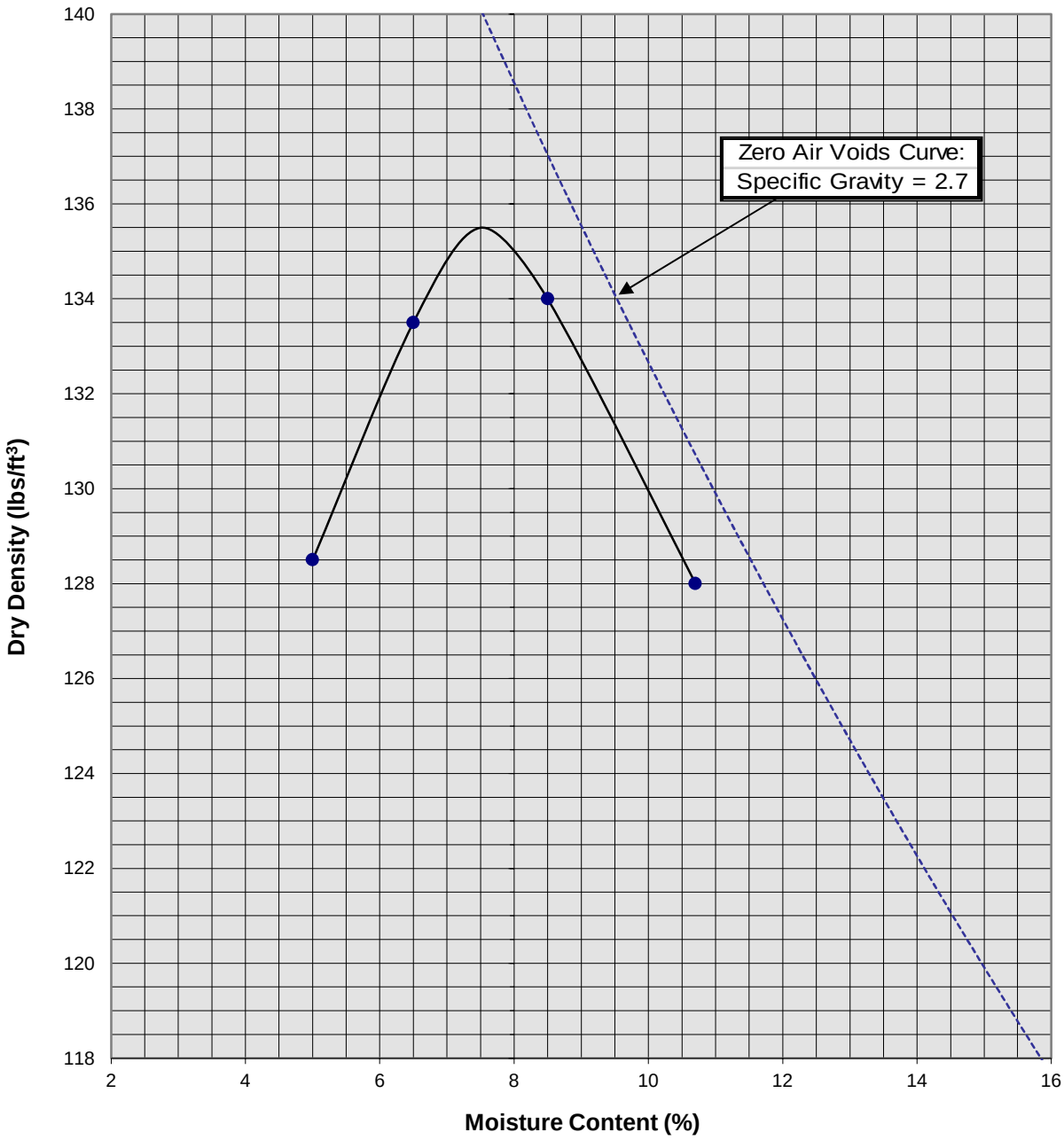
Soil ID Number	B-1 @ 0-5'
Optimum Moisture (%)	6
Maximum Dry Density (pcf)	134.5
Soil Classification	Gray Brown Silty fine to coarse Sand, trace fine Gravel

Proposed Warehouse Development
Palmdale, California
Project No. 21G286-1

PLATE C-7

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Moisture/Density Relationship
ASTM D-1557



Soil ID Number	B-7 @ 0-5'
Optimum Moisture (%)	7.5
Maximum Dry Density (pcf)	135.5
Soil Classification	Gray Brown Silty fine Sand

Proposed Warehouse Development
Palmdale, California
Project No. 21G286-1

PLATE C-8

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

APPENDIX D

GRADING GUIDE SPECIFICATIONS

These grading guide specifications are intended to provide typical procedures for grading operations. They are intended to supplement the recommendations contained in the geotechnical investigation report for this project. Should the recommendations in the geotechnical investigation report conflict with the grading guide specifications, the more site specific recommendations in the geotechnical investigation report will govern.

General

- The Earthwork Contractor is responsible for the satisfactory completion of all earthwork in accordance with the plans and geotechnical reports, and in accordance with city, county, and applicable building codes.

- The Geotechnical Engineer is the representative of the Owner/Builder for the purpose of implementing the report recommendations and guidelines. These duties are not intended to relieve the Earthwork Contractor of any responsibility to perform in a workman-like manner, nor is the Geotechnical Engineer to direct the grading equipment or personnel employed by the Contractor.

- The Earthwork Contractor is required to notify the Geotechnical Engineer of the anticipated work and schedule so that testing and inspections can be provided. If necessary, work may be stopped and redone if personnel have not been scheduled in advance.

- The Earthwork Contractor is required to have suitable and sufficient equipment on the job-site to process, moisture condition, mix and compact the amount of fill being placed to the approved compaction. In addition, suitable support equipment should be available to conform with recommendations and guidelines in this report.

- Canyon cleanouts, overexcavation areas, processed ground to receive fill, key excavations, subdrains and benches should be observed by the Geotechnical Engineer prior to placement of any fill. It is the Earthwork Contractor's responsibility to notify the Geotechnical Engineer of areas that are ready for inspection.

- Excavation, filling, and subgrade preparation should be performed in a manner and sequence that will provide drainage at all times and proper control of erosion. Precipitation, springs, and seepage water encountered shall be pumped or drained to provide a suitable working surface. The Geotechnical Engineer must be informed of springs or water seepage encountered during grading or foundation construction for possible revision to the recommended construction procedures and/or installation of subdrains.

Site Preparation

- The Earthwork Contractor is responsible for all clearing, grubbing, stripping and site preparation for the project in accordance with the recommendations of the Geotechnical Engineer.

- If any materials or areas are encountered by the Earthwork Contractor which are suspected of having toxic or environmentally sensitive contamination, the Geotechnical Engineer and Owner/Builder should be notified immediately.

- Major vegetation should be stripped and disposed of off-site. This includes trees, brush, heavy grasses and any materials considered unsuitable by the Geotechnical Engineer.

- Underground structures such as basements, cesspools or septic disposal systems, mining shafts, tunnels, wells and pipelines should be removed under the inspection of the Geotechnical Engineer and recommendations provided by the Geotechnical Engineer and/or city, county or state agencies. If such structures are known or found, the Geotechnical Engineer should be notified as soon as possible so that recommendations can be formulated.

- Any topsoil, slopewash, colluvium, alluvium and rock materials which are considered unsuitable by the Geotechnical Engineer should be removed prior to fill placement.

- Remaining voids created during site clearing caused by removal of trees, foundations basements, irrigation facilities, etc., should be excavated and filled with compacted fill.

- Subsequent to clearing and removals, areas to receive fill should be scarified to a depth of 10 to 12 inches, moisture conditioned and compacted

- The moisture condition of the processed ground should be at or slightly above the optimum moisture content as determined by the Geotechnical Engineer. Depending upon field conditions, this may require air drying or watering together with mixing and/or discing.

Compacted Fills

- Soil materials imported to or excavated on the property may be utilized in the fill, provided each material has been determined to be suitable in the opinion of the Geotechnical Engineer. Unless otherwise approved by the Geotechnical Engineer, all fill materials shall be free of deleterious, organic, or frozen matter, shall contain no chemicals that may result in the material being classified as “contaminated,” and shall be very low to non-expansive with a maximum expansion index (EI) of 50. The top 12 inches of the compacted fill should have a maximum particle size of 3 inches, and all underlying compacted fill material a maximum 6-inch particle size, except as noted below.

- All soils should be evaluated and tested by the Geotechnical Engineer. Materials with high expansion potential, low strength, poor gradation or containing organic materials may require removal from the site or selective placement and/or mixing to the satisfaction of the Geotechnical Engineer.

- Rock fragments or rocks less than 6 inches in their largest dimensions, or as otherwise determined by the Geotechnical Engineer, may be used in compacted fill, provided the distribution and placement is satisfactory in the opinion of the Geotechnical Engineer.

- Rock fragments or rocks greater than 12 inches should be taken off-site or placed in accordance with recommendations and in areas designated as suitable by the Geotechnical Engineer. These materials should be placed in accordance with Plate D-8 of these Grading Guide Specifications and in accordance with the following recommendations:

    - Rocks 12 inches or more in diameter should be placed in rows at least 15 feet apart, 15 feet from the edge of the fill, and 10 feet or more below subgrade. Spaces should be left between each rock fragment to provide for placement and compaction of soil around the fragments.

    - Fill materials consisting of soil meeting the minimum moisture content requirements and free of oversize material should be placed between and over the rows of rock or

concrete. Ample water and compactive effort should be applied to the fill materials as they are placed in order that all of the voids between each of the fragments are filled and compacted to the specified density.

- Subsequent rows of rocks should be placed such that they are not directly above a row placed in the previous lift of fill. A minimum 5-foot offset between rows is recommended.

- To facilitate future trenching, oversized material should not be placed within the range of foundation excavations, future utilities or other underground construction unless specifically approved by the soil engineer and the developer/owner representative.

- Fill materials approved by the Geotechnical Engineer should be placed in areas previously prepared to receive fill and in evenly placed, near horizontal layers at about 6 to 8 inches in loose thickness, or as otherwise determined by the Geotechnical Engineer for the project.

- Each layer should be moisture conditioned to optimum moisture content, or slightly above, as directed by the Geotechnical Engineer. After proper mixing and/or drying, to evenly distribute the moisture, the layers should be compacted to at least 90 percent of the maximum dry density in compliance with ASTM D-1557-78 unless otherwise indicated.

- Density and moisture content testing should be performed by the Geotechnical Engineer at random intervals and locations as determined by the Geotechnical Engineer. These tests are intended as an aid to the Earthwork Contractor, so he can evaluate his workmanship, equipment effectiveness and site conditions. The Earthwork Contractor is responsible for compaction as required by the Geotechnical Report(s) and governmental agencies.

- Fill areas unused for a period of time may require moisture conditioning, processing and recompaction prior to the start of additional filling. The Earthwork Contractor should notify the Geotechnical Engineer of his intent so that an evaluation can be made.

- Fill placed on ground sloping at a 5-to-1 inclination (horizontal-to-vertical) or steeper should be benched into bedrock or other suitable materials, as directed by the Geotechnical Engineer. Typical details of benching are illustrated on Plates D-2, D-4, and D-5.

- Cut/fill transition lots should have the cut portion overexcavated to a depth of at least 3 feet and rebuilt with fill (see Plate D-1), as determined by the Geotechnical Engineer.

- All cut lots should be inspected by the Geotechnical Engineer for fracturing and other bedrock conditions. If necessary, the pads should be overexcavated to a depth of 3 feet and rebuilt with a uniform, more cohesive soil type to impede moisture penetration.

- Cut portions of pad areas above buttresses or stabilizations should be overexcavated to a depth of 3 feet and rebuilt with uniform, more cohesive compacted fill to impede moisture penetration.

- Non-structural fill adjacent to structural fill should typically be placed in unison to provide lateral support. Backfill along walls must be placed and compacted with care to ensure that excessive unbalanced lateral pressures do not develop. The type of fill material placed adjacent to below grade walls must be properly tested and approved by the Geotechnical Engineer with consideration of the lateral earth pressure used in the design.

Foundations

- The foundation influence zone is defined as extending one foot horizontally from the outside edge of a footing, and proceeding downward at a ½ horizontal to 1 vertical (0.5:1) inclination.

- Where overexcavation beneath a footing subgrade is necessary, it should be conducted so as to encompass the entire foundation influence zone, as described above.

- Compacted fill adjacent to exterior footings should extend at least 12 inches above foundation bearing grade. Compacted fill within the interior of structures should extend to the floor subgrade elevation.

Fill Slopes

- The placement and compaction of fill described above applies to all fill slopes. Slope compaction should be accomplished by overfilling the slope, adequately compacting the fill in even layers, including the overfilled zone and cutting the slope back to expose the compacted core

- Slope compaction may also be achieved by backrolling the slope adequately every 2 to 4 vertical feet during the filling process as well as requiring the earth moving and compaction equipment to work close to the top of the slope. Upon completion of slope construction, the slope face should be compacted with a sheepsfoot connected to a sideboom and then grid rolled. This method of slope compaction should only be used if approved by the Geotechnical Engineer.

