SECTION 5
IMPACT ANALYSIS

5.1 AESTHETICS

5.1.1 Introduction

The following analysis addresses visual resources in the project vicinity and the potential for visual impacts to occur as a result of implementing the proposed project.

Aesthetics, as addressed in CEQA, refers to visual considerations. Aesthetics analysis (or visual resource analysis) is a process to logically assess visible change and anticipated viewer response to that change. Common methodology for conducting visual analysis, as developed by the United States Department of Agriculture (USDA) Forest Service and used by California State Parks, has been used in this assessment. Initially, such analysis begins with the identification of existing conditions for visual resources and entails the following steps:

- Objective identification of visual features of the landscape.
- Assessment of the character and quality of those resources relative to overall regional visual character.
- Assessment of the potential significance of features in the landscape to the people who see them and their sensitivity to the proposed changes to those features.

Viewshed is an area of the landscape that is visible from a particular location (e.g., an overlook) or series of points (e.g., a road or trail). To identify the importance of views of a resource, a viewshed may be broken into distance zones of foreground, middleground, and background. Generally, the closer a resource is to the viewer, the more dominant it is and the greater its importance to the viewer. Although distance zones in viewsheds may vary between different geographic regions or types of terrain, a commonly used set of criteria identifies the foreground zone as 0.25 to 0.50 mile from the viewer; the middleground zone as 0.50 to 5 miles from the viewer; and the background zone extends infinitely.

In the foreground zone, the observer is a direct participant, and the views include objects at close range that may tend to dominate the view. This zone is an important linkage because it sets a tone for the quality of a visual resource. Foreground views are valued at a maximum level.

In the middleground zone, the observer focuses on the center of the viewshed. Views tend to include objects that are the center of attention if they are sufficiently large or visually different from adjacent visual features. Details will not be as sharp as the foreground view, but land features will still be distinguishable.

In the background zone, the observer can see less detail and distinction in landform and surface features. The emphasis of background views is an outline or edge. Silhouettes and ridges of one landmass against another are the conspicuous visual parts of the background, with skyline serving as the strongest line. Objects in the background eventually fade to obscurity with increasing distance.

Viewer sensitivity is based on the visibility of resources in the landscape, the proximity of viewers to the visual resource, the relative elevation of viewers to the visual resource, and the types and expectations of individuals and viewer groups. The criteria for identifying the importance of views are related in part to the position of the viewer relative to the resource.

Visual sensitivity also depends on the number and type of viewers and the frequency and duration of the views. Generally, visual sensitivity increases with an increase in total number of viewers, the frequency of viewing (e.g., daily or seasonally), and the duration of views (i.e., how long a scene is viewed). Also, visual sensitivity is higher for views seen by people who are driving for pleasure; people engaging in recreational activities such as hiking, biking, or camping; and homeowners. Sensitivity tends to be lower for views seen by people driving to and from work or as a part of their work. Views from recreation trails and areas, scenic highways, and scenic overlooks are generally assessed as having high visual sensitivity.

The discussion of visual character enables the analysis to compare and contrast features within the project site with those of the surrounding area. The discussion of visual quality analyzes the significance of the project site as a visual resource within the setting.

Visual quality is determined by analyzing three elements of the visual environment. Vividness, intactness, and unity are criteria that can be used to help evaluate the visual quality of natural and human-created landscapes. None of these is itself indicative of visual quality, and all three must be high to indicate superior visual quality.

Vividness is the visual power or memorability of landscape components as they combine in striking or distinctive visual patterns. Examples of high vividness include views of areas such as the Grand Canyon, the ocean, or an urban skyline.

Intactness is the visual integrity of the natural and artificial landscape and its freedom from encroaching elements. Intactness can be present in well-kept urban and rural landscapes, as well as in natural settings. Intactness relates to the physical setting. For example, in a natural setting, it is the freedom from development or infrastructure; in a rural setting, it is the freedom from urban influences; and in an urban/suburban setting, it is the freedom from uses such as industrial smokestacks in an area with office buildings or intensive commercial development in a residential area.

Unity is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the artificial landscape. Examples of high unity would include a well-maintained master-planned community, a mixed-use downtown development, or a coastal fishing village.

5.1.2 Existing Conditions

The project site is located in the western portion of the City of Lancaster which is developing but still consists primarily of farm and ranch land crossed with two-lane rural roads. Isolated older farm houses and some new single-family homes dot the landscape to the west beyond the project site. Some Joshua trees and non-native ornamental trees near the farmhouses are evident in the area.

The project site consists of disturbed vegetation largely comprised of sage scrub species and several Joshua trees. On the eastern border of the site, there is a small area of dirt mounds. To the east of the project site across 65th Street West there is a residential development. New development is evident along Avenue J, particularly east of 65th Street West which is the current urban boundary. The northeast corner of the project site is located approximately 0.5 mile from the southwest corner of the property that houses the California State Prison, Los Angeles County, and the Mira Loma Detention Facility. The prison is located along Avenue J from 60th Street West to 50th Street West.

The visual character of the site is a gentle slope from the south to the north. The site is covered with native grasses and brush that is sandy and green in color. The site is visible from adjacent roadways and from some distant vantage points to the north, south, and east as part of a continuous field. The project site contains no vivid components or distinctive visual patterns. Significant scenic view corridors exist within this area that include panoramic views of the San Gabriel and Tehachapi Mountains and the gradually ascending alluvial fan that leads up to them from the project site looking southwest. There are some abandoned machinery pieces on the site and some weathered mounds of soil along the east site. It was observed during the site inspection that portions of the grass appeared to have been burnt. The site does not contain trees or rock outcroppings or any other feature to

distinguish it from the surrounding undeveloped property. Photographs of the site and the typical vistas are shown on Exhibits 4.1a – 4.1e in the preceding section.

Analysis of potential light and glare impacts considers the following:

- **Artificial Sky Glow:** The brightening of the night sky attributable to human-created sources of light.
- **Glare:** Light that causes visual discomfort or disability, or a loss of visual performance.
- **Spill Light:** Light from an installation that falls outside of the boundaries of the property on which the installation is sited.
- **Light Trespass:** Spill light that because of quantitative, directional, or type of light causes annoyance, discomfort, or loss in visual performance and visibility.
- **Luminaire (light fixture):** A complete lighting unit consisting of one or more electric lamps, the lamp holder, reflector, lens, diffuser, ballast, and/or other components, and accessories.
- **Shielding:**
  - Fully shielded - A luminaire emitting no light above the horizontal plan.
  - Shielded - A luminaire emitting less than 2 percent of its light above the horizontal plane.
  - Partly shielded - A luminaire emitting less than 10 percent of its light above the horizontal plane.
  - Unshielded - A luminaire that may emit light in any direction.
- **Luminance:** The amount of light emitted in a given direction from a surface by the light source or by reflection from a surface. Luminance is measured in candela per square meter.

Light spill occurs on the project site from the existing residential development to the east and the street lights along that development on 65th Street West. Some artificial sky glow from the prison located to the northeast may be visible at times from the project site.

The project site is at the edge of the urbanized area. Residential development is evident on the east side of the project site; other adjacent areas are vacant.

City of Lancaster General Plan

The City of Lancaster General Plan includes a section devoted to the preservation of scenic resources that includes the following:

Objective 3.8 Preserve and enhance important views within the City, and significant visual features which are visible from the City of Lancaster.

Policy 19.1.4(c) Through the development review process, ensure that new developments are designed to respect the identified views and view corridors of existing developments to the greatest extent possible.

- Where applicable, enhance view corridors which are oriented toward existing or proposed community amenities, such as parks, open space, or natural features.
- Encourage subtle variations in architectural and landscape component which provide visual interest, but do not create abrupt changes or cause discord in the overall character of the neighborhood.
- Provide appropriate transitions between different projects and urban and rural land use transitions. Include the provision of buffer areas, landscaping and other similar treatments; for example, hedges, walls, fences, berms, or landscaped open space.
- Encourage a harmonious appearance based on the compatibility of individual structures rather than one specific style of architecture.

Analysis of the project consistency with the General Plan is contained in Section 5.9, Land Use and Planning.

5.1.3 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact if it would:

- Substantially degrade the existing visual character or aesthetic quality of the site and its surroundings.
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Impacts to scenic vistas and scenic resources were determined to be less than significant during the preparation of the Initial Study (see Appendix A-1). Therefore, no further analysis of these issues is required.

5.1.4 Project Impacts

Short-Term Impacts

Construction activities associated with the proposed project would result in the removal of the vegetation on the project site. Scrapers, bulldozers, and graders would be visible during the grading operations. The existing visual characteristics of the natural vegetation on the project site would be removed. The greatest change in the visual character would be experienced during grading operations by passersbys along adjacent Avenue J, 65th Street West, and 70th Street West and by the residents located east of the project site. However, the construction activities would take place over a few months and the resulting impacts would be temporary. Therefore, the proposed construction activities would result in a less than significant visual impact on the adjacent residents and those traversing the area on the roadways either in vehicles, on bicycles, or on foot.

Long-Term Impacts

Implementation of the proposed project would substantially alter the existing character of the project site. The alteration of the site would substantially degrade the existing visual character and aesthetic quality of the site and its surroundings. Additionally, the proposed project would add new sources of substantial light or glare which would adversely affect nighttime views in the area. Excessive glazing (e.g., windows) or use of reflective surfaces in construction or design could contribute to daytime glare. Distant views of the San Gabriel and Tehachapi Mountains are available from the homes and roadways near the project site. The proposed residences would include similar structural heights as the adjacent residential communities.

Street lights, house lights, and ornamental lights would be introduced to the area and create light trespass onto the adjacent residential development to the east. Residents of the project would be subjected to artificial sky glow on the horizon from the prison and light trespass from the adjacent residential development to the east. Light and glare are potentially significant and mitigation is provided. The project would be surrounded by a masonry wall that would be evident despite edge landscaping. A landscaped median would be provided along Avenue J to the north of the site. Hikers and bikers in the area would lose the visual experience of open space. The project is not consistent with the objectives and the policies of the General Plan regarding the provision of view corridors. The project is not consistent with Policy 19.1.4(c) of the General Plan regarding the provision of view corridors with new development to protect the views of existing developments (see Section 5.9). The

project is proposed to be surrounded by a retaining wall and has no view corridors or other open space.

Long-term impacts to the visual quality of the project site are considered significant.

5.1.5 Cumulative Impacts

Future potential developments in the project vicinity such as TTM 62332 and 62604 to the southwest would permanently alter the visual landscape of this region and obscure panoramic vistas. As part of urbanization, new streets would be developed and new lighting sources would be added increasing light and glare. Additionally, the California State Prison, Los Angeles County, located northeast of the site, commented in a letter in response to the NOP (Appendix A-1) that some existing residents of the area have expressed displeasure over the light and glare emanating from the prison. While some residents of the proposed project may receive some direct glare from the prison, the night glow effect from the prison combined with the additional glare from the proposed project would add to the nighttime lighting effects throughout the area. Cumulative impacts to views and aesthetics in the project vicinity are considered to be significant. Development of the proposed project would contribute to significant cumulative impacts to views and aesthetics in the project vicinity.

5.1.6 Mitigation Measures

Provision of standard street lighting shading and luminescent restrictions provided as Mitigation Measure AE-1 and AE-2 would reduce the light and glare impacts from the proposed project. However, without changes to the project regarding density, lot layout, and provision of common landscaped areas and view corridors, no mitigation with respect to aesthetics is possible.

AE-1 The following light design features shall be incorporated into all permanent street lighting:

- Luminaries shall be cut-off type fixtures (i.e. fully shielded, emitting no light above the horizontal plane).
- Luminaries shall be installed to direct light away from nearby residences.
- Luminaries shall be restricted to no more that 500 lux (1 lumen per square meter) or 50 foot candles.
- Luminaire lamps shall provide good color rendering and natural light qualities.
- Luminaries shall be placed at the minimum height to reduce potential for backscatter into the nighttime sky and incidental spillover into adjacent properties and open space.
- Luminaire mountings shall have non-glare finishes.

AE-2 To reduce glare from buildings, non-reflective glass and wall surfaces shall be used in all architectural designs.

5.1.7 Level of Significance After Mitigation

No mitigation measures were identified which would reduce the proposed project's aesthetic impacts; therefore, impacts to aesthetics would remain significant and unavoidable. The proposed project would also contribute to a significant cumulative impact due to the multiple residential developments that are planned to occur along the view corridor within the next several years. Impacts related to light and glare would be reduced to less than significant with incorporation of the mitigation measures.

5.2 AIR QUALITY

5.2.1 Introduction

This section analyzes the potential air quality impacts that would result from the development of the proposed project. This assessment was conducted within the context of the CEQA (California Public Resources Code Sections 21000, et seq.). The methodology follows the CEQA and Federal Conformity Guidelines prepared by the Antelope Valley Air Quality Management District (AVAQMD) for quantification of emissions and evaluation of potential impacts to air resources. URBEMIS 2007 version 9.2.2 and Caline4 computer programs, developed and approved by the California Air Resources Control Board (CARB), were used to quantify project-related emissions. The supporting model output is included in Appendix C. This section also utilizes a Global Climate Change Report prepared by Michael Brandman Associates in January 2008, contained in Appendix C-2.

5.2.2 Existing Conditions

Mojave Desert Air Basin

The project site is located in the Antelope Valley within the Los Angeles County portion of the Mojave Desert Air Basin (MDAB). The basin includes portions of Los Angeles, San Bernardino, and Kern counties. The AVAQMD has regulatory jurisdiction over air pollution sources located in the northern, desert portion of Los Angeles County within the MDAB. The air quality in the MDAB is affected by topography, climate, wind speed and direction, and periodic natural events.

Topography and a dominant atmospheric high-pressure zone affect regional and local air quality within the MDAB. Topographic features such as the Tehachapi, Sierra Madre, San Gabriel, and San Bernardino Mountains form natural barriers separating the air basin from the coastal influences. In the summer, the MDAB is influenced by a coastal Pacific subtropical high pressure zone that prevents cloud formation thereby increasing daytime sunlight. The atmospheric high-pressure zone blocks out most mid-latitude storms except in the winter when the high-pressure zone is the weakest. The atmospheric high-pressure zone, protective mountains, and the distance from the Pacific Ocean limit precipitation. Rainfall averages between 3 and 7 inches per year, but is highly variable. The MDAB is one of the hottest and driest areas in California.

The MDAB prevailing breezes of 10 to 20 miles per hour generally originate from the southwest and west. Periods of high winds are experienced year-round. Wind is an important factor in the transport of air pollution, as ozone precursors can be transported from sources miles away. Due to the prevailing winds and intermittent valley passes through the mountain ranges, the MDAB is subject to ozone-polluted air coming into the area from the South Coast Air Basin.

The air basin's inversion conditions are much less favorable for the buildup of high pollutant concentrations than the coastal areas of Southern California. When subsidence inversions occur, they are generally 6,000 to 8,000 feet above the desert surface, allowing much greater vertical mixing than along the coast where the inversion base is often as low as 1,500 feet.

Regional Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections of air quality in the project area are best documented from measurements made near the project site. The air quality monitoring station closest to the project site is located at 43301 Division Street in the City of Lancaster. The most recent published data is presented in Table 5.2-1. This data shows that the baseline air quality conditions in the project area include occasional events of unhealthful air with ozone and particulate matter less than 10 microns in diameter (PM_{10}).

Table 5.2-1: Regional Ambient Air Quality Data

Pollutant Averaging Time (units)	Standards		Maximum Concentration (days exceeding Federal Standard, State Standard)			Met Standards?
	Federal	State	2003	2004	2005	
Ozone						
1 Hour (ppm)	—	0.09	0.156 (4, 50)	0.121 (0, 37)	0.127 (1, 42)	No
8 Hour (ppm)	0.08	0.070	0.120 (33, *)	0.101 (24, *)	0.103 (31, *)	No
Carbon Monoxide (CO)						
8 Hour (ppm)	9	9.0	1.88 (0, 0)	1.72 (0, 0)	1.54 (0, 0)	Yes
Nitrogen Dioxide (NO_2)						
1 Hour (ppm)	—	0.25	0.067 (–, 0)	0.103 (–, 0)	0.074 (–, 0)	Yes
Mean (ppm)	0.053	—	0.015	0.015	0.015	Yes
PM_{10}						
Mean ($\mu g/m^3$)	—	20	23.2	12.4	11.1	Yes
24 Hour ($\mu g/m^3$)	150	50	98.4 (0, 6)	83.0 (0, *)	55.5 (0, *)	No
$PM_{2.5}$						
Mean ($\mu g/m^3$)	15	12	9.4	8.5	8.9	Yes
24 Hour ($\mu g/m^3$)	35	—	25.0 (0, 0)	18.0 (0, 0)	28.0 (0, 0)	Yes

Notes:
ppm = parts per million of air, by volume
$\mu g/m^3$ = micrograms per cubic meter
Mean = Annual Arithmetic Mean
* = No data available.
Measurements are the maximum concentrations; numbers in parenthesis refer to the number of sampling day per year that the ambient concentration exceeded the federal standard and the state standard.
Source: California Air Resources Board, Air Quality Data Statistics, Top 4 Summary, Accessed on September 26, 2006. www.arb.ca.gov/adam/welcome.html. The data are from the Lancaster-43301 Division Street station.

Attainment Status

Air basins where ambient air quality standards are exceeded are referred to as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." Federal nonattainment areas are considered severe, serious, or moderate as a function of deviation from standards. The current attainment designations for the project area are shown in Table 5.2-2.

Table 5.2-2: Mojave Desert Air Basin (Antelope Valley) Attainment Status

Pollutant	Averaging Time	State Status	National Status
Ozone	1-hour	Nonattainment	Standard revoked June 15, 2005; area is not subject to standard
Ozone	8-hour	Unclassified	Nonattainment
Carbon Monoxide	1-hour and 8-hour	Attainment	Attainment
Nitrogen Dioxide	1-hour and Annual	Attainment	Unclassified / Attainment
Sulfur Dioxide	24-hour; 1-hour	Attainment	Unclassified / Attainment
PM_{10}	24-hour; Annual	Nonattainment	Unclassified
$PM_{2.5}$	24-hour; Annual	Unclassified	Unclassified / Attainment
Source: AVAQMD CEQA and Federal Conformity Guidelines, May 2005.			

Regulatory Setting

Air pollutants are regulated at the federal, state, air basin, and local level with each agency having a different degree of control. The United States Environmental Protection Agency (EPA) regulates at the federal level. The CARB regulates at the State level. The AVAQMD regulates at the air basin level. The City of Lancaster regulates at the local level.

Pollutant Characteristics

Various health effects result from exposure to the criteria pollutants. Pollutant characteristics, mechanisms of pollutant origination, and health effects for the criteria pollutants and other pollutants of concern are described below.

- **Carbon Monoxide (CO):** A colorless, odorless toxic gas produced by incomplete combustion of carbon-containing fuels (e.g., gasoline or diesel fuel). CO levels tend to be highest during the winter months, when the meteorological conditions favor the accumulation of the pollutants.
- **Ozone:** A photochemical oxidant that is formed when Reactive Organic Gases (ROG) and oxides of nitrogen (NO_x) (both byproducts of internal combustion engines) react in the

presence of ultraviolet sunlight. Ozone is a very energetic combination of three oxygen atoms that, when it comes into contact with a surface, releases its force as chemical energy. When this happens to biological systems (i.e., the respiratory tract and plants), this energy can cause damage to sensitive tissues.

- **Oxides of Nitrogen (NO_x):** The two important forms of nitrogen oxide in air pollution are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is from a byproduct of fuel combustion and quickly reacts with oxygen to form NO_2. NO_x is a mixture of NO and NO_2 in the atmosphere. The major concern with NO_x emissions is mainly due to their contribution to the formation of ozone and particulate matter. The main human health concerns of nitrogen dioxide include lung damage, increased incidence of chronic bronchitis, eye, and mucus membrane damage, negative effects on the respiratory system, pulmonary dysfunction, and premature death. Small particles can penetrate deeply into the sensitive tissue of the lungs and can cause or worsen respiratory disease such as emphysema, asthma, and bronchitis, and can also aggravate existing heart disease[1]

- **Sulfur Dioxide (SO_2):** Sulfur dioxide is a colorless, pungent gas formed by the combustion of fossil fuels containing sulfur. Sulfur dioxide is a precursor to sulfate and PM_{10}. Exposure to sulfur dioxide, especially sensitive populations, can result in irritation of existing cardiovascular disease and respiratory illness. Symptoms include wheezing, shortness of breath and chest tightness, which are apparent especially during exercise and in people with asthma.[2]

- **Lead (Pb):** Lead concentrations have not exceeded state or federal standards in the region since 1982. Lead can accumulate in bone, soft tissue, and blood and can damage the kidneys, liver, and nervous system, and can also result in learning disabilities, seizures, and death. Lead concentrations once exceeded the state and federal air quality standards by a wide margin, but have not exceeded state or federal air quality standards in the area for at least 10 years. Lead is no longer an additive in gasoline, which is the main reason the concentration of lead in the air is low.

- **Suspended Particulate Matter (PM_{10} and $PM_{2.5}$):** PM_{10} refers to particulate matter that is 10 microns or less in diameter (1 micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter. Particulate matter sources include road dust, diesel soot, soil erosion, combustion particles (ashes and soot), and tire and brake abrasion. Breathing particulate matter can cause or aggravate problems associated with asthma, can increase coughing and cause breathing to be difficult or painful.[3] Breathing particulate matter

[1] U.S. Environmental Protection Agency. Six Common Air Pollutants. Health and Environmental Impacts of NOx. http://www.epa.gov/air/urbanair/nox/hlth.html

[2] U.S. Environmental Protection Agency. Air Trends. Sulfur Dioxide. 2004. www.epa.gov/airtrends/sulfur.html

[3] U.S. Environmental Protection Agency. Particulate Matter, Health and Environment. http://www.epa.gov/air/particlepollution/health.html Accessed October 2007.

has been associated with chronic bronchitis and decreases lung function.[4] Fugitive dust is defined as "any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person."[5]

- **Diesel Particulate Matter:** Diesel exhaust is a mixture of many particles and gases that is produced when an engine burns diesel fuel. Many compounds found in diesel exhaust are carcinogenic, including 16 that are classified as possibly carcinogenic by the International Agency for Research on Cancer.[6] Diesel particulate matter (DPM) includes the particle-phase particles in diesel exhaust. Exposure to diesel exhaust can cause immediate health effects.

- **Visibility Reducing Particles** (VRP) are suspended particulates that reduce visibility. A measure of visibility is the distance that can be seen clearly without the use of instrumental assistance. The EPA implemented a Regional Haze Rule in 1999 to attempt to protect visibility in 156 Class I national parks and wilderness areas in the United States. The regulation requires states to establish goals for improving their areas and work with other states since pollution is often transported over long distances.

- **Reactive Organic Gases** (ROGs), also known as reactive organic compounds (ROCs) and volatile organic compounds (VOCs), consist of nonmethane hydrocarbons and oxygenated hydrocarbons. Hydrocarbons are organic compounds that contain only hydrogen and carbon atoms. Nonmethane hydrocarbons are hydrocarbons that do not contain the unreactive hydrocarbon, methane. Oxygenated hydrocarbons are hydrocarbons with oxygenated functional groups attached. There are no state or federal ambient air quality standards for ROGs because they are not classified as criteria pollutants; however, they are regulated. ROGs are ozone precursors; therefore, a reduction in ROG emissions reduces certain chemical reactions that contribute to the formulation of ozone. Although health-based standards have not been established for ROGs, health effects can occur from exposure to high concentrations because of interference with oxygen uptake.

- **Greenhouse Gases.** Greenhouse gases help to regulate the climate by absorbing infrared radiation in the atmosphere and allowing incoming solar radiation to pass through the atmosphere. Greenhouse gases include water vapor, methane, carbon dioxide, nitrous oxide, ozone, halogenated fluorocarbons, perfluorinated carbons, and hydrofluorocarbons. Increased production of greenhouse gases can contribute to global warming. Global climate change is an average rise in the earth's temperature, which can cause changes in climate.

Federal and State Regulatory Agencies

The EPA handles national and interstate air pollution issues and policies. The EPA sets federal vehicle and stationary source emission standards, oversees approval of all State Implementation Plans

[4] Ibid

[5] South Coast Air Quality Management District. Rule 403. Amended June 3, 2005.

[6] California Environmental Protection Agency. Office of Environmental Health Hazard Assessment. Executive Summary for the "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant," 1998.

(SIP), provides research and guidance in air pollution programs, and sets National Ambient Air Quality Standards (NAAQS), also known as federal standards. There are NAAQS for six common air pollutants, called criteria air pollutants. The six criteria pollutants are ozone, particulate matter (PM_{10} and $PM_{2.5}$), oxides of nitrogen (NO_x), carbon monoxide (CO), lead, and sulfur dioxide. The EPA is the regulatory authority charged with enforcing the NAAQS.

The CARB has overall responsibility for statewide air quality maintenance and air pollution prevention. The SIP for the State of California is administered by CARB. A SIP is a document prepared by each state describing existing air quality conditions and measures which will be taken to attain and maintain NAAQS. The CARB also administers California Ambient Air Quality Standards (CAAQS), or state standards, for the 10 air pollutants designated in the California Clean Air Act (CCAA). The 10 state air pollutants are visibility reducing particulates (VRP), hydrogen sulfide, sulfates, vinyl chloride, and the six federal criteria pollutants listed above. The criteria pollutants and the applicable CAAQS and NAAQS are shown in Table 5.2-3. These standards establish the context for local air quality management plans.

Table 5.2-3: Air Quality Standards and Relevant Effects

Air Pollutant	Averaging Time	California Standard	National Standard	Most Relevant Effects
Ozone (O_3)	1 Hour 8 Hour	0.09 ppm 0.070 ppm	— 0.08 ppm	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals, and (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage.
Carbon Monoxide (CO)	1 Hour 8 Hour	20 ppm 9.0 ppm	35 ppm 9 ppm	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO_2)	1 Hour Mean	0.25 ppm*	— 0.053 ppm	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration.

Table 5.2-3 (Cont.): Air Quality Standards and Relevant Effects

Air Pollutant	Averaging Time	California Standard	National Standard	Most Relevant Effects
Sulfur Dioxide (SO_2)	1 Hour 24 Hour Mean	0.25 ppm 0.04 ppm —	— 0.14 ppm 0.030 ppm	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Particulate Matter (PM_{10})	24 Hour Mean	50 µg/m^3 20 µg/m^3	150 µg/m^3 —	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children; (c) Increased risk of premature death from heart or lung diseases in elderly.
Particulate Matter ($PM_{2.5}$)	24 Hour Mean	— 12 µg/m^3	35 µg/m^3 15 µg/m^3	
Sulfates	24 Hour	25 µg/m^3	—	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage.
Lead	30-day Quarter	1.5 µg/m^3 —	— 1.5 µg/m^3	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction
Visibility Reducing Particles	Extinction coefficient of 0.23 kilometer - visibility of 10 miles or more due to particles when relative humidity is less than 70%.		—	Visibility impairment on days when relative humidity is less than 70%.

ppm = parts per million (concentration) µg/m^3 = micrograms per cubic meter Quarter = Calendar quarter
Mean = Annual Arithmetic Mean 30-day = 30-day average
Sources: SCAQMD, 2007 Air Quality Management Plan (AQMP). CARB, Ambient Air Quality Standards, 2007.
* The nitrogen dioxide standard was amended on February 22, 2007, to lower the 1-hour standard to 0.18 ppm and establish a new standard of 0.030 ppm. These changes become effective after regulatory changes are submitted and approved by the Office of Administrative Law.

Antelope Valley Air Quality Management District

The air pollution control agency for the Los Angeles County portion of the MDAB is the AVAQMD, which was established in 1997. Prior to 1997, the South Coast Air Quality Management District (SCAQMD) had regulatory authority over the Antelope Valley. The AVAQMD is responsible for controlling emissions primarily from stationary sources. The AVAQMD is also responsible for developing, updating, and implementing the Air Quality Attainment Plan for the MDAB.