- Sandy soils lacking in adequate cohesion may be unstable for a finished slope condition and therefore should not be placed within 15 horizontal feet of the slope face.

- All fill slopes should be keyed into bedrock or other suitable material. Fill keys should be at least 15 feet wide and inclined at 2 percent into the slope. For slopes higher than 30 feet, the fill key width should be equal to one-half the height of the slope (see Plate D-5).

- All fill keys should be cleared of loose slough material prior to geotechnical inspection and should be approved by the Geotechnical Engineer and governmental agencies prior to filling.

- The cut portion of fill over cut slopes should be made first and inspected by the Geotechnical Engineer for possible stabilization requirements. The fill portion should be adequately keyed through all surficial soils and into bedrock or suitable material. Soils should be removed from the transition zone between the cut and fill portions (see Plate D-2).

Cut Slopes

- All cut slopes should be inspected by the Geotechnical Engineer to determine the need for stabilization. The Earthwork Contractor should notify the Geotechnical Engineer when slope cutting is in progress at intervals of 10 vertical feet. Failure to notify may result in a delay in recommendations.

- Cut slopes exposing loose, cohesionless sands should be reported to the Geotechnical Engineer for possible stabilization recommendations.

- All stabilization excavations should be cleared of loose slough material prior to geotechnical inspection. Stakes should be provided by the Civil Engineer to verify the location and dimensions of the key. A typical stabilization fill detail is shown on Plate D-5.

- Stabilization key excavations should be provided with subdrains. Typical subdrain details are shown on Plates D-6.

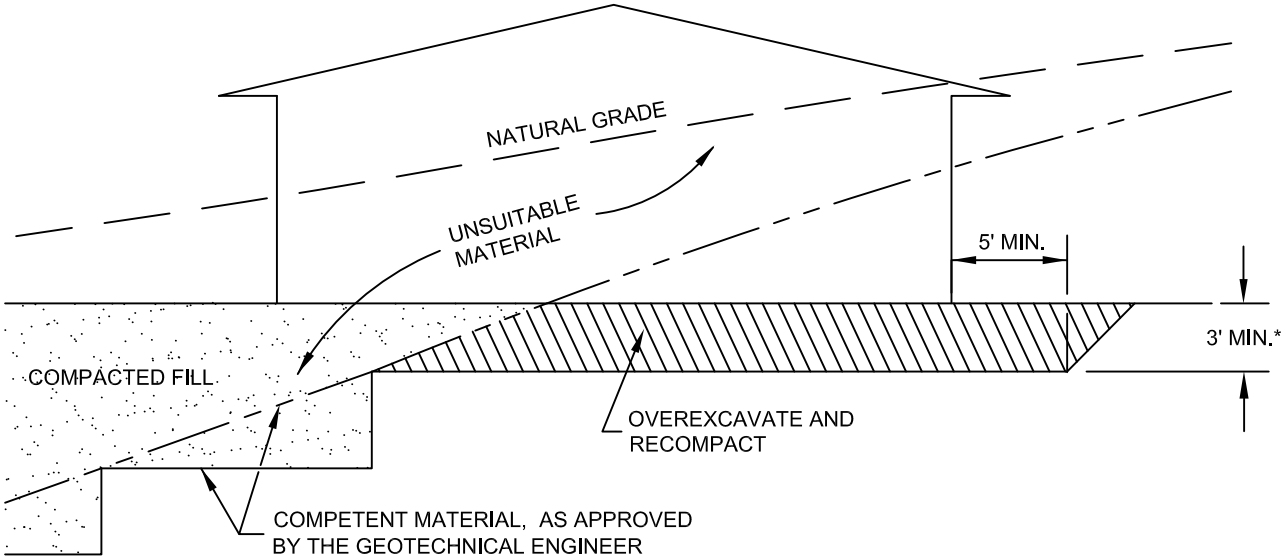
Subdrains

- Subdrains may be required in canyons and swales where fill placement is proposed. Typical subdrain details for canyons are shown on Plate D-3. Subdrains should be installed after approval of removals and before filling, as determined by the Soils Engineer.

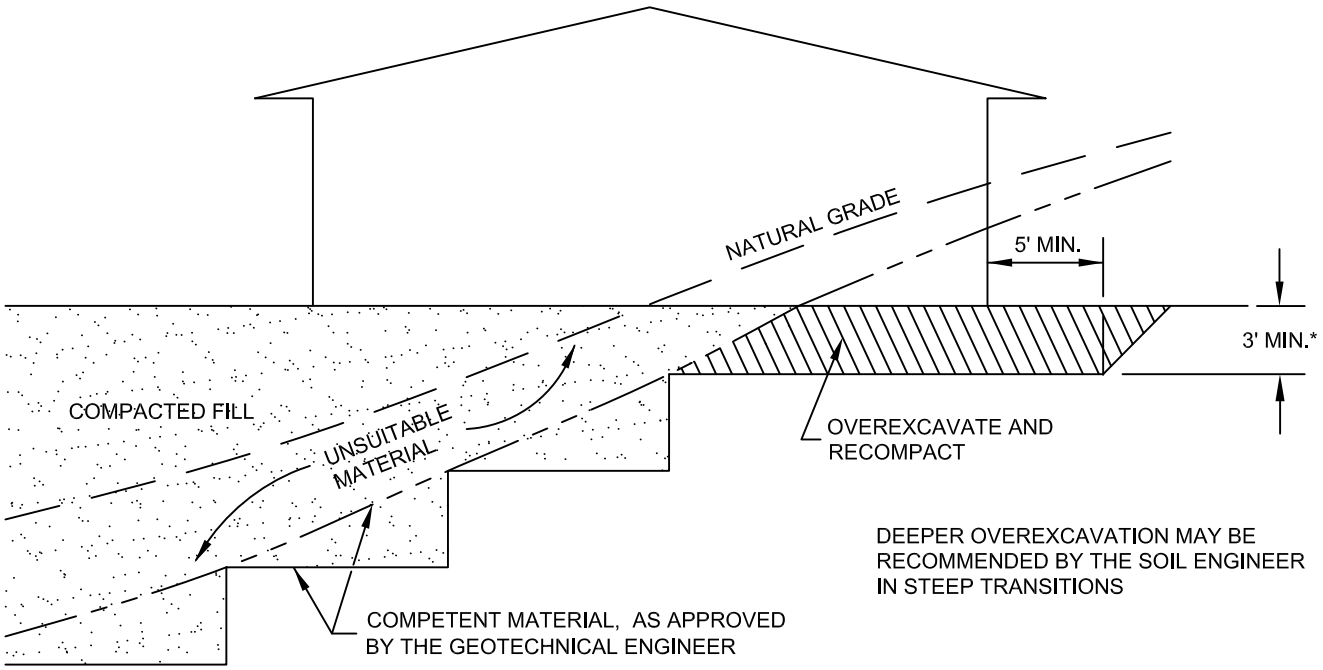
- Plastic pipe may be used for subdrains provided it is Schedule 40 or SDR 35 or equivalent. Pipe should be protected against breakage, typically by placement in a square-cut (backhoe) trench or as recommended by the manufacturer.

- Filter material for subdrains should conform to CALTRANS Specification 68-1.025 or as approved by the Geotechnical Engineer for the specific site conditions. Clean ¾-inch crushed rock may be used provided it is wrapped in an acceptable filter cloth and approved by the Geotechnical Engineer. Pipe diameters should be 6 inches for runs up to 500 feet and 8 inches for the downstream continuations of longer runs. Four-inch diameter pipe may be used in buttress and stabilization fills.

CUT LOT



CUT/FILL LOT (TRANSITION)

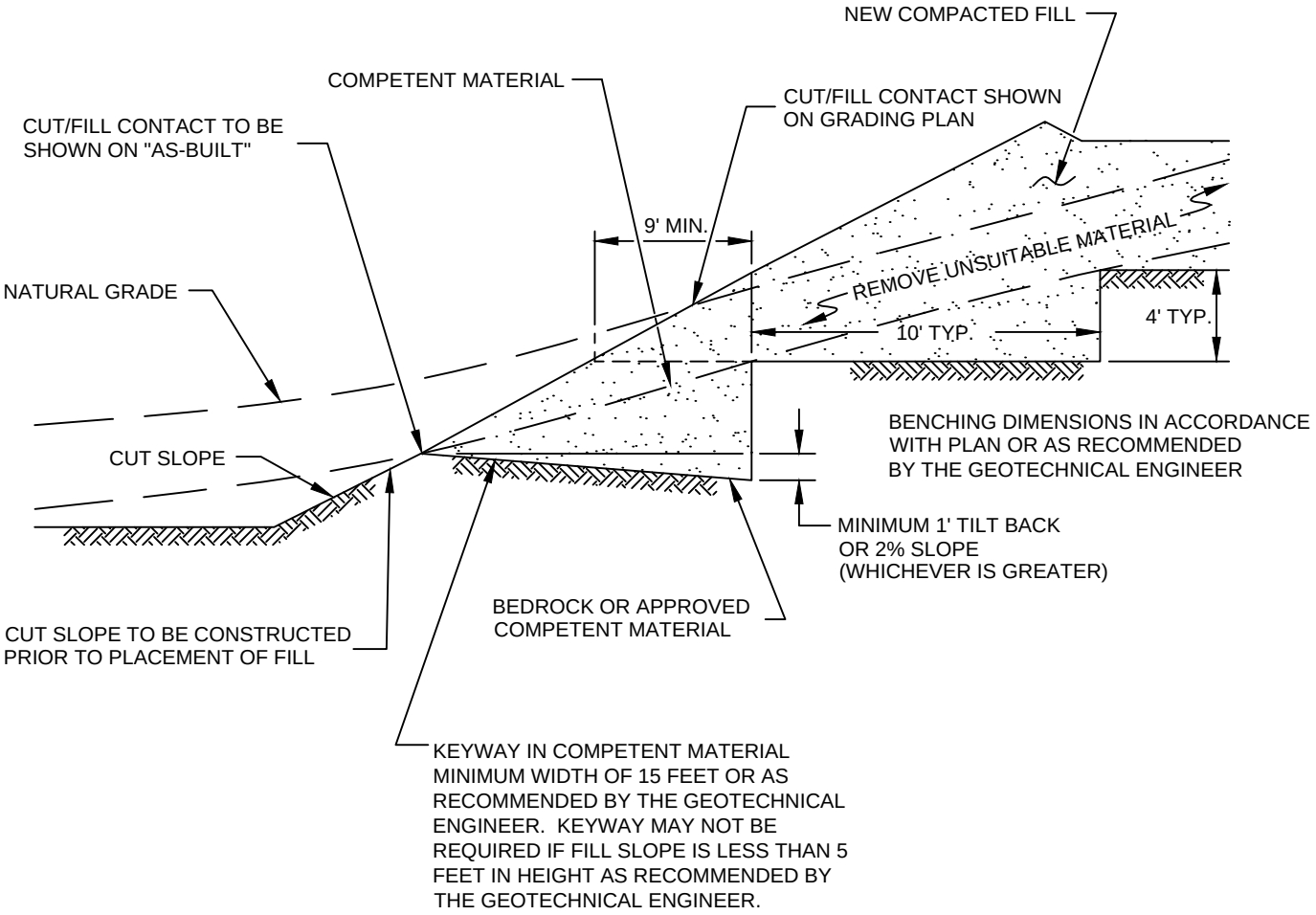


*SEE TEXT OF REPORT FOR SPECIFIC RECOMMENDATION. ACTUAL DEPTH OF OVEREXCAVATION MAY BE GREATER.