AVAQMD 2004 Ozone Attainment Plan

In the past, the SCAQMD addressed the Antelope Valley in its 1991 Air Quality Management Plan (AQMP), the 1994 AQMP, and the 1997 AQMP. The AVAQMD's 2004 Ozone Attainment Plan (OAP) replaces all previously submitted plans for the Antelope Valley. The goals of the 2004 OAP are as follows:

1. Demonstrate that the AVAQMD will meet the primary required federal ozone planning milestones, attainment of the ozone national ambient air quality standards (NAAQS) by the end of 2007;
2. Present the progress the AVAQMD will make towards meeting all required state ozone planning milestones, including attainment of the ozone California ambient air quality standards; and
3. Discuss the 8 hour ozone NAAQS, preparatory to an expected non-attainment designation for the new NAAQS.[7]

Within the Antelope Valley, the SCAQMD rules and regulations in effect in 1997 were transferred over to the Antelope Valley. Since then, the Governing Board of the AVAQMD has chosen to amend and rescind some of those rules and regulations. The 2004 OAP did not propose any new rules. The 2004 OAP indicates that the Antelope Valley will achieve the state and federal standards by the "earliest practicable date not as a result of local reductions, but as a result of reductions occurring upwind."[8]

AVAQMD Measures to Reduce Particulate Matter

California Health and Safety Code Section 39614 requires the CARB, in consultation with local air pollution control and air quality management districts, to reduce public exposure to PM_{10} and $PM_{2.5}$. Local districts were responsible for preparing a list of feasible control measures. The AVAQMD adopted the "List and Implementation Schedule for District Measures to Reduce PM Pursuant to Health and Safety Code Section 39614(d)" (PM List) on August 16, 2005. The document contains four components:

1. PM measures that are currently contained in the AVAQMD rules and programs.
2. Measures that do not need to be implemented in the AVAQMD because there are no sources of that type in the district and any new sources would need to comply with Best Available Control Technology pursuant to the AVAQMD's New Source Review regulations.
3. Measures that are or could be included in rules to be adopted or modified in the future.
4. Measures that require analysis to determine if they are cost effective.

The PM List contains measures to be analyzed and potentially implemented within the AVAQMD to reduce particulate matter emissions; the rules that could apply to the project are as follows:

[7] Antelope Valley Air Quality Management District. 2004 Ozone Attainment Plan. April 20, 2004.
[8] Ibid.

- AVAQMD Rule 444, Open Fires, prohibits outdoor residential open burning which applies to open fires in the residential areas such as burning of leaves or trash.
- AVAQMD Rule 403, Fugitive Dust, governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard best management practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites. Rule 403 also requires submission of a Fugitive Dust Plan to the AVAQMD for projects that disturb over 100 acres of soil or move 10,000 cubic yards per day of material.
- AVAQMD Rule 1121, Combustion Sources. Residential Water Heaters: a) Limits NO_x emissions from water heaters with heat input rates equal to or less than 75,000 British Thermal Units (BTu) per hour to 20 nanogram (ng)/joule of heat output and sets future limit to 10 ng/joule of heat output. b) Limits NO_x emissions from water heaters with heat input rates equal to or less than 75,000 Btu per hour to 40 ng/joule of heat output.

There is also a proposed rule that limits the number of wood-burning fireplaces and wood-burning heaters that may be installed in new residential developments.

District Rules Applicable to the Project

The rules and regulations that apply to this project include, but are not limited to, the following:

- AVAQMD Rule 403, Fugitive Dust, governs the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.
- AVAQMD Rule 1108, Cutback Asphalt, governs the sale, use and manufacturing of asphalt and limits the ROG content in asphalt used in the basin. Although this rule does not directly apply to the project, it does dictate the ROG content of asphalt available for use during the construction.
- AVAQMD Rule 1113, Architectural Coatings, governs the sale, use and manufacturing of architectural coating and limits the ROG content in paints and paint solvents. Although this rule does not directly apply to the project, it does dictate the ROG content of paints available for use during the construction of buildings.

Baseline Emissions

The project site is currently vacant. The existing emissions consist of particulate matter from windblown dust.

Sensitive Receptors

Those who are sensitive to air pollution include children, the elderly, persons with preexisting respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. The locations that house these persons or places where they gather to exercise are defined as sensitive receptors.[9] The sensitive receptors located near the project site are residences situated adjacent to the eastern project boundary. There is also a residence north of Avenue J.

City of Lancaster General Plan

The City of Lancaster General Plan was adopted on October 28, 1997 and amended in August 2007. The Air Resources section contains the objective to "preserve acceptable air quality by striving to attain and maintain national and state air quality standards." The General Plan contains policies and specific actions to accomplish this objective. The specific actions included in the General Plan that are applicable to the project include:

Goal 3 Identify the level of natural resources needed to support existing and future development within the City and its sphere of influence and ensure that these resources are managed and protected.

Objective 3.3 Preserve acceptable air quality by striving to attain and maintain national and state air quality standards.

An analysis of this project's consistency with General Plan goals and objectives is provided in Section 5.9, Land Use and Planning.

5.2.3 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or protected air quality violation;

[9] South Coast Air Quality Management District. CEQA Air Quality Handbook. Chapter 3, Basic Air Quality Information. November 2001 (Version 3).

- 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors); or
- Expose sensitive receptors to substantial pollutant concentrations.

The Initial Study determined that the project would not create objectionable odors affecting a substantial number of people (See Appendix A-1).

AVAQMD Thresholds

While the final determination of whether a project is significant is within the purview of the lead agency pursuant to Section 15064(b) of the CEQA Guidelines, the AVAQMD recommends that air pollution thresholds be used by the lead agencies in determining whether the proposed project could result in a significant impact. The AVAQMD Guidelines indicates that a project is significant if it:

1. Generates total emissions (direct and indirect) exceeding the thresholds given in Table 5.2-4; and/or
2. Generates a violation of any ambient air quality standard when added to the local background; and/or
3. Does not conform with the applicable attainment or maintenance plan(s); and/or
4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 1 in a million and/or a Hazard Index (non-cancerous) greater than or equal to 0.1.

Table 5.2-4: AVAQMD Significance Thresholds

Pollutant	Annual Threshold (tons)	Daily Threshold (pounds)
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NO_x)	25	137
Volatile Organic Compounds, also known as reactive organic gases (ROG)	25	137
Oxides of Sulfur (SO_x)	25	137
Particulate Matter (PM_{10})	15	82
Source: AVAQMD CEQA and Conformity Guidelines. May 17, 2005.		

There is no threshold for $PM_{2.5}$; however, the South Coast Air Quality Management District's threshold for $PM_{2.5}$ is approximately one-third that of PM_{10}.[10] If that same ratio is used, the threshold for $PM_{2.5}$ would be 27 pounds per day and 5 tons per year. This is the threshold that will be used in this assessment. Note that it does not set a threshold for the City of Lancaster.

According to the 2005 AVAQMD Guidelines, a project conforms to the current attainment plans if it:

- Complies with all applicable District rules and regulations.
- Complies with all proposed control measures that are not yet adopted from the applicable plan(s).
- Is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Conformity with growth forecasts can be established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast.

5.2.4 Project Impact Analysis

Air quality impacts can be described in a short-term and long-term perspective. Short-term impacts would occur during site grading and project construction. Long-term air quality impacts would occur once the project is in operation.

Construction Impacts (Short-Term)

Short-term impacts would include fugitive dust and other particulate matter, as well as exhaust emissions generated by earthmoving activities and operation of grading equipment during site preparation. Construction emissions can be either onsite or offsite. Onsite emissions principally consist of exhaust emissions (NO_x, SO_x, CO, ROG, $PM_{2.5}$ and PM_{10}) from heavy-duty construction equipment, motor vehicle operation, and fugitive dust (PM_{10} and $PM_{2.5}$) from disturbed soil. Offsite emissions are principally caused by motor vehicle exhaust from delivery vehicles, as well as worker traffic, but also include road dust.

The project would be developed in four phases. Therefore, to estimate impacts from construction of the proposed project, emissions from construction of 175 residences are considered. It is assumed that the entire site would be mass graded initially for worst-case scenario purposes. The assumed construction schedule for Phase I is shown in Table 5.2-5 below. Major construction-related activities include the following: grading/clearing; excavation and earth moving for construction of

[10] South Coast Air Quality Management District. Air Quality Significance Thresholds. Revised October 2006. http://www.aqmd.gov/ceqa/handbook/signthres.doc

the utilities and dwelling unit foundations and footings; building construction; asphalt paving of access roads throughout the development; and application of architectural coatings for things such as dwelling stucco and interior painting.

Table 5.2-5: Construction Schedule

Construction Phase/ Activity	Required Construction Equipment	Duration
Site Preparation Grading of 160 acres	Grader (1), Water Trucks (2), Rubber Tired Dozers (1), Scrapers (20), Worker Vehicles	3 months
Building/ Finishing for one phase (Infrastructure; dwelling unit construction; utilities, etc.)	Generator Sets Without mitigation: (12) With mitigation: (3) Rough Terrain Forklifts (10), Rubber Tired Loader (1), Tractor/Loader/Backhoes (2), Trenchers (1), Welders (2), Worker Vehicles	9 months
Architectural Coating	Worker Vehicles	3 months
Paving of Roads	Graders (1), Off Highway Trucks (1), Other Equipment (1), Pavers (1), Rollers (1) Worker Vehicles	1 month
Construction Period		**16 months**
Source: Michael Brandman Associates, 2006.		

Construction equipment as listed in Table 5.2-5 would result in emissions of CO, NO_x, ROG, SO_x, PM_{10}, and $PM_{2.5}$. Paving operations and application of architectural coatings would release ROG emissions. Table 5.2-6 summarizes the daily construction emissions without mitigation.

Table 5.2-7 displays the annual construction emissions without mitigation. All emissions were estimated using URBEMIS2007. The AVAQMD does not have thresholds associated with $PM_{2.5}$; therefore, the emissions are shown for informational purposes only. When emissions projections are compared with the AVAQMD regional thresholds of significance, it is shown that emissions exceed the daily thresholds for NO_x and PM_{10}. There is no threshold for $PM_{2.5}$; however, the South Coast Air Quality Management District's threshold for $PM_{2.5}$ is approximately one-third that of PM_{10}. If that same ratio is used, the threshold for $PM_{2.5}$ would be 27 pounds per day and 5 tons per year. Judging by those thresholds, $PM_{2.5}$ would exceed the daily significance threshold. The short-term impacts to air quality are considered significant.

Table 5.2-6: Construction-Related Daily Emissions (Unmitigated)

Pollution Source	Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Grading	44.8	421.4	204.9	<0.1	417.5	99.6
Building and Asphalt Paving	26.0	120.5	104.1	<0.1	9.3	8.4
Building	19.9	81.7	86.9	<0.1	7.3	6.6
Building and Coatings	55.0	81.8	88.9	<0.1	7.3	6.6
Maximum Daily Emissions[1]	55.0	421.4	204.9	<0.1	417.5	99.6
Threshold	137.0	137.0	548.0	137.0	82.0	27*
Exceed Threshold?	No	Yes	No	No	Yes	Yes*

Notes:
[1] The maximum daily emissions refer to the maximum emissions that would occur in one day; grading and construction do not occur at the same time; therefore, their emissions are not summed. The maximum ROG emissions occur during building construction and architectural coatings. The other maximum emissions occur during grading.
* There is no threshold for $PM_{2.5}$ established by the AVAQMD.
Source: URBEMIS output (see Appendix C).

Table 5.2-7: Construction-Related Annual Emissions (Unmitigated)

Pollution Source	Emissions (tons per year)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Grading	1.45	13.70	6.66	0.00	13.57	3.24
Asphalt Paving	0.07	0.43	0.19	0.00	0.02	0.02
Building	1.96	8.05	8.56	0.00	0.71	0.65
Architectural Coatings	1.16	0.00	0.07	0.00	0.00	0.00
Total	4.64	22.18	15.48	0.00	14.30	3.91
Threshold	25.0	25.0	100.0	25.0	15.0	5*
Exceed Threshold?	No	No	No	No	No	No*

Notes:
* There is no threshold for $PM_{2.5}$ established by the AVAQMD.
Source: URBEMIS output (see Appendix C).

Long-Term Impacts

Long-term emissions from occupancy or buildout of the proposed project include mobile and stationary emissions. Mobile emissions are mainly from motor vehicle traffic, while stationary sources include consumer products, water and area heaters and other products that consume natural gas, as well as gasoline-powered landscaping equipment. Mobile emissions from motor vehicles are

the largest single long-term source of air pollutants from the proposed project, based on an estimated 6,221 daily trips.

Operational emissions were estimated using URBEMIS2007. Daily emissions during summer associated with build-out of the proposed project are shown in Table 5.2-8. As shown in Table 5.2-8, summer emissions of CO and PM_{10} exceed the daily emission threshold. Daily emissions during winter are shown in Table 5.2-9 and as shown, emissions of ROG, CO, $PM_{2.5}$ and PM_{10} exceed the thresholds. Annual emissions are shown in Table 5.2-10 and as shown, the annual emissions exceed the ROG, CO, $PM_{2.5}$, and PM_{10} thresholds. Therefore, operational emissions result in a significant air quality impact.

Table 5.2-8: Daily Summer Operational Emissions (Unmitigated)

Operational Activity	Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile Emissions	53.8	72.6	659.5	0.7	108.6	21.2
Natural Gas	0.8	10.6	4.5	0.0	<0.1	<0.1
Landscaping	5.5	0.3	30.2	0.0	0.1	0.1
Consumer Products	33.4	-	-	-	-	-
Architectural Coatings	2.4	-	-	-	-	-
Total Daily Emissions	95.9	83.5	694.2	0.7	108.7	21.3
AVAQMD Daily Threshold	137.0	137.0	548.0	137.0	82.0	27*
Exceeds Threshold?	No	No	Yes	No	Yes	No*

Notes:
* The AVAQMD does not have a threshold for $PM_{2.5}$.
Source: URBEMIS output (see Appendix C).

Table 5.2-9: Daily Winter Operational Emissions (Unmitigated)

Operational Activity	Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile Emissions	58.1	87.5	629.3	0.6	108.6	21.2
Natural Gas	0.8	10.6	4.5	0.0	<0.1	<0.1
Fireplace/Hearth	637.5	21.2	1294.1	3.2	194.9	187.6
Consumer Products	33.4	-	-	-	-	-
Architectural Coatings	2.4	-	-	-	-	-
Total Daily Emissions	732.2	119.3	1927.9	3.8	303.5	208.8
AVAQMD Daily Threshold	137.0	137.0	548.0	137.0	82.0	27*
Exceeds Threshold?	Yes	No	Yes	No	Yes	Yes*

Notes:
* The AVAQMD does not have a threshold for $PM_{2.5}$.
Source: URBEMIS output (see Appendix C).

Table 5.2-10: Annual Operational Emissions (Unmitigated)

Operational Activity	Emissions (tons per year)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile Emissions	10.1	14.2	118.5	0.1	19.8	3.9
Natural Gas	0.2	1.9	0.8	0.0	0.0	0.0
Fireplace/Hearth	8.0	0.3	16.2	<0.1	2.4	2.3
Landscaping	1.0	0.1	5.5	0.0	<0.1	<0.1
Consumer Products	6.1	-	-	-	-	-
Architectural Coatings	0.4	-	-	-	-	-
Total Annual Emissions	25.8	16.5	141	0.1	22.2	6.2
AVAQMD Yearly Threshold	25.0	25.0	100.0	25.0	15.0	5*
Exceeds Threshold?	Yes	No	Yes	No	Yes	Yes*

Notes:
* The AVAQMD does not have a threshold for $PM_{2.5}$.
Source: URBEMIS output (see Appendix C).

CO Hot Spot Analysis

A CO hot spot is a localized concentration of CO that is above the state or federal 1-hour or 8-hour ambient air standards. Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. To provide a worst-case scenario, CO concentrations are estimated at

proposed project impacted intersections, where the concentrations would be the greatest. Intersections with the highest potential for CO hot spots were selected based on their average delay, traffic volumes, and proximity to sensitive receptors. This analysis follows guidelines recommended by the Caltrans CO Protocol. According to the CO Protocol, intersections with Level of Service (LOS) E or F require detailed analysis. In addition, intersections that operate under LOS D in areas that experience meteorological conditions favorable to CO accumulation require a detailed analysis.

The CARB emission factor model, EMFAC2002, was used to estimate the emission factors for the hot spot analysis in the year 2010. This model generates emission factors. The year 2010 is the more conservative or worst-case scenario. Additional worst case assumptions that account for low speed, congested conditions include:

- Approach/departure speed - 5 miles per hour.
- Travel speed - 25 miles per hour.
- Temperature - 40 degrees Fahrenheit.
- Season - winter.
- Geographical area - Antelope Valley Air Quality Management District.

Using the Caline4 model, potential CO hot spots were analyzed at the intersections listed in Table 5.2-11. Caline4 is a line source dispersion model that uses the emission factors as generated from EMFAC2002 to estimate concentrations at the corners of the intersections. As shown, the estimated 1-hour concentrations, in combination with background concentration, are below the state and federal ambient air quality standards. As shown in Table 5.2-12, the estimated 8-hour concentrations, in combination with the background concentration, are below the ambient air quality standards. No CO hot spots are anticipated as a result of traffic-generated emissions by the proposed project in combination with other anticipated development in the area. Therefore, even though CO operational emissions are over the AVAQMD regional significance thresholds (as shown in Table 5.2-8 and Table 5.2-9), the mobile related emissions from the project are not anticipated to contribute substantially to an existing or projected air quality violation.

Table 5.2-11: Estimated CO 1-Hour Concentrations

Intersection	Future Without Project (ppm)[1]	Future With Project, without Mitigation (ppm)*	Significant Impact[2]
4. Avenue J & 60th Street West	4.3	4.5	No
6. Avenue J & 45th Street West	4.5	4.5	No
7. Avenue J & 40th Street West	5.1	5.4	No
8. Avenue J & 35th Street West (AM)	5.3	5.5	No
9. Avenue J & 32nd Street West (AM)	5.7	5.9	No
10. Avenue J & 30th Street West	5.5	5.8	No
12. Avenue J & 25th Street West	5.4	5.5	No
17. Avenue J-8 & 60th Street West	4.0	4.4	No
19. Avenue K & 65th Street West	4.1	4.3	No
21. Avenue K & 50th Street West	4.5	4.8	No
22. Avenue K & 45th Street West	6.8	5.6	No
23. Avenue K & 40th Street West	6.8	5.8	No
24. Avenue K & 30th Street West	4.9	6.0	No
25. Avenue K & 20th Street West	5.3	6.5	No
27. Avenue K & SR-14 NB Ramp	5.4	6.6	No

Notes:

[1] Caline4 output plus background concentration of 2.7 ppm (the 8 hour concentration from Table 5.2-1 was divided by 0.7). The 0.7 persistence factor is from page 9-11 of the 1993 South Coast Air Quality Management District CEQA Handbook. Even though the basin is in attainment for CO, the nonattainment factor was used.

[2] Comparison of the 1-hour concentration to the state standard of 20 ppm

Source: Project contribution estimated using Caline4; see Appendix C for model output. Intersection numbers correlate to those in the project specific traffic study. (AM) indicates traffic volumes from AM peak hour (because the LOS at the AM peak was greater); no designation - PM peak hour.

Table 5.2-12: Estimated CO 8-Hour Concentrations

Intersection	Future Without Project (ppm)[1]	Future With Project, without Mitigation (ppm)[1]	Significant Impact[2]
4. Avenue J & 60th Street West	3.0	3.1	No
6. Avenue J & 45th Street West	3.1	3.1	No
7. Avenue J & 40th Street West	3.6	3.8	No
8. Avenue J & 35th Street West	3.7	3.8	No
9. Avenue J & 32nd Street West	4.0	4.1	No
10. Avenue J & 30th Street West	3.8	4.1	No
12. Avenue J & 25th Street West	3.8	3.8	No
17. Avenue J-8 & 60th Street West	2.8	3.1	No
19. Avenue K & 65th Street West	2.9	3.0	No
21. Avenue K & 50th Street West	3.1	3.4	No
22. Avenue K & 45th Street West	4.8	3.9	No
23. Avenue K & 40th Street West	4.8	4.1	No
24. Avenue K & 30th Street West	3.4	4.2	No
25. Avenue K & 20th Street West	3.7	4.5	No
27. Avenue K & SR-14 NB Ramp	3.8	4.6	No

Notes:
[1] The Caline4 output is the 1-hour concentration; therefore, the 8-hour project increment was calculated by multiplying the 1-hour estimated concentration by 0.7 (persistence factor), then adding a background concentration of 1.88 ppm (from Table 5.2-1). The 0.7 persistence factor is from page 9-11 of the 1993 South Coast Air Quality Management District CEQA Handbook. Even though the basin is in attainment for CO, the nonattainment factor was used.
[2] Comparison of the 8-hour concentration to the state/federal standard of 9 ppm.
Source: Project contribution estimated using Caline4; see Appendix C for model output.

Health Effects

The project would introduce sensitive receptors into the area because residential development would include children within the households. This section correlates project short-term and long-term emissions with health effects and determines the significance.

Health Impacts from Project Short-Term Emissions

Short-term emissions of NO_x, $PM_{2.5}$, and PM_{10} during construction would result in significant regional short-term impacts to air quality. However, it is unlikely that emissions of these pollutants by the proposed project would result in significant localized health effects. This is because it is unlikely that project emissions alone would cause an exceedance of the applicable ambient air quality standards.

The construction equipment on the project site would emit diesel particulate matter. However, the diesel particulate matter emissions from the project site are short-term in nature. Determination of risk from diesel particulate matter is considered over a 70-year exposure time. It is unlikely that emissions from the project would result in substantial health impacts to the surrounding residents. Therefore, the exposure to diesel particulate matter is less than significant.

Health Impacts from Project Long-Term Emissions

Without mitigation, long term operational impacts from the project would result in significant regional impacts to ROG, CO, PM_{10}, and $PM_{2.5.}$ This is because the proposed project is large scale in nature and significant increases in motor vehicle emissions would result from the proposed land use. It is anticipated that emissions of PM_{10} and $PM_{2.5}$ would not result in significant project-only health impacts but would result in cumulatively considerable health impacts without mitigation as discussed below.

The project would not expose sensitive receptors to substantial CO concentrations. The greatest potential for an exceedance of CO would be at project-impacted intersections. A CO hot spot analysis determined that the levels of CO at impacted intersections are below the state and federal ambient air quality standards. Therefore, localized concentrations of CO from the project would not result in localized health effects.

Long-term emissions of ROG are above the AVAQMD significance thresholds, as shown in Table 5.2-9 and Table 5.2-10. However, with mitigation, levels of ROG are below the significance thresholds (as shown in Table 5.2-17 and Table 5.2-18).

Summary of Health Impacts

In summary, short-term and long-term project emissions alone are not likely to result in a significant health impact to the surrounding residents.

Consistency with the AVAQMD Attainment Plan

The AVAQMD criteria were used in assessing project conformity.

Rules and Regulations

The proposed project would comply with all applicable District rules and regulations, including but not limited to those identified in Section 5.2.2, Existing Conditions. Therefore, the project complies with this criterion.

Control Measures

The second criterion is compliance with the control measures in the AQMP. The 2004 OAP did not propose any new control measures, since the Antelope Valley intends to achieve the federal and state standards not as a result of local reductions, but as reductions occurring upwind. Therefore, the proposed project complies with this criterion.

AQMP Assumptions

The third way to assess project compliance with the attainment plan assumptions is to ensure that the land use is consistent with the growth assumptions used in the air plans for the air basin. The AVAQMD Guidelines indicate that if the proposed project is consistent with the land use plan that was used to generate the growth forecast(s) in the attainment plan, then the project complies. The proposed project requires a General Plan amendment from Non-Urban Residential to Urban Residential and changes the zoning from RR-2.5 to R-7,000.

The AVAQMD indicated that the on-road mobile sources growth forecast is generated by the Southern California Associated Governments (SCAG), and is converted to emissions by CARB using the latest version of EMFAC. Therefore, even though the project is proposing 650 units, while the 1997 City of Lancaster General Plan Land Use Element has 64 units, the projections from SCAG are used to determine project consistency with the AQMP. As discussed in Section 5.11, Population and Housing, of this EIR, the project is consistent with the growth forecasts generated by SCAG. Therefore, the project complies with the AQMP.

Overall Compliance with the Attainment Plan

The proposed project would comply with the AVAQMD rules and regulations. The proposed project would comply with any proposed control measures. The proposed project meets SCAG's growth assumptions. Therefore, the proposed project does comply with the current air quality attainment plan.

Greenhouse Gas Impacts

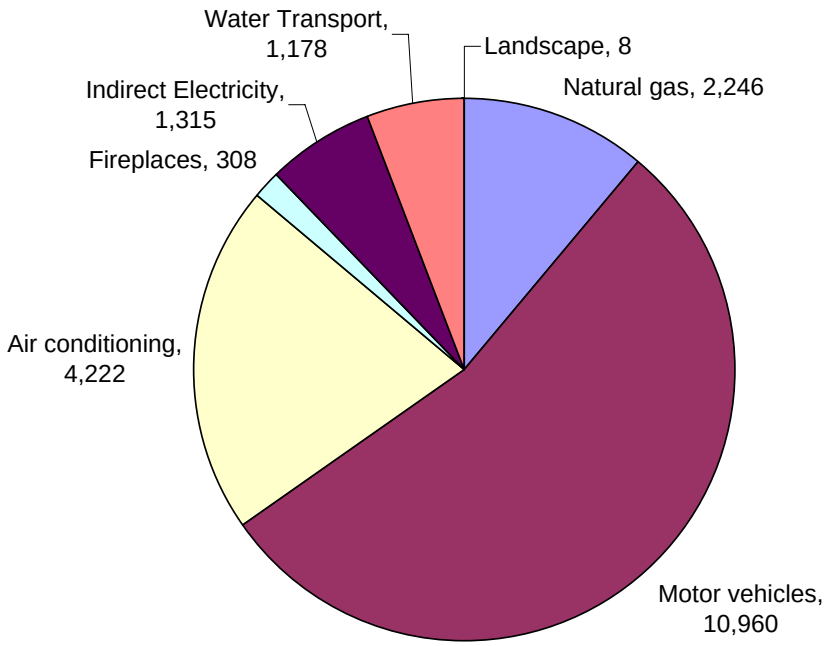
This section summarizes the Global Climate Change Analysis prepared by Michael Brandman Associates contained in Appendix C-2.

In 2006, the State Legislature signed AB 32, which requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. Greenhouse gases contribute to climate change. CARB, the California Environmental Protection Agency, the United States (U.S.) EPA, or other appropriate governmental organizations have not yet developed guidelines on how to prepare a

California Environmental Quality Act (CEQA) assessment for global climate change. Note that this analysis is specific to the project and may not apply to other projects in the City of Lancaster.

Construction of the proposed project would result in approximately 4,743 metric tons of carbon dioxide equivalent ($MTCO_2E$). Prior to mitigation, the proposed project would emit approximately 20,237 $MTCO_2E$ per year. As shown in Exhibit 5.2-1, the largest source of greenhouse gas emissions from the proposed project is from the motor vehicles that would access the project, which would contribute more than half of the anticipated emissions. After mitigation, the proposed project is anticipated to result in approximately 19,925 $MTCO_2E$ per year at buildout.

Exhibit 5.2-1: Project Operational Emissions of Carbon Dioxide Equivalents (Unmitigated)



The proposed project would result in a significant impact to climate change from its contribution of greenhouse gases because it is not implementing all feasible mitigation and it is not consistent with all of the California strategies to reduce greenhouse gas emissions to 1990 levels. Specifically, the project is not consistent with the smart land use strategy. Smart land use advocates for better access and less traffic by mixing land uses, clustering development, and providing transit options. It creates safe, convenient, attractive, and affordable neighborhoods. Because smart land use is typically denser, it leaves room for open space, which conserves our natural resources and provides communities with more parks and recreation. The proposed project would require the residents who

live there to drive to get to all uses (commercial, jobs, retail, recreation, etc.). The project is also not increasing its energy efficiency beyond Title 24 compliance, which conflicts with the state strategy to improve energy efficiency. Therefore, the project contributes to a significant impact to climate change.

However, it is anticipated that the project would not be significantly impacted from secondary effects of global climate change (i.e., sea level rise).

5.2.5 Cumulative Impacts

Section 15130(b) of the CEQA Guidelines states the following:

> The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

In accordance with CEQA Guidelines 15130(b), this analysis of cumulative impacts incorporates a summary of projections and a list approach. These two approaches are used with additional criteria to assess cumulative air quality impacts:

1. Consistency with the AVAQMD project specific thresholds for construction and operation.
2. Consistency with existing air quality attainment plan(s) (summary of projections approach).
3. A list of related projects (list approach).
4. A cumulative assessment of the health impacts of the pollutants.
5. An assessment of cumulative greenhouse gas impacts.

Air Quality Attainment Plans

The Basin is the geographic scope for assessing air quality impacts because it is the area in which the air pollutants generated by the sources within the basin circulate and are often trapped. The AVAQMD evaluated the sources in the basin when developing its 2004 OAP. The 2004 OAP described and evaluated basin wide conditions contributing to the cumulative impact of air quality. As discussed above, the project is in compliance with the current 2004 OAP. Therefore, the project is not cumulatively significant according to this tier.

List of Projects

As discussed under Section 4.2 Related Projects, there are 112 related projects. These would increase the quantity of mobile vehicles on the roads. The proposed project does not have commercial/retail uses, recreational, or employment centers within convenient walking distance. With few exceptions, this is true of the other related projects as well. Therefore, it would be necessary for the residents of the projects to drive to the various commercial uses.

The construction of the various projects may occur at the same time as construction of the proposed project. Because the emissions of the proposed project are significant, emissions from local projects would combine with the emissions from the proposed project and create a cumulative impact for the nonattainment pollutants of PM_{10}, $PM_{2.5}$, and ozone.