TRANSITION LOT DETAIL

GRADING GUIDE SPECIFICATIONS

NOT TO SCALE	SoCalGeo SOUTHERN CALIFORNIA GEOTECHNICAL
DRAWN: JAS CHKD: GKM	
PLATE D-1	



FILL ABOVE CUT SLOPE DETAIL

GRADING GUIDE SPECIFICATIONS

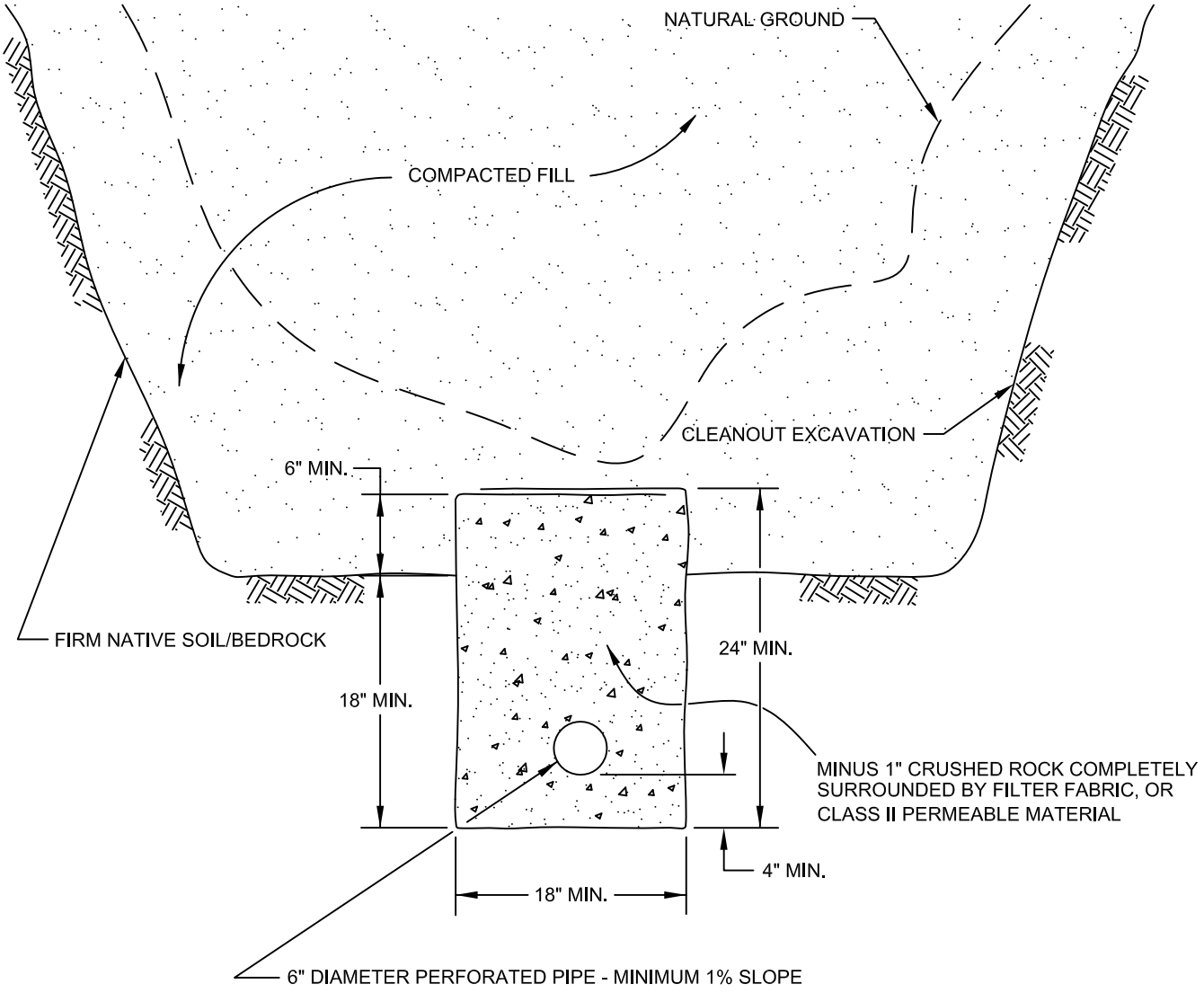
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-2

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



PIPE MATERIAL	DEPTH OF FILL OVER SUBDRAIN
ADS (CORRUGATED POLETHYLENE)	8
TRANSITE UNDERDRAIN	20
PVC OR ABS: SDR 35	35
SDR 21	100

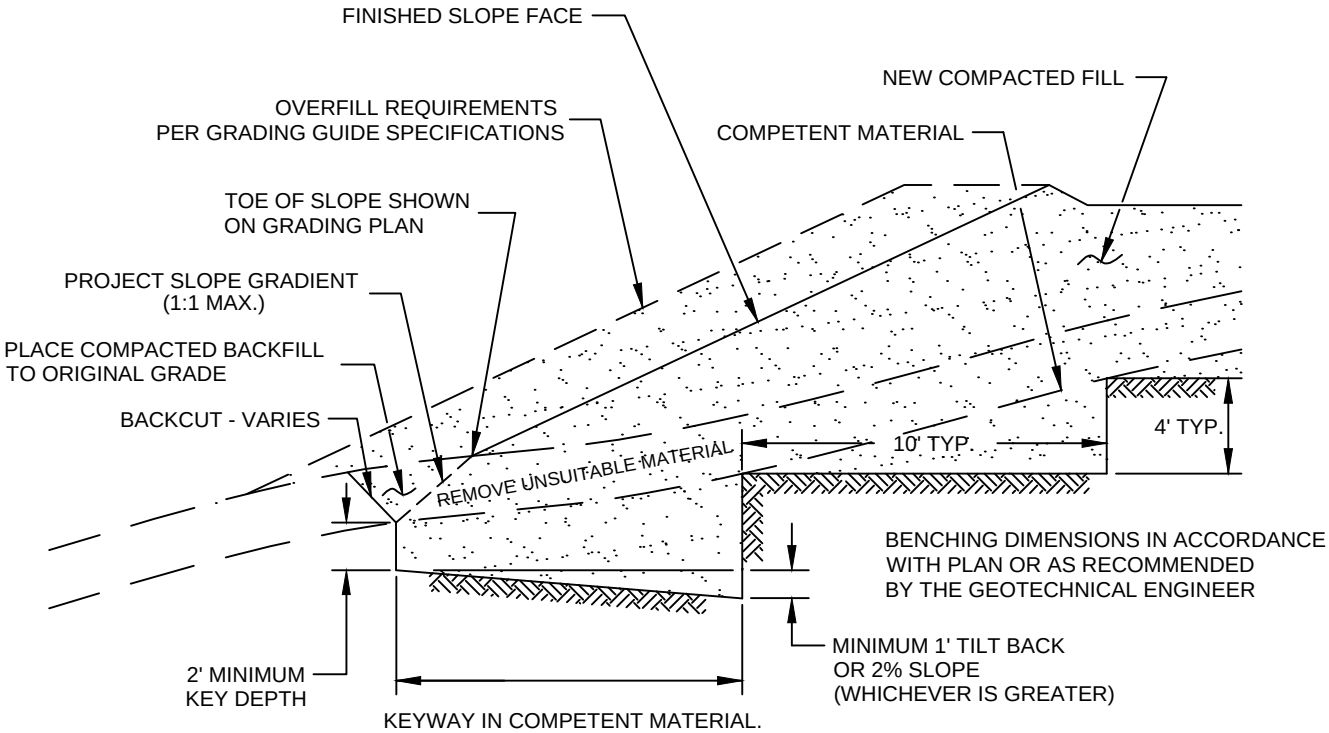
SCHEMATIC ONLY
NOT TO SCALE

CANYON SUBDRAIN DETAIL
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE
DRAWN: JAS
CHKD: GKM

PLATE D-3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



NOTE:
BENCHING SHALL BE REQUIRED WHEN NATURAL SLOPES ARE EQUAL TO OR STEEPER THAN 5:1 OR WHEN RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

FILL ABOVE NATURAL SLOPE DETAIL

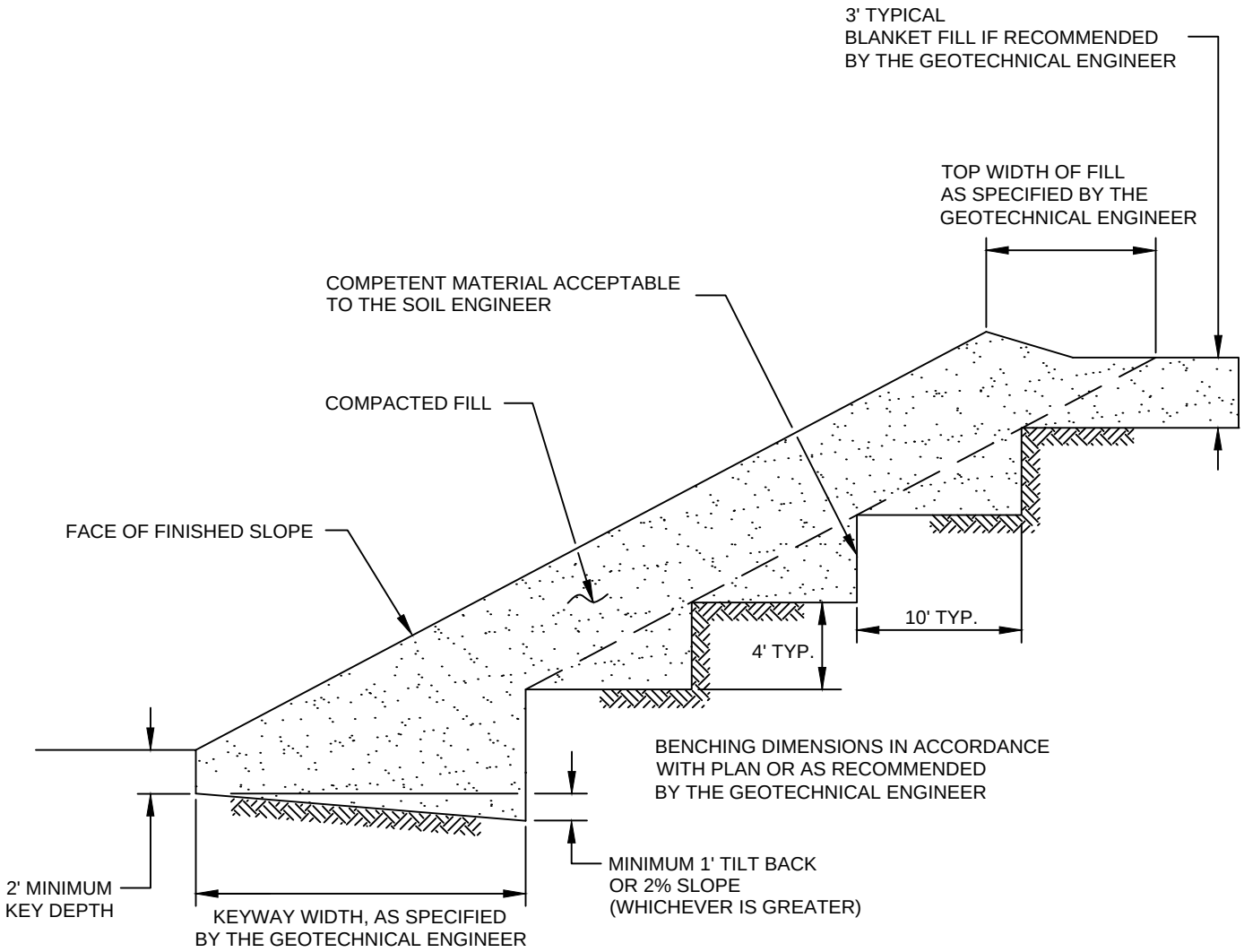
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



STABILIZATION FILL DETAIL

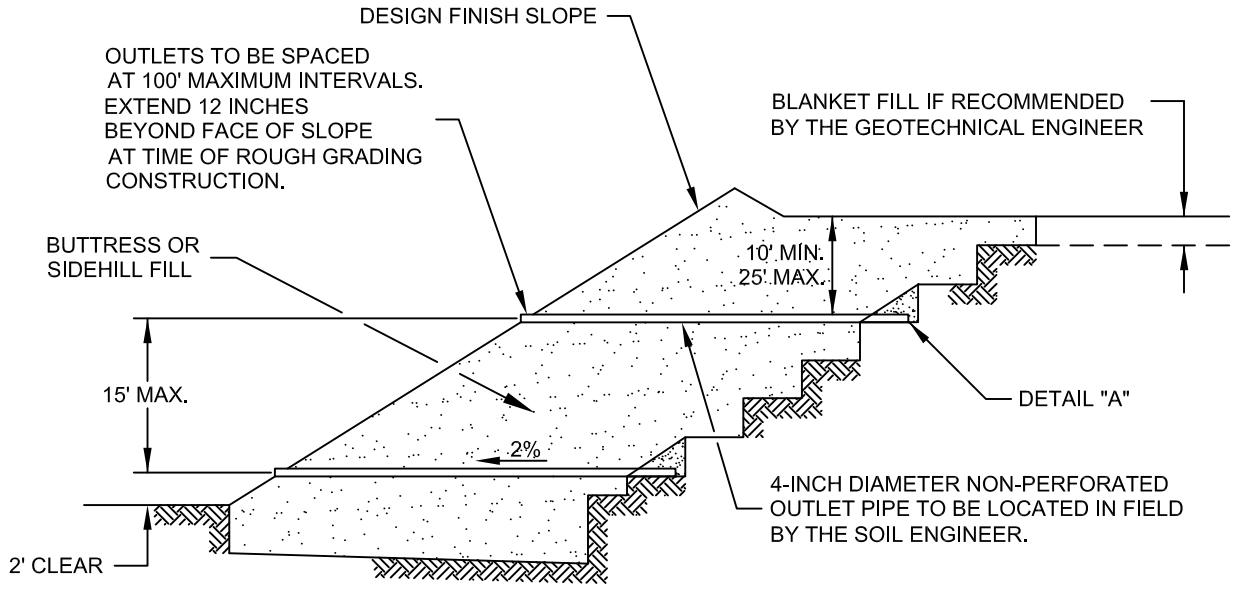
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-5

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



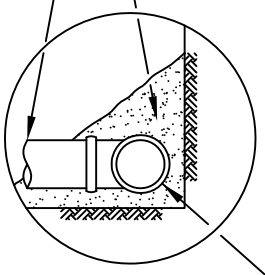
"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50



DETAIL "A"

NOTES:
1. TRENCH FOR OUTLET PIPES TO BE BACKFILLED WITH ON-SITE SOIL.