In summary, because 1) the related projects require the new residents to depend heavily upon the use of private automobiles, 2) the project's construction emissions are over the AVAQMD significance thresholds, and 3) construction of the project may occur concurrently with other nearby projects, the project is cumulatively significant.

Cumulative Health Effects

The basin is in nonattainment for ozone and PM_{10}, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The other pollutants that may exceed the thresholds, ROG, NO_x, and CO, are in attainment, and therefore, are not anticipated to result in a cumulative health effect. The air quality standards were set to protect the health of sensitive individuals (i.e., elderly, children, and the sick). Therefore, when the concentration of those pollutants exceed the standard, it is likely that some of the sensitive individuals of the population experience health effects as described earlier under the heading Pollutant Characteristics.

Cumulative Health Impacts during Construction

During grading activities, with mitigation, emissions of PM_{10} would exceed the AVAQMD's significance threshold and emissions of $PM_{2.5}$ would exceed the derived threshold. The emissions of particulate matter, primarily in the form of fugitive dust, would result in a significant cumulative health impact as it would add to the background concentrations of PM_{10} and $PM_{2.5}$ and may result in an exceedance of the ambient air quality standards at the neighboring residences. Health effects of particulate matter could include the following: (a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children; and (c) Increased risk of premature death from heart or lung diseases in elderly.

Similarly, ozone is in nonattainment in the basin. ROG and NO_x are ozone precursors. With mitigation, NO_x emissions during grading exceed the AVAQMD's daily significance thresholds. Therefore, NO_x resulting from the project in combination with ROG from other sources could result in cumulative health effects from ground-level ozone exposure during construction. Health effects from ozone may include the following: (a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals, and (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; and (d) Property damage.

Cumulative Health Effects during Operation

Long-term unmitigated operational emissions of ROG exceed the AVAQMD's significance thresholds. ROG and NO_x are precursors to ozone. Because ozone is a secondary pollutant (it is not emitted directly but formed by chemical reactions in the air), it can be formed miles downwind of the project site. Unmitigated project emissions of ROG and NO_x could contribute to the background concentration of ozone and cumulatively cause health effects as identified earlier in Table 5.2-3 and under the heading Pollutant Characteristics. However, with mitigation, long-term emissions of ROG and NO_x are under the AVAQMD's significance thresholds. Therefore, project emissions are not such to contribute to a significant effect and the cumulative health impact from ozone is less than significant with mitigation.

Even with mitigation, operational emissions of PM_{10} exceed the regional significance threshold. Therefore, because project emissions exceed the threshold, project emissions may be substantial enough to contribute to the background of PM_{10} and cause an exceedance of the ambient air quality standards. This may result in cumulative health impacts from exposure to PM_{10}. PM_{10} also contains a component of $PM_{2.5}$, approximately 21% of road dust and 96% from fireplaces. Therefore, without mitigation, emissions of $PM_{2.5}$ could result in significant impacts from wood smoke during the winter. However, with mitigation, emissions of $PM_{2.5}$ are significantly reduced. As shown in, concentrations of $PM_{2.5}$ in the area do not currently exceed the ambient air quality standards. Therefore, it is not anticipated that the project would result in cumulative $PM_{2.5}$ air quality impacts after application of mitigation measures.

Cumulative Greenhouse Gas Impacts

The cumulative impact of the project's contribution to greenhouse gas emissions and climate change is speculative for the following reasons: the list of cumulative projects for climate change is unknown; there is no approved plan that covers the jurisdiction that discusses climate change or greenhouse gases; there are no thresholds for determining the significance of the impacts.

Summary of Cumulative Impacts

The project exceeds the AVAQMD regional significance thresholds during construction and operation; therefore, the project fails to meet the first criterion in the four-tiered cumulative approach. The project does comply with the AQMP; therefore, the project meets the second criterion. The project will combine with emissions from other nearby projects and result in a significant impact according to the third tier. The project may result in a cumulative health impact from ozone, $PM_{2.5}$, and PM_{10} during grading activities and from PM_{10} during operation and therefore fails to meet the fourth criterion. The project's cumulative contribution to climate change is speculative at this time. The project fails three out of five criteria and therefore results in a significant cumulative air quality impact.

5.2.6 Mitigation Measures

AQ-1 During construction of the proposed project, the developer shall use only zero-volatile organic compounds (VOC) paints (assumes no more than 100 grams/liter of VOC) and coatings. All paints shall be applied using either high-volume low-pressure (HVLP) spray equipment or by hand application. For a listing of paints, see www.aqmd.gov/prdas/brochures/paintguide.html.

AQ-2 Prior to construction of the proposed project, the project proponent shall provide a traffic control plan that shall describe in detail safe detours around the project construction site and provide temporary traffic control (i.e. flag person) during concrete transport and other construction related truck hauling activities.

AQ-3 During construction of the proposed improvements, all contractors shall be advised not to idle construction equipment onsite for more than five minutes in any hour.

AQ-4 During grading, construction equipment run-time shall be limited to no more than a total of eight hours of work each day. During building and asphalt paving, construction equipment run-time shall be limited to no more than a total of six hours of work each day.

AQ-5 During construction of the proposed project, onsite electrical hook ups shall be provided for electric construction tools including saws, drills, and compressors to eliminate the need for diesel powered electric generators.

AQ-6 During the construction of the proposed project, off-road diesel equipment for asphalt paving activities shall not operate at the same time as the off-road diesel equipment used for building activities.

AQ-7 To reduce emissions of oxides of nitrogen (NO_x), the off-road construction equipment used during grading activities shall be equipped with low NO_x catalysts.

AQ-8 Prior to construction of the project, the project proponent shall provide a Dust Control Plan that will describe the application of standard best management practices to control

dust during construction. Best Management Practices shall include application of water on disturbed soils a minimum of three times per day, covering haul vehicles, replanting disturbed areas as soon as practical, and restricting vehicle speeds on unpaved roads to 15 miles per hour, and other measures, as deemed appropriate to the site, to control fugitive dust. The Fugitive Dust Control Plan shall be submitted to the City and Antelope Valley Air Quality Management District for approval and shall be approved prior to construction.

AQ-9 To reduce air pollutant emissions, fireplaces and wood-burning stoves shall be prohibited from the development.

AQ-10 To reduce waste generated by the project, the following measures shall be implemented:

a) A minimum of 50% of the construction waste shall be reused or recycled.
b) The City shall ensure that the project will have recycling available for the residents during project occupancy.

AQ-11 To increase energy efficiency, the following measures shall be implemented:

a) The project shall incorporate light-colored roofs, paints, and driveway materials.
b) Solar powered water heaters and solar panels shall be offered to the home buyer as an option.
c) Each appliance (i.e., washer/dryer, refrigerators, stoves, etc.) provided by the builder shall be Energy Star qualified if an Energy Star appliance is available.
d) Any lighting installed by the applicant shall be energy efficient (i.e., fluorescent lights).

AQ-12 To reduce water usage, the following measures shall be implemented:

a) The landscaping areas shall use water-saving irrigation, such as inground irrigation as opposed to sprinklers that do not direct the water flow directly to the plants and allow for increased evaporation.
b) The landscaping concept shall emphasize use of drought-resistant plants and minimize use of turf.
c) Low flow, water saving appliances (i.e., toilets, dishwashers, shower heads, washing machines) shall be installed if provided by the builder.

AQ-13 To reduce emissions associated with vehicle miles traveled, the City shall coordinate controlled intersections impacted as part of the project so that traffic passes more efficiently through congested areas. Where signals are installed as part of the project, the use of Light Emitting Diode traffic lights shall be required.

5.2.7 Level of Impact After Mitigation

Implementation of measures AQ-1 through AQ-9 would substantially reduce construction-related emissions of all pollutants during project construction. However, emission levels of NO_x, $PM_{2.5}$, and PM_{10} during grading activities would still exceed daily significance levels as shown in Table 5.2-13. As shown in Table 5.2-14, emission levels do not exceed the annual significance levels.

Table 5.2-13: Construction-Related Emissions (Mitigated)

Pollution Source	Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Grading	44.8	358.3	204.9	<0.1	181.6	50.4
Asphalt Paving	6.1	38.8	17.3	<0.1	2.0	1.9
Building	12.6	63.0	69.1	<0.1	5.4	4.9
Building and Coating	47.7	63.1	71.1	<0.1	5.5	4.9
Maximum Daily Emissions[1]	47.7	358.3	204.9	<0.1	181.6	50.4
Regional Threshold	137.0	137.0	548.0	137.0	82.0	27*
Exceed Regional Threshold?	No	Yes	No	No	Yes	Yes*

Notes:
[1] The maximum daily emissions refer to the maximum emissions that would occur in one day; grading and construction do not occur at the same time; therefore, their emissions are not summed. The maximum ROG emissions occur during building construction and architectural coatings. The other maximum emissions occur during grading.
* There is no threshold for $PM_{2.5}$ established by the AVAQMD.
Source: URBEMIS output (see Appendix C).

Table 5.2-14: Construction-Related Annual Emissions (Mitigated)

Pollution Source	Emissions (tons per year)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Grading	1.45	11.64	6.66	0.00	5.90	1.64
Asphalt Paving	0.07	0.43	0.19	0.00	0.02	0.02
Building Construction	1.10	5.51	6.04	0.00	0.48	0.43
Architectural Coatings	1.16	0.00	0.07	0.00	0.00	0.00
Total	3.78	17.58	12.96	0.00	6.40	2.09
Regional Threshold	25.0	25.0	100.0	25.0	15.0	5*
Exceed Regional Threshold?	No	No	No	No	No	No*

Notes:
* There is no threshold for $PM_{2.5}$ established by the AVAQMD.
Source: URBEMIS output (see Appendix C).

Implementation of mitigation measure AQ-9 would reduce emissions from fireplaces and wood stoves; this decrease is shown in Table 5.2-16 and Table 5.2-17. The mitigation proposed would still not reduce the anticipated amount of air pollutants from project operation to less than significant levels, as shown in Table 5.2-15, Table 5.2-16, and Table 5.2-17. However, mitigation does reduce $PM_{2.5}$ emissions to less than significant levels.

Table 5.2-15: Operation-Related Summer Emissions (Mitigated)

Operational Activity	Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile Emissions	53.8	72.6	659.5	0.7	108.6	21.2
Natural Gas	0.7	8.5	3.6	0.0	<0.1	<0.1
Landscaping	5.5	0.3	30.2	0.0	0.1	0.1
Consumer Products	33.4	-	-	-	-	-
Architectural Coatings	2.4	-	-	-	-	-
Total Daily Emissions	95.8	81.4	693.3	0.7	108.7	21.3
AVAQMD Daily Threshold	137.0	137.0	548.0	137.0	82.0	27*
Exceeds Threshold?	No	No	Yes	No	Yes	No*

Notes:
* The AVAQMD does not have a threshold for $PM_{2.5}$.
Source: URBEMIS output (see Appendix C).

Table 5.2-16: Operation-Related Winter Emissions (Mitigated)

Operational Activity	Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile Emissions	58.1	87.5	629.3	0.6	108.6	21.2
Natural Gas	0.7	8.5	3.6	0.0	<0.1	<0.1
Hearth/Fireplace	0.3	5.4	2.3	<0.1	0.4	0.4
Consumer Products	33.4	-	-	-	-	-
Architectural Coatings	2.4	-	-	-	-	-
Total Daily Emissions	94.9	101.4	635.2	0.6	109.0	21.6
AVAQMD Daily Threshold	137.0	137.0	548.0	137.0	82.0	27*
Exceeds Threshold?	No	No	Yes	No	Yes	No*

Notes:
* The AVAQMD does not have a threshold for $PM_{2.5}$.
Source: URBEMIS output (see Appendix C).

Table 5.2-17: Operation-Related Annual Emissions (Mitigated)

Operational Activity	Emissions (tons per year)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile Emissions	10.07	14.15	118.53	0.11	19.82	3.86
Natural Gas	0.12	1.55	0.66	0.00	0.00	0.00
Hearth/Fireplace	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Landscaping	0.99	0.05	5.50	0.00	0.01	0.01
Consumer Products	6.09	-	-	-	-	-
Architectural Coatings	0.43	-	-	-	-	-
Total Annual Emissions	17.70	15.75	124.69	0.11	19.83	3.87
AVAQMD Daily Threshold	25.0	25.0	100.0	25.0	15.0	5*
Exceeds Threshold?	No	No	Yes	No	Yes	No*

Notes:
* The AVAQMD does not have a threshold for $PM_{2.5}$.
Source: URBEMIS output (see Appendix C).

After implementation of identified mitigation measures, emissions of NO_x and particulate matter (PM_{10} and $PM_{2.5}$) may exceed the AVAQMD maximum daily regional significance thresholds during construction. There is no further feasible mitigation to reduce emissions of NO_x and particulate matter; thus, the proposed project would result in a cumulatively significant and unavoidable cumulative air quality impact. Mitigation measure AQ-9 reduces emissions from fireplaces during operation of the project, thereby reducing particulate matter exposure; however, emissions during operation still exceed the regional emissions thresholds and are therefore still significant.

After implementation of the identified mitigation measures, the following impacts would remain significant and unavoidable.

- Significant short-term air quality impacts during construction from NO_x and particulate matter (PM_{10} and $PM_{2.5}$) emissions.
- Significant operational impacts during project occupancy from CO and PM_{10} emissions.
- Cumulative health impacts during grading from particulate matter (PM_{10} and $PM_{2.5}$) and ground-level ozone.
- Cumulative health impacts during operation from particulate matter (PM_{10}).
- The project would result in a significant impact regarding global climate change from project related greenhouse gas emissions.

5.3 AGRICULTURE

This section addresses existing conditions and potential impacts to agricultural resources resulting from the proposed project. Analysis provided in this section is based on the results of the Land Evaluation and Site Assessment (LESA) Model (Appendix K-1). The purpose of the agricultural assessment is to evaluate existing conditions onsite as a basis for evaluating potential project-related impacts.

5.3.1 Existing Conditions

Regional Agricultural Conditions

According to the Los Angeles County 2004 Crop and Livestock Report, agriculture is a $300 million per year industry. Less than $8 million of this total is attributed to livestock.

Project Site Agricultural Conditions

The project site may have been used for alfalfa farming at one time as have many of the other properties in the area; however, no records are available. The area to the west of the site has a few small ranches with small cultivated areas and horses, but no agricultural activity. According to the Phase I Environmental Site Assessment (see Section 5.7), the project site has not been used for agricultural purposes since at least 1953. No information is available for the time preceding 1953.

Williamson Act

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. The project site is not currently under the Williamson Act.

State Farmland Mapping Program

The California Department of Conservation (CDC) established the Farmland Mapping and Monitoring Program (FMMP) in 1982. The FMMP is a non-regulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status. It is identified by the following categories,[1] collectively referred to as Farmland:

[1] California Farmland Conversion Report 1998-2002, http://www.conservation.ca.gov/DLRP/fmmp/pubs/1998-2000/FCR/FCR_98_00_ch123.pdf. Accessed July 16, 2007

Prime Farmland: This land has the best soil quality (physically and chemically) for long-term agricultural production. Additionally, land of this nature has the appropriate growing season and moisture supply needed to produce sustained high yields. To classify as "prime farmland," the land must have been used for irrigated agricultural production at some point during the four years prior to the mapping date.

Farmland of Statewide Importance: Land in this category is very similar to Prime Farmland but it may be of slightly lesser quality. Like Prime Farmland, this land must have been used for irrigated agricultural production at some time during four years prior to the mapping date, but it may have greater slopes or less ability to store moisture than Prime Farmland.

Unique Farmland: This type of Farmland is of lesser quality soils than the above and is used for the production of the State's leading agricultural crops. Although this land is usually irrigated, it may also consist of non-irrigated orchards or vineyards. Land must have been cropped at some time during the four years prior to the mapping date.

Farmland of Local Importance: Farmland of this nature is important to the local agricultural economy according to a county's board of supervisors and a local advisory committee. For Los Angeles County, Farmland of Local Importance is defined as "producing lands that would meet the standard criteria for Prime or Statewide [Farmland] but are not irrigated."[2]

According to the FMMP, the project site is not included within any of these categories and is shown on the State Wide Maps as Grazing Land (Appendix K-2).

General Plan Policies Related to Agriculture

The 1997 General Plan does not include an agriculture designation. However, the following policy related to agriculture is included in the General Plan:

Policy 3.5.3 Protect lands currently in agricultural production from the negative impacts created when urban and rural land uses exist in close proximity, while recognizing the possibility of their long-term conversion to urban or rural uses.

5.3.2 Thresholds of Significance

Based upon Appendix G of the CEQA Guidelines, the proposed project would have a significant effect on the environment if it would:

[2] Ibid.

- 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.
- Conflict with existing zoning for agricultural use, or a Williamson Act Contract.
- Involve other changes in existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

Appendix G of the CEQA Guidelines provides for an alternative evaluation technique for assessing potential impacts to agricultural resources by the use of the California Agricultural Land Evaluation and Site Assessment Model (LESA) prepared by the California Department of Conservation.

5.3.3 Project Impacts

The proposed project would convert the open land located on the project site to non-agricultural uses. This would result in the conversion of 160 acres of potential grazing land that is considered neither Prime Farmland nor Unique Farmland. This is not typically considered a significant impact on farmland and agricultural resources. The site of the proposed project is zoned for rural residential use. The evaluation of potential impacts to agricultural land and agriculture can be conducted using LESA. The following is a discussion of the project impacts based on the LESA Model.

Impacts Related to Conversion of Farmland and Agricultural Uses

The LESA Model is composed of factors that evaluate the land and the project site. The criterion includes a Land Evaluation (LE) scoring threshold and a Site Assessment (SA) scoring threshold. The four SA factors below are used to measure social, economic, and geographic attributes that contribute to the overall value of agricultural land. The rating factors are:

- Project Size Rating
- Water Resources Availability Rating
- Surrounding Agricultural Land Rating
- Surrounding Protected Resource Land Rating

LE factors used in the LESA Model to determine whether a project would have significant impacts on agricultural resources as follows:

- The Land Capability Classification Rating; and
- The Storie Index Rating

For a proposed project, each of these factors is separately rated. According to the LESA Model, a total score of 0-39 points is not considered significant; 40-59 points, is considered significant only if LE and SA sub-scores are each greater than or equal to 20 points; 60-79 points, is considered significant unless either LE or SA sub-scores are each less than to 20 points; and scores totaling 80 or more are considered significant[3].

The proposed project consists of 160 acres, which exceeds the LESA threshold of 80 acres; thus, project size is a significant impact in the scoring scheme. However, the site has no onsite water resources, the surrounding land is not used for agriculture, and the project site is not protected for agricultural or other resources. These characteristics contribute to a less than significant impact in the scoring scheme. The LESA scoring process was conducted for this site and the final score was 17. A score less than 39 is considered a less than significant impact on farmland. Therefore, implementation of the proposed project would not have a significant impact on Farmland and agricultural resources. The LESA calculations are contained in Appendix K-1, Land Evaluation and Site Assessment (LESA) Model.

Impacts Related to Conflicts with Agricultural Zoning or Williamson Act Contracts

There are no Williamson Act contracts for any land on the project site and the site is zoned for rural residential use. Therefore, no impacts with respect to Agricultural Zoning or Williamson Act contracts would occur.

5.3.4 Cumulative Impacts

Future development associated with the related projects (see Section 4.2) in the area and the region is anticipated to result in the conversion of additional grazing land. However, there are no grazing operations in the area now, and the potential for agricultural businesses to move to this area is remote. Cumulative impacts on agricultural resources are less than significant.

5.3.5 Mitigation Measures

No mitigation measures are necessary.

5.3.6 Level of Significance After Mitigation

Impacts would be less than significant.

[3] California Department of Conservation, Land Evaluation and Site Assessment Model, http://www.consrv.ca.gov/DLRP/qh_lesa.htm, accessed August 2006.

5.4 BIOLOGICAL RESOURCES

5.4.1 Introduction

This section addresses existing conditions and potential impacts to biological resources resulting from the proposed project. Information provided in this section was derived from the biological resources assessment and a Burrowing Owl Survey performed by Michael Brandman Associates (MBA) and located in Appendix B-1 and Appendix B-2. The purpose of the biological resources assessment is to evaluate existing conditions onsite as a basis for evaluating potential project-related impacts.

5.4.2 Existing Conditions

The following discussion provides a summary of the sensitive biological resources potentially occurring and/or observed on the project site. The potential for a species to occur onsite is based upon the known geographic ranges, elevation distributions, presence of preferred habitats, and the field survey conducted as part of the biological assessment.

Literature Review

A compilation of sensitive plant and wildlife species recorded in the vicinity of the project site was derived from the California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDB), a sensitive species and plant community account database. Additional recorded occurrences of plant species found on or near the site were obtained from the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California database. Federal register listings, protocols, and species data provided by the United States Fish and Wildlife Service (USFWS) and CDFG were reviewed in conjunction with anticipated federal and state listed species potentially occurring in the vicinity.

Reconnaissance Survey

A reconnaissance-level field survey of the project site was conducted on June 26, 2006 during daylight hours. Sensitive or unusual biological resources identified during the literature review were verified during the reconnaissance-level survey for mapping accuracy. Plant communities within the project site were classified at a general level of detail. Survey results for plant and wildlife species are described in Appendix B-1.

The project site was inspected for diagnostic wildlife signs such as nests, burrows, tracks, vocalizations, and noted all direct observations. Also inspected were surface litter, fallen bark, area beneath stones, and tree branches to look for secretive reptiles and amphibians.

Four subsequent surveys was conducted on February 13, 2007 through February 16, 2007, by MBA and changes in existing conditions onsite were noted. The active channel that had conveyed flows offsite from urban runoff located along the eastern boundary of the project site had been removed and replaced with a storm drain. Observations during the reconnaissance survey are provided below by topic.

Soils and Topographic Features

The project site contains three different soil series (Exhibit 5.4-1). A soil series is a group of soils with similar profiles. These profiles include major horizons with similar thickness, arrangement, etc. The project site consists of Merrill sandy loam, Pond loam, and Sunrise loam.

Topographically, the project site consists of relatively flat undeveloped land. Several dirt berms exist on the eastern portion of the site. Elevation onsite is approximately 2,360 - 2,370 feet above mean sea level (MSL)[1]. Generally, the site slopes downward from south to north.

Level of Disturbance

The project site exhibits various types of disturbance including dirt access roads, trash dumping, prevalence of ruderal vegetation, and adjacent residential development.

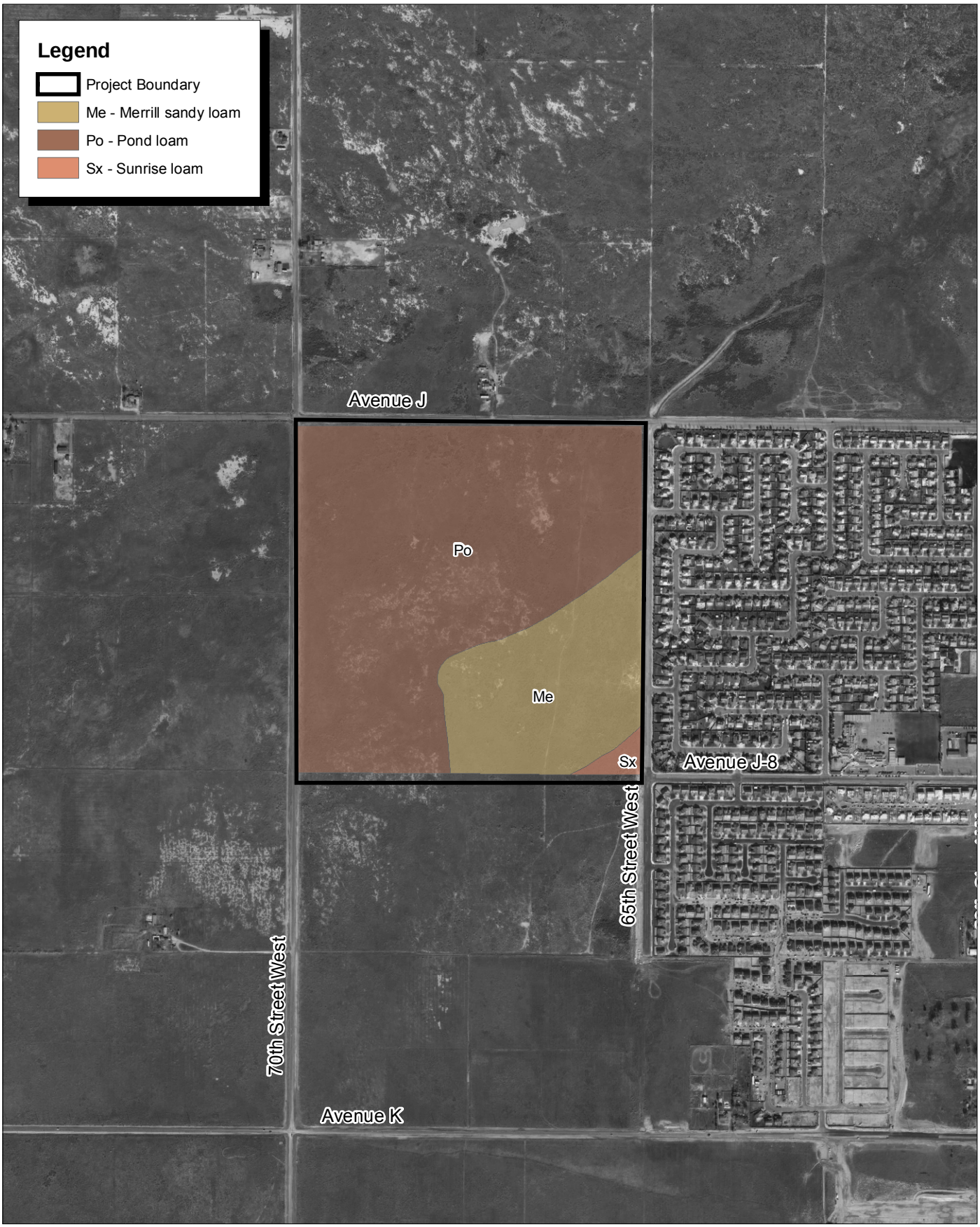
Plant Communities

The project site consists of non-native grassland, ruderal vegetation, and desert saltbush scrub (Exhibit 5.4-2). In addition, approximately five Joshua trees were scattered throughout the southern portion of the site.

Desert Saltbush Scrub

Desert saltbush scrub typically consists of low-growing, grayish, microphyllous shrubs that are approximately 1 to 3 feet in height with intermixed succulent species. Desert saltbush scrub occurs primarily in the eastern portion of the site. Common shrub species observed within this community include fourwing saltbush (*Atriplex canescens*) and shadscale (*Atriplex confertifolia*). The understory of the community contains grasses and weedy annuals that occur within openings between the larger shrubs. Common understory species include downy brome (*Bromus tectorum*), hare barley (*Hordeum vulgare*), and Russian thistle (*Salsola tragus*).

[1] US Geological Survey Geologic Map of the West Lancaster 7.5' Quadrangle 1974 and US Geological Survey Del Sur 7.5' Quadrangle, 1974.