SLOPE FILL SUBDRAINS

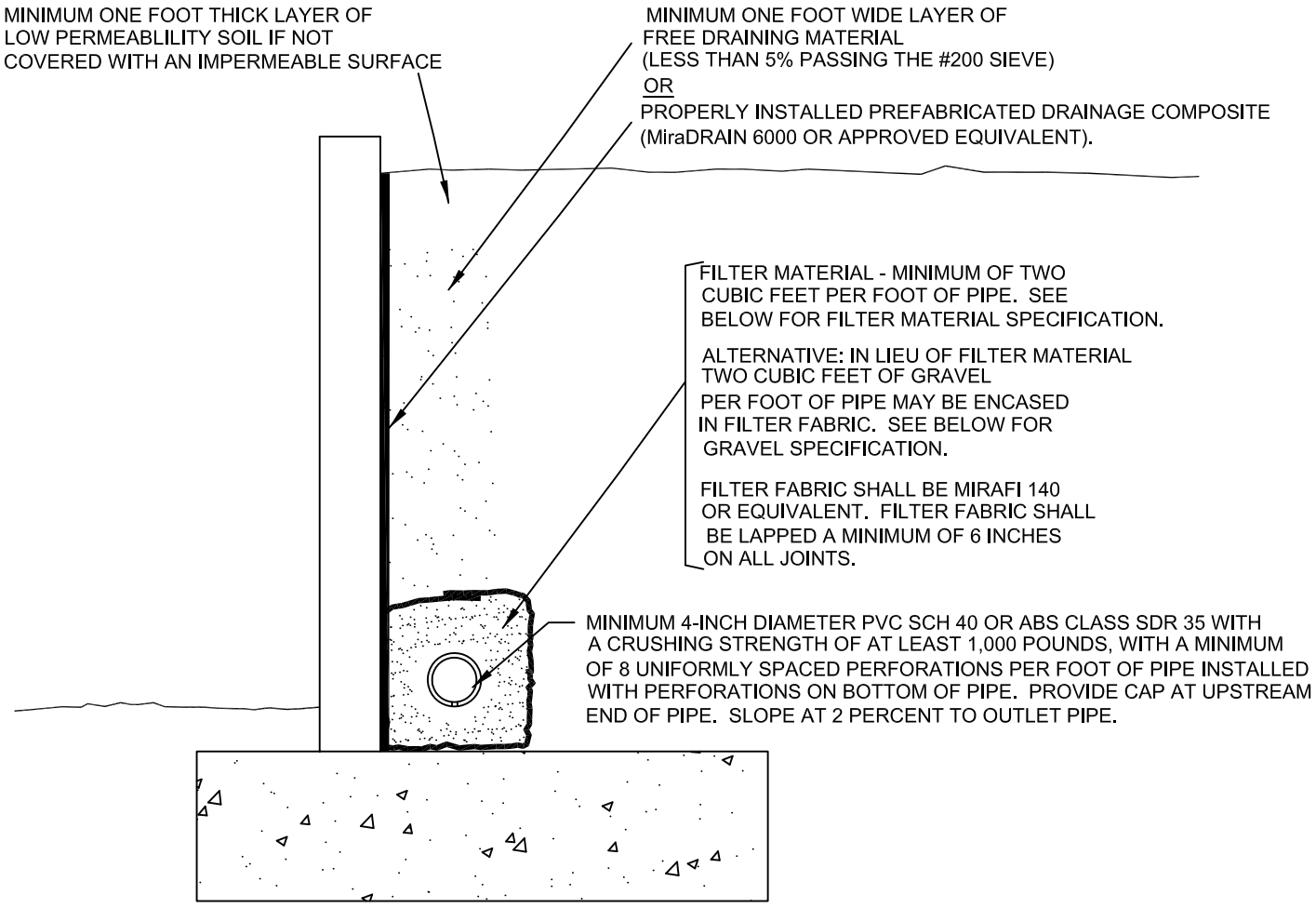
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-6

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50

RETAINING WALL BACKDRAINS

GRADING GUIDE SPECIFICATIONS

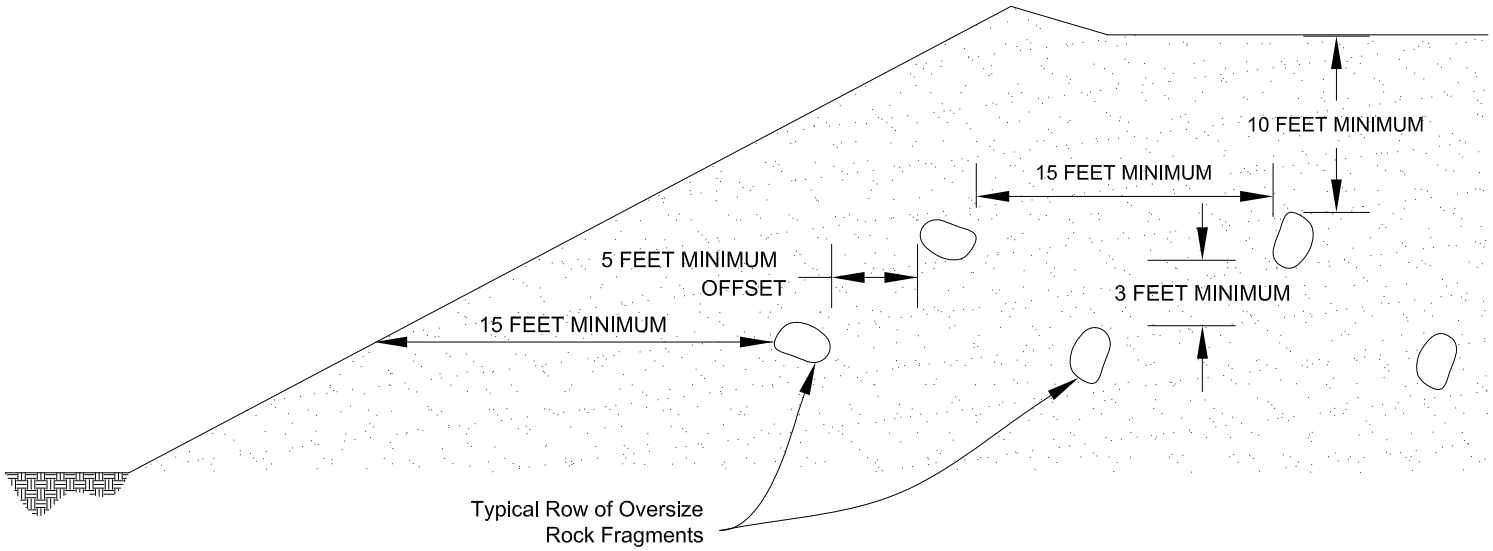
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

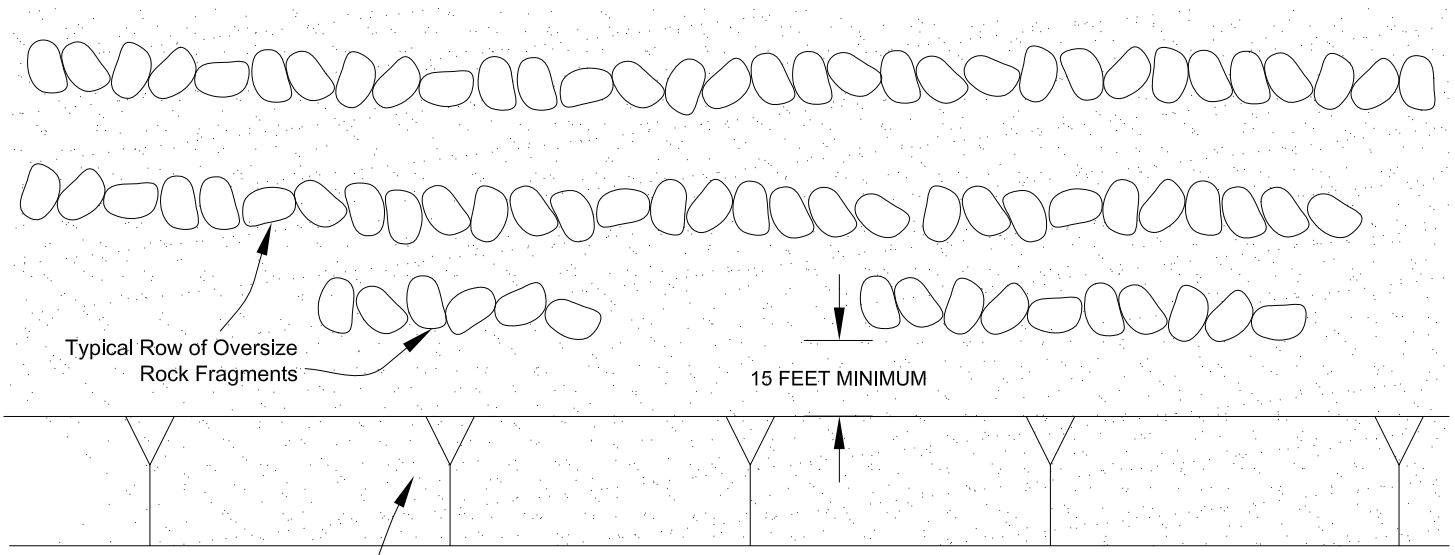
PLATE D-7

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



Section View



Plan View

PLACEMENT OF OVERSIZED MATERIAL

GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: PM
CHKD: GKM

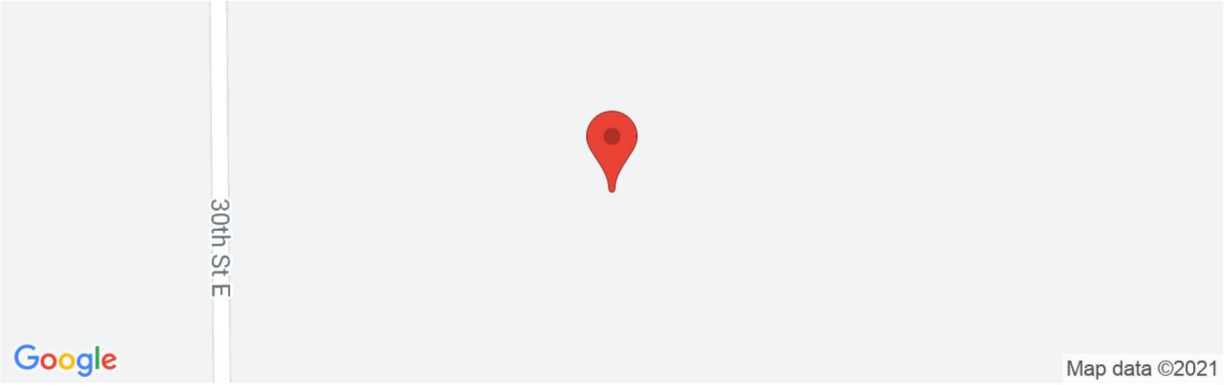
PLATE D-8

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL

APPENDIX E

Latitude, Longitude: 34.650201, -118.072211



Date	12/23/2021, 2:40:06 PM
Design Code Reference Document	ASCE7-16
Risk Category	III
Site Class	D - Stiff Soil

Type	Value	Description
S_S	1.5	MCE_R ground motion. (for 0.2 second period)
S_1	0.6	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.5	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S_{DS}	1	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	0.617	MCE_G peak ground acceleration
F_{PGA}	1.1	Site amplification factor at PGA
PGA_M	0.679	Site modified peak ground acceleration
T_L	12	Long-period transition period in seconds
SsRT	1.71	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.914	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.5	Factored deterministic acceleration value. (0.2 second)
S1RT	0.707	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.801	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.617	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.894	Mapped value of the risk coefficient at short periods
C_{R1}	0.883	Mapped value of the risk coefficient at a period of 1 s

SOURCE: SEAOC/OSHPD Seismic Design Maps Tool
<https://seismicmaps.org/>

SEISMIC DESIGN PARAMETERS - 2019 CBC

PROPOSED WAREHOUSE DEVELOPMENT

PALMDALE, CALIFORNIA

DRAWN: JAH
CHKD: RF

SCG PROJECT
21G286-1

PLATE E-1

SOUTHERN CALIFORNIA GEOTECHNICAL

PALMDALE

a place to call home

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT AND SCOPING MEETING

DATE: September 21, 2023

TO: State Clearinghouse, Public Agencies, Organizations, and Interested Parties

PROJECT Palmdale Logistics Center

The City of Palmdale, as lead agency under the California Environmental Quality Act (CEQA), will prepare an Environmental Impact Report (EIR) for proposed industrial project, which would require discretionary approval of Tentative Parcel Map (TPM) 84077, Conditional Use Permit (CUP) 23-003, Site Plan Review (SPR) 23-001, and Minor Site Plan Review (hereinafter "Project"). In accordance with Section 15082 of the CEQA Guidelines, the City of Palmdale has issued this Notice of Preparation (NOP) to provide responsible agencies, trustee agencies, and other interested parties with information describing the proposed Project and its potential environmental effects. The City of Palmdale is requesting input from reviewing agencies and the public regarding the scope and content of the EIR.

This NOP is also available on the City's website at: https://www.cityofpalmdaleca.gov/277/Environmental-Documents

Due to time limits mandated by State law, your response must be sent at the earliest possible date but no later than 30 days after the date of this notice.

Date of Notice: September 21, 2023
Notice of Preparation Review Period: September 25, 2023, to October 25, 2023
Scoping Meeting: October 5, 2023, at 5:00 p.m.

The Project is located within Los Angeles County in the northeastern portion of the City of Palmdale, within Los Angeles County. Regional access to the Project site is provided by State Route 14 and State Route 138. Local access to the site is provided from 30th Street East, a designated major arterial or Crosstown Street, and East Avenue M / Columbia Way, a designated Regional arterial street. The Project site is northeast of the 30th Street East and East Avenue M / Columbia Way intersection.

The Project proposes to subdivide the approximately 150.18-acre property (APN 3170-018-081) into three parcels for the development of two industrial buildings (each approximately 1.5 million square feet) and an 11-acre stormwater detention basin lot. The Project would include parking, associated infrastructure, and landscape corresponding with each building as well as street improvements for East Avenue M and 30th Street East, and the construction of two new roadways (Avenue L-8 and 35th Street East).

The proposed development requires City of Palmdale review and approval of Tentative Parcel Map (TPM), Conditional

Use Permit (CUP), Site Plan Review (SPR) and Minor Site Plan Review (MSPR) applications. The application filed with the City of Palmdale includes the following:

- SPR 23-001 is a proposed site plan for the development of two industrial buildings together totaling approximately 3,001,712 square feet.
- TPM 84077 is a proposed map to subdivide the property into three parcels.
- CUP 23-003 is provision for additional building height.
- Minor Site Plan Review for screening wall.

Scope of the EIR

In accordance with CEQA, the City of Palmdale requests that agencies review the description of the Project provided in this NOP and provide comments or guidance on the scope of environmental issues related to the statutory responsibilities of the Lead Agency. The EIR will be used by the City of Palmdale when considering the Project for approval and by other Responsible and Trustee Agencies to support their discretionary actions related to the Project, as applicable. The City of Palmdale is also seeking comments from other interested parties regarding issues they believe should be addressed in the EIR. A Regional Location map, Local Vicinity Map, and the proposed Site Plan for the proposed development of the site are attached hereto.

The City of Palmdale in its capacity as Lead Agency has determined that an Environmental Impact Report (EIR) will be prepared for the proposed Project. The Lead Agency opted to prepare an Initial Study and has determined that the environmental factors checked below would be potentially affected by the proposed project, thereby, requiring analysis in the proposed Project's EIR:

☒ Aesthetics
☒ Agriculture and Forestry Resources
☒ Air Quality
☒ Biological Resources
☒ Cultural Resources
☒ Energy
☒ Geology /Soils
☒ Greenhouse Gas Emissions
☒ Hazards & Hazardous Materials
☒ Hydrology/ Water Quality
☒ Land Use/ Planning
☐ Mineral Resources
☒ Noise
☒ Population/ Housing
☐ Public Services
☐ Recreation
☒ Transportation
☒ Tribal Cultural Resources
☒ Utilities / Service Systems
☐ Wildfire
☒ Mandatory Findings of Significance

The EIR will assess the effects of the proposed Project on the environment, identify potentially significant impacts, identify feasible mitigation measures to reduce or eliminate potentially significant environmental impacts, and discuss potentially feasible alternatives to the Project that may accomplish basic objectives while lessening or eliminating any potentially significant Project-related impacts.

Scoping Meeting

Pursuant to California Public Resources Code Section 21083.9(a)(2) of the CEQA Statute and CEQA Guidelines Section 15082(c), the City of Palmdale will hold a public scoping meeting, where agencies, organizations, and members of the public will receive a brief presentation on the Project, the scope of environmental review, and the overall EIR process. While the issues raised in this meeting will be summarized in the required EIR, anyone wishing to make formal comments on the Notice of Preparation must do so in writing.

The scoping meeting will be held on:

Date and Time:	October 5, 2023, at 5:00 p.m.
Access:	https://us06web.zoom.us/j/84683125817
Meeting ID:	846 8312 5817

The scoping meeting will include time for attendees to provide input on the scope and content of the EIR, including any input regarding potential mitigation measures or possible alternatives to the project.

Opportunity for Public Review and Comment

The issuance of this NOP begins a 30-day public scoping period. The scoping period begins on **September 25, 2023,** and ends on **October 25, 2023.** Comments may be sent to the City of Palmdale at any time during the 30-day public scoping period. Please focus your comments on issues related to the scope and content of the environmental analysis that will be included in the EIR. All scoping comments must be received by the City of Palmdale or postmarked by October 25, 2023. Due to the time limits mandated by State law, the City of Palmdale, recommends that your feedback is provided at the earliest possible date, but not provided later than 30 days after the date of this notice. Trustee Agencies and Responsible agencies are asked to identify their statutory authorities pertaining to the Project. If applicable, please include the name and contact information of a contact person for your agency. Direct all comments to:

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

Comments may also be emailed to: bmagana@cityofpalmdale.org

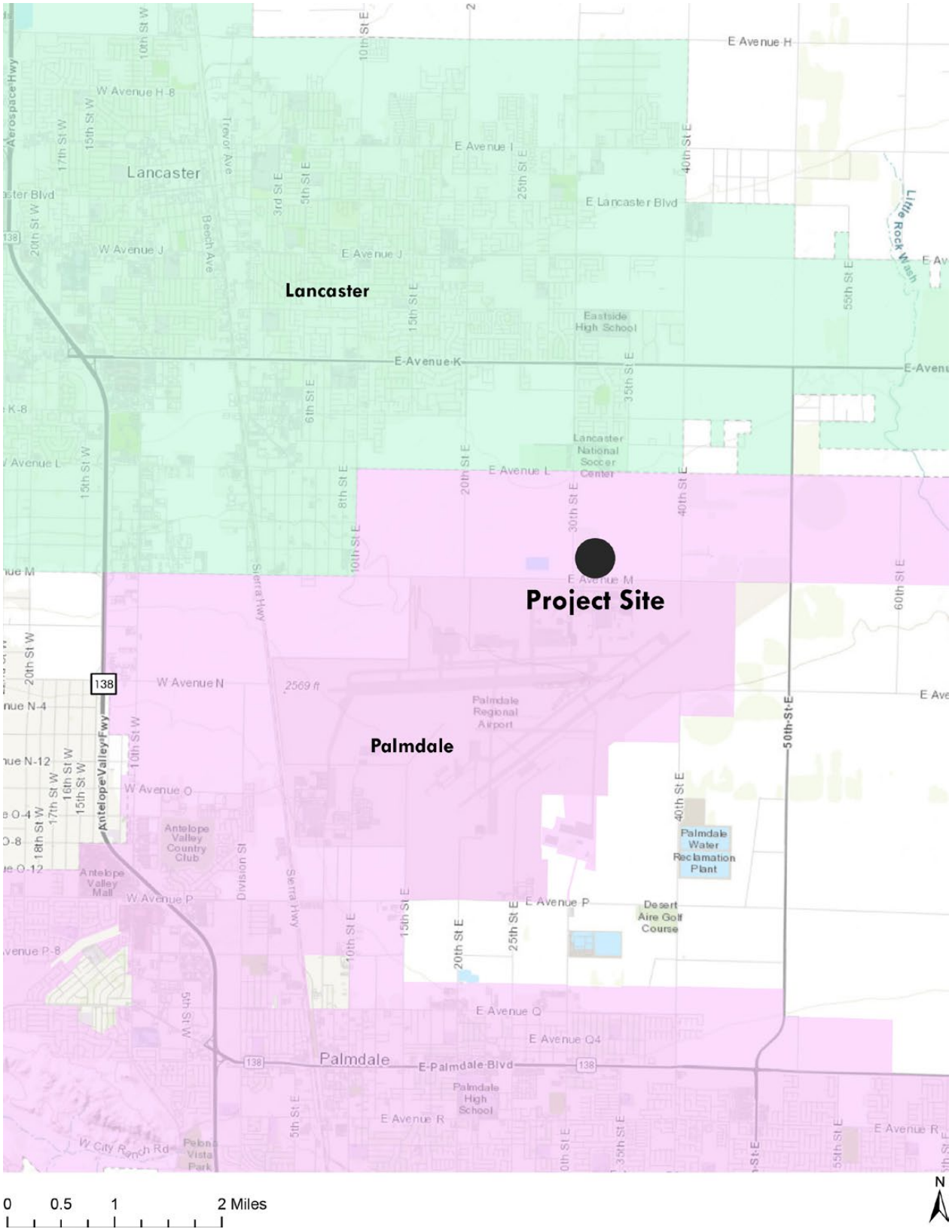
Attachments:

Figure 1 – Regional Location

Figure 2 – Local Vicinity

Figure 3 – Aerial View

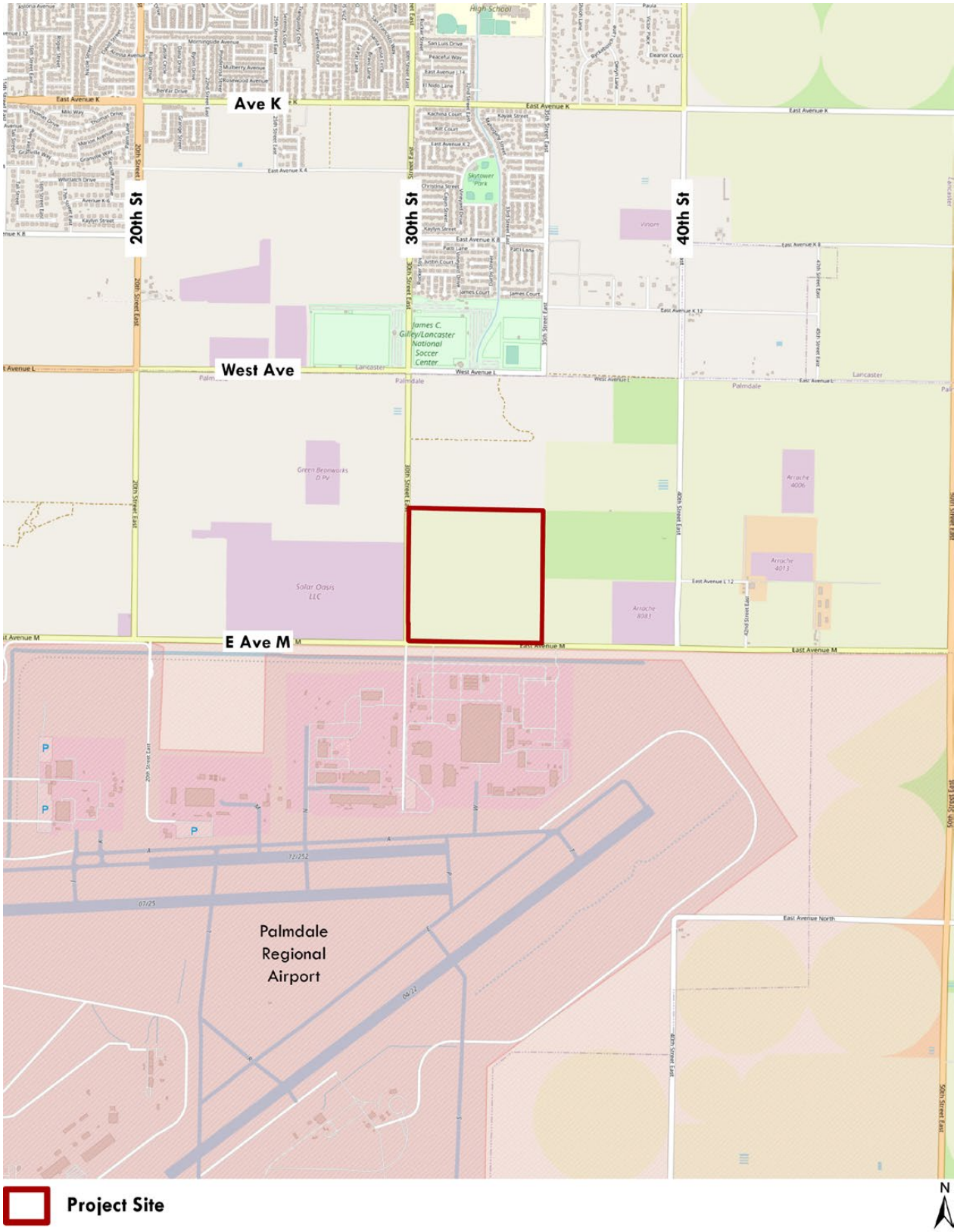
Regional Location



Palmdale Logistics Center
City of Palmdale

Figure 1

Local Vicinity



Palmdale Logistics Center
City of Palmdale

Figure 2

Aerial View

Palmdale Logistics Center
City of Palmdale

Figure 3

ROB BONTA
Attorney General

State of California
DEPARTMENT OF JUSTICE

1300 I STREET, SUITE 125
P.O. BOX 944255
SACRAMENTO, CA 94244-2550

E-Mail: EJ@doj.ca.gov

October 13, 2023

Brenda Magana, Planning Manager
City of Palmdale
38250 Sierra Highway
Palmdale, CA 93550