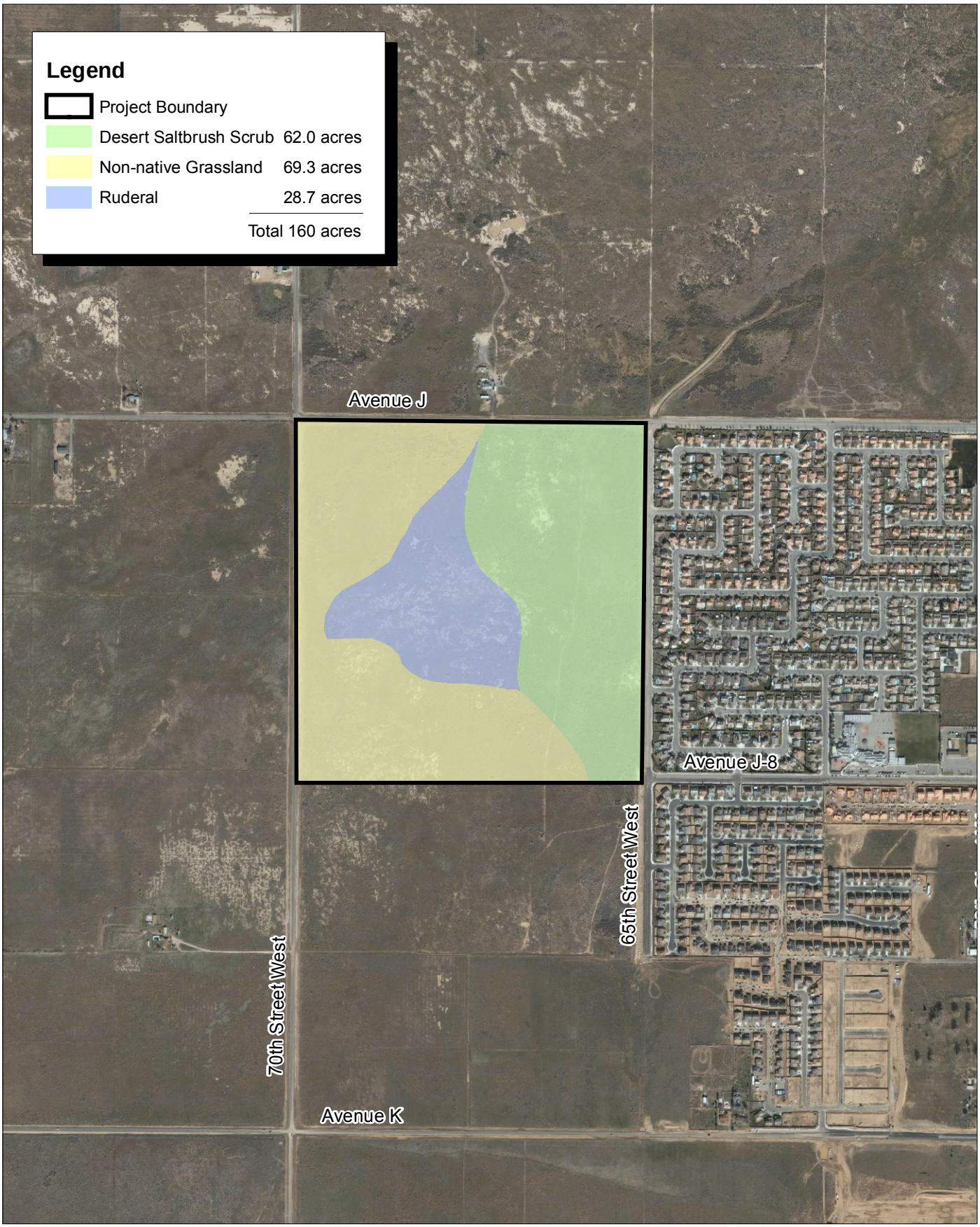
Source: Google Earth Pro! (2006) and US Dept. of Agriculture Soils Data.

NORTH

1,000 500 0 1,000 Feet

Michael Brandman Associates

Exhibit 5.4-1
USDA Soils Map



Source: Google Earth Pro! (2006) and MBA Field Survey.

NORTH

1,000 500 0 1,000 Feet

Michael Brandman Associates

Exhibit 5.4-2
Plant Communities Map

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ENVIRONMENTAL IMPACT REPORT

Non-native Grassland

Non-native grassland, a prevalent community throughout California, is generally characterized by a dense to sparse cover of non-native, annual grasses often associated with numerous weedy species as well as some native annual forbs (wildflowers), especially in years of plentiful rain. Non-native grassland occurs primarily throughout the western portion of the project site. Some common grasses found onsite include downy brome and hare barley.

Ruderal

The ruderal plant community is comprised of non-native, weedy plant species that occur in areas associated with continuous human disturbance. The weeds are generally low growing, but can have a few tall species, up to about 6.5 feet. The community typically contains large areas of bare ground and very low vegetative cover. The ruderal plant community occurs throughout the center of the site.

Sensitive Plant Species

Five sensitive plant species were previously recorded within 7 miles of the project site and were evaluated for potential to occur on or in the vicinity of the site. Based on a lack of suitable habitat onsite, three of the species are not likely to occur:

- Lancaster milk-vetch (*Astragalus preussii var. laxiflorus*)
- Parry's spineflower (*Chorizanthe parryi var. parryi*)
- Sagebrush loeflingia (*Loeflingia squarrosa var. artemisiarum*)

One sensitive plant species, white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), was determined to have a low potential to occur onsite. One sensitive plant species, alkali mariposa lily (*Calochortus striatus*), was determined to have a moderate potential to occur onsite. None of these species are federally or state-listed as endangered or threatened. A discussion of each sensitive plant species recognized as potentially present according to the CNDDB and CNPS database is presented in Table 5.4-1. No CDFG or CNPS sensitive plant species were observed on the project site during the survey.

Table 5.4-1: Special Status Plant Species

Species		Status			Preferred Habitat	Life Form	Blooming Period	Potential to Occur / Known Occurrence / Suitable Habitat
Common Name	Scientific Name	USFWS	CDFG	CNPS				
Alkali mariposa lily	*Calochortus striatus*	—	—	1B	Chaparral, chenopod scrub, Mojavean desert scrub, meadows. Prefers alkaline meadows and ephemeral washes at elevation 90-1595 feet MSL.	Bulbiferous herb	Apr - Jun	**Moderate potential to occur.** Documented occurrences within 2 miles of site. Suitable habitat not present.
White-bracted spineflower	*Chorizanthe xanti var. leucotheca*	—	—	1B	Mojave desert scrub, pinyon juniper woodland at elevation 300-1200 feet MSL.	Annual herb	Apr - Jun	**Low potential to occur.** Documented occurrences within 6 miles of site. Marginally suitable habitat present.

United States Fish and Wildlife Service

- FE Federal Endangered
- FT Federal Threatened
- PE Proposed Endangered
- PT Proposed Threatened
- FC Federal Candidate
- FSC Species of Concern*

*No longer recognized as a federal designation.

California Department of Fish and Game

- CE California Endangered
- CT California Threatened
- CR California Rare

California Native Plant Society

- 1A Plants presumed extinct in California.
- 1B Plants rare, threatened, or endangered in California and elsewhere.
- 2 Plants rare, threatened, or endangered in California, but more common elsewhere.
- 3 Plants about which we need more information.
- 4 Plants of limited distribution.

Not Likely to Occur - There are no present or historical records of the species occurring on or in the immediate vicinity (within 3 miles) of the project site and the diagnostic habitats strongly associated with the species do not occur on or in the immediate vicinity of the site.
Low Potential to Occur - There is a historical record of the species in the vicinity of the project site and potentially suitable habitat onsite, but existing conditions (e.g. density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, isolation) substantially reduce the possibility that the species may occur. The site is above or below the recognized elevation limits for this species.
Moderate Potential to Occur - The diagnostic habitats associated with the species occur on or in the immediate vicinity of the project site, but there is not a recorded occurrence of the species within the immediate vicinity (within three miles). Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity.
High Potential to Occur - There is both suitable habitat associated with the species and a historical record of the species on or in the immediate vicinity of the project site (within 3 miles).
Species Present - The species was observed on the project site at the time of the survey or during a previous biological survey.

Sensitive Plant Communities

Based on the literature review one sensitive plant community, Southern Cottonwood Willow Riparian Forest, has been recorded within 7 miles of the project site. This sensitive community occurs only in surrounding quads and is located over 6 miles from the site. However, no Southern Cottonwood Willow Riparian Forest occurs within the site.

Wildlife Species

The project site provides habitat for wildlife species that commonly occur in non-native grassland and saltbush scrub. Common wildlife species observed on or in the vicinity of the site include:

- Black-tailed jackrabbit (*Lepus californicus*)
- Common raven (*Corvus corax*)
- Western meadowlark *(Sturnella neglecta*)

A complete list of wildlife species observed on the project site can be found in Appendix B-1.

Sensitive Wildlife Species

Seven sensitive wildlife species were previously recorded within 7 miles of the project site and were evaluated for potential to occur on or in the vicinity of the site. Based on a lack of suitable habitat onsite, three sensitive wildlife species are not likely to occur within the project site:

- Southwestern pond turtle (*Emys marmorata pallida*)
- Two-striped garter snake (*Thamnophis hammondii*)
- Mohave ground squirrel (*Spermophilus mohavensis*)

Burrowing owl (*Athene cunicularia*) is a California species of concern that is protected by the Migratory Bird Treaty Act (MBTA) and CFG Code. Due to the presence of suitable habitat on the project site and a recorded occurrence within one mile of the site, burrowing owl has a moderate potential to occur onsite. Four surveys were conducted from February 13, 2007 through February 16, 2007, and the project site does not contain any sign of burrowing owl presence (feathers, scat, and pellets) and no burrowing owls were detected on the project site. Currently, the project site is not occupied by burrowing owls.

Mohave ground squirrel is state listed as threatened by CDFG. The site provides only marginally suitable habitat for this sensitive species. According to CDFG policy, any project site greater than 5 miles west of State Route 14 (SR-14) is not within the known range of the Mohave ground squirrel and will not require focused surveys. Therefore, due to the presence of marginally suitable habitat

and the site's location greater than 5 miles west of SR-14, the potential for this sensitive species to be present is unlikely.

Three sensitive wildlife species, silvery legless lizard (*Anniella pulchra pulchra*), Coast (California) horned lizard (*Phrynosoma coronatum frontale*), and Coast (San Diego) horned lizard (*Phrynosoma coronatum blainvillii)* were determined to have a low potential to occur on the project site. One sensitive wildlife species, burrowing owl (*Athene cunicularia*) was determined to have a moderate potential to occur on or in the vicinity of the project site. A discussion of each sensitive wildlife species recognized by the CNDDB and MBA as potentially present on the site is presented in Table 5.4-2.

Table 5.4-2: Special Status Wildlife Species

Species		Status			Required Habitat	Potential to Occur / Known Occurrence / Suitable Habitat
Common Name	**Scientific Name**	**Federal**	**State**	**Other**		
Reptiles and Amphibians						
Silvery legless lizard	*Anniella pulchra pulchra*	—	—	CDFG: CSC	Sandy or loose loamy soils under sparse vegetation. Prefers soils with high moisture content.	**Low potential to occur.** Documented occurrences within 2 miles of site. Marginally suitable habitat present but species is not known to occur in large numbers on the desert floor of the Antelope Valley.
Coast (San Diego) horned lizard	*Phrynosoma coronatum blainvillii*	—	—	CDFG: CSC	Inhabits coastal sage scrub and chaparral in arid and semi-arid climate conditions. Prefers friable, rocky, or shallow sandy soils.	**Low Potential To Occur.** Documented occurrences within 7 miles of the site. Marginally suitable habitat present.
Coast (California) horned lizard	*Phrynosoma coronatum frontale*			CDFG: CSC	Frequents a wide variety of habitats. Most common in lowlands along sandy washes with scattered low bushes. Needs open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	**Low potential to occur.** Documented occurrences within 4 miles of the site. Marginally suitable habitat present.
Birds						
Burrowing owl	*Athene cunicularia*	—	—	CDFG: CSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	**Moderate potential to occur.** Documented occurrences within 1 mile of site. Suitable habitat present.

Federal

FE	Federal Endangered
FT	Federal Threatened
FSC	Federal Species of Concern
PFT	Proposed Federal Threatened
C	Candidate for Federal Listing
D	Delisted

State

SE	State Endangered
ST	State Threatened

Other

CDFG: CSC	California Species of Concern
CDFG: FP	Fully Protected Species
CDFG: P	Protected Species

Jurisdictional Waters and Wetlands

Prior to conducting the site visit, United States Geological Survey (USGS) topographic maps and aerial photography were reviewed to identify any potential natural drainage features and water bodies that may fall within the jurisdiction of the United States Army Corp of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and/or CDFG. In general, all surface drainage features indicated as blue-line streams on USGS maps and linear patches of vegetation expected to exhibit evidence of flows are considered potentially subject to state and federal regulatory authority as "waters of the U.S. and/or state." A drainage channel five to six feet across and one to two feet deep was observed along the eastern boundary of the project site. The channel was dry, but appeared to have previously contained stormwater. However, a second survey on February 13, 2007 indicated that the active channel has been removed and replaced with a storm drain.

Wildlife Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat, separating different populations of a single species. Corridors effectively act as links between these populations**.** The project site does not concentrate wildlife movement through a narrow corridor between two large areas of open space. Therefore, the project site is not located within a wildlife movement corridor.

City of Lancaster General Plan

The following objectives related to biological resources are contained in the General Plan.

Objective 1.7 Encourage protection of areas that have natural resource, scenic or cultural heritage values.

Objective 3.4 Identify, preserve, and maintain important biological systems within the Antelope Valley, and educate the public about these resources, which include the Joshua Tree - California Juniper Woodland, areas that support endangered or sensitive species, and other natural areas of regional significance.

Objective 3.5 Preserve land resources through the application of appropriate soils management techniques and the protection and enhancement of surrounding landforms and open space.

This project's consistency with these objectives is discussed in Section 5.9, Land Use and Planning.

5.4.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a significant impact on biological resources would occur if the proposed project would:

- 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 CDFG or USFWS;
- 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 CDFG or USFWS;
- 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; and

The Initial Study (Appendix A-1) determined that impacts to wetlands and local policies and ordinances protecting biological resources would be less than significant. Therefore, no further analysis of these issues is required.

Certain species listed as threatened or endangered by the USFWS and/or by the California Fish and Game Commission are also protected by the California Native Plant Protection Act (NPPA). Some habitats are considered sensitive biological resources by the CDFG. The CNPS compiles and maintains an inventory of sensitive plant species, including state and federally recognized rare plant species and those plants determined to be rare by that organization and other experts. In accordance with these requirements, a project would normally be deemed to produce a significant or potentially significant impact on biological resources if the project would:

- Result in a violation of any applicable regulations promulgated by a state or federal resource agency for the protection of rare, threatened, endangered, or otherwise protected species and their habitats, including wetlands; or
- Result in a violation of any applicable state or federal laws prohibiting the elimination or net reduction in a site's or an area's biological value through either direct removal of sensitive or protected onsite or near-site biological value through the avoidance of such impacts or through the provision of substitute resources or environs or other measures providing reasonable and relatively equivalent compensation for such impacts.

5.4.4 Project Impacts

The proposed project would result in the loss of desert salt brush scrub, non-native grasslands and ruderal plant communities due to grading on the project site. The significance of this land as habitat is discussed in the following sections.

Common Plant Species

Common plant species found on the site and Joshua trees would be eliminated by implementation of the proposed project. However, these species are abundant in the area and impacts would be less than significant.

Common Wildlife Species

The major impacts to wildlife on the project site involve elimination of habitat needed for cover, nesting, feeding, and open space. Small mammals such as rabbits, reptiles, and bird species that frequent the project site would be displaced to other suitable habitat in the immediate vicinity. Project implementation would result in the encroachment on common wildlife species. Encroachment on common wildlife species is considered to be adverse but not a significant impact. Displaced wildlife species would likely find shelter in undeveloped areas to the west and north.

Sensitive Plant Species

While the drainage channel on the east side of the project site was in place, alkali mariposa lily had a moderate potential to occur onsite. Alkali mariposa lily is both a CDFG species of special concern and CNPS List 1B species. This habitat no longer exists on the site. Other sensitive species such as the Lancaster milk-vetch, Parry's spineflower, sagebrush loeflingia and while-bracted spineflower were not observed on the site. Impacts are therefore less than significant.

Sensitive Wildlife Species

The project site contains suitable habitat for the burrowing owl, which is a California Species of Special Concern that is protected by the MBTA and CDFG Code. Four focused burrowing owl surveys were conducted from February 13, 2007 through February 16, 2007. Onsite surveys revealed no sign (including pellets, white wash, feathers, or prey remains) of burrowing owls onsite or within a 500-foot buffer zone surrounding the project site. Nevertheless, suitable habitat for the burrowing owl exists on the site, and the possible taking of the burrowing owl is a potentially significant impact.

The project site contains marginally suitable habitat for three reptile species of special concern, Coast (California) horned lizard, Coast (San Diego) horned lizard, and silvery legless lizard. Although each species is a California species of special concern, none are federally or state-listed as endangered or

threatened. The project site is approximately four to seven miles from the closest recorded occurrence for these species. Due to the disturbed nature of the existing habitat and the distance from known recorded occurrences, the potential for these species to occur onsite is low. Impacts are therefore less than significant.

The project site contains suitable nesting habitat for tree and ground-nesting avian species such as the burrowing owl. Therefore, pursuant to the MBTA and CDFG Code, removal of any trees, shrubs, or any other potential nesting habitat during the nesting season is a potentially significant impact.

Regional Connectivity/Wildlife Movement Corridors

The project site does not serve as a wildlife movement corridor or provide regional connectivity. No impacts to regional connectivity and/or wildlife movement corridors would occur with implementation of the proposed project.

City of Lancaster General Plan

The consistency with the City General Plan regarding biological resources is contained in Section 5.9, Land Use and Planning.

Jurisdictional Areas

The potentially jurisdictional drainage feature running along the east side of the project area at the time of the issuance of the Notice of Preparation (NOP) has been removed. While conducting a focused burrowing owl survey on February 13, 2007, MBA observed that the active channel had been removed and replaced with a storm drain. The proposed project therefore would not impact any jurisdictional area.

5.4.5 Cumulative Impacts

Per the provisions of CEQA, actions which have impacts that are individually limited, but cumulatively considerable, may be considered significant and adverse. Potential cumulative impacts on biological resources are primarily related to both the regional and local loss to the displacement of sensitive plant and sensitive wildlife species from this habitat may cause. The related projects would contribute to a cumulative loss at habitat but the amount of loss would be less than 5% of the total habitat contained in the western part of the City and surrounding county areas. Therefore, cumulative impacts are less than significant.

5.4.6 Mitigation Measures

The following mitigation measures shall be required to reduce potential impacts to biological resources associated with the proposed project.

B-1 Prior to the issuance of a grading permit and again within 30 days before the commencement of any ground disturbance on the project site, a qualified biologist shall conduct a focused survey to determine the presence/absence of the burrowing owl. The survey should be conducted according to the standard protocol established by CDFG and the Burrowing Owl Consortium (BOC). If burrowing owls are determined to be present on the site, mitigation for potential impacts to owls shall follow the guidelines outlined by the BOC, including passive relocation and purchase of replacement habitat.

B-2 Removal of any trees, shrubs, or any other potential nesting habitat should be conducted outside the avian nesting season. The nesting season generally extends from early February through August, but can vary slightly from year to year based upon seasonal weather conditions. If suitable nesting habitat must be removed during the nesting season, a qualified biologist shall conduct a breeding-bird survey to identify any potential nesting activity. If active nests are observed, construction activity must be prohibited within a 500-foot buffer around the nest until the nestlings have fledged. All construction activity within the vicinity of active nests must be conducted in the presence of a qualified biological monitor.

5.4.7 Level of Significance After Mitigation

With implementation of the above listed mitigation measures, impacts to biological resources as a result of the proposed project would be less than significant. Cumulative impacts from the development of the related projects would result in a loss of habitat, but other developments can be expected to utilize similar mitigation measures and cumulative impacts would be less than significant.

5.5 CULTURAL RESOURCES

5.5.1 Introduction

This section summarizes information contained in an archaeological and paleontological resource evaluation and significance assessment of the project site prepared by MBA in July 2007. The report includes a cultural resource records search, field survey, paleontological records search, and archaeological/historical significance test for the project Area of Potential Effect (APE). The complete report can be found in Appendix D-1, Cultural Report, of this EIR.

5.5.2 Existing Conditions

Historic and Prehistoric Background

This section provides a brief overview of the prehistory and history of the project area. A more detailed description can be found in ethnographic studies, mission records, and major published sources, including Kroeber, Wallace, Warren, Heizer, Moratto, and Chartkoff and Chartkoff, Fagan, and Moratto provide recent overviews of California archaeology in general and review the history of the desert regions in southern California. The most accepted regional chronology for coastal and central interior Southern California is derived from Wallace's four-part Horizon format, which was later updated and revised by Warren. Presently, regional archaeologists generally follow Wallace's Southern California format, but the loosely established times for each period subunit are often challenged. The documented stages are as follows:

- Desert Culture Period (12000 to 10000 B.C.)
- Western Hunting Culture or Lake Mohave Period (~9000 to 5000 B.C.)
- Pinto Period (5000 to 2500 B.C.)
- Protohistoric (2500 B.C. to A.D. 1769) [1]

Desert Culture Period (12000 to 10000 B.C.)

Comparatively, little is known of Paleo-Indian people in the California archaeological record, although highly documented archaeological village sites in the Southwest have revealed associated bones of now extinct large mammals, as well as Clovis and Folsom tool traditions. However, this period is noted for an increase in drier weather; consequently, most of the known California Late Paleo-Indian/early Archaic sites are located near extinct desert valley lakes, rock shelters, and on the Channel Islands off the California coast.[2] Typically, the sites consist of occupation sites, butchering stations, and burial sites. This period ends with a marked extinction of large game native to North

[1] Phase I Cultural Resource Assessment and Paleontological Records Review Avenue J and 70th Street West - TTM 062757, Michael Brandman Associates, July 24, 2007.

[2] Ibid.

America and a distinct change in prehistoric tool kits used to prepare plant foods. Small projectile points, choppers, flat scrapers, drills, and digging sticks are common. [3]

Western Hunting Culture or Lake Mohave Period (~9000 to 5000 B.C.)

It is believed that as large mammals became less available for hunting because of drier weather conditions, the West and Southwest showed an increased reliance on small game, such as squirrels and rabbits, as a primary protein source.[4] This period is marked by the absence of food grinding stone implements; however, stone grinding implements become increasingly more prevalent in the archaeological record at the end of this period.[5]

In the early part of this period, large lakes formed in much of the now-dry eastern California deserts. The large playa known as Rosamond Dry Lake formed at this time and was filled with water, which was due to the wetter climate; the lake lasted for several thousand years. Numerous flaked lithic sites have been found on the periphery of the Rosamond Dry Lake.

Pinto Period (~5000 to 2500 B.C.)

This period highlights a combination of both Desert Culture and Western Hunting Cultures, where an increase in grinding tools appears in the archaeological record. Such tools suggest an increased level of reliance on wild plants and small animals. The Pinto spear-point tool tradition is the hallmark of this period. A slight variation in tool type appears towards the end of this period, which is represented by Gypsum points and Elko points.

Protohistoric (~2500 B.C. to A.D. 1769)

In the southwestern Great Basin, this period is characterized as having cooler and wetter conditions than previously experienced, an environment similar to that of today. Sites appear in previously unoccupied areas of California. These changes reflect a phenomenon found throughout the western United States, where an increase in population and changes in tool kits and living arrangements resulted in more specialized uses of materials and landscapes.

Saratoga Springs Period (1500 to 800 B.C.)

This period is environmentally similar to earlier periods. In the southwest Great Basin, this period is characterized by the introduction of the bow and arrow, exploitation of the pine nut, and an increase in logistical complexity relative to landscape use.

[3] Ibid.

[4] Ibid.

[5] Ibid.

Indigenous Native American Presence

The native groups that lived within the Lancaster region and surrounding areas at the time of European contact are not clearly known. The Vanuyme, Kitanemuk, Serrano, and Alliklik may have used the general area for lithic resource procurement or water, as there were springs in the hills to the north. A discussion of the Kitanemuk, who led a lifestyle similar to the other groups named above, can be found in Appendix D-1. The Vanyume are known for the Victorville-Hesperia area, and the Alliklik were known around the Tejon Pass, but both groups were extinct as tribal entities by the time ethnologists began to write of the native peoples.[6]

Historic Review of the Lancaster Area

The modern city of Lancaster is located in the Antelope Valley, which is situated in the westernmost portion of the Mojave Desert. The history of the Antelope Valley is unlike the histories of other regions in California, for this area does not exhibit historic Mission settlements. Instead, the Valley served as a crossroads for differing indigenous groups, Franciscan padres, and various explorers and pioneers.[7]

Exploration of the Antelope Valley probably began in the early 1770s, and the first recorded entry of a European was Captain Pedro Fages, in 1772. Several famous expeditions occurred in the 1840s and 1850s, and Lt. Robert S. Williamson surveyed and described the valley in 1853. The Williamson expedition was affiliated with the U.S. War Department railway survey, and may be the first documented non-native travel within modern Lancaster limits. Though explored by these various groups over time, the area experienced very little non-native development until the introduction of the Railroad in the late 1800s.[8]

The history of the City of Lancaster is inexorably linked to the operation of the Southern Pacific Railroad (SPR). Workers constructing the SPR route from Bakersfield toward Los Angeles reached the site of modern Mojave on August 8, 1876. In the Lancaster area, the workers built a water well, a 1,400 foot siding, three section houses for employees, a garage for a hand car, and a tool house. However, Lancaster was not named at this time and did not become a full station depot until 1884.

Development in the Lancaster area began when prominent real estate developer Moses Langley Wicks purchased 60 sections of land from the SPR in 1884. Wicks had the area surveyed and recorded on February 16, 1884. Some resources report that Lancaster was then named by Wicks, after Lancaster, PA. This was supposedly done in order to honor the purported birthplace of Wicks;

[6] Ibid.

[7] Ibid.

[8] Ibid.

however, he was actually born in Aberdeen, Mississippi. This discrepancy has led to various theories on the origin of the name Lancaster. Presently, historians do not know exactly why the name was selected. [9]

Archival Research

On June 8, 2006, a letter was sent to the Native American Heritage Commission (NAHC) in an effort to determine whether any sacred sites are listed on their Sacred Lands File for this portion of the City of Lancaster. The results of the search were received on August 2, 2006 and indicated that the search failed to indicate the presence of Native American cultural resources in the immediate vicinity of the project site. To ensure that all Native American resources are adequately addressed, letters were sent to the four Native American individuals/organizations provided by the NAHC. A representative copy of the letter is included in Appendix D-2.

A records search was conducted on June 14, 2006 at the South Central Coastal Information Center (SCCIC), which is located in the Department of Anthropology at the California State University, Fullerton campus. The record search results indicated that there are seven recorded cultural resources within a 0.75-mile radius of the project site, one of which is located within the project site, CA-LAN-2886. There have been 11 previous studies conducted within a 0.75-mile radius of the project site, and one abutted the southeastern boundary of the project site.

On June 12, 2006, a paleontological record search was requested from the Natural History Museum of Los Angeles County (NHMLAC), Los Angeles. A response was received from Dr. Samuel A. McLeod of the Natural History Museum of Los Angeles County on June 16, 2006. The paleontological review indicated that the project site is situated on younger Quaternary Alluvium beneath soil. This alluvium is unlikely to contain significant vertebrate fossils, however, excavation into Quaternary Alluvium and older Quaternary sediments may well encounter significant vertebrate fossils. Therefore, excavation in the proposed project area may uncover fossil remains.

Previous Research and Records Review Results

On June 14, 2006, a records search was conducted at the SCCIC, which is located in the Department of Anthropology on the California State University, Fullerton campus. To identify any historic properties, the record search included current inventories of the National Register of Historic Places (NRHP), the California Register (CR), the California Historical Landmarks (CHL) list, and the California Points of Historical Interest (CPHI) list. In addition, the California State Historic Resources Inventory (HRI) for Los Angeles County and the City of Lancaster were reviewed to determine the existence of previously documented local historical resources. Two historic maps were

[9] Ibid.

examined to determine if any historic structures or resources were present in the vicinity of the project site. Review of the 1936 Del Sur, CA, 7.5-minute topographic quadrangle depicts the project site as undeveloped at that time. The 1958 Bouquet Reservoir, California, 15-minute topographic quadrangle exhibits a dirt track road traversing north/south through the project site.

The record search indicated that 11 studies have been conducted within a 0.75-mile radius of the project site, and one (LA6637) abuts the southeastern project site boundary. Table 5.5-1 provides the study number, date of study, and whether or not sites were recorded as a result of the study, and if they were, the type of site.

Table 5.5-1: Previously Undertaken Cultural Resource Surveys

Survey Number	Date	Sites Recorded	Prehistoric	Historic
LA2063	1990	None		
LA131	1988	One	LAN-1412, Surface scatter of lithic debitage	
LA6637 *Abuts southern boundary of project area	2003	None		
LA6634	2003	None		
LA2805	1993	Two	LAN-2099H, prehistoric temporary camp with a variety of artifacts	LAN-2091H, homestead dating to the 1925–1935 period
LA3074	1993	Two (same as above)	Phase II: LAN-2099H, prehistoric temporary camp with a variety of artifacts	Phase II: LAN-2091H, homestead dating to the 1925–1935 period
LA5320	2000	None		
LA6624	2003	None		
LA2059	1990	None		
LA4904	2000	None		
Source: EIR Appendix D - 1 Phase I Cultural Resource Assessment and Paleontological Records Review Avenue J and 70th Street West - TTM 062757, Michael Brandman Associates, July 24, 2007.				

In addition to the eleven surveys within a 0.75-mile radius of the project site, seven sites have been previously recorded within the same radius. One of the seven sites is located within the project area, CA-LAN-2886. Table 5.5-2 provides salient site information.

Table 5.5-2: Previously Recorded Cultural Resource Sites

Site Number	Location	Prehistoric Description	Historic Description	Will site be directly affected by Project?
CA-LAN-2886	Section 22 T7N R13W		Historic period refuse deposit measuring 25' E/W and 33' N/S; dating between 1925 and 1930	Yes
CA-LAN-2885	Section 22 T7N R13W		Historic period refuse deposit measuring 9' E/W and 4' N/S; dating between 1944 and 1954	No
P19-100419	Section 22 T7N R13W	Isolate: single, flaked lithic artifact, lavender rhyolite		No
CA-LAN-2887	Section 22 T7N R13W		Historic period agricultural site measuring 100' E/W and 210' N/S. Contains refuse from 1885–1910 overlain with refuse from 1930–1950.	No
CA-LAN-2888	Section 22 T7N R13W		Historic period refuse deposit measuring 350' E/W and 150' N/S; dating between 1930 and 1950	No
CA-LAN-2091H	Section 22 T7N R13W		Historic period standing home dating to 1925–1935 period	No
CA-LAN-2099H	Section 22 T7N R13W	Prehistoric temporary camp; hundreds of flaked lithics. Subsequent Phase II testing revealed no subsurface components.		No

Source: EIR Appendix D-1 Phase I Cultural Resource Assessment and Paleontological Records Review Avenue J and 70th Street West - TTM 062757, Michael Brandman Associates, July 24, 2007.

Tribal Consultation Guidelines

The State of California Tribal Consultation Guidelines (heretofore known as SB18) went into effect March 1, 2005. California became the first state in the nation to require consultations with Native American groups as a part of the environmental compliance package. SB18 consultations mirror consultations performed by federal archaeologists as part of the Section 106 process, so most tribes have some knowledge of what is involved. However, local governments in California must take the lead in fulfilling this requirement.

Lead Agency Requirements

The intent of SB18 is to allow tribes an opportunity to participate in local land use decisions at an early planning stage for the purpose of protecting or mitigating impacts to cultural places. Tribes have the right to ask for consultation when presented with plans for development. The consultations take place when certain government planning decisions are undertaken: any adoption of and/or amendment to any General Plans *and* any adoption of and/or amendment of any Specific Plans. Legally, lead agencies must consult with tribes under the following two circumstances:

1) Local governments must consult with tribes that have requested consultation in accordance with Government Code 65352.3.

2) Local governments must consult with tribes before designating open space if the affected land contains a cultural place and if the affected tribe has requested public notice under Government Code 65092.

Native American Heritage Commission

The NAHC is an integral part of the SB18 compliance process. The NAHC maintains the list of tribes found in local areas and a list of cultural places (also known as 'sacred sites') that tribes have identified. There are approximately 130 tribes in California, but not all on the SB18 list are recognized by the federal government as "official" tribes. Unofficial tribes and their sacred sites get the same level of concern and protection. Tribal boundaries overlap as there are no static borders and the tribes occasionally vie among themselves for "ownership" rights to sacred sites. Upon request from the lead agency, the NAHC will send a lead agency the list of tribes within their jurisdiction with whom they may have to consult.

If the NAHC provides such a list, the local government must contact the tribes and give them notice of opportunity to consult. Tribes must respond to the notice, in whatever form, within 90 days. Consultation begins if requested by tribe. If no requests are made for consultation, the process is deemed complete.

Therefore, the first step in the process is for the City of Lancaster to submit a request to the NAHC for a list of tribes in the local area of the project site. Such correspondence was sent March 22, 2007. A response was received April 2, 2007 listing individuals and agencies that might have an interest. Letters were sent to these individuals and agencies, and no response was received.

Cultural Resources Fieldwork

On June 20, 2006, a pedestrian survey of the project site was conducted. The field survey included all visible ground surface and was conducted utilizing transects of 10 meters or less, depending on

vegetation and/or other obstructions. The typical ground surface consisted of sandy soil, Joshua trees, and small desert scrub vegetation. The project site is flat with no distinguishing resources or features. The ground surface visibility of the project site was generally good to poor, with some areas covered with clumps of desert scrub and high grassy vegetation that obscured the ground surface. During the course of the pedestrian survey, two prehistoric (C-1-2 and C-1-3), and two historic resource sites (C-1-1 and C-1-4) were observed. Details of the three sites discovered during the MBA survey and the relocated site, CA-LAN-2886, designated C-1-1 for purposes of the MBA survey, follows.

Site C-1-1 (CA-LAN-2886)

This refuse deposit, field designation C-1-1, consisted of approximately 50 tin cans; aqua, amber, and lavender bottle glass fragments; and white ware ceramic shards with no maker's marks (Appendix D, Photograph 2). The deposit measured approximately 12 meters east/west and 12 meters north/south. This is undoubtedly the previously recorded site CA-LAN-2886, which was recorded in 2001 as a "historic period refuse deposit, 1925-1930 period." However, many of the artifacts noted in 2001, were not observed during this survey, specifically many of the embossed bottle bases. Unlike the ceramics found during the 2001 survey, none of the ceramic shards exhibited maker's marks, which could be used for dating purposes. However, one datable attribute that was found during the survey was lavender or "solarized" glass, which had a manufacture range from about 1880 to the start of World War I, 1915.

Site C-1-2

This resource area, field designation C-1-2, consisted of 10 lithic flakes made up of various material including chert, quartzite, and rhyolite. The lithic types consisted of four secondary cortical, three early interior, and three shatter/non-diagnostic. These artifacts were found in an area measuring approximately 15 meters north/south and 10 meters east/west. No additional artifacts, features, or buried resources were observed in this area (Appendix D, Photograph 3).

Site C-1-3

This resource site, field designation C-1-3, also consisted of lithic material, including two quartzite flakes, one black chert flake, and one rhyolite flake. As with C-1-2, no additional artifacts, features, or buried resources were observed at this location (Appendix D, Photograph 4).

Site C-1-4

This resource site, field designation C-1-4, a refuse deposit, consisted of approximately 30–35 tin cans, clear and amber bottle glass, barbwire, clear glass ketchup bottle, white ceramic shards, and various pieces of rusted metal. The site measured approximately 10 meters north/south and 10 meters east/west (Appendix D, Photograph 5).

City of Lancaster General Plan

The following objective related to cultural resources is contained in the General Plan:

Objective 11.1 Identify and preserve and /or restore those features of cultural, historical, or architectural significance.

An analysis of this project's consistency with this objective is contained in Section 5.9, Land Use and Planning.

5.5.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the proposed project would have a significant impact if it would:

- Cause a substantial adverse change on a historical or archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- Disturb any human remains, including those interred outside of formal cemeteries.

5.5.4 Project Impacts

Cultural Resources

The cultural resource study determined that cultural resources more than 45 years old are located within the project site, and that such resources could be impacted by proposed project. The record search indicated that seven sites have been recorded within a 0.75-mile radius and one of those sites (CA-LAN-2886) is within the project site. The pedestrian survey resulted in discovery of two prehistoric (C-1-2 and C-1-3) and two historic (C-1-1 and C-1-4) resource sites. As mentioned above, the previously recorded site, CA-LAN-2886, was relocated and designated as MBA's C-1-1. Therefore, the total number of sites within the proposed project is four; three new sites (C-1-2, C-1-3, and C-1-4) and the previously recorded CA-LAN-2886 (C-1-1).

Since a large lithic scatter was recorded southeast of the project site and two lithic scatters were discovered during the pedestrian survey, there is a possibility that intact prehistoric resources may occur within the project site. Because of the likelihood of potential buried historic and prehistoric remains, impacts to archeological and prehistoric resources from development of the proposed project are considered potentially significant. A letter was received from the Native American Heritage Commission dated March 29, 2007 (included in Appendix D-1) and there is a possibility that a Native

American tribe will request consultation to preserve artifacts on the site. Mitigation is provided to address these potential impacts.

Paleontological Resources

The project site is situated on younger Quaternary Alluvium beneath soil. Typically, this alluvium is unlikely to contain significant vertebrate fossils, at least in the uppermost layers. However, excavation five feet or more into the Quaternary Alluvium, and the older Quaternary sediments may encounter significant vertebrate fossils. This is a potentially significant impact.

5.5.5 Cumulative Impacts

Implementation of the proposed project and related projects would result in the impact of known cultural resources, and the potential impact for buried paleontological resources. As a result, implementation of the proposed project would contribute to significant cumulative impacts to prehistoric and historic resources.

5.5.6 Mitigation Measures

The following mitigation measures are required to reduce impacts on archaeological resources:

CR-1 Following project approval and at least four weeks before construction-related grading is scheduled by the grading contractor, sites CA-LAN-2886 (C-1-1), C-1-2, C-1-3 and C-1-4 shall be Phase II tested for significance by a qualified archaeologist. If the project archaeologist determines that one or all of the four sites are not significant resources under CEQA guidelines, additional mitigation need not be undertaken at these site locations before project-related earthmoving begins. If the project archaeologist determines that one or more of these sites is a significant resource under CEQA guidelines, the significant resource(s) shall be Phase III excavated before any project-related earthmoving is scheduled within the site, including within 100 feet of the perimeter of the site(s) boundary. Fieldwork associated with the Phase II test and/or any Phase III excavation must be completed before project-related earthmoving begins.

CR-2 There is always the possibility that ground-disturbing activities during construction may uncover previously unknown, buried cultural resources. In the event that cultural resources are discovered during construction, operations shall stop in the immediate vicinity of the find, and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The archaeologist shall make recommendations to the lead agency concerning appropriate measures that will be implemented to protect the resources, including but not limited to excavation and evaluation of the finds in accordance with § 15064.5 of the CEQA Guidelines. Cultural resources could consist of,

but are not limited to, stone, bone, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria.

If the resources are determined to be unique historic resources as defined under § 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the archaeologist and recommended to the lead agency. Appropriate mitigation measures for significant resources could include avoidance or capping; incorporation of the site in green space, parks, or open space; or data recovery excavations.

CR-3 Although considered unlikely, there is always the possibility that ground-disturbing activities may uncover previously unknown human remains. Should this occur, Section (§) 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed.

In the event of an accidental discovery or recognition of any human remains, Public Resource Code (PRC) § 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Los Angeles County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC § 5097.98, or

2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:

- The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission;

- The descendent identified fails to make a recommendation; or
- The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

CR-4 Any recovered archaeological resources shall be identified, sites recorded and mapped, and artifacts catalogued as required by standard archaeological practices. Examination by an archaeological specialist should be included where necessary, dependent upon the artifacts, features, or sites that are encountered. Specialists will identify, date, and/or determine significance potential.

CR-5 A final report of findings will be prepared by the City-approved archaeologist for submission to the City and project applicant. The report will describe the history of the project area, summarize field and laboratory methods used, if applicable, and include any testing or special analysis information conducted to support the resultant findings.

Paleontological Resources

CR-6 Prior to the issuance of a grading permit for excavation five (5) or more feet below the original ground surface, the project applicant shall retain a City-approved paleontologist. The paleontologist shall review the approved development and construction plans. The City-approved paleontologist shall monitor all excavation activities in areas of the project underlain by previously undisturbed sediments. Earthmoving in areas of the site where previously undisturbed sediments will be buried but not disturbed will not be monitored.

CR-7 Monitoring shall be conducted on a full-time basis in areas of the project underlain by sensitive rock units associated with older alluvium being encountered by earthmoving at depths of five (5) feet or greater.

CR-8 Should fossils be found within an area being cleared or graded, earth-disturbing activities shall be diverted elsewhere until the monitor has completed salvage. If construction personnel make the discovery, the grading contractor should immediately divert construction and notify the monitor of the find. If too few fossil remains are found after 50 percent of earthmoving has been completed, monitoring can be reduced or discontinued in those areas at the project paleontologist's direction.

CR-9 If paleontological resources are detected, all recovered fossils shall be prepared, identified, and curated for documentation in the summary report and transferred to an appropriate depository.

CR-10 A final report of findings shall be prepared by the City-approved paleontologist for submission to the City, project applicant, and the Los Angeles County Museum. All

collected specimens and the final report shall be provided to the Los Angeles County Museum.

5.5.7 Level of Significance After Mitigation

Implementation of the above mitigation measures would ensure that impacts on the existing and potential archeological and paleontological resources would be reduced to a less than significant level.

5.6 GEOLOGY AND SOILS

5.6.1 Introduction

The following discussion is based on a Limited Geotechnical Engineering Investigation (Geotechnical Feasibility Study) Proposed G-C EIR Development 70th Street West and Avenue J, Lancaster, California, prepared by Krazan & Associates, Inc., and dated May 19, 2006 (see Appendix E).

5.6.2 Existing Conditions

Regional Geology

The region surrounding the project site is within the southwestern portion of the Mojave Desert Geomorphic Providence. Antelope Valley is bounded by the Tehachapi Mountains of the Sierra Nevada Providence to the northwest and the San Gabriel of the Travers Ranges to the south. A major portion of the Mojave Desert Providence is underlain by Mesozoic granitic rocks. Quaternary alluvium covers a majority of the Antelope Valley floor.

Local Geology

Sub-surface soil conditions were explored by drilling 16 borings using a truck mounted drill rig to depths ranging from approximately 10 to 50 feet below existing grade. Laboratory test were performed on selected soil samples to evaluate their physical and engineering properties. The subsurface conditions on and near the project site are typical of those found in the geologic region. Soils consist of approximately 1 to 3 feet of disturbed/loose surficial soils underlain by alluvium deposits. No significant fills sites were uncovered. Below the near-surface soils, medium-stiff to hard silty clay, clayey silt, sand silt, and medium-dense to silty sand and sand were encountered.

Faulting and Seismicity

Both the Tehachapi and San Gabriel mountain ranges are geologically young mountain ranges and active and potentially active fault zones. The project site is located 5.2 miles northeast of the San Andreas Fault Zone. Although the San Andreas Fault is classified by the State of California as an active fault, there has not been any record of recent fault activity in the general area.

The San Andreas Fault extends over 750 miles from Cape Mendocino in northern California to the Salton Sea region in southern California. It is considered the “master fault” that controls seismic activity in southern California. Its activity is known from historic earthquakes and from many fault studies that have shown that the San Andreas Fault offsets or displaces recently deposited sediments.

The San Andreas Fault is divided into segments in order to evaluate future earthquake potential. The segmentation is based on physical characteristics along the fault, particularly discontinuities that may affect the rupture length. While this methodology is valuable in predicting earthquakes, historical records and prehistoric earthquakes show it is possible for more than one segment to rupture during a large quake or for ruptures to overlap into adjacent segments. No area of the City of Lancaster is included in an Alquist-Priolo Zone.[1] The project site is located in Seismic Zone 4, as is most of southern California. Seismic Zones are established by Federal Emergency Management Agency and range from numbers 1 to 4, based on the number and magnitude of past earthquakes. Seismic Zone 4 is the highest zone, indicating that it has experienced the highest number and the highest magnitude of past earthquakes.

Liquefaction

Liquefaction occurs when loose, cohesionless, water-saturated soils are subjected to strong seismic ground motion of significant duration. These soils essentially behave like liquids, losing all bearing strength. Structures built on these soils tilt or sink when soils liquefy. Liquefaction more often occurs in earthquake-prone areas underlain by young alluvium where the ground water table is less than 50 feet below the ground surface.

The soils beneath the project site consist of medium- to very stiff clayey silt, silty clay, sand silt, and medium-dense to very dense silty sand and sand. Historic groundwater is considered to be greater than 50 feet. According to the California Geological Survey, Seismic Hazards Zonation Program maps, the project site is not subject to liquefaction.[2]

Groundwater

Groundwater in the project area typically occurs in excess of 50 feet below the ground surface. Because of the nature of the alluvial fan deposits, it is possible for localized areas to have shallow purched water. However, springs, seeps, and other indicators of shallow, perched groundwater were not observed during the geologic investigations on the project site. No groundwater was discovered during the borings that were conducted on the site.

Soils

The soils on the site consist of approximately 1 to 3 feet of disturbed/loose surficial soils underlain by alluvium deposits. No significant fill soils were found. Below the disturbed/loose near-surface soils,

[1] California Geological Survey, Table 4 Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of May 1, 1999, http://www.consrv.ca.gov/cgs/rghm/ap/affected.htm, accessed August 24, 2006.

[2] Geological Survey, Seismic Hazards Zonation Program, http://www.conservation.ca.gov/cgs/shzp/, accessed October 11, 2007.

medium- stiff to hard silty clay, clayey silt, sandy silt, and medium-dense to very dense silty sand and sand were encountered. Laboratory tests indicate that the native soils are moderately strong and slightly compressible. Laboratory tests also indicate the soil on the site has very severe sulfate and chloride concentrations and, therefore, may have corrosive properties.

City of Lancaster General Plan

The following objective related to Geology and Soils is contained in the General Plan.

Objective 4.1 Minimize the potential for loss of life, physical injury, property damage, and social disruption resulting from seismic ground shaking and other geological events.

An analysis of the project's consistency with this objective is contained in Section 5.9, Land Use and Planning.

5.6.3 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed project would result in a significant impact to geology and soils if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on expansive soil.

5.6.4 Project Impacts

Seismic Ground Shaking

The strong ground motion or shaking that occurs during an earthquake is the primary cause of earthquake damage. The acceleration of the ground shaking at any one point depends primarily on the earthquake magnitude, distance from the earthquake source, and the local geologic conditions. The most severe shaking would be caused by an earthquake on the San Andreas Fault. This fault has the potential of generating peak horizontal ground accelerations at the site greater than about 0.5g. Given the potentially high accelerations that could occur at this site, the impact of strong ground motion could be considered a significant impact. However, the California Building Codes that would be applied in the construction of this project include standards for construction that would reduce the risk to less than significant levels.

Seismic-Related Ground Failure

Liquefaction

The geotechnical investigation determined that the potential for liquefaction at the project site would be unlikely since the sediments underlying the area are coarse grained and ground water is greater than 50 feet below the surface. Loose surficial soils would be removed and replaced with compacted fill as part of normal grading activities, further reducing the potential for liquefaction to occur. The hazard of liquefaction is considered to be less than significant.

Ground Lurching

Certain soils have been observed to move in a wave-like manner in response to intense seismic ground shaking. At present, the potential for ground lurching to occur can be predicted only generally. Under strong seismic ground motion conditions, lurching can be expected within loose, cohesionless soils, or in clay-rich soils with high moisture content. Colluvial soils and loose, cohesionless soils are not present at the surface of the site; therefore, ground lurching due to seismic shaking would be less than significant.

Seismically-Induced Settlement

Strong ground shaking can cause settlement by allowing greater compaction of the soil particles. The high-density soils on the site, therefore, are not susceptible to settlement, and impacts would be less than significant.

Landslides

There are no existing landslides on or near the project site that would threaten the stability of the proposed development. In addition, there are no natural slopes nearby that pose a hazard to the project. Therefore, the existing topography on the project site would not result in landslide impacts.

Soil Erosion and Loss of Topsoil

The project site is relatively flat with a gentle slope trending south to north in and not subject to high erosion potential that would result in down cutting, sheet wash, slumping, or bank failures from heavy rain events. There was a drainage swale along the eastern border of the project site that conveyed offsite water from 65th Street West and areas south of the project site. However, this channel has been replaced with a storm drain. Project development would include grading, infilling, and compacting of soil. The site would be developed with streets and storm drain facilities. A large drainage channel would be provided along the north boundary of the site adjacent to Avenue J. Appropriate National Pollution Discharge Permits (NPDES), which regulate storm water runoff to reduce pollutants into waterways, would be obtained. In addition, refer to Section 5.8 (Hydrology and Water Quality) of this document for a discussion related to project site drainage, which would include erosion control measures.

Rains occurring during construction could lead to erosion and washing of soil onto adjacent roadways. However, prior to the issuance of a grading or construction permit, the City of Lancaster requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) that conforms to the State Water Resources Control Board NPDES Permit No. CAS000002 (Waste Discharge Requirement Order No. 99-08-DWQ). Generally, the SWPPP specifies Best Management Practices (BMPs) that would prevent all construction-related stormwater and all products of erosion from moving offsite into receiving waters. BMPs would be included in the grading permit received from the City of Lancaster from the list provided by the EPA[3]. Therefore, impacts would be less than significant.

During construction and grading operations, there is a potential for wind-generated erosion to occur. Control of fugitive dust and wind-generated erosion is regulated by Antelope Valley Air Quality Management District Rule 403, which requires positive control of fugitive dust through watering and other means. This requirement is also enforced through the City of Lancaster grading permit process, and, therefore, impacts of erosion due to wind are less than significant.

The proposed project would result in the displacement of topsoil due to the conversion of a majority of the project site to urban uses as a result of site grading. However, because the site is not used for agriculture and the topsoil would provide for lawns and other landscaping, impacts are less than significant.

Geologic Stability

Collapsible Soils

The upper few feet of the native soil onsite are potentially collapsible. Field and laboratory tests indicate that near surface soils (within 1 to 3 feet of the surface) are moderately strong and slightly compressible. The technical details of this finding regarding penetration resistance are contained in the full report, which is included in Appendix E. However, the surface soils would be removed and replaced as part of the normal grading process. Underlying soils are considered suitable for foundations. Impacts are considered less than significant.

Expansive Soils

Expansion Index (EI) testing was performed on representative soil samples obtained from borings. The test results indicate that the clayey soils have high expansion potential. The estimated swell pressure of the clayey material may cause movement affecting slabs and brittle exterior finishes. Impacts due to expansive soil would be considered significant.

[3] U.S. Environmental Protection Agency, Construction Site Stormwater Runoff Control, http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=4, accessed April 2007.

Corrosive Soils

As part of the Geotechnical Feasibility Study, soil corrosion tests were performed, and soils were found to have very severe concentrations of sulfate and chloride. Excessive sulfate or chloride in either the soil or native water may result in an adverse reaction between the cement in concrete and the soil. Onsite soils may have a very high potential for metal loss from electrochemical corrosion process. Impacts to foundations and underground utilities containing metal would be significant.

5.6.5 Cumulative Impacts

Geologic and soil impacts are site-specific; and there is little, if any, cumulative relationship between the development of the proposed project and development within the greater cumulative project area. For instance, development at the project site would not result in the altering of geologic events or soil features/characteristics, such as ground shaking, seismic intensity, or soil expansion, to and residential development at the project site would not affect the level of intensity at which a seismic event on an adjacent site is experienced. However, future development within the project site and the project area may expose future populations to seismic hazards; yet, seismic safety standards for new construction and ongoing provisions for emergency preparedness and response are anticipated to reduce such a risk to an acceptable level, on a project-by-project basis. Therefore, the project, in conjunction with other projects or conditions, would not result in cumulative impacts on geology and soils.

5.6.6 Mitigation Measures

Potentially significant impacts were identified related to expansive and corrosive soils. Mitigation is provided for those impacts as follows.

G-1 To minimize soil movement due to expansive soils, the upper 24 inches of soil within the building slab and exterior flatworks areas shall be replaced with “non-expansive” soils (with EI<20). Alternately, a combination of reinforcement of the slab and presoaking of the subgrade can be used to mitigate the expansion potential. Final recommendations shall be provided in accordance with the Expansion Index for each individual lot after site grading.

G-2 To eliminate impacts relating to soil corrosivity, prior to the issuance of building permits, a qualified corrosion engineer shall prepare a report for review and approval by the City of Lancaster setting forth recommendations to protect structures and facilities from the effects of soil corrosivity.

5.6.7 Level of Significance After Mitigation

All geologic and soils impacts would be less than significant after implementation of mitigation measures.

5.7 HAZARDS AND HAZARDOUS MATERIALS

5.7.1 Introduction

Michael Brandman Associates (MBA) prepared a Phase I Environmental Site Assessment (ESA) for the project site in August 30, 2006, which included a site reconnaissance and records review. The findings of the ESA are summarized herein, and a copy of the complete report is included in Appendix F of this Draft EIR. Information in this section is based upon the ESA and correspondence received regarding the Notice of Preparation.

5.7.2 Existing Conditions

Hazardous Materials Regulations

Since hazardous materials and wastes are increasingly used and disposed of in urban settings, and since they represent a serious potential threat to human health and safety, numerous laws and regulations have been developed to control their use, storage, disposal, and transport.

Statewide, the California Environmental Protection Agency (California EPA) and the Department of Toxic Substances Control (DTSC) are responsible for the regulation and control of hazardous materials and wastes. Specifically, these organizations regulate the generation, handling, storage, disposal, and transportation of hazardous waste, as well as oversee the remediation of contaminated sites. In addition to the above, the California EPA and the DTSC seek to reduce the amount of hazardous waste produced in California. While the scope of DTSC activities primarily focuses upon commercial and industrial operations, DTSC also oversees waste evaluation programs and assists in waste determinations to identify what substances, in what concentrations, are harmful. The California Hazardous Substances Control Law (California Health & Safety Code, Division 20, Chapter 6.5) establishes regulations and incentives, which ensure that the generators of hazardous waste employ technology and management practices for the safe handling, treatment, recycling, and destruction of their hazardous wastes prior to disposal.

Locally, hazardous materials emergency response in the City of Lancaster is provided by the Los Angeles County Fire Department on a contract basis. In 1991, the Los Angeles County Health Department transferred its Health Hazardous Materials Division (HHMD) to the Fire Department. Working together, the Department can provide mitigation efforts from responding HazMat squads, as well as timely remediation efforts directed by HHMD officers. In 1997, HHMD became a Certified Unified Program Agency (CUPA) to administer the following programs within Los Angeles County: the Hazardous Waste Generator Program, the Hazardous Materials Release Response Plans and Inventory Program, the California Accidental Release Prevention Program (Cal-ARP), the Aboveground Storage Tank Program, and the Underground Storage Tank Program. In 2003, the

Hazardous Materials Unit merged into the Los Angeles Fire Department's Homeland Security Section to further enhance and integrate operations. Currently, Hazardous Materials Squad 130 is positioned to serve the City of Lancaster; a new version of the Metropolitan Incident Response Vehicle (MIRV) will be placed into frontline service and will further expand the Department's response capability.

The mission of the HHMD is to protect the public health and the environment throughout Los Angeles County from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes, through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight.

Physical Setting

The project site is vacant and undeveloped. Land uses surrounding the site consist of residential subdivisions to the east and southeast and undeveloped land to the north, south, and west. The site topography is relatively flat with a low level of disturbance. The vegetation onsite is comprised of non-native grassland and rabbit bush scrub.

Site Reconnaissance

A site reconnaissance, which included a visual observation of surface conditions at the project site and its adjoining properties, was performed on August 8, 2006. The objective of the site reconnaissance was to obtain information indicating the likelihood of recognized environmental concerns (RECs) occurring onsite and hazards and/or hazardous materials (including petroleum) in connection with the property. The reconnaissance searched for the presence of polychlorinated biphenyls (PCBs) and/or asbestos-containing materials (ACMs); indications of surface or subsurface hydrocarbon or pesticide contamination; the presence of onsite groundwater wells, pits or sumps; wastewater discharge practices; and surface water drainage patterns.

Observations

In general, during the site reconnaissance, no petroleum by-products or soil staining caused by petroleum by-products were observed on the project site, agricultural chemicals were not observed on the project site, and no PCB-containing materials were observed on the project site. Easily identified potential concerns are listed on the checklist in Table 5.7-1. Site photographs are included in Appendix F, Phase I ESA.

Table 5.7-1: Summary of Site Reconnaissance

Feature	Observed	Not Observed
Existing structures: were any power line towers onsite?		●
Evidence of past uses (foundations, debris, roads)		●
Hazardous substances and/or petroleum products (including containers)		●
Aboveground storage tanks (ASTs) or evidence of ASTs		●
Underground storage tanks (USTs) or evidence of USTs		●
Strong, pungent, or noxious odors		●
Pools of liquid likely to be hazardous materials or petroleum products		●
Drums		●
Unidentified substance containers		●
PCB-containing equipment		●
Subsurface hydraulic equipment		●
Heating/ventilation/air conditioning (HVAC)		●
Stains or corrosion on floors, walls, or ceilings		●
Floor drains and sumps		●
Pits, ponds, or lagoons		●
Stained soil and/or pavement		●
Stressed vegetation		●
Waste or wastewater discharges to surface or surface waters on subject site (including stormwater)		●
Wells (irrigation, domestic, dry, injection, abandoned, monitoring wells)		●
Septic systems		●
Source: MBA, August 2006.		

Adjacent Properties

The existing land uses on adjacent properties were also identified during the site reconnaissance. The following observations are a summary of adjacent streets and property usage that were noted in the Phase 1 ESA:

- North: Avenue J runs east-west along the northern boundary of the project site. Power transmission lines run parallel to Avenue J. At the time of the site visit, there was an occupied single-dwelling home adjacent to the north border of the property, and the undeveloped land was being used as a storage yard.

- East: 65th Street West runs north-south along the eastern boundary of the project site. The property to the east is occupied by a residential subdivision. The property south of this development (southeast of the project) is also occupied by a residential subdivision.
- South: There is no roadway to the south of the project site. The property to the south is undeveloped.
- West: 70th Street West runs north-south along the western boundary of the project site. The property to the west is undeveloped.

Regulatory Records Review

CEQA requires that the lead agency consult the lists of hazardous waste sites compiled by various State agencies, pursuant to Government Code Section 65962.5 (California Public Resources Code Section 21092.6). Databases from federal and State regulatory agencies were reviewed to identify any sites known to use, generate, store, treat and/or dispose of hazardous materials and chemicals or release incidents of such materials, which may have impacted the project site. The available regulatory databases, provided by Environmental Data Resources Inc. (EDR) and dated August 15, 2006, were reviewed.

As indicated in the ESA, no mapped sites were found in EDR's search of available, 'reasonably ascertainable,' government records either on the project site or within the search radius around the site. In addition, no EDR unmapped, or orphan, sites were determined to be located on or adjacent to the site.