RE: Palmdale Logistics Center, SCH #2023090551

Dear Ms. Magana:

Thank you for the opportunity to provide comments on the Notice of Preparation for the Palmdale Logistics Center project. While the logistics industry is an important component of our modern economy, warehouses can bring various environmental impacts to the communities where they are located. For example, diesel trucks visiting warehouses emit nitrogen oxide (NO_x)—a primary precursor to smog formation and a significant factor in the development of respiratory problems like asthma, bronchitis, and lung irritation—and diesel particulate matter (a subset of fine particular matter that is smaller than 2.5 micrometers)—a contributor to cancer, heart disease, respiratory illnesses, and premature death.[1] Trucks and on-site loading activities can also be loud, bringing disruptive noise levels during 24/7 operation that can cause hearing damage after prolonged exposure.[2] The hundreds, and sometimes thousands, of daily truck and passenger car trips that warehouses generate can contribute to traffic jams, deterioration of road surfaces, traffic accidents, and unsafe conditions for pedestrians and bicyclists. Depending on the circumstances of an individual project, warehouses may also have other environmental impacts.

To help lead agencies avoid, analyze, and mitigate warehouses' environmental impacts, the Attorney General Office's Bureau of Environmental Justice has published a document containing best practices and mitigation measures for warehouse projects. We have attached a

[1] California Air Resources Board, Nitrogen Dioxide & Health, https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health (NOx); California Air Resources Board, Summary: Diesel Particular Matter Health Impacts, https://ww2.arb.ca.gov/resources/summary-diesel-particulate-matter-health-impacts; Office of Environmental Health Hazard Assessment and American Lung Association of California, Health Effects of Diesel Exhaust, https://oehha.ca.gov/media/downloads/calenviroscreen/indicators/diesel4-02.pdf (DPM).

[2] Noise Sources and Their Effects, https://www.chem.purdue.edu/chemsafety/Training/PPETrain/dblevels.htm (a diesel truck moving 40 miles per hour, 50 feet away, produces 84 decibels of sound).

copy of this document to this letter, and it is also available online.[3] We encourage you to consider the information in this document as you prepare the draft environmental impact report for this project.

Priority should be placed on avoiding land use conflicts between warehouses and sensitive receptors and on mitigating the impacts of any unavoidable land use conflicts. However, even projects located far from sensitive receptors may contribute to harmful regional air pollution, so you should consider measures to reduce emissions associated with the project to help the State meet its air quality goals. A distant warehouse may also impact sensitive receptors if trucks must pass near sensitive receptors to visit the warehouse.

The Bureau will continue to monitor proposed warehouse projects for compliance with the California Environmental Quality Act and other laws. We are available to discuss as you prepare the draft environmental impact report and consider how to guide warehouse development in your jurisdiction. Please do not hesitate to contact the Environmental Justice Bureau at ej@doj.ca.gov if you have any questions.

Sincerely,

CHRISTIE VOSBURG
Supervising Deputy Attorney General

For ROB BONTA
Attorney General

[3] https://oag.ca.gov/system/files/media/warehouse-best-practices.pdf.

DEPARTMENT OF TRANSPORTATION
DISTRICT 7- OFFICE OF REGIONAL PLANNING
100 S. MAIN STREET, SUITE 100
LOS ANGELES, CA 90012
PHONE (213) 266-3574
FAX (213) 897-1337
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

October 20, 2023

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

RE: Palmdale Logistics Center Project – Notice of Preparation (NOP)
SCH# 2023090551
GTS# 07-LA-2023-04319
Vic. LA-14 PM R64.684

Dear Brenda Magaña,

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The Project proposes to subdivide the approximately 150.18-acre property into three parcels for the development of two industrial buildings (each approximately 1.5 million square feet) and an 11-acre stormwater detention basin lot. The Project would include 1,517 car parking spaces, associated infrastructure, and landscape corresponding with each building as well as street improvements for East Avenue M and 30th Street East, and the construction of two new roadways (Avenue L-8 and 35th Street East). The proposed development requires City of Palmdale review and approval of:

- Site Plan Review (SPR) 23-001 for the development of two industrial buildings together totaling approximately 3,001,712 square feet.
- Tentative Parcel Map (TPM) 84077 to subdivide the property into three parcels.
- Conditional Use Permit (CUP) 23-003 is a provision for additional building height.
- Minor Site Plan Review (MSPR) for screening wall.

The nearest State facility to the proposed project is State Route 14. After reviewing the NOP, Caltrans has the following comments:

With three million square feet of new warehouses, 1,517 new car parking spaces, 516 new loading dock doors, and stalls for 990 trailer stalls, the Palmdale Logistic Center Project will induce demand for a consequential amount of additional vehicle trips and vehicle miles travelled. Caltrans expects for the forthcoming DEIR to identify substantial infrastructure investments to mitigate the significant safety and environmental impacts that the Project is anticipated to produce.

Caltrans recommends the following:

- Reducing the amount of parking whenever possible. Research looking at the relationship between land-use, parking, and transportation indicates that the amount of car parking supplied can undermine a project's ability to encourage public transit and active modes of transportation.

- Invest in alternative modes of freight movement, such as rail, which is not only more efficient but also more easily converted to carbon neutral energy sources in the future.

- Due to the increased volume of truck trips, a substantial contribution should be made to a city fund that will build safer infrastructure for people walking, riding bikes, and taking transit throughout the city. The most effective methods to reduce pedestrian and bicyclist exposure to cars and trucks is through physical design and geometrics. These methods include the construction of physically separated facilities such as Class IV bike lanes, wide sidewalks, pedestrian refuge islands, landscaping, street furniture, and reductions in crossing distances through roadway narrowing.

Caltrans looks forward to reviewing the forthcoming Draft Environmental Impact Report (DEIR) to confirm that the project will result in a net reduction in Vehicle Miles Traveled (VMT).

Finally, any transportation of heavy construction equipment and/or materials which requires use of oversized-transport vehicles on State highways will require a Caltrans transportation permit. We recommend large size truck trips be limited to off-peak commute periods.

If you have any questions, please contact project coordinator Anthony Higgins, at anthony.higgins@dot.ca.gov and refer to GTS# 07-LA-2023-04319.

Sincerely,

Anthony Higgins for

MIYA EDMONSON
IGR/CEQA Branch Chief

cc: State Clearinghouse

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Rd.
San Diego, CA 92123
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

October 25, 2023

Brenda Magana
City of Palmdale
38250 Sierra Highway
Palmdale, CA 93550
BMagana@cityofpalmdale.org

SUBJECT: PALMDALE LOGISTICS CENTER (PROJECT), NOTICE OF PREPARATION (NOP), SCH #2023090551

Dear Brenda Magana:

The California Department of Fish and Wildlife (CDFW) has received a Notice of Preparation of a Draft Environmental Impact Report (DEIR) from the City of Palmdale (City) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State [Fish & G. Code, §§ 711.7, subdivision (a) & 1802; Pub. Resources Code, § 21070; California Environmental Quality Act (CEQA) Guidelines, § 15386, subdivision (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect State fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Pub Resources Code, §21069; CEQA Guidelines, §15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code, including lake and streambed alteration regulatory authority (Fish & G. Code, §1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take", as defined by State

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

law, of any species protected under the California Endangered Species Act (CESA) (Fish & Code, § 2050 et seq.), or CESA-listed rare plant pursuant to the Native Plant Protection Act (NPPA; Fish & G. Code §1900 et. sea.), CDFW recommends the Project proponent obtain appropriate authorization under the Fish and Game Code.

Project Description Summary

Proponent: Transwestern Development Company

Objective: The Project proposes to subdivide a 150.18-acre property into three parcels for the creation of two industrial buildings on two of the parcels and an 11-acre stormwater detention basin on the remaining parcel. Each industrial building would be approximately 1,500,586 square feet. The Project also proposes to construct two new roadways, Avenue L-8 along the northern portion and 35th Street East along the eastern portion. Fencing, utilities, and landscaping will be installed throughout the Project site. The stormwater detention basin would be constructed in the most northern parcel within the Project site, and stormwater runoff will be conveyed to the basin via catch basins and roof drains. Construction activities (i.e., site preparation, grading, building construction, paving, and architectural coatings) would be conducted in one phase over the course of 11 months.

Location: The Project site is located on the northeast corner of 30th Street East and Columbia Way in the City of Palmdale, California, and is bound by Columbia Way to the south, vacant land to the north, 30th Street East to the west, and vacant land to the east. The Assessor's Parcel Number associated with the Project site is 3170-018-081. Palmdale Regional Airport is approximately 1.5 miles south of the Project site and solar fields are located directly east and approximately 0.5 mile west of the Project site.

Biological Setting: The Project site is currently vacant and undeveloped, with signs of historical agricultural practices**,** off-road vehicular access, and illegal dumping. Along the immediate borders of the Project site, vacant land lies directly to the north and east, both of which are separated from the Project site by two unpaved roads. A field survey was conducted on November 15, 2022, with findings compiled in a Biological Resource Assessment (BRA).

No natural or sensitive vegetative communities were observed on site; rather, the vegetative density on the Project site varied from unvegetated areas to sparsely vegetated areas, consisting of weedy and non-native species. No watercourses flowed through the Project site or surrounding areas. Wildlife observed during the field survey include ruby-crowned kinglet (*Regulus calendula*), white-crowned sparrow (*Zonotrichia leucophrys*), horned lark (*Eremophila alpestris*), Anna's hummingbird (*Calypte anna*), common raven (*Corvus corax*), turkey vulture (*Cathartes aura*), Say's phoebe (*Sayornis saya*), and California ground squirrel (*Otospermophilus beecheyi*). Sensitive species that have been identified to occur within the City and are of potential concern for the Project include Mohave ground squirrel (*Xerospermophilus mohavensis*, CESA listed-threatened), northern California legless lizard (*Anniella pulchra,* California Species of Special Concern (SSC)), coast horned lizard (*Phrynosoma blainvillii*, SSC), burrowing owl (*Athene*

cunicularia, SSC), mountain plover (*Charadrius montanus*, SSC), and raptors and migratory birds.

Comments and Recommendations

CDFW offers the recommendations below to assist the City in adequately identifying the Project's significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources. The DEIR should provide adequate and complete disclosure of the Project's potential impacts on biological resources [Pub. Resources Code, §21061; CEQA Guidelines, §§15003(i), 15151]. CDFW looks forward to commenting on the DEIR when it is available.

Specific Comments

1. Cumulative Impacts. Given the rapid buildout of the City and adjacent areas, potential exists for cumulative impacts to open space (CEQA Guidelines, §15064(d)). CDFW is especially concerned about the loss of desert habitats that support sensitive avian and herpetofauna species (discussed below), and rare plants, as well as the general biodiversity of plant and wildlife species occurring in these local habitats. Cumulatively, loss of on-site habitat may be significant and warrant further analysis, including mitigating for loss of habitat. CDFW believes that cumulative impacts of the Project on biological resources could be cumulatively considerable (CEQA Guidelines §15065(a)(3)) and recommend that the environmental document include analysis of the overall level of existing and proposed development in the surrounding region, as it pertains to biological resources.

2. Local Wildlife Movement. Although the Project site is not located within a designated wildlife corridor, the Project site is surrounded by open space from the north and east. With the northern parcel designated for a future vehicle storage facility, wildlife movement in this urbanized area may be further hindered. CDFW recommends the DEIR analyze whether the Project would impact local wildlife movement. Impacts include, but are not limited to, habitat loss and fragmentation, narrowing of wildlife corridors, and introduction of barriers to wildlife movement. Technical detail such as data, maps, diagrams, and similar relevant information should be provided to permit full assessment of significant environmental impacts by reviewing agencies and members of the public (CEQA Guidelines, §15147). If avoidance of corridor encroachment is not feasible, the DEIR should provide measures to mitigate the Project's significant impacts to local wildlife movement.