Historic Topographic Maps Review

EDR's Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s. Historic topographic maps from the United States Geological Survey (USGS) show very little regional development in 1917, some regional development in 1958, and very little change in 1974; the target property is not identifiable in the maps from 1987 and 1995.

Title Information/Environmental Liens Review

Title documents were provided by Richland Communities (Mike Byer) and Pacific Land Company for review and checks for environmental liens were made. No issues are outstanding.

Historical Aerial Photographs

Historic aerial photographs provided by EDR were reviewed to determine previous facilities, and land uses and land use changes over time. A summary of these photographs follows.

- The 1953 aerial photograph shows the project site as fallow, undeveloped land with no structures identified. Photo source: Pacific Air.
- The 1968 aerial photograph is similar to the 1953 photograph, with no changes observed. Photo source: Teledyne.
- The 1989 aerial photograph is similar to the 1968 photograph, with no changes observed. Photo source: USGS.
- The 1994 aerial photograph is similar to the 1989 photograph, with no changes observed. Photo source: USGS.
- The 2002 aerial photograph is similar to the 1989 photograph, with no changes observed. Photo source: USGS.

Interviews

The current property owner, Mr. Byer, with Richland Communities in a joint venture with Pacific Land Company, was interviewed to determine whether there are any known conditions related to hazardous materials in, on, or around the project site. He also was questioned about whether there are notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous materials. Relevant information is summarized below.

Mr. Byer, interviewed on August 28, 2006, indicated that to the best of his knowledge there are no known conditions related to hazardous materials on or near the site, and there have been no notices from governmental entities and no known violations of environmental laws on this property. He also indicated that no previous Phase I Environmental Site Assessments have been performed on this property.

City of Lancaster General Plan

The City's General Plan contains the following objectives related to Hazards and Hazardous Materials:

Objective 4.5 Protect life and property from the potential detrimental effects (short and long term) of the transportation, storage, treatment, and disposal of hazardous materials and wastes within the City of Lancaster.

Objective 4.7 Ensure that development occurs in a manner that minimizes the risk of structural and wildland fire.

An analysis of the project's consistency with these objective is contained in Section 5.9, Land Use and Planning.

5.7.3 Thresholds of Significance

Based upon Appendix G of the CEQA Guidelines, the proposed project would result in a significant hazards and hazardous materials impact if:

- The project site is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and as a result, would create a significant hazard to the public or environment;
- Implementation would impair or physically interfere with an adopted emergency response plan or an emergency evacuation plan; and
- The project site would expose people or structures to significant risk of loss, injury, or death involving wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

5.7.4 Project Impacts

Short-Term Impacts

Construction Activities

Grading and construction activities may involve the limited transport, storage, usage, or disposal of hazardous materials, such as the fueling/servicing of construction equipment. However, such activity is short-term or one-time in nature and is subject to federal, State, and local health and safety requirements. Additionally, during the construction phase the proposed project would likely generate hazardous waste such as paint; thus, the proposed project would be subject to the Conditionally Exempt Small Quantity Generator Program. Although run by the City of Los Angeles, the program is available to any development within the County of Los Angeles. The program would require that contractors employ a licensed hazardous waste hauler to manifest and transport such waste. This requirement would ensure that no significant impacts from short-term land uses would occur.

Long-Term Impacts

Hazards and Hazardous Materials

Based on the interview and review of historic aerial photography, the project site appears to have been undeveloped at least since the 1950s. No evidence has been found that suggests improper use, storage, or application of agricultural chemicals at the site; therefore, agricultural chemicals are not likely to be considered a Recognized Environmental Condition (REC). The Phase I ESA revealed no evidence of RECs in connection with the project site. Additionally, the project site is not listed on a

list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. There are no underground storage tank records or industrial waste files maintained at the County of Public Works Department for the project site. However, while there is not direct evidence of past use of the site for agriculture, the history of the area suggests that alfalfa and other crops were grown in this area, and there is potential for pesticide residue in the soil. This is potentially significant, and mitigation is provided.

Based on the site reconnaissance and a review of physiographic, historical, and regulatory information, there is no evidence of recognized environmental concerns in connection with the project site, including past, present, or potential releases of hazardous substances at the site, or other potential or existing environmental conditions on site and/or the surrounding properties. However, there is the potential for previously unknown hazardous materials to be encountered during the project development activities from historical use of the project site. Such contamination, if found, is subject to existing federal, State, and local policies and procedures, requiring the delineation and remediation of sites containing hazardous substances to the satisfaction of the designated local enforcement agency and in accordance with the State of California Hazardous Substances Control Law. Accordingly, any currently unidentified groundwater wells discovered during development/ redevelopment of the site should be properly destroyed or removed in accordance with State and local guidelines. Moreover, it is unlikely that any such contamination, if it occurs, would extend beyond the capacities of typical remediation measures; therefore, impacts are considered less than significant.

Household Hazardous Wastes

Long-term activities on the developed project site would result in an increase in the use and storage of common Household Hazardous Wastes (HHWs), such as household cleaning and janitorial products, herbicides, insecticides, solvents, and fuel. However, Waste Management operates a household hazardous waste collection and reuse facility at the Antelope Valley Public Landfill, located at 1200 West City Ranch Road in the City of Palmdale, which would allow future residents of the proposed project to deliver and properly dispose of their household hazardous wastes. This collection point is called the Antelope Valley Environmental Collection Center and is a collaborative effort between Los Angeles County, Palmdale, Lancaster, and Waste Management. Therefore, impacts related to HHWs are considered less than significant.

Emergency Access and Evacuation Routes

The proposed project would introduce a new onsite population that would be subject to emergency evacuation or response in the event of a major disaster. The project site is located along Avenue J, a designated evacuation route. Traffic associated with the proposed development could impact evacuation routes in the vicinity of the project site. These potential traffic impacts were analyzed in a traffic study prepared for the proposed development and are evaluated in Section 5.14, Transportation

and Traffic. However, the proposed project would not result in the impairment or interference with the implementation of the City of Lancaster's emergency evacuation and support services procedures in the event of a natural disaster or war emergency. The street network provides adequate emergency vehicular access to and through the project site. Project impacts regarding an adopted emergency response plan or emergency evacuation plan would be less than significant.

Wildland Fires

The project site is located in the rural portion of the City of Lancaster and may potentially be subject to localized brush fires, since the area to the west and south of the site is vacant and the property to the north is only minimally developed (i.e., a single-family residence). The vegetation is light and not subject to large conflagrations. Perimeter walls and landscaping included in the project would reduce the danger from wildfires. Firefighting services for the City of Lancaster are provided by the Los Angeles County Fire Department on a contract basis. Currently, there are seven fire stations within the City boundary. The nearest fire station to the project site is Los Angeles County Fire Station No. 130, located approximately 3 miles east at 44558 40th Street West.

The Los Angeles County Fire Department has not identified a specific fire hazard area in the vicinity of the project site, and the California Department of Forestry and Fire Protection has not designated the vicinity of the project site a Wildland Fire Area or a Very High Fire Hazard Severity Zone (AB 337). Therefore, wildland fires would have a less than significant impact on the proposed project.

5.7.5 Cumulative Impacts

Residential development such as that which is proposed is not likely to result in activities that would introduce hazardous materials. In general, the types of uses allowed with the proposed development do not include those that would result in the generation of substantial quantities of hazardous wastes or toxic materials. Compliance with federal, State, and local regulations concerning the handling, transport, and disposal of hazardous materials and wastes would reduce impacts to less than significant levels. As related projects in the project vicinity would be required to mitigate their own hazardous materials impacts, no significant cumulative impacts related to hazardous materials are anticipated.

The proposed projects would cumulatively increase the use of common HHWs in the area as development intensifies within the greater project area. The use of HHWs is regulated federally, statewide, and locally, and Los Angeles County operates household hazardous waste collection and reuse facilities, which allows residents to deliver and dispose of their household hazardous wastes in a manner that will not result in cumulative hazardous materials impacts. It is recognized that proper

disposal is voluntary, and there is the possibility that some HHWs would be disposed of in an improper manner. However, the use of HHWs by a typical homeowner is not at such levels that the occasional improper disposal will result in a release that would pose a threat, and, thus, it would not constitute a significant impact.

5.7.6 Mitigation Measures

Potential impacts were identified relating to the presence of agricultural pesticides remaining in the soil. To determine the presence of pesticides in the soil and the levels to which they might occur in relation to applicable standards for residential development, the following mitigation measure shall be implemented prior to the issuance of grading permits.

HM-1 Prior to issuance of a grading permit or any activity that may disturb the soil; the applicant shall have Phase II soil boring and analysis completed. This analysis shall follow the requirements set out in the DTSC Preliminary Endangerment Assessment (PEA) Guidance Manual. This includes taking 41 samples with 1-acre centers with each location sampled to include one surface sample (0 to 6 inches) and one subsurface sample (2- to 3-foot range). A minimum of four offsite background samples must also be collected from non-agricultural and industrial areas. These borings shall be analyzed using EPA Method 8081 for herbicides, EPA Method 8151 for pesticides, and CAM 17 for heavy metals and shall be completed by a certified laboratory. If any levels of herbicide, pesticide, or metal tested is above the State threshold, a cleanup phase shall be implemented prior to any grading or construction. All cleanup shall comply with all local, State, and federal regulations pertaining to the chemical(s) to be removed from the area.

5.7.7 Level of Significance After Mitigation

With implementation of the identified mitigation measure, impacts would be less than significant.

5.8 HYDROLOGY AND WATER QUALITY

5.8.1 Introduction

This section of the DEIR evaluates the potentially significant impacts to hydrology and water quality and is based on information contained in the Hydrological Impact Report for Tract 062757, City of Lancaster, California, prepared by Blair, Church & Flynn Consulting Engineers, dated April 10, 2007, which is included in Appendix G.

5.8.2 Existing Conditions

Regional Conditions

The site is within the Antelope Valley, which forms the western arm of the Mojave Desert. The valley watershed is approximately 2,400 square miles, and the valley floor has few defined natural channels for capturing runoff. As a result, the valley floor is susceptible to sheet flow flooding. Surface water runoff from the surrounding hills and from the valley floor flows primarily towards three dry lakes (Rosamond, Rogers, and Buckhorn Dry Lakes) on Edwards Air Force Base. The Hydrological Report indicates that the project site drains northeast to Amargosa Creek, which directs water to the Rosamond Dry Lake located on the Base.

Annual rainfall averages from five to nine inches with lower rainfall on the valley floor and higher rainfall in the surrounding foothills and mountains. Extreme rainfall can occur in the late summer and early fall, releasing rainfall equal to the annual average. This can cause sheet flooding across the valley floor. Heavy rainfall in the San Gabriel Mountains can also result in flooding in the valley.

Regional Drainage Facilities

Earthen and concrete lined channels operated by the Los Angeles County Flood Control District channel runoff across the valley floor to drainage retention/detention basins and ultimately to the dry lake beds. Currently, the District's facilities end at Avenue J, but do not extend northerly of that point. All improved drainage channels within the City of Lancaster are operated by the City. The City of Lancaster storm drainage master plan provides further guidance for the construction of the regional master planned drainage channels, the conversion of some channels to pipelines, and regional retention/detention basins. The Master Plan includes the construction of two regional drainage facilities in the vicinity of the project site. One is Element 15A, which is a 90-foot-wide by 6-foot-deep earthen channel along the south side of Avenue J, between 70th Street West and 65th Street West. This will connect to a 200-foot-wide by 7-foot-deep earthen channel currently under construction, which is connected to the Mira Loma Flood Control Facility. These are under construction as shown in Exhibit 5.8-1.

The second facility is Element 16, which consists of twin 96-inch-diameter pipes that run parallel to 65th Street West from the south boundary of the project site to Avenue J, where it connects to Element 15A.

Local Drainage Facilities

Local storm drainage facilities are provided by properties as they develop in accordance with City of Lancaster development standards. Developing properties must provide a means to connect to existing or planned regional storm drain facilities. If regional drainage facilities are not available, then retention and detention basins are required to be sized and constructed to handle the forecast runoff. When regional facilities become available, the retention and detention basins may be removed.

Project Site Conditions

The project site and the surrounding area have a relatively gentle gradient from the southwest to the northeast of approximately 4 feet per 1000 feet. The upslope land use is currently open but is planned for development. According to the Natural Resources Conservation Service Criteria, the soils belong to Group A, which indicates low runoff potential with infiltration rates between 4 and 12 millimeters per hour. No jurisdictional waters, streams, or bodies of water are located on the project site.

Prominent surface features that affect drainage include 70th Street West on the west, Avenue J on the north and 65th Street West and an existing subdivision directly east. Each of these features affects runoff from the project site by redirecting flows or acting as impediments to flow. A channel along 65th Street West, existing site contours, and the profiles of the surrounding streets direct runoff from the site and from uphill areas to an existing culvert located at the southwest corner of Avenue J and 65th Street West. This 24-inch-diameter culvert discharges runoff into an existing, though not well-defined, swale located at the north side of Avenue J. The area where this culvert discharges is being developed, and the ill-defined swale would be replaced with a regional earthen drainage channel that would be 200 feet wide by 7 feet deep. This facility would connect to the retention/detention basin known as the Mira Loma Flood Control Facility.

Flooding

The entire project site is located within the Federal Emergency Management Agency (FEMA) Zone B designation, which indicates the project site is subject to flood waters less than 1 foot during the 100- to 500-year storms. The project site is within the 100-year flood zone. The Hydrological Report further indicates that the project site also is subject to sheet flooding of depths less than 1 foot, due to the crown of Avenue J holding back flood flows from continuing north.

Photograph 1: Looking west from the northeast corner of West Ave. J and 65 street at recently installed storm drains. The storm drain on the left was installed by the city of Lancaster, the right is being installed by the developer.

Photograph 2: Looking northeast from the southwest corner of West Ave. J and 65 street at the storm drain construction.

Photograph 3: Looking south from the northeast corner of the project site at the disturbed ground on the right side of the barbwire fence. This disturbed area is where the active channel was located.

Photograph 4: Looking east from the northeast corner of West Ave. J and 65 street at a new basin that will be incorporated with the storm drains.

Source: Michael Brandman Associates, 2007.

Michael Brandman Associates

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Exhibit 5.8-1
Storm Drain Construction

Runoff and Percolation Volumes

The hydrological report estimates that the current annual runoff from the project site is 1.7 acre-feet (1 acre-foot equals 325,851 gallons) and that approximately 80 acre-feet percolate into the soil.

City of Lancaster General Plan

The City's General Plan includes the following objectives related to Hydrology and Water Quality:

Objective 3.5 Preserve land resources through the application of appropriate soils management techniques and the protection and enhancement of surrounding landforms and open space.

Objective 4.2 Minimize the potential for loss of life, physical injury, property damage, and social disruption resulting from a 100-year flood.

An analysis of the project's consistency with these objects is contained in Section 5.9, Land Use and Planning.

5.8.3 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant hydrology and water quality impact if it would:

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or
- Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems.

5.8.4 Project Impacts

The proposed project would develop the project site with urban uses that would increase surface runoff on- and off-site. According to the hydrological report, the project area runoff volume is expected to increase from 1.7 acre-feet to 27 acre-feet (approximately 8.8 million gallons). At full buildout, the construction of houses, driveways, sidewalks, and street paving would result in an

increase in the impervious area of the project site from the current 1 percent to 42 percent.[1] The project would also reduce the time of concentration in the project area, due to the more efficient drainage patterns that would result from the construction of streets and graded lots. This would reduce percolation of rainfall into the ground and increase runoff volumes from the project site. Percolation rates on the site are expected to decrease from 80 acre-feet to 10 acre-feet. The impacts from this increased stormwater runoff are discussed below.

Impacts Related to Erosion and Siltation

The project site is not currently subject to high levels of erosion and siltation, and the amount of runoff from the site does not contribute to downstream erosion or siltation. The development of the proposed project would result in development of urban uses and increased rates of stormwater runoff. There are no well-defined natural drainage courses, streams, or rivers near the project site that would be affected by the proposed project.

Construction activities associated with the proposed project would include clearing and grading, which have the potential to alter existing drainage patterns and create the potential for offsite flooding and siltation. However, prior to the issuance of a grading or construction permit, the City of Lancaster requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) that conforms to the State Water Resources Control Board National Pollutant Discharge Elimination System (NPDES) Permit No. CAS000002 (Waste Discharge Requirement Order No. 99-08-DWQ). Generally, the SWPPP specifies Best Management Practices (BMPs) that would prevent all construction-related stormwater and all products of erosion from moving offsite into receiving waters.

The NPDES program is administered by the State Water Resources Control Board (SWRCB) through the individual California Regional Water Quality Control Boards (RWQCB). General Construction Activity Storm Water NPDES permits for storm water discharges are administered by the RWQCB. Construction activities subject to this General Permit include clearing, grading, and disturbances to the ground, such as stockpiling, or excavation that results in soil disturbances. SWPPPs are required for project implementation under a construction NPDES permit; these plans typically include both structural and non-structural BMPs to reduce water quality impacts. Therefore, impacts relating to siltation and erosion would be less than significant.

Impacts Related to On- or Off-site Flooding and Stormwater Runoff

As indicated above, the site is subject to sheet flooding during exceptional rainfall events. There are no well-defined natural drainage courses on the site, and there is one manmade shallow drainage

[1] Hydrological Impact Report for Tract 062757, City of Lancaster, California, prepared by Blair, Church & Flynn Consulting Engineers, dated April 10, 2007.

course on the east side of the project site. The existing runoff volumes are relatively low at 1.7 acre-feet per year. The runoff created by the additional impermeable surfaces creates the potential for both onsite and offsite flooding.

The proposed project includes onsite and offsite flood control and street improvements as described in Section 3.3.2, Infrastructure Improvements, of this EIR. In accordance with the standards of the City of Lancaster, the project would be constructed to retain the 10-year storm flow at or below street curbs and to retain the 25-year storm flow within the street right-of-way. Arterials and collector streets would be constructed to be clear of water for the 10-year storm.

Stormwater conveyed from the project site would be directed to a proposed storm channel located along the northern boundary of the project site. This proposed storm channel has been envisioned as a component of the Lancaster Master Plan of Drainage. The proposed stormwater system would protect the project site from upstream flows and would control increased runoff from the project site. Therefore, impacts due to flooding from 10- and 25-year storms would be less than significant.

However, according to the Hydrological Report, flooding events such as the FEMA 100-year base flood would exceed the capacity of the local and regional drainage facilities. This is a potentially significant impact.

Impacts Related to Exceeding the Capacity of the Stormwater Systems

The proposed project would increase the stormwater runoff by 25 acre-feet per year. Precise runoff volumes during storm events were not calculated in the hydrological report. These additional flows have the potential to affect stormwater facilities offsite. However, the City of Lancaster Master Plan of Drainage includes two regional facilities (Elements 15A and 16) directly adjacent to the proposed project that are currently under construction. The developer of the proposed project would be required to contribute to the construction costs of these facilities. These facilities are sized to accommodate stormwater flows from the project site and from other planned projects in the vicinity. Accordingly, the impacts from the proposed project on the capacity of stormwater systems would be less than significant.

Cumulative Impacts

Development of the related projects and the resulting conversion of rural open lands to urban-type land uses would contribute cumulatively to increased stormwater runoff by creating more impervious surfaces. Potential for erosion, siltation, and overburdening of stormwater facilities would increase. However, with implementation of the proposed City of Lancaster Master Plan of Drainage, sufficient stormwater capacity would be available, and cumulative impacts would be less than significant.

5.8.5 Mitigation Measures

HWQ-1 Prior to the issuance of a grading permit, the applicant shall demonstrate compliance with NPDES Stormwater Permit requirements to the satisfaction of the City of Lancaster. Applicable BMP provisions shall be incorporated into the NPDES Permit.

HWQ-2 The project shall include proper grading design to include breakover paths for floodwaters to move through the project. Additionally, the building finish floors would be elevated above the breakover elevation, such that the floodwaters move through and past the project without flooding the buildings.

HWQ-3 Prior to the issuance of a grading permit, the City Engineer shall review the developer's plans to determine whether a temporary water quality/stormwater detention basin or other treatment BMP shall be required onsite. Plans shall be submitted to the City Engineer identifying the location and size of the temporary water quality/stormwater detention basin or other treatment BMP. The City Engineer shall also approve the location and size of an onsite, temporary water quality/stormwater detention basin on the northeastern portion of the project site. This basin will be required to be sized to accept 100 percent of excess stormwater flows from the project site.

HWQ-4 Prior to issuance of a grading permit, the applicant shall demonstrate compliance with NPDES stormwater permit in relation to erosion and siltation during construction.

5.8.6 Level of Significance After Mitigation

With implementation of these mitigation measures, hydrology and water quality impacts would be less than significant.

5.9 LAND USE AND PLANNING

5.9.1 Introduction

This section addresses the potential land use and planning impacts associated with the proposed General Plan Amendment change in the land use designations. Information in this section is based upon the following documents:

- City of Lancaster 2020 General Plan, adopted October 28, 1997, last amended August 2007
- City of Lancaster Zoning Code, Title 17 of the Municipal Code

5.9.2 Existing Conditions

The project site is located at the edge of the urbanizing western portion of the City. The project site and the surrounding land to the west, north, and south are generally open with few structures and may have been used for farming and grazing in the mid-20th century. Directly to the east, there is a residential subdivision, and beyond that to the east and southeast there are many residential developments similar to the proposed project, that is, single-family dwelling units on 7,000-square-foot lots. Each of the residential developments is primarily freestanding with its own access roads and perimeter walls. Trails, parks, substantial landscaping, and similar amenities are noticeably absent from these new developments.

The General Plan designation is Non-Urban Residential (NU) and zoning for the project site is RR-2.5 (Rural Residential, one dwelling unit per 2.5-acre lot). According to the Zoning Ordinance, minimum net lot size for this category is 100,000 square feet (2.3 acres) with a minimum dimension of 165 feet by 250 feet. Considering the requirements for roadways and other dedications, this would allow approximately one dwelling unit for every 2.5 acres. The current zoning, therefore, would permit 64 dwelling units.

City of Lancaster General Plan

The Lancaster General Plan includes 20 Community Goals followed by several objectives and policies associated with each goal. These goals address many aspects of the City, including General Goals, Natural Environment, Public Health and Safety, the Living Environment, Physical Mobility, Municipal Services and Facilities, Economic Development and Vitality, and the Physical Development. Each of the goals and objectives applicable to this project are listed in Table 5.9-1.

Table 5.9-1: City of Lancaster 2020 General Plan Goals and Objectives

Goal or Objective No.	Statement
Goal 1	Ensure that Lancaster manages land use and development in a manner as to place the highest value on people and their quality of life.
Objective 1.2	Ensure a healthful living environment free of environmental hazards and nuisances.
Objective 1.3	Ensure a well designed, visually pleasing built environment.
Objective 1.7	Encourage protection of areas that nave natural resource, scenic or cultural heritage values.
Objective 1.8	Provide a safe, crime free environment in which to work and live.
Goal 2	Facilitate development of the City into a balanced and complete community with a diverse mix of land use types and intensities, housing types and styles, and local employment and business opportunities which combine to provide a quality living and working environment.
Goal 3	Identify the level of natural resources needed to support existing and future development within the City and its sphere of influence and ensure that these resources are managed and protected.
Objective 3.1	Protect, maintain, and expand groundwater supplies to meet present and future urban and rural needs.
Objective 3.2	Reduce the per capita rate of water consumption in the City of Lancaster.
Objective 3.3	Preserve acceptable air quality by striving to attain and maintain national and state air quality standards.
Objective 3.4	Identify, preserve, and maintain important biological systems within the Antelope Valley, and educate the general public about these resources, which include the Joshua Tree - California Juniper Woodland, areas that support endangered or sensitive species, and other natural areas of regional significance.
Objective 3.5	Preserve land resources through the application of appropriate soils management techniques and the protection and enhancement of surrounding landforms and open space.
Objective 3.8	Preserve and enhance important views within the City, and significant visual features which are visible from the City of Lancaster.
Goal 4	To provide a secure manmade environment which offers a high level of protection from natural and manmade hazards to life, health and property.
Objective 4.1	Minimize the potential for loss of life, physical injury, property damage, and social disruption resulting from seismic groundshaking and other geological events.
Objective 4.2	Minimize the potential for loss of life, physical injury, property damage, and social disruption resulting from a 100-year flood.

Table 5.9-1 (Cont.): City of Lancaster 2020 General Plan Goals and Objectives

Goal or Objective No.	Statement
Objective 4.3	Promote noise compatible land use relationships by implementing the noise standards identified in Table III-1 to be utilized for design purposes in new development and establishing a program to attenuate existing noise problems.
Objective 4.4	Ensure compatibility between land uses in the City of Lancaster and air operations from U.S. Air Force Plant 42 (Palmdale Regional Airport), Fox Field, and Edwards Air Force Base.
Objective 4.5	Protect life and property from the potential detrimental effects (short and long term) of the transportation, storage, treatment, and disposal of hazardous materials and wastes within the City of Lancaster.
Objective 4.6	Reduce the risk of crime and provide residents with security through maintenance of an adequate force of peace officers, physical planning strategies that maximize surveillance, minimize opportunities for crimes, and by creating a high level of public awareness.
Objective 4.7	Ensure that development occurs in a manner that minimizes the risk of structural and wildland fire.
Goal 5	To provide a system of emergency services which is adequate to meet routine emergencies, as well as major catastrophic situations.
Objective 5.1	Maintain a level of preparedness to respond to emergency situation which will save lives, protect property, and facilitate recovery with a minimum of disruption.
Goals 6, 7, 8	Housing Element of the General Plan
Goal 9	To promote access to high quality local educational services for Lancaster residents.
Goal 10	To provide a park, recreation and open space system which enhances the livability of urban and rural areas by providing parks for residential neighborhoods; establishing a comprehensive trails system and meeting the open space and recreational needs of Lancaster residents
Objective 10.1	Provide sufficient neighborhood and community park facilities such that a rate of 5.0 acres of park land per 1,000 residents is achieved and distributed so as to be convenient to Lancaster residents.
Objective 10.2	Establish and maintain a hierarchical system of trails (including equestrian, bicycle, and pedestrian trails) witch provides recreational opportunities and an alternative means of reaching schools, parks and natural areas, and places of employment, and which connects to regional trail systems.
Goal 11	To provide community appreciation for the unique history of the Antelope Valley and the City of Lancaster and to promote community involvement in the protection, preservation and restoration where features of cultural historical or architectural significance exist.
Objective 11.1	Identify and preserve and /or restore those features of cultural, historical, or architectural significance.

Table 5.9-1 (Cont.): City of Lancaster 2020 General Plan Goals and Objectives

Goal or Objective No.	Statement
Objective 12.2	Promote the availability of local library facilities and book reserves in accordance with the standards of the American Library Association.
Goal 14	A well balanced transportation and circulation system which provides for the efficient and safe transport of goods and people within and through the City of Lancaster; and which balances concerns for mobility with concerns for safety and the quality of the City's living environment.
Objective 14.1	Maintain a hierarchical system which balances the need for free traffic flow with economic realities, such that streets are designed to handle normal traffic flows with tolerances to allow for potential short-term delays (Level of Service "D") at peak hours. (see Table V-1).
Objective 14.2	Promote a roadway system, which balances the need to move vehicles while protecting environmental, aesthetic, and quality of life issues.
Objective 14.3	Achieve a balance between the supply of parking and demand for parking, recognizing the desirability and availability of alternative to the use of private automobile.
Objective 14.4	Reduce reliance of the use of automobiles and increase average readership (AVR) to 1.5 by promoting alternative to the use of the private automobile, including ridesharing, non-motorized transportation (bicycle, pedestrian) and the use of public transit.
Objective 14.5	Ensure the availability of adequate means to safely move commodities within and through the City of Lancaster, including availability of truck routes, pipelines, and utility corridors, in such a manner as to minimize impacts on adjacent land uses and enhance Lancaster residents' quality of life.
Goal 15	A full range of municipal services and facilities at desired levels for urban and rural areas, as appropriate.
Objective 15.1	Achieve and maintain prescribed levels of service for streets, sewers, sewage treatment, water, flood control, police, fire, parks and recreation, libraries and schools/other facilities.
Objective 15.2	Minimize the negative impacts of solid waste disposal.
Objective 15.3	Ensure the coordination of development activity with the provision of public services and facilities in order to eliminate gaps in service provision, provide economical public services, and achieve the equitable sharing of the cost of such facilities and services.
Goal 16	To promote economic self-sufficiency and a fiscally solvent and financially stable community.
Objective 16.1	Achieve and maintain a balance between the number and types of jobs and the amount and cost of housing available within the Lancaster General Plan study area.
Objective 16.7	Ensure that all new development pays for all of the infrastructure, public facilities and differential service costs associated with new development.