3. Mohave Ground Squirrel. Mohave ground squirrels are documented within the Antelope Valley region. *Table BIO-2: Sensitive Animal Species with Potential to Occur on Project Site* presented in the Initial Study lists Mohave ground squirrel as a potential species to occur on site (page 49). Additionally, the Mohave Ground Squirrel Predicted Habitat Dataset, demonstrates that there is low to medium value suitable habitat for Mohave ground squirrel in the surrounding open spaces (CDFW 2017).

a) Protection Status. Mohave ground squirrel is designated as a threatened species under CESA. CDFW considers adverse impacts to a species protected by CESA to be significant without mitigation under CEQA. Take of any endangered, threatened, candidate species that results from the Project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9).

b) Disclosure and Surveys. CDFW recommends the DEIR provide a discussion of habitat suitability, as well as potential direct and indirect impacts on Mohave ground squirrel. CDFW recommends the Project proponent retain a qualified biologist to conduct a focused survey during the appropriate period and adhering to CDFW's Mohave Ground Squirrel Survey Guidelines (CDFW 2010). Findings from the focused survey should be included in the DEIR for complete public disclosure and review.

c) Mitigation. If the Project would impact Mohave ground squirrel, the DEIR should provide measures to avoid, minimize, and/or mitigate potential impacts to Mohave ground squirrel as well as habitat supporting the species. For unavoidable impacts, CDFW recommends consultation with CDFW and obtaining appropriate take authorization under CESA.

d) CESA ITP. An appropriate take authorization from CDFW under CESA may include an Incidental Take Permit (ITP) or a Consistency Determination in certain circumstances, among other options [Fish & Game Code, §§ 2080.1, 2081, subds. (b) and (c)]. Early consultation is encouraged, as significant modification to the project and mitigation measures may be required to obtain an ITP. Revisions to the Fish and Game Code, effective January 1998, may require that CDFW issue a separate CEQA document for the issuance of an ITP for the Project unless the Project's DEIR addresses all the Project's impact on CESA endangered, threatened, and/or candidate species. The DEIR should also specify a mitigation monitoring and reporting program that will meet the requirements of an ITP. It is important that the take proposed to be authorized by CDFW's ITP be described in detail in the DEIR. Also, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for an ITP. However, it is worth noting that mitigation for the Project's impact on a CESA endangered, threatened, and/or candidate species proposed in the Project's DEIR may not necessarily satisfy mitigation required to obtain an ITP. Please visit CDFW's California Endangered Species Act (CESA) Permits webpage for more information (CDFW 2023a).

4. Mountain Plover. According to California Natural Diversity Database (CNDDB), there are various observations (2004, 2007, 2011, 2012) that have been recorded of mountain plover utilizing the surrounding areas as wintering grounds (CDFW 2023b). Although the Project site is disturbed, mountain plover utilize sparse vegetation or bare ground as wintering habitat, which is characteristic of the Project site. Activities proposed by the Project may impact mountain plover through direct mortality and/or injury as well as removal or habitat modification.

a) Protection Status. Mountain plover is designated as an SSC. CEQA provides protection for any species including but not limited to SSC, which can be shown to meet the criteria for State listing. Therefore, take of SSC could require a mandatory finding of significance (CEQA Guidelines, § 15065).

b) Disclosure. The DEIR should disclose the presence of mountain plover on a local and regional scale. The DEIR should include a discussion describing the Project's potential impact on mountain plover, its wintering habitat within and adjacent to the site, and the Project's potential contribution to the ongoing loss of wintering habitat.

c) Surveys. CDFW recommends the Project proponent retain a qualified biologist to conduct a focused survey for mountain plover. Within one year prior to vegetation removal, a qualified biologist familiar with the species' behavior and life history should conduct surveys to determine the presence/absence of mountain plover. Surveys should be conducted throughout the entire Project site and adjacent. Surveys should also be conducted during the appropriate season (September - March) when the species is in California and utilizing wintering grounds.

d) Mitigation. If the Project would impact mountain plover or their favored wintering habitat, the DEIR should provide measures to avoid, minimize, and/or mitigate potential impacts to mountain plover as well as habitat supporting the species.

5. Burrowing Owl. According to the Initial Study, burrowing owl has potential to occur on site (page 49). Moreover, California ground squirrels are the primary excavator of burrows used by burrowing owls and ground squirrels were found on site during the field survey. Project activities may result in removal of supporting habitat. Additionally, elevated levels of noise, human activity, ground vibrations may flush burrowing owls out of potential wintering or breeding sites, thus resulting in nest abandonment and/or reduced reproductive capacity.

a) Protection Status. Burrowing owls are designated as an SSC. Although burrowing owls are not a CESA-listed species, CEQA provides protection for any species including but not limited to SSC, which can be shown to meet the criteria for State listing. Therefore, take of SSC could require a mandatory finding of significance (CEQA Guidelines, § 15065).

b) Disclosure. The DEIR should provide full disclosure of the presence or absence of burrowing owls within the Project site and the Project's impact on burrowing owls and suitable owl habitat. An impact assessment for burrowing owls should consider that this species may be transitory seasonally and evaluate impacts resulting from Project construction activities as well as from habitat loss on site and cumulatively on a regional scale. Adequate disclosure is recommended so CDFW may review data pertaining to burrowing owls and provide comments and recommendations specific to the Project's potential alternatives, mitigation measures, and any potential significant effects.

c) Surveys. CDFW recommends the Project proponent retain a qualified biologist to conduct a focused survey for burrowing owls prior to the preparation of the DEIR. A qualified biologist should survey for burrowing owls adhering to survey methods described in CDFW's March 7, 2012, Staff Report on Burrowing Owl Mitigation (CDFW 2012). A focused burrowing owl survey should be conducted no more than one year from the date of the Project's DEIR. The survey area should include the Project site and 150 meters from the Project site where suitable habitat is present. All survey efforts should be conducted by a qualified biologist. Survey protocol for breeding season owl surveys states to conduct four survey visits: 1) at least one site visit between February 15 and April 15, and 2) a minimum of three survey visits, at least three weeks apart, between April 15 and July 15, with at least one visit after June 15. Findings from the focused surveys should be included in the DEIR for complete public disclosure and review.

d) Mitigation. If presence of burrowing owls within the Project site is confirmed, the DEIR provide measures to avoid, minimize, and mitigate potential impacts on burrowing owls and further address the loss of suitable habitat from a perspective of cumulative impacts. CDFW recommends mitigation methods described in the Staff Report on Burrowing Owl Mitigation. Inadequate avoidance and mitigation measures will result in the Project having substantial adverse direct and cumulative effect, either directly or through habitat modifications, on an SSC.

6. Species of Special Concern – Reptiles. The BRA states that, "[T]he survey area provides suitable foraging and cover habitat for local reptile species adapted to a high degree of anthropogenic disturbance in the Mojave Desert (page 5)". Northern California legless lizard and coast horned lizard are two species that have been identified throughout Antelope Valley and the Mojave Desert. It is possible for both species to be present during Project activities as they utilize the vegetation on site.

a) Protection Status. Northern California legless lizard and coast horned lizard are both designated as SSC. CDFW considers impacts to SSC a significant direct and cumulative adverse effect without implementing appropriate avoidance and/or mitigation measures [CEQA Guidelines, §§ 15064, 15065, 15125(c), and 15380].

b) Disclosure. CDFW recommends the DEIR thoroughly discuss the potential for impacts to these species, assume their presence, and include a mitigation measure or measures which provide compensatory mitigation for Project impacts on SSC.

7. Nesting Birds and Raptors. The Initial Study states, "[T]he Project site contains some shrubs that can be utilized by nesting birds during the nesting bird season… (page 50)". Moreover, various avian species were identified during the field survey. The proposed Project would impact nesting birds through construction activities, installation activities, elevated-related noise, and vegetation removal. Furthermore, Project activities occurring during the nesting bird season, especially in areas providing suitable nesting habitat, could result in the incidental loss of fertile eggs or nestlings, or nest abandonment.

a) Protection Status. Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (Code of Federal Regulations, Title 50, § 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA). It is unlawful to take, possess, or needlessly destroy the nest or eggs of any raptor.

b) Disclosure and Analysis. The DEIR should discuss the Project's potential impact on nesting birds and raptors within the Project site. A discussion of potential impacts should include impacts that may occur during ground-disturbing activities and vegetation removal. The DEIR should analyze and discuss the Project's impact on bird and raptor nesting and breeding habitat.

c) Avoidance. CDFW recommends the DEIR include a measure to fully avoid impacts to nesting birds and raptors. To the extent feasible, no construction, ground-disturbing activities (e.g., mobilizing, staging, and excavating), and vegetation removal during the avian breeding season which generally runs from February 1 through September 1 (as early as January 1 for some raptors) to avoid take of birds, raptors, or their eggs.

d) Minimizing Potential Impacts. If impacts to nesting birds and raptors cannot be avoided, CDFW recommends the DEIR include measures to minimize impacts on nesting birds and raptors. Prior to starting ground-disturbing activities and vegetation removal, a qualified biologist should conduct nesting bird and raptor surveys to identify nests. The qualified biologist should establish no-disturbance buffers to minimize impacts on those nests. CDFW generally recommends a minimum 100-foot no disturbance buffer around active passerine nests. For raptors, the no disturbance buffer should be expanded to 500 feet. Personnel working on the Project, including all contractors working on site, should be instructed on the presence of nesting birds, area sensitivity, and adherence to no-disturbance buffers. Reductions in the buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors determined by a qualified biologist.

General Comments

1. Biological Baseline Assessment. The DEIR should provide an adequate biological resources assessment, including a complete assessment and impact analysis of the flora and fauna within and adjacent to the Project site and where the Project may result in ground disturbance. The assessment and analysis should place emphasis upon identifying endangered, threatened, sensitive, regionally, and locally unique species, and sensitive habitats. Impact analysis will aid in determining any direct, indirect, and cumulative biological impacts, as well as specific mitigation or avoidance measures necessary to offset those impacts. CDFW recommends avoiding any sensitive natural communities found on or adjacent to the Project site. CDFW also considers impacts to SSC a significant direct and cumulative adverse effect without implementing

appropriate avoidance and/or mitigation measures. The DEIR should include the following information.

a) Information on the regional setting is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region [CEQA Guidelines, § 15125(c)], or common habitats that have become greatly reduced because of ongoing development. The DEIR should include measures to fully avoid or otherwise offset impacts to Sensitive Natural Communities or native/naturalized communities that support regional sensitive species from Project-related impacts. CDFW considers these communities as threatened habitats having both regional and local significance. In particular, plant communities, alliances, and associations with a state-wide ranking of S1, S2, and S3 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by visiting the Vegetation Classification and Mapping Program - Natural Communities webpage (CDFW 2023d).

b) A thorough, recent, floristic-based assessment of special status plants and natural communities following CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018). Adjoining habitat areas should be included where Project construction and activities could lead to direct or indirect impacts off site.

c) Floristic, alliance- and/or association-based mapping and vegetation impact assessments conducted at a Project site and within the neighboring vicinity. The Manual of California Vegetation Online should also be used to inform this mapping and assessment (CNPS 2023). Adjoining habitat areas should be included in this assessment if the Project could lead to direct or indirect impacts off site. Habitat mapping at the alliance level will help establish baseline vegetation conditions.

d) A complete, recent, assessment of the biological resources associated with each habitat type on site and within adjacent areas that could also be affected by a Project. California Natural Diversity Database in Sacramento should be contacted to obtain current information on any previously reported sensitive species and habitat. An assessment should include a nine-quadrangle search of the CNDDB to determine a list of species potentially present at a Project site. A lack of records in the CNDDB does not mean that rare, threatened, or endangered plants and wildlife do not occur on the Project site. Field verification for the presence or absence of sensitive species is necessary to provide a complete biological assessment for adequate CEQA review [CEQA Guidelines, § 15003(i)].

e) A complete, recent, assessment of rare, threatened, and endangered, and other sensitive species on site and within the area of potential effect, including California Species of Special Concern and California Fully Protected Species (Fish & G. Code, §§ 3511, 4700, 5050, and 5515). Species to be addressed should include all those which meet the CEQA definition of endangered, rare, or threatened species (CEQA Guidelines, § 15380). Seasonal variations in use of a project site should also be addressed such as wintering, roosting, nesting, and foraging habitat.

Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, may be required if suitable habitat is present. See CDFW's Survey and Monitoring Protocols and Guidelines for established survey protocol for select species. Acceptable species-specific survey procedures may be developed in consultation with CDFW and the USFWS.

f) A recent wildlife and rare plant survey. CDFW generally considers biological field assessments for wildlife to be valid for a 1-year period, and assessments for rare plants may be considered valid for a period of up to 3 years. Some aspects of a proposed Project may warrant periodic updated surveys for certain sensitive taxa, particularly if build out could occur over a protracted time frame or in phases.