Table 5.9-1 (Cont.): City of Lancaster 2020 General Plan Goals and Objectives

Goal or Objective No.	Statement
Goal 17	To establish a variety of land uses which serve to develop Lancaster into a balances and complete community in which people, live, work, shop and play.
Objective 17.1	Designate adequate land for a balanced mix of rural and urban residential, and non-residential uses.
Goal 18	To manage urban development by planning the location and intensity of urban and rural uses to create a comprehensive urban structure.
Objective 18.1	Prevent future discordant land uses, and where possible reconcile existing discordant land uses, by establishing appropriate interface among conflicting uses and functions.
Policy 18.2.1	Encourage appropriate infill development.
Goal 19	To create a well planned community with an aesthetically pleasing physical environment.
Objective 19.1	Ensure that all development within the City of Lancaster yields a pleasant living, working or shopping environment, and attracts the interest of residents, workers, shoppers, and visitors as the result of consistent exemplary site, architectural, and landscape design.
Objective 19.2	Reinforce the distinct components which make up the City's form, emphasizing the specific elements based on their individual characteristics.
Goal 20	To promote a regional perspective in land use decisions affecting the residents of Lancaster.
Objective 20.1	Coordinate planning efforts and development decisions between Lancaster, Palmdale, Los Angeles County, Kern County, San Bernardino County and regional, state and federal agencies.

Regional Plans

The project site is also subject to the applicable growth forecasts and policies developed by the Southern California Association of Governments (SCAG). In response to the Notice of Preparation (NOP), SCAG indicated that the proposed project is regionally significant, thereby requiring a consistency analysis with the Destination 2030: 2004 Regional Transportation Plan (RTP); the Regional Comprehensive Plan and Guide (RCPG) - 1996 Version; and the Compass Vision Growth, 2004. Consistency with these forecasts is a key to compliance with various regional mandates including air quality and water usage.

SCAG Compass Vision Growth, 2004. The fundamental goal of Compass Vision Growth is to make the SCAG region a better place to live, work, and play for all residents regardless of race, ethnicity, or income class. Thus, decisions regarding growth, transportation, land use, and economic development should be made to promote and sustain for future generations the region's mobility,

livability, and prosperity. Regional Growth Principles provide a framework for local and regional decisions that include a specific set of strategies intended to achieve the goals that follow.

Principle 1: Improve Mobility

- Encourage transportation investments and land use decisions that are mutually supportive
- Locate new housing near existing jobs and new jobs near existing housing
- Encourage transit-oriented development
- Promote a variety of travel choices

Principle 2: Foster Livability

- Promote infill development and redevelopment to revitalize existing communities
- Promote development that provides a mix of uses
- Promote "people-scaled" walkable communities
- Support the preservation of stable, single-family neighborhoods

Principle 3: Enable Prosperity

- Provide a variety of housing types to support all income levels
- Support education opportunities that promote balanced growth
- Ensure environmental justice
- Support fiscal policies that encourage balanced growth

Principle 4: Promote Sustainability

- Preserve rural, agricultural, recreational, and environmentally sensitive areas
- Focus development in urban centers and existing cities
- Use resources efficiently, eliminate pollution, and reduce waste
- Utilize "green" development strategies

The Compass Vision Growth Plan designates selected jurisdictions in key growth areas within the region to develop tools to implement the four principles. The Compass plan is based upon making incremental changes in two percent of the land area within the region to promote mobility, livability, prosperity, and sustainability. Compass plan opportunity areas have been established throughout the region. The downtown area of the City of Lancaster is designated as one of the Opportunity Areas, but the designation does not extend to the project site.[1]

SCAG Regional Comprehensive Plan and Guide (RCPG). The SCAG Regional Comprehensive Plan and Guide includes several policies related to regional growth forecasts; standard of living;

[1] http://www.compassblueprint.org/files/pdf/LA_County_North.pdf, accessed March 1, 2007

quality of life; social, political, and cultural equity; air quality; and conservation/open space. Those policies that are related to the proposed project are outlined in Table 5.9-2.

Table 5.9-2: Related Policies of the SCAG Regional Comprehensive Plan and Guide

Growth Forecasts
The population, housing, and job forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by the SCAG in all phases of implementation and review. (Population, housing and job forecasts are provided by SCAG for the City of Lancaster and are contained in Table 5.9-3.)
Standard of Living
SCAG shall support local jurisdictions actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.
Quality of Life
SCAG shall support provisions and incentives created by local jurisdictions to attract housing growth in job right subregions and job growth in housing rich subregions.
SCAG shall encourage development in locations least likely to cause adverse environmental impact.
SCAG shall encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.
SCAG shall discourage the development, or encourage the use of special design requirements in areas with steep slopes, high fire, flood, and seismic hazards.
SCAG shall encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage and to develop emergency response plans.
Social, Political, and Cultural Equity
SCAG shall encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment (RHNA).
SCAG shall support local jurisdiction and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.
Air Quality
The region shall be subject to ambient air quality standards set by both the federal Environmental Protection Agency and the California Air Resources Board.
Conservation/Open Space
SCAG shall encourage local jurisdictions in their efforts to minimize potentially hazardous developments in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire and other known hazards, and areas with limited access for emergency equipment.
Source: Southern California Association of Governments, Regional Comprehensive Plan and Guide, 1996 Version.

Table 5.9-3: SCAG Population, Housing, and Job Forecasts for the City of Lancaster

Year	Population	Dwelling Units	Employment
2000	119,416	38,289	52,119
2005	142,043	42,673	52,791
2010	168,032	51,418	59,684
2015	191,192	58,980	62,937
2020	215,468	66,591	66,081
2025	238,048	74,058	69,026
2030	259,696	81,403	71,816

Source: Southern California Association of Governments, City Projections, http://www.scag.ca.gov/forecast/downloads/2004GF.xls, accessed March 1, 2007.

Destination 2030: 2004 Regional Transportation Plan (RTP). The primary purpose of Destination 2030 is to "establish a better [regional] transportation system which is integrated with the best possible growth pattern for the region over the Plan horizon of 2030."[2] The RTP is a performance-based transportation plan that places a strong emphasis on meeting specific goals. The 2004 RTP goals are listed below:

- Maximize mobility and accessibility for all people and goods in the Region.
- Ensure travel safety and reliability for all people and goods in the Region.
- Preserve and ensure a sustainable regional transportation system.
- Maximize the productivity of [the regional] transportation system.
- Protect the environment, improve air quality and promote energy efficiency.
- Encourage land-use and growth patterns that complement [regional] transportation investments.

An analysis of this project's consistency with these goals is contained in Table 5.9-6.

5.9.3 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant impact on Land Use and Planning if it would:

[2] Destination 2030: 2004 Regional Transportation Plan. http://www.scag.ca.gov/rtp2004/2004/Final/FINAL_2004_RTP.pdf. Accessed July 23, 2007.

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

5.9.4 Project Impacts

A General Plan Amendment and a zone change would be required to change the General Plan designation from Non-Urban Residential to Urban Residential (2.1 to 6.5 du/ac) and to change the zoning from RR-2.5 to R-7,000 (Residential, minimum lot size 7,000 square feet). The various sections of this document assess the significance of the impacts associated with that change. The only applicable plan affected by the proposed project is the Lancaster General Plan.

City of Lancaster General Plan

Table 5.9-4 provides an analysis of the project's consistency with each of the relevant General Plan goals and objectives.

Table 5.9-4: General Plan Consistency of the Proposed Project

Goal or Objective No.	Goal or Objective Statement	Consistency Determination
Goal 1	Ensure that Lancaster manages land use and development in a manner as to place the highest value on people and their quality of life.	The proposed project provides housing desirable by new residents but in a manner that is detrimental to the City as a whole and is therefore **inconsistent** with this goal.
Objective 1.2	Ensure a healthful living environment free of environmental hazards and nuisances.	The proposed project will be required to comply with all applicable federal, state and local environmental hazard regulations designed to protect public health and safety; the proposed project is therefore **consistent** with this objective.
Objective 1.3	Ensure a well designed, visually pleasing built environment.	The proposed project would alter the site and would substantially degrade the existing visual character and aesthetic quality of the site and its surroundings; viewers in the area would lose the visual experience of open space, therefore, the proposed project is **inconsistent** with this objective.

Table 5.9-4 (Cont.): General Plan Consistency of the Proposed Project

Goal or Objective No.	Goal or Objective Statement	Consistency Determination
Objective 1.7	Encourage protection of areas that have natural resource, scenic or cultural heritage values.	The proposed project provides no such opportunities particularly recreational and is, therefore, **inconsistent** with this objective.
Objective 1.8	Provide a safe, crime free environment in which to work and live.	The proposed project provides sidewalks and vehicle access and is, therefore, **consistent** with this objective.
Goal 2	Facilitate development of the City into a balanced and complete community with a diverse mix of land use types and intensities, housing types and styles, and local employment and business opportunities which combine to provide a quality living and working environment.	The proposed project provides one type of housing unit that is prevalent in the area with no employment or other amenities, and is therefore **inconsistent** with this objective.
Goal 3	Identify the level of natural resources needed to support existing and future development within the City and its sphere of influence and ensure that these resources are managed and protected.	The analysis and mitigation measures contained in Section 5.3 of this EIR fulfill this objective, and thus the project is **consistent** with this goal.
Objective 3.1	Protect, maintain, and expand groundwater supplies to meet present and future urban and rural needs.	The proposed project reduces groundwater recharge, and increases water consumption and is therefore **inconsistent** with this objective.
Objective 3.2	Reduce the per capita rate of water consumption in the City of Lancaster.	The proposed project would have a greater water demand than the current land use designation. Without mitigation measures to assure per capita reduction in the water usage, the proposed project would be **inconsistent** with this objective.
Objective 3.3	Preserve acceptable air quality by striving to attain and maintain national and state air quality standards.	The proposed project site would create air quality emission that exceed applicable standards and is, therefore, **inconsistent** with this objective.
Objective 3.4	Identify, preserve, and maintain important biological systems within the Antelope Valley, and educate the general public about these resources, which include the Joshua Tree - California Juniper Woodland, areas that support endangered or sensitive species, and other natural areas of regional significance.	The proposed project does not impact important biological resources and is therefore **consistent** with this objective.

Table 5.9-4 (Cont.): General Plan Consistency of the Proposed Project

Goal or Objective No.	Goal or Objective Statement	Consistency Determination
Objective 3.5	Preserve land resources through the application of appropriate soils management techniques and the protection and enhancement of surrounding landforms and open space.	The proposed project would include best management practices to manage soil erosion but would decrease the amount of open space in the City and is therefore **inconsistent** with this objective.
Objective 3.8	Preserve and enhance important views within the City, and significant visual features which are visible from the City of Lancaster.	The project is located on the urban fringe and will restrict views of open space and is therefore **inconsistent** with this objective.
Goal 4	To provide a secure manmade environment which offers a high level of protection from natural and manmade hazards to life, health and property.	The proposed project contains no hazards and is adequately protected from wildfires and is therefore **consistent** with this goal.
Objective 4.1	Minimize the potential for loss of life, physical injury, property damage, and social disruption resulting from seismic groundshaking and other geological events.	The proposed project would comply with applicable seismic safety building codes and is therefore **consistent** with this objective.
Objective 4.2	Minimize the potential for loss of life, physical injury, property damage, and social disruption resulting from a 100-year flood.	The proposed project includes storm water collection facilities that will limit potential impacts related to floods and is therefore **consistent** with this objective.
Objective 4.3	Promote noise compatible land use relationships by implementing the noise standards identified in Table III-1 to be utilized for design purposes in new development and establishing a program to attenuate existing noise problems.	The proposed project will adhere to applicable standards and regulations regarding noise and is therefore **consistent** with this objective.
Objective 4.5	Protect life and property from the potential detrimental effects (short and long term) of the transportation, storage, treatment, and disposal of hazardous materials and wastes within the City of Lancaster.	The analysis and mitigation measures contained in Section 5.7 of this EIR fulfill this objective, and thus the project is **consistent** with this objective.
Objective 4.6	Reduce the risk of crime and provide residents with security through maintenance of an adequate force of peace officers, physical planning strategies that maximize surveillance, minimize opportunities for crimes, and by creating a high level of public awareness.	The proposed project would not create an undue burden on law enforcement and would generate fees and taxes to support police services, and is therefore **consistent** with this objective.

Table 5.9-4 (Cont.): General Plan Consistency of the Proposed Project

Goal or Objective No.	Goal or Objective Statement	Consistency Determination
Objective 4.7	Ensure that development occurs in a manner that minimizes the risk of structural and wildland fire.	The proposed project includes a perimeter wall and will include fire protection mechanisms and is therefore **consistent** with this objective.
Goal 5	To provide a system of emergency services which is adequate to meet routine emergencies, as well as major catastrophic situations.	The proposed project provides adequate emergency access and is therefore **consistent** with this goal.
Objective 5.1	Maintain a level of preparedness to respond to emergency situation which will save lives, protect property, and facilitate recovery with a minimum of disruption.	The proposed project will be adequately served by emergency services and is therefore **consistent** with this objective.
Goals 6	To promote sufficient housing to meet the diverse housing needs of all economic segments of the present and future City of Lancaster.	The proposed project will consist of 650 residential lots, with homes that would be typical of those in the area; although the project does not appear to contribute to the diversity of housing in the city, it is still considered **consistent** with this goal.
Goal 7	To preserve existing housing stock within areas for which a desirable living environment can be provided; to promote conversion of such residential areas for which a desirable environment cannot be sustained.	The proposed project is proposed on vacant land and would not remove existing housing stock within the City, and is therefore, **consistent** with this goal.
Goal 8	To promote provision of adequate housing opportunities for those desiring to live in Lancaster, regardless of age, race, ethnic background, national origin, religion, family size, marital status, physical handicap, or other arbitrary factors.	The proposed project will promote the provision of housing available to these groups and other special needs groups, and is therefore **consistent** with this goal.
Goal 9	To promote access to high quality local educational services for Lancaster residents.	The proposed project would pay school fees to mitigate all school impacts and is therefore **consistent** with this goal.
Goal 10	To provide a park, recreation and open space system which enhances the livability of urban and rural areas by providing parks for residential neighborhoods; establishing a	The proposed project is deficient in park and recreational facilities, however proposed mitigation includes provision of a turn key park that will make the proposed project **consistent** with this goal.

Table 5.9-4 (Cont.): General Plan Consistency of the Proposed Project

Goal or Objective No.	Goal or Objective Statement	Consistency Determination
cont.	comprehensive trails system and meeting the open space and recreational needs of Lancaster residents	
Objective 10.1	Provide sufficient neighborhood and community park facilities such that a rate of 5.0 acres of park land per 1,000 residents is achieved and distributed so as to be convenient to Lancaster residents.	Mitigation measures included in the EIR would provide for a turn key park within the project area, and therefore the project would be **consistent** with this alternative.
Objective 10.2	Establish and maintain a hierarchical system of trails (including equestrian, bicycle, and pedestrian trails) witch provides recreational opportunities and an alternative means of reaching schools, parks and natural areas, and places of employment, and which connects to regional trail systems.	The project would provide sidewalks, and the mitigation measures included in this EIR would provide bike trails and mass transit stops and therefore the project would be **consistent** with this objective.
Goal 11	To provide community appreciation for the unique history of the Antelope Valley and the City of Lancaster and to promote community involvement in the protection, preservation and restoration where features of cultural historical or architectural significance exist.	This EIR provides history and analysis of historical resources and the proposed mitigation measures would preserve recovered resources, therefore the proposed project is **consistent** with this goal.
Objective 11.1	Identify and preserve and /or restore those features of cultural, historical, or architectural significance.	This EIR provides history and analysis of historical resources and the proposed mitigation measures would preserve recovered resources, therefore the proposed project is **consistent** with this objective.
Objective 12.2	Promote the availability of local library facilities and book reserves in accordance with the standards of the American Library Association.	The proposed project would place increased service demands on libraries but would provide tax revenues to finance increased library services, and would therefore be **consistent** with this objective.
Goal 14	A well balanced transportation and circulation system which provides for the efficient and safe transport of goods and people within and through the City of Lancaster; and which balances concerns for mobility with concerns for safety and the quality of the City's living environment.	The proposed housing project provides for adequate project access and circulation, and will not diminish the City's ability to provide a well balanced, efficient and safe transportation and circulation system; the proposed project is therefore **consistent** with this goal.

Table 5.9-4 (Cont.): General Plan Consistency of the Proposed Project

Goal or Objective No.	Goal or Objective Statement	Consistency Determination
Objective 14.1	Maintain a hierarchical system which balances the need for free traffic flow with economic realities, such that streets are designed to handle normal traffic flows with tolerances to allow for potential short-term delays (Level of Service "D") at peak hours. (see Table V-1).	The proposed project would create traffic impacts on several intersections, however proposed mitigation measures would reduce the impacts, and the project would then be **consistent** with this objective.
Objective 14.2	Promote a roadway system, which balances the need to move vehicles while protecting environmental, aesthetic, and quality of life issues.	The proposed project includes a system of collector access roads and internal local roadways and perimeter walls that promote auto dependency, and is therefore **inconsistent** with this objective.
Objective 14.3	Achieve a balance between the supply of parking and demand for parking, recognizing the desirability and availability of alternative to the use of private automobile.	The proposed project provided adequate parking and is therefore **consistent** with this objective.
Objective 14.4	Reduce reliance of the use of automobiles and increase average readership (AVR) to 1.5 by promoting alternative to the use of the private automobile, including ridesharing, non-motorized transportation (bicycle, pedestrian) and the use of public transit.	The proposed project includes a maze of streets and perimeter walls that promote auto dependency, and is therefore **inconsistent** with this objective.
Objective 14.5	Ensure the availability of adequate means to safely move commodities within and through the City of Lancaster, including availability of truck routes, pipelines, and utility corridors, in such a manner as to minimize impacts on adjacent land uses and enhance Lancaster residents' quality of life.	The proposed project includes improvements to Avenue J which is a major street and is therefore **consistent** with this objective.
Goal 15	A full range of municipal services and facilities at desired levels for urban and rural areas, as appropriate.	The proposed project and the proposed mitigation measures provides all municipal services, and it is therefore **consistent** with this goal.
Objective 15.1	Achieve and maintain prescribed levels of service for streets, sewers, sewage treatment, water, flood control, police, fire, parks and recreation, libraries and schools/other facilities.	The proposed project provides adequate levels of these services and is therefore **consistent** with this objective.

Table 5.9-4 (Cont.): General Plan Consistency of the Proposed Project

Goal or Objective No.	Goal or Objective Statement	Consistency Determination
Objective 15.2	Minimize the negative impacts of solid waste disposal.	The proposed project increases solid waste but the increase is not substantial, and the project is therefore **consistent** with this objective.
Objective 15.3	Ensure the coordination of development activity with the provision of public services and facilities in order to eliminate gaps in service provision, provide economical public services, and achieve the equitable sharing of the cost of such facilities and services.	The proposed project would provide services and facilities appropriate to its size and would pay applicable fees, and is therefore **consistent** with this objective.
Goal 16	To promote economic self-sufficiency and a fiscally solvent and financially stable community.	The proposed project would pay fees and contribute tax revenues and is therefore **consistent** with this goal.
Objective 16.1	Achieve and maintain a balance between the number and types of jobs and the amount and cost of housing available within the Lancaster General Plan study area.	The proposed project provides homes, but no significant long-term jobs; the proposed project contributes to an inadequate jobs/housing ratio within the City, and is therefore **inconsistent** with this objective.
Objective 16.7	Ensure that all new development pays for all of the infrastructure, public facilities and differential service costs associated with new development.	The proposed project would provide services and facilities appropriate to its size and would pay applicable fees, and is therefore **consistent** with this policy.
Goal 17	To establish a variety of land uses which serve to develop Lancaster into a balances and complete community in which people, live, work, shop and play.	The proposed project adds to an oversupply of housing in the City and is therefore **inconsistent** with this goal.
Objective 17.1	Designate adequate land for a balanced mix of rural and urban residential, and non-residential uses.	The proposed project provides would eliminate rural residential zoning and is therefore **inconsistent** with this objective.
Goal 18	To manage urban development by planning the location and intensity of urban and rural uses to create a comprehensive urban structure.	The proposed project perpetuates a pattern of subdivisions with a maze of streets, perimeter walls and auto dependency and is therefore **inconsistent** with this goal.
Objective 18.1	Prevent future discordant land uses, and where possible reconcile existing discordant land uses, by establishing appropriate interface among conflicting uses and functions.	The proposed project is surrounded is by open space and farmland to the north, west, and south, and would perpetuate a development pattern that is **inconsistent** with this objective.

Table 5.9-4 (Cont.): General Plan Consistency of the Proposed Project

Goal or Objective No.	Goal or Objective Statement	Consistency Determination
Policy 18.2.1	Encourage appropriate infill development.	The proposed project extends the urban boundary into open space and rural areas and is therefore **inconsistent** with this objective.
Goal 19	To create a well planned community with an aesthetically pleasing physical environment.	The proposed project perpetuates a pattern of subdivisions with a maze of streets, perimeter walls and lack of visual open space corridors, and is therefore **inconsistent** with this goal.
Objective 19.1	Ensure that all development within the City of Lancaster yields a pleasant living, working or shopping environment, and attracts the interest of residents, workers, shoppers, and visitors as the result of consistent exemplary site, architectural, and landscape design.	The proposed project perpetuates a pattern of subdivisions with a maze of streets, perimeter walls and not visual open space corridors and is therefore **inconsistent** with this goal.
Objective 19.2	Reinforce the distinct components which make up the City's form, emphasizing the specific elements based on their individual characteristics.	The proposed project is located in the western portion of the city, an area used for farming and ranching; the proposed project would not reinforce these uses or otherwise reinforce the City's form, and is therefore **inconsistent** with this objective.
Goal 20	To promote a regional perspective in land use decisions affecting the residents of Lancaster.	The proposed project adds to the oversupply of housing within the City in excess of the SCAG forecasts and is therefore **inconsistent** with this objective.
Objective 20.1	Coordinate planning efforts and development decisions between Lancaster, Palmdale, Los Angeles County, Kern County, San Bernardino County and regional, state and federal agencies.	The proposed project has been made available for review by these agencies and is therefore **consistent** with this objective.

Review of Table 5.9-4 indicates that the proposed project is not consistent with General Plan Goals 1, 2, 17, 18, 19, and 20; Objectives 1.3, 1.7, 3.1, 3.2, 3.3, 3.5, 3.8, 14.2, 14.4, 16.1, 17.1, 18.1, 19.1, and 19.2; and Policy 18.2.1. Although, the character of the proposed project is similar to the adjacent development to the east and consistent with the development occurring throughout the west side of the City, within the urban boundary, land use impacts in terms of conflict with the Lancaster General Plan are considered potentially significant.

SCAG Compass Vision Growth Plan

The proposed project is not contained in the Opportunity Area established for the City of Lancaster in the Compass Vision Growth Plan. Nevertheless, the project is not consistent with most of the Principles contained in the Plan. Specifically, the project does not improve mobility by locating housing near existing jobs, is not a transit-oriented development, and limits travel choices to the automobile. The proposed project does not foster livability by promoting infill or promote "people-scaled" walkable communities. The Principle regarding enabling prosperity is not applicable to the proposed project. The proposed project does not promote sustainability by preserving agricultural areas, focusing development in urban cities, using resources efficiently, or utilizing green development.

The proposed project site is not within an opportunity area and is consistent with the pattern of residential development found in the surrounding area, but is inconsistent with the principles of the Compass Vision Growth Plan. Impacts related to incompatibility to the SCAG Compass Vision Growth Plan are, therefore, potentially significant.

SCAG Regional Comprehensive Plan and Guide (RCPG)

A detailed analysis of the project's consistency with the policies of the RCPG is contained below in Table 5.9-5.

Table 5.9-5: RCPG Consistency of the Proposed Project

Area of Analysis	Statement	Consistency Analysis
Growth Forecasts	The population, housing, and job forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by the SCAG in all phases of implementation and review.	The proposed project would result in an increase in the population on the site of approximately 1,961 persons. Compared with the projected population from 64 units under existing General Plan designations and zoning, a population increase of approximately 1,762 persons would result from the proposed project. The project is expected to be completed by 2010. The SCAG forecasts shown on Table 5.9-3 indicate the City will grow from 168,032 persons in 2010 to 215,468 persons in 2020 and to 259,696 persons in 2030. That would be an increase of 47,436 persons between 2010 and 2020, and an increase of 91,664 between 2010 and 2030. The 1,961 persons would be 4.1 percent of the 47,436 persons and 2.14 percent of the 91,664 persons. This increase is not substantial and is consistent with applicable SCAG RCPG.

Table 5.9-5 (Cont.): RCPG Consistency of the Proposed Project

Area of Analysis	Statement	Consistency Analysis
Standard of Living	SCAG shall support local jurisdictions actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.	The applicant is working directly with the City of Lancaster to ensure that all appropriate regulations are met and the project can be moved through the permitting process in an timely manner. Thus, the project is consistent with this policy.
Quality of Life	SCAG shall support provisions and incentives created by local jurisdictions to attract housing growth in job rich subregions and job growth in housing rich subregions.	The proposed project provides homes and no jobs and contributes to an inadequate jobs/housing ratio within the City. It is therefore inconsistent with this objective.
	SCAG shall encourage development in locations least likely to cause adverse environmental impact.	As outlined in Section 6 of this EIR, there are impacts related to Aesthetics, Air Quality, Land Use, Water Service, and Traffic that are significant and unavoidable. The project is inconsistent with this RCPG policy.
	SCAG shall encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.	The analysis and mitigation measures contained in Section 5.5, Cultural Resources, fulfill this policy, thus the proposed project is consistent.
	SCAG shall discourage the development, or encourage the use of special design requirements in areas with steep SCAG shall encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage and to develop emergency response plans.	The analysis and mitigation measures contained in Section 5.6, Geology and Soils, and Section 5.8, Hydrology and Water Quality, fulfill this RCPG policy, thus the proposed project is consistent. The analysis and mitigation measures contained in Section 5.10, Noise; Section 5.4, Biological Resources; and Section 5.6, Geology and Soils fulfill this policy, thus the proposed project is consistent.

Table 5.9-5 (Cont.): RCPG Consistency of the Proposed Project

Area of Analysis	Statement	Consistency Analysis
	SCAG shall encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment (RHNA).	The proposed project involves the development of 160 acres of now vacant land with 650 single-family dwellings and would increase the supply of housing in the area. As discussed in Section 5.11, Population and Housing, the project site is not designated to include Low Income Housing Tax Credits or other characteristics that would indicate that low-income of below-market housing is an element of the project. Therefore, the proposed project is consistent with this RCPG policy.
Social, Political, and Cultural Equity	SCAG shall support local jurisdiction and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.	The developer would provide a 6 acre turn-key park to the City of Lancaster (Mitigation Measure P-1); and pay the appropriate school impact fees (Mitigation Measure S-1). As discussed in Section 5.12, Public Services, the members of this proposed residential community would also have access to law enforcement and fire protection should these services be necessary. Therefore, the project is consistent.
Air Quality	The region shall be subject to ambient air quality standards set by both the federal Environmental Protection Agency and the California Air Resources Board.	The project creates significant unavoidable impacts related to regulations of applicable air quality standards. Therefore, the project is inconsistent.
Conservation/ Open Space	SCAG shall encourage local jurisdictions in their efforts to minimize potentially hazardous developments in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire and other known hazards, and areas with limited access for emergency equipment.	As discussed in Section 5.6, Geology and Soils, there are no natural slopes nearby that pose a hazard to the proposed project. The project site is relatively flat and is not contained in a hillside or canyon. Additionally, the analysis and mitigation measures contained in Section 5.6 and Section 5.8, Hydrology and Water Quality reduce impacts to the project from flooding, earthquakes and other known hazards to less than significant. As discussed in Section 5.12, Public Services, emergency vehicles and equipment will be able to easily access the project site. Therefore, the proposed project is consistent with this objective.
Source: Southern California Association of Governments, Regional Comprehensive Plan and Guide, 1996 Version.		

Although the proposed project is consistent with most of the applicable goals outlined in the RCPG, it is not consistent with two goals that fall under the category of "quality of life" and the goal related to

air quality. Although, the character of the proposed project is similar to the adjacent development to the east and consistent with the development occurring throughout the west side of the City, within the urban boundary, the project is inconsistent with the RCPG and therefore the project specific impacts are considered potentially significant.

Destination 2030: 2004 Regional Transportation Plan (RTP). An analysis of this project's consistency with the Regional Transportation Plan is contained below in Table 5.9-6.