2. Disclosure. The DEIR should provide an adequate, complete, and detailed disclosure about the effect which a proposed Project is likely to have on the environment (Pub. Resources Code, § 20161; CEQA Guidelines, §15151). Adequate disclosure is necessary so CDFW may provide comments on the adequacy of proposed avoidance, minimization, or mitigation measures, as well as to assess the significance of the specific impact relative to plant and wildlife species impacted (e.g., current range, distribution, population trends, and connectivity).

3. Mitigation Measures. Public agencies have a duty under CEQA to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of feasible alternatives or mitigation measures [CEQA Guidelines, §§ 15002(a)(3), 15021]. Pursuant to CEQA Guidelines section 15126.4, an environmental document "shall describe feasible measures which could mitigate for impacts below a significant level under CEQA."

a) Level of Detail. Mitigation measures must be feasible, effective, implemented, and fully enforceable/imposed by the Lead Agency through permit conditions, agreements, or other legally binding instruments (Pub. Resources Code, § 21081.6(b); CEQA Guidelines, § 15126.4). A public agency "shall provide the measures that are fully enforceable through permit conditions, agreements, or other measures" (Pub. Resources Code, § 21081.6). CDFW recommends the City provide mitigation measures that are specific, detailed (i.e., responsible party, timing, specific actions, location), and clear in order for a measure to be fully enforceable and implemented successfully via a mitigation monitoring and/or reporting program (Pub. Resources Code, § 21081.6; CEQA Guidelines, § 15097). Adequate disclosure is necessary so CDFW may provide comments on the adequacy and feasibility of proposed mitigation measures.

b) Disclosure of Impacts. If a proposed mitigation measure would cause one or more significant effects, in addition to impacts caused by the Project as proposed, the DEIR should include a discussion of the effects of proposed mitigation measures [CEQA Guidelines, § 15126.4(a)(1)]. In that regard, the DEIR should provide an adequate, complete, and detailed disclosure about the Project's proposed mitigation measure(s). Adequate disclosure is necessary so CDFW may assess the potential

impacts of proposed mitigation measures.

4. Biological Direct, Indirect, and Cumulative Impacts. CDFW recommends providing a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts. The DEIR should address the following.

   a) A discussion regarding Project-related indirect impacts on biological resources, including resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or proposed or existing reserve lands [e.g., preserve lands associated with a Natural Community Conservation Plan (Fish & G. Code, § 2800 et. seq.)]. Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in adjacent areas, should be fully evaluated in the DEIR.

   b) A discussion of both the short-term and long-term effects to species population distribution and concentration and alterations of the ecosystem supporting the species impacted [CEQA Guidelines, § 15126.2(a)].

   c) A discussion of potential adverse impacts from lighting, noise, temporary and permanent human activity, and exotic species, and identification of any mitigation measures.

   d) A discussion of Project-related changes on drainage patterns; the volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-Project fate of runoff from the Project site. The discussion should also address the potential water extraction activities and the potential resulting impacts on the habitat (if any) supported by the groundwater. Mitigation measures proposed to alleviate such Project impacts should be included.

   e) An analysis of impacts from proposed changes to land use designations and zoning, and existing land use designation and zoning located nearby or adjacent to natural areas that may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the DEIR.

   f) A cumulative effects analysis, as described under CEQA Guidelines section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant and wildlife species, habitat, and vegetation communities. If the City determines that the Project would not have a cumulative impact, the DEIR should indicate why the cumulative impact is not significant. The City's conclusion should be supported by facts and analyses [CEQA Guidelines, § 15130(a)(2)] including the amount of development which has occurred within the City and adjacent lands, and the amount of development forecasted/expected to occur.

5. Compensatory Mitigation. The DEIR should include mitigation measures for adverse Project-related direct or indirect impacts to sensitive plants, animals, and habitats. Mitigation measures should emphasize avoidance and reduction of Project-related impacts. For unavoidable impacts, on-site habitat restoration or enhancement should be discussed in detail. If on-site mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, off-site mitigation through acquisition and preservation in perpetuity should be addressed. Areas proposed as mitigation lands should be protected in perpetuity with a conservation easement, financial assurance, and dedicated to a qualified entity for long-term management and monitoring. Under Government Code, section 65967, the Lead Agency must exercise due diligence in reviewing the qualifications of a governmental entity, special district, or nonprofit organization to effectively manage and steward land, water, or natural resources on mitigation lands it approves. Consideration may also be given for the purchase of credits from a conservation bank supporting similar habitat as that being impacted; the bank should have been approved by CDFW.

6. Long-term Management of Mitigation Lands. For proposed preservation and/or restoration, the DEIR should include measures to protect the targeted habitat values from direct and indirect negative impacts in perpetuity. The objective should be to offset the Project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include (but are not limited to) restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, and increased human intrusion. An appropriate non-wasting endowment should be set aside to provide for long-term management of mitigation lands.

7. Scientific Collecting Permits. CDFW has the authority to issue permits for the take or possession of wildlife, including mammals; birds, nests, and eggs; reptiles, amphibians, fish, plants; and invertebrates (Fish & G. Code, §§ 1002, 1002.5, 1003). Effective October 1, 2018, a Scientific Collecting Permit is required to monitor project impacts on wildlife resources, as required by environmental documents, permits, or other legal authorizations; and, to capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with otherwise lawful activities (Cal. Code Regs., tit. 14, § 650). Please visit CDFW's Scientific Collection Permits webpage for information (CDFW 2023e). Pursuant to the California Code of Regulations, title 14, section 650, the qualified biologist must obtain appropriate handling permits to capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with Project construction and activities.

8. Environmental Data. CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database (i.e., California Natural Diversity Database) which may be used to make subsequent or supplemental environmental determinations [Pub. Resources Code, § 21003, subd. (e)]. Information on special status species should be submitted to the CNDDB by completing and submitting CNDDB Field Survey Forms (CDFW 2023f). Information on special status native plant populations and sensitive natural communities, the Combined Rapid Assessment and Relevé Form should be completed and submitted to

CDFW's Vegetation Classification and Mapping Program (CDFW 2023g).

9. Mitigation Measures. Public agencies have a duty under CEQA to prevent significant, avoidable damage to the environment by requiring changes in projects using feasible alternatives or mitigation measures [CEQA Guidelines, §§ 15002(a)(3), 15021]. Mitigation measures must be feasible, effective, implemented, and fully enforceable by the Lead Agency through permit conditions, agreements, or other legally binding instruments (Pub. Resources Code, § 21081.6(b); CEQA Guidelines, §§ 15126.4, 15041). In preparation of an environmental document, CDFW recommends that the City prepare mitigation measures that are specific, detailed (i.e., responsible party, timing, specific actions, location), and clear so that a measure is fully enforceable and implemented successfully via a mitigation, monitoring, and reporting program (CEQA Guidelines, § 15097; Pub. Resources Code, § 21081.6).

Conclusion

We appreciate the opportunity to comment on the NOP for the Palmdale Logistics Center to assist the City in identifying and mitigating Project impacts on biological resources. If you have any questions or comments regarding this letter, please contact Julisa Portugal, Environmental Scientist, at Julisa.Portugal@wildlife.ca.gov or (562) 330-7563.

Sincerely,

DocuSigned by:
David Mayer
D700B4520375406...

David Mayer
Environmental Program Manager
South Coast Region

ec: CDFW
Cindy Hailey, San Diego – Cindy.Hailey@wildlife.ca.gov
CEQA Program Coordinator, Sacramento – CEQACommentLetters@wildlife.ca.gov

OPR
State Clearinghouse, Sacramento – State.Clearinghouse@opr.ca.gov

References

[CDFW] California Department of Fish and Wildlife. 2010. Mohave Ground Squirrel Survey Guidelines. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83975

[CDFW] California Department of Fish and Wildlife. 2012. Staff Report on Burrowing Owl Mitigation. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843

[CDFW] California Department of Fish and Wildlife. 2017. Mohave Ground Squirrel Predicted Habitat – CWHR M073 [ds2531]. Available at: https://data.ca.gov/dataset/mohave-ground-squirrel-predicted-habitat-cwhr-m073-ds2531

[CDFW] California Department of Fish and Wildlife. 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline

[CDFW] California Department of Fish and Wildlife. 2023a. Threatened and Endangered Species. Available at: https://wildlife.ca.gov/Conservation/CESA

[CDFW] California Department of Fish and Wildlife. 2023b. California Natural Diversity Database. Available at: https://wildlife.ca.gov/Data/CNDDB

[CDFW] California Department of Fish and Wildlife. 2023c. Survey and Monitoring Protocols and Guidelines. Available at: https://wildlife.ca.gov/Conservation/Survey-Protocols

[CDFW] California Department of Fish and Wildlife. 2023d. Vegetation Classification and Mapping Program Natural Communities. Available at: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities

[CDFW] California Department of Fish and Wildlife. 2023e. Scientific Collecting Permit. Available at: https://wildlife.ca.gov/Licensing/Scientific-Collecting#53949678

[CDFW] California Department of Fish and Wildlife. 2023f. Submitting Data to the CNDDB. Available from: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data

[CDFW] California Department of Fish and Wildlife. 2023g. Natural Communities - Submitting Information. Combined Rapid Assessment and Revele Form. Available at: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Submit

[CNPS] California Native Plant Society. 2023. A Manual of California Vegetation Online. Available at: https://vegetation.cnps.org/

LOS ANGELES COUNTY
SANITATION DISTRICTS
Converting Waste Into Resources

Robert C. Ferrante
Chief Engineer and General Manager

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
(562) 699-7411 • www.lacsd.org

October 12, 2023

Ref. DOC 7036342

VIA EMAIL bmagana@cityofpalmdale.org

Ms. Brenda Magaña, Planning Manager
City of Palmdale
Department of Economic and Community Development
38250 Sierra Highway
Palmdale, CA 93550

Dear Ms. Magaña:

NOP Response to Palmdale Logistics Center

The Los Angeles County Sanitation Districts (Districts) received a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the subject project located in the City of Palmdale on September 18, 2023. We offer the following comments regarding sewerage service:

1. The project area is outside the jurisdictional boundaries of the Districts and will require annexation into District No. 14 before sewerage service can be provided to the proposed development. For a copy of the Districts' Annexation Information and Processing Fee sheets, go to www.lacsd.org , under Services, then Wastewater Program and Permits and select Annexation Program. For more specific information regarding the annexation procedure and fees, please contact Ms. Donna Curry at (562) 908-4288, extension 2708.

2. The wastewater flow originating from the proposed project will discharge directly to the Districts' Trunk C Trunk Sewer, located in 30th Street East north of Avenue M. The Districts' 15–inch diameter trunk sewer has a capacity of 2.3 million gallons per day (mgd) and conveyed a peak flow of 0.2 mgd when last measured in 2021. A 6-inch diameter or smaller direct connection to a Districts' trunk sewer requires a Trunk Sewer Connection Permit issued by the Districts. An 8-inch diameter or a larger direct connection to a Districts' trunk sewer requires submittal of Sewer Plans for review and approval by the Districts. For additional information, please contact the Districts' Engineering Counter at engineeringcounter@lacsd.org or (562) 908-4288, extension 1205.

3. The wastewater generated by the proposed project will be treated at the Lancaster Water Reclamation Plant, which has a capacity of 18 mgd and currently processes an average recycled flow of 13.9 mgd.

4. The expected average wastewater flow from the project, described in the NOP as 40,000 square feet office and 2,961,712 square feet warehouse, is 82,043 gallons per day. For a copy of the District's average wastewater generation factors, go to www.lacsd.org, under Services, then Wastewater Program and Permits and select Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link.

5. The Districts are empowered by the California Health and Safety Code to charge a fee to connect facilities (directly or indirectly) to the Districts' Sewerage System or to increase the strength or quantity of wastewater discharged from connected facilities. This connection fee is used by the Districts for its capital facilities. Payment of a connection fee may be required before this project is permitted to discharge to the

Districts' Sewerage System. For more information and a copy of the Connection Fee Information Sheet, go to www.lacsd.org, under Services, then Wastewater (Sewage) and select Rates & Fees. In determining the impact to the Sewerage System and applicable connection fees, the Districts will determine the user category (e.g. Condominium, Single Family Home, etc.) that best represents the actual or anticipated use of the parcel(s) or facilities on the parcel(s) in the development. For more specific information regarding the connection fee application procedure and fees, please contact the Districts' Wastewater Fee Public Counter at (562) 908-4288, extension 2727.

6. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service but is to advise the developer that the Districts intend to provide this 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 Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2742, or phorsley@lacsd.org.

Very truly yours,

Patricia Horsley

Patricia Horsley
Environmental Planner
Facilities Planning Department

PLH:plh

cc: A. Schmidt
A. Howard