Table 5.9-6: RTP Consistency of the Proposed Project

Goal	Consistency Analysis
Maximize mobility and accessibility for all people and goods in the Region.	The proposed project consists of a maze of streets and would add to congestion on SR 14 even after mitigation (Section 5.13, Transportation and Traffic). It does not maximize mobility nor does it increase accessibility. Therefore the project is inconsistent with this goal.
Ensure travel safety and reliability for all people and goods in the Region.	The streets associated with this proposed project would meet the required safety standards and it is therefore consistent with this goal.
Preserve and ensure a sustainable regional transportation system.	The proposed project's impact to SR 14 is significant and unavoidable and thus, the project is inconsistent with this goal.
Maximize the productivity of [the regional] transportation system.	The proposed project would contribute to congestion in the area and would therefore not maximize productivity; it is inconsistent with this goal.
Protect the environment, improve air quality, and promote energy efficiency.	There are significant and unavoidable impacts to air quality associated with the proposed project. The project perpetuates a pattern of subdivisions with a maze of streets, perimeter walls and auto dependency. It does not promote energy efficiency and is therefore inconsistent with this goal.
Encourage land-use and growth patterns that complement [regional] transportation investments.	The proposed project would add a residential development away from the center of town and promote individual auto use. It is inconsistent with this goal.
Source: Southern California Association of Governments, Destination 2030: Regional Transportation Plan	

The proposed project is inconsistent with the goals and polices of the General Plan, the SCAG Compass Vision Growth Plan, the Regional Comprehensive Plan and Guide, and the Regional Transportation Plan, and therefore, the project specific impacts are considered potentially significant.

5.9.5 Cumulative Impacts

The character of the proposed project is similar to the adjacent development to the east and consistent with the development occurring throughout the west side of the City, within the urban boundary. Single-family residential developments consisting of 7,000-square-foot lots are the dominant type of new development extending from the proposed project site south to Avenue N and east to Highway 14. The proposed project reflects a pattern of enclosed, highly auto-dependent residential subdivisions lacking parks and open spaces that respond to General Plan goals and objectives in a manner similar to the proposed project. The proposed project, together with the other similar project proposed in this area, would continue to spread and intensify the conflict with General Plan policies. For the above reasons, the proposed project is not consistent with various policies and goals of the SCAG Compass Vision Growth Plan, the Regional Comprehensive Plan and Guide, nor the Regional Transportation Plan. This project, together with other similar projects, would add to the conflict associated with these specific goals and objectives. This is a significant impact relating to land use planning.

5.9.6 Mitigation Measures

No mitigation measures for project or cumulative impacts are proposed other than the selection of an alternate project design. Selection of an alternate project design is not a mitigation measure for the proposed project. Therefore, no mitigation measures are available to reduce impacts.

Level of Significance After Mitigation

Project and cumulative impacts related to inconsistency with General Plan Goals 1, 2, 17, 18, 19, and 20; Objectives 1.3, 1.7, 3.1, 3.2, 3.3, 3.5, 3.8, 14.2, 14.4, 16.1, 17.1, 18.1, 19.1, and 19.2; and Policy 18.2.1; would remain significant. Also, the proposed project is not consistent with the Southern California Association of Governments (SCAG) Compass Vision Growth Plan, and various goals of the Regional Transportation Plan, and with two of the above policies related to quality of life outlined in the SCAG Regional Comprehensive Plan and Guide.

5.10 NOISE

This section addresses the potential for significant effects related to noise and provides an analytical methodology and parameters used for noise modeling and an evaluation of the noise levels in relation to the City of Lancaster land use compatibility noise standards.

This discussion is based upon an Acoustical Analysis Report prepared by MBA and dated October 2006 and a letter report dated February 28, 2007 prepared by ROMA ENVIRONMENTAL that contains an on-site noise measurement, both of which are contained in Appendix J.

5.10.1 Introduction

Noise is defined as unwanted or objectionable sound. The effect of noise on people can include general annoyance, interference with speech communication, sleep disturbance and, in the extreme, hearing impairment. The unit of measurement used to describe a noise level is the decibel (dB). The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, the "A-weighted" noise scale, which weighs the frequencies to which humans are sensitive, is used for measurements. Noise levels using A-weighted measurements are written dBA. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as doubling a traffic volume, would increase the noise level by 3 dBA; a halving of the energy would result in a 3-dBA decrease.

Noise levels can be further refined into Community Noise Equivalent Level (CNEL), where noise that occurs during certain hours of the evening and night are weighted (penalized) because they are considered subjectively more annoying during these time periods. CNEL is a 24-hour weighted average measure that adds 5 dBA to the average hourly noise levels between 7 p.m. and 10 p.m. (evening hours) and 10 dBA to the average hourly noise levels between 10 p.m. and 7 a.m. (nighttime hours). This weighting accounts for the increased human sensitivity to noise in the evening and nighttime hours.

L_{eq}, or noise equivalent level is another means of characterizing noise over a certain time period. L_{eq} is equal to the energy averaged noise level over the stated time period. Thus, an hourly L_{eq} would average the many peak noise events during the measured hour and provide a value representing a constant noise level during the hour.

Sensitive receptors are places where humans are participating in activities that may be subject to the stress of significant interference from noise. Land uses associated with sensitive receptors include

residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, school, daycare facilities, churches, and libraries. Other receptors include office and industrial buildings, which are not considered sensitive receptors, but are still required to meet local land use compatibility standards for noise levels.

5.10.2 Existing Conditions

State of California Standards

Table 5.10-1 is a land use compatibility chart for community noise prepared by the former California Office of Noise Control and contained in the 1998 State California General Plan Guidelines. The updated 2003 California State General Plan Guidelines do not include noise and land use compatibility standards and recommend that Caltrans noise standards for airports and roadways be used. Table 5.10-1 adequately reflects the Caltrans noise standards and identify normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses. A conditionally acceptable designation implies new construction or that development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use is made and needed noise insulation features are incorporated in the design. By comparison, a normally acceptable designation indicates that standard construction can occur with no special noise reduction requirements.

City of Lancaster Noise Standards

The City of Lancaster Municipal Code section 8.24 Noise Regulations prohibits construction activities within 500 feet of an occupied dwelling between the hours of 8 pm and sunrise Monday through Saturday. Additionally, City standards include a maximum exterior noise level for residential of 65dBA CNEL and a maximum interior noise level of 45 dBA CNEL.

Table 5.10-1: Noise/Land Use Compatibility Matrix

Community Noise Exposure (CNEL or L_{dn} [dBA])							
LAND USES	55	60	65	70	75	80
Residential [1]	A					
		B				
				C		
					D	
Transient Lodging: Hotels, Motels	A					
		B				
				C		
						D
Schools, Libraries, Churches, Hospitals, Nursing Homes	A					
		B				
				C		
						D
Auditoriums, Concert Halls, Amphitheaters [2]	B					
				D		
Sports Arenas, Outdoor Spectator Sports [2]	B					
					D	
Playgrounds, Parks	A					
				C		
					D	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	A					
				C		
						D
Office Buildings, Business Commercial, and Professional	A					
			B			
					C	
Industrial, Manufacturing, Utilities, Agriculture	A					
				B		
						C

Notes:

[1] For aircraft-related noise, the maximum acceptable exposure for new residential development is 60 dB CNEL.

[2] No normally acceptable condition is defined for these uses. Noise studies are required prior to approval.

A. Normally Acceptable. Specified land use is satisfactory, based upon the assumption that any buildings involved meet conventional Title 24 construction standards. No special noise insulation requirements.

B. Conditionally Acceptable. New construction or development shall be undertaken only after a detailed analysis is made and noise reduction measures are identified and included in project design.

C. Normally Unacceptable. New construction or development is discouraged. If new construction is proposed, a detailed analysis is required, noise reduction measures must be identified, and noise insulation features included in the design.

D. Clearly Unacceptable. New construction or development clearly should not be undertaken.

Source: Modified from 1998 State of California General Plan Guidelines

Existing Noise Levels

The project site is currently vacant land. To the north of the site is a ranch house and open space. To the east of the site is a residential subdivision similar to the proposed project. To the south and west of the site, there is vacant farmland. The California State Prison, Los Angeles County and the Mira Loma Detention Facility are located approximately 0.50 mile to the northeast of the site. In response to the NOP, prison officials commented that residents in the area have complained about the noise

from the firing range. The Bohunk Airpark is located 1.5 miles to the northwest. This is a private airfield and there are currently no aircraft based there. Located 4 miles to the northeast is the General William J Fox Airfield. Intermittent aircraft over flights can be expected throughout the area. However, the project site is not within the arrival or departure paths for the Fox Field Airport, and noise events are not expected to be significant. Avenue J on the north and 70th Street West on the west of the project site are two lane roads. Avenue J has a posted speed limit of 55 mph and is an east-west thoroughfare. Peak-hour traffic volumes on the segment of J Street adjacent to the site range between 85 and 152 vehicles.[1] 65th Street West is a three-lane road with turn pockets at the intersection of Avenue J and the entrance to the adjoining subdivision. According to the Traffic Study, morning peak-hour traffic volume on the segment of 65th Street West adjacent to the project site includes 38 vehicles traveling south and 82 vehicles traveling north for a total of 120 vehicles. Evening peak-hour traffic includes 40 vehicles traveling south and 26 vehicles traveling north for a total of 66 vehicles.[2] Existing traffic noise levels in and near the project site are provided in Table 5.10-2.

Table 5.10-2: Existing CNEL Noise Levels

Street-Segment	Existing Noise Levels
70th Street West: between Avenue J and Avenue K	58.4
65th Street West: between Avenue J and Avenue J-8	55.1
65th Street West: between Avenue J-8 and Avenue K	56.3
60th Street West: between Avenue J and Avenue J-8	60.1
60th Street West: between Avenue J-8 and Avenue K	59.3
30th Street West: between Avenue J and Avenue K	61.0
25th Street West: between Avenue J and Avenue K	61.5
West Avenue K: between 70th and 60th Street West	53.7
West Avenue K: between 60th and 20th Street West	62.8
West Avenue J: between 70th and 60th Street West	58.6
West Avenue J: between 60th and 30th Street West	58.2
West Avenue J: between 30th and 25th Street West	62.1
West Avenue J: between 25th Street West and SR-14	64.9
Modeled at 80 feet from roadway centerline Modeled noise levels included existing walls at residential units along 30th Street, Avenue K and Avenue J8 west of 30th Street. Source: Michael Brandman Associates, 2006	

One fifteen-minute noise measurement was taken 15 feet from the edge of pavement at the southwest corner of Avenue J and 65th Street West. Dominant noise at the Avenue J location was caused by

[1] Meyer, Mohaddes Associates, City of Lancaster CPA 04-05 (Group C - Development C-1) Traffic Impact Study, July 2007.

[2] Ibid

traffic. Twenty autos, two medium trucks, one heavy truck, and one high-flying aircraft passed this location during the 15-minute period. There was a strong breeze at this location. The L_{max} was 92.6 dBA and the L_{min} was 32.6 dBA. The average 15-minute L_{eq} was estimated to be 61.26 dBA.

Sensitive Receptors

Sensitive receptors in the vicinity of the project site include existing residential units to the east, and the proposed residential units within the project site during the phased construction would also be considered sensitive receptors.

City of Lancaster General Plan

The General Plan document of City of Lancaster includes a section entitled Plan for Health and Safety that includes the following Noise Compatible Land Use Objective.

4.3 Promote noise compatible land use relation ships by implementing the noise standards identified in Table III-1 to be utilized for design purposes in new development and establishing a program to attenuate existing noise problems.

This objective promotes noise compatible land use by implementing noise standards for design purposes in new development. An analysis of the project's consistency with the above objective is contained in section 5.9, Land Use and Planning

5.10.3 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant noise impact if it would result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- A substantial increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

For purposes of this analysis, the City of Lancaster's Noise Compatible Land Use Objectives from Table III-1 in City of Lancaster Plan for Health and Safety, which is contained in the 2020 General Plan, were used to judge the significance of noise impacts.

5.10.4 Project Impacts

The generation of noise associated with the proposed project would occur over the short-term for site preparation and construction activities to implement the proposed project. In addition, noise would result from the long-term operation of the project that is due to additional vehicle traffic. Both short-term and long-term noise impacts associated with the project are examined in this analysis.

Short-Term, Construction-Related Impacts

Development of the proposed project would require site preparation (e.g., land clearing, grading, excavation, and trenching) and construction of the buildings and infrastructure. These activities typically involve the use of heavy equipment, such as graders, backhoes, and cranes. Trucks would be used to deliver equipment and building materials, and to haul away waste materials. Smaller equipment such as air compressors, pneumatic tools, plate compactors, and concrete vibrators would also be used throughout the project site during its development. This equipment would generate noise that would be heard both on and off the project site. Table 5.10-3 lists typical construction equipment noise levels for equipment that would be used during construction of the proposed project. Construction activities are carried out in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise levels surrounding the construction site as work progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow noise ranges to be categorized by work phase.

Table 5.10-3: Noise Associated with Typical Construction Equipment

Type of Equipment	Maximum Noise Levels for One Piece of Equipment (dBA at 50 feet)	Construction Phase
Grader	89	Grading and Site Preparation
Backhoe	90	Grading and Site Preparation
Pneumatic Tools	88	Framing
Air Compressor	86	Framing
Crane	83	Framing
Plate Compactor	89	Grading and Site Preparation
Concrete Vibrator	85	Foundation
Trucks	87	All
Source: Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, Bolt, Beranek and Newman, 1971.		

The grading and site preparation phase tends to create the highest noise levels, because the noisiest construction equipment is found in the earthmoving equipment category. This category includes excavating machinery (backhoes) and earthmoving and compacting equipment (graders compactors etc.). Typical operating cycles may involve 1 or 2 minutes of full power operation producing noise levels similar to those shown in Table 5.10-3, followed by 3 or 4 minutes of lower power settings. Combined instantaneous noise levels at 50 feet from earthmoving equipment range from 73 to 96 dBA while combined hourly L_{eq} noise levels range up to about 89 dBA.

The nearest residential area that is subject to potential construction noise impacts are homes immediately east, across 65th Street West and any homes on the site that are built in the earlier phases of the project. Maximum 1-hour construction noise is estimated to reach 89 dBA L_{eq} at the fence line of the project site. Therefore, noise levels would be 30 to 40 dBA CNEL, lower during the majority of the construction period, due to lower power settings. The homes across 65th Street West would experience lower noise levels caused by the distance across the roadway and the perimeter wall that would be expected to attenuate noise by 7 db. The 24-hour average construction noise is estimated to reach 75.1 dBA CNEL. Therefore, impacts from construction noise are potentially significant.

Another potential noise impact resulting from construction of the proposed project is groundborne vibrations. Perceptible groundborne vibrations are typically associated with blasting operations and, potentially, the use of piledrivers, neither of which would be used during construction of the proposed project. As such, no excessive groundborne vibration would be created by the proposed project and, therefore, impacts from project-generated groundborne vibrations are less than significant.

Long-Term Operational Impacts

On-site Impacts

An impact may be significant if the project sites a land use (e.g., residential) in an incompatible area caused by excessive noise. The City has set a desirable daytime level of 65 dBA CNEL for residences. Based on the future (Buildout Year 2012) traffic volumes identified in Section 5.13, noise levels were calculated along the existing and future streets adjacent to the project site. These streets include Avenue J, Avenue J-8, 70 Street West and 65th Street West. Noise levels from vehicle traffic were modeled (see Appendix J-1) and are presented in Table 5.10-4. Residences on the perimeter of the site would be exposed to future year 2012 vehicular noise that range between 60.4 and 61.1 dBA CNEL.[3] (Please note that the noise measurement data of 61.2 dBA is a 15-minute L_{eq} measurement, and this figure is a day long CNEL measurement.) Residences that abut 70th Street West would be exposed to noise levels of 60.7 dBA, those which abut Avenue J would be exposed to noise levels of 61.1 dBA, and those which abut 65th Street West would be exposed to noise levels of 60.4 dBA. Avenue J-8 to the south of the project would experience very low traffic volumes and, thus, very low noise. These levels are below the City of Lancaster threshold of 65 dBA CNEL, and, therefore, impacts are less than significant.

Similarly, indoor noise levels on the project site would be below the City's standard of 45 dBA. Standard construction, as required by the Uniform Building Code and Title 24 of the California Code of Regulations, typically provide a 20-dB noise reduction. Therefore, homes with outdoor noise levels that do not exceed 65 dB CNEL would have indoor noise levels that do not exceed 45 dB CNEL.

Some residents of the proposed project may be able to hear the distant sound from the firing range at the California State Prison. The firing range is used every Wednesday from approximately 6 a.m. to 4 p.m. and on three other days scattered throughout the month. All firearms used on the range are pistols. The firing range is located at the extreme southwest corner of the Prison property, but it is nevertheless more than 0.25 mile from the closest point to the proposed project. Noise complaints have been received from residents directly across Avenue J near the intersection of Avenue 60th West. No complaints have been received from residents near 65th Street West, which is near the proposed project site.[4] Accordingly, noise from the Prison firing range is not expected to be a significant impact. Nevertheless, mitigation is provided to assure that future residents are aware of the noise from the firing range.

[3] CNEL is a day-long measure. Existing measurement used Leq for a 15-minute period.

[4] Telephone conversation, Lt. Mallet, Training Officer, California State Prison, April 23, 2007 with Kenneth Dalena.

Off-site Impacts

Table 5.10-4 also shows future noise levels along the roadway segments analyzed in the Traffic Study and in Section 5.13. The only segments modeled for noise are those for which there is traffic data. Noise levels in all locations are below 65 dBA CNEL, except at Avenue J between 25th Street West and State Route 14 (SR-14) and Avenue K between 60th and 20th Streets. This is a long street segment that was analyzed in the traffic report. However, the project's contribution to these noise levels is less than 1.3 dBA. This level of increase that is due to the project is imperceptible to the general public but might be barely perceptible to people with highly sensitive hearing. This level of increase is not a significant impact.

Table 5.10-4: Existing and Future Year 2012 CNEL Noise Impacts

Street-Segment	Existing	Future-No Project	Future-With Project	Change from Existing	Change from Future with No Project
70th Street West: between Avenue J and Avenue K	58.4	59.6	60.7	2.3	1.10
65th Street West: between Avenue J and Avenue J-8	55.1	55.6	60.4	5.3	4.8
65th Street West: between Avenue J-8 and Avenue K	56.3	56.8	61.8	5.5	5.0
60th Street West: between Avenue J and Avenue J-8	60.1	61.6	61.8	1.7	0.2
60th Street West: between Avenue J-8 and Avenue K	59.3	61.4	61.9	2.6	0.4
30th Street West: between Avenue J and Avenue K	61.0	63.9	64.2	3.2	0.3
25th Street West: between Avenue J and Avenue K	61.5	63.6	63.9	2.4	0.2
West Avenue K: between 70th and 60th Street West	53.7	61.2	64.7	11.0	3.4
West Avenue K: between 60th and 20th Street West	62.8	65.4	66.6	3.7	1.2
West Avenue J: between 70th and 60th Street West	58.6	59.8	61.1	2.5	1.3
West Avenue J: between 60th and 30th Street West	58.2	61.7	62.8	4.6	1.1
West Avenue J: between 30th and 25th Street West	62.1	65.1	65.4	3.30	0.30
West Avenue J: between 25th Street West and SR-14	64.9	66.2	66.3	1.40	0.10

Notes:
Modeled at 80 feet from roadway centerline
Modeled noise levels included existing walls at residential units along 30th Street, Avenue K and Avenue J8 west of 30th Street, and are consistent with the noise measurement data.
Source: Michael Brandman Associates, 2006

5.10.5 Cumulative Impacts

On-site Impacts

Implementation of the proposed project and future developments in the project vicinity would result in vehicular traffic noise levels that are evaluated in Section 5.10.3. As discussed, future (Year 2012) traffic noise levels generated from the proposed project and other developments in the project vicinity would not result in significant noise levels affecting the project residences.

Off-site Impacts

Table 5.10-4 shows project contribution to noise levels for the year 2012. As discussed, the project would not contribute to a significant cumulative impact at any of the analyzed segments. Construction noise is temporary and by definition does not contribute to cumulative impacts.

5.10.6 Mitigation Measures

Mitigation measures N-1 through N-4 that follow are required in order to reduce potential construction-related noise. Mitigation measure N-5 addresses potential operational noise associated with proximity to the California State Prison firing range.

N-1 During all project site excavation and grading activities, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufactures standards.

N-2 When construction operations occur in proximity to occupied residential areas, appropriate additional noise reduction measures shall be implemented, including (1) changing the location of stationary construction equipment to maximize the distance between stationary equipment and occupied residential areas, (2) installing muffling devices on equipment, (3) shutting off idling equipment, (4) notifying adjacent residences in advance of construction, and (5) installing temporary acoustic barriers around stationary construction noise sources.

N-3 The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise and the noise-sensitive receptors during all project construction.

N-4 During all construction activities, the construction contractor shall limit all construction-related activities to between 7:00 a.m. and 7:00 p.m., Monday through Saturday, in accordance with Ordinance 8.24.040. No construction shall be allowed on Sundays and public holidays.

N-5 A notice shall be placed on the Final Subdivision Public Report noting the location of the California State Prison and the potential for noise impacts from the firing range.

5.10.7 Level of Significance After Mitigation

Implementation of the above mitigation measures would reduce potential short-term noise impacts to less than significant. Mufflers on construction equipment can reduce noise by 5 to 10 dB, and the daytime hours of operation place noise events during hours that do not receive either evening (3 dB) or nighttime (10 dB) penalties in the CNEL methodology. Long-term operational noise impacts are less than significant.

5.11 POPULATION AND HOUSING

5.11.1 Introduction

This section examines the potential implications of the proposed project stemming from changes in population and housing supply and the relationship of the proposed project to regional growth policies of the Southern California Association of Governments (SCAG). The potential impacts of the proposed project have been evaluated in the context of the relationship between growth associated with the project and overall projected growth in the region.

5.11.2 Existing Conditions

The project site is located at the edge of the urbanizing western portion of the City. The project site and the surrounding land to the west, north, and south are generally open with few structures and may have been used for farming and grazing in the mid-20th century. Directly to the east, there is a residential subdivision, and beyond that to the east and southeast there are many residential developments similar to the proposed project, that is, single-family dwelling units on 7,000-square-foot lots.

Population Trends and Forecasts

The City of Lancaster grew from a population of 97,291 and 32,901 housing units in 1990, to 118,718 persons and 41,745 housing units in 2000. The U.S. Census estimates that the 2005 population was 135,225 with 43,889 dwelling units. The California Department of Finance estimates the 2005 population at 132,951 and the 2006 population at 138,392[1].

Growth forecasts developed by SCAG indicate that the City's population will grow to 168,032 in 2010, 191,912 in 2020, and 259,696 in 2030. SCAG forecasts dwelling units will grow to 51,418 in 2010, 58,980 in 2020, and 81,403 in 2030.

Regional Planning Policy

The SCAG Regional Comprehensive Plan and Guide (RCPG) presents the region's forecasts and policies for dealing with anticipated growth including population, housing, and employment throughout Southern California. Growth projections contained in the RCPG are based on a compilation of County and local projections. RCPG forecasts are then used in the formulation of regional plans dealing with regional air quality, housing, transportation/circulation, and other

[1] California Department of Finance, http://www.dof.CA.gov/HTML/DEMOGRAP/Reports/Estimates/El/documents/E-1table.xls, Accessed May 22, 2007.

infrastructure issues. Further analysis of these policies is contained in Section 5.9, Land Use and Planning.

Regional Planning Policy - Housing Affordability

State law mandates that local communities provide for their portion of the regional demand for housing units. The number of units to be accommodated, or a local jurisdiction's portion of the regional demand, is determined by SCAG. If the number of units or number of units affordable to distinct income groups were not met or justified and the existing conditions were exacerbated by the proposed project, the project typically would be considered regionally significant. SCAG provides this guidance in its Regional Housing Needs Assessment (RHNA).

According to a SCAG document titled, Housing Element Compliance and Building Permit Issuance in the SCAG Region, dated April 2006, the City of Lancaster approved a Housing Element on June 6, 2001, which addressed low-income housing requirements that was reviewed by SCAG on September 21, 2001. The construction need for low- and moderate-income housing, established by the RHNA and adopted by SCAG for the period of 1998–2005 for the City of Lancaster, indicates a requirement to construct 7,205 residential units, of which 1,609 would be for Very Low Income, 1,241 would be Low Income, 1,681 would be Moderate Income, and 2,075 would be Above Moderate Income.[2]

5.11.3 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed project would potentially have a significant impact on population and housing if it would:

- Induce substantial population growth in an area, either directly or indirectly.

5.11.4 Project Impacts

Population Growth

The proposed project would result in a direct increase in population and housing within the City of Lancaster. The proposed project includes a General Plan Amendment to change land designation to Urban Residential and a zone change to change the permitted density.

The proposed project would result in an increase in the population on the site by approximately 1,961 persons. The 1,961 persons would be 8.2 percent of the 23,880 growth in population forecast by SCAG for the City between the years 2010 and 2020. The proposed project would increase the

[2] Southern California Association of Governments Regional Housing Needs Assessment, http://api.ucla.edu/RHNA /Regional Housing Needs Assessment/Final Numbers/Frame.htm, accessed May 22, 2007.

dwelling units by 586 above the existing General Plan and zoning allocation for the project site, which would represent 7.7 percent of the total 7,562 new residential units forecast by SCAG for the City between the years 2010 and 2020. The project would represent 8.54% of the total 7,562 new residential units forecast by SCAG. While the project's share of total new growth projected within the City may be considered significant, these increases are within the totals identified in SCAG's adopted forecasts. Therefore, project impacts regarding direct population increases are considered less than significant. The City of Lancaster has approved but has not constructed housing—equivalent to the SCAG forecasts for 2010.[3] However, this project would not be completed before that time.

While the proposed project's share of total new growth projected within the City may be considered significant, these increases are within the totals identified in adopted forecasts, and are not inconsistent with applicable SCAG forecasts. Therefore, project impacts regarding direct population increases are considered less than significant.

Regional Planning Policy - Housing Affordability

The proposed project is not slated to include Low Income Housing Tax Credits or other characteristics that would indicate that low-income or below-market housing is an element of the project. However, the City of Lancaster is meeting its goals for affordable housing for working families through the development of multi-family units and the rehabilitation of existing housing.[4] Accordingly, impacts related to housing affordability are less than significant.

5.11.5 Cumulative Impacts

The proposed projects listed in the Environment Setting of the EIR total 8,883 dwelling units. At 3.11 persons per dwelling unit, that would create an additional population of 27,627. That would be 55 percent of the SCAG Forecast population increase of 49,869 between the years 2005 and 2020. The projected population increases are within the boundaries of SCAG's forecasts. Cumulative impacts would be less than significant.

5.11.6 Mitigation Measures

No mitigation measures are necessary.

[3] Southern California Association of Governments Regional Housing Needs Assessment, January 2007.

[4] Telephone conversation, Brubaker, Elizabeth. Director of Housing and Neighborhood Rehabilitation, City of Lancaster, October 9, 2006.

5.11.7 Level of Significance After Mitigation

The proposed project impact on population and housing is considered less than significant.

5.12 PUBLIC SERVICES AND UTILITIES

5.12.1 Police Service

Existing Conditions

The City of Lancaster contracts with the Los Angeles County Sheriff's Department (LACSD) for police services. The project site is located within LACSD's service area and receives police protection per the City's contract with LACSD. Currently the City of Lancaster and nearby Los Angeles County area is served by 220 sworn and approximately 60 civilian LACSD personnel.[1] The City of Lancaster has a population of approximately 138,400 people[2]. The surrounding Los Angeles County area is estimated to include 40,000 people that are served by the Lancaster Sheriff's station.[3] Thus, the current ratio of sworn officers to residents is approximately 1 officer for every 811 residents. The City of Lancaster has hired 15 Community Service Officers that are used for more routine calls, in order to free up uniformed deputies for emergency and priority calls. Response times for the City are shown on Table 5.12-1.

The sheriff's station is located at 501 West Lancaster Boulevard, approximately seven miles from the project site. There is also a Sheriff's sub-station located at 50th Street West and Avenue M. The projected average response time to an emergency call for service within the project vicinity is approximately 5.3 minutes and 14 minutes for priority calls.[4] The City continually monitors its policing needs and adjusts its contract with the LACSD to provide the level of service needed for the expanding population. Pursuant to the Lancaster Municipal Code Section 15.64.136, the proposed project would be subject to a Sheriff's Sub-station Facilities Fee to finance the acquisition of land and construction of facilities for Sheriff's Sub-stations. However, no new Sheriff's sub-stations are planned at this time.[5]

Crime statistics for the City indicate that in 2006 there were 6,347 major crimes including homicide, rape, robbery, assault, burglary, larceny/theft, automobile theft, and arson. Based on the population used by the Sherriff's Department of 134,027, approximately 1 major crime per every 21 persons occurs. Crime statistics are not released by the Sheriff's Department for individual reporting districts.[6]

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1 Telephone conversation, Lt. Gordan Carn, LACSD, July 24, 2006.
2 California Department of Finance estimate, January 2006.
3 Telephone conversation, Lt. Gordan Carn, LACSD, July 24, 2006.
4 Telephone conversation, Lt. Gordan Carn, LACSD, July 24, 2006.
5 Telephone conversation, Mark Bozigian, Asst. City Manager, City of Lancaster, July 27, 2006.
6 E-mail, Lt. Gordan Carn LACSD, February 20, 2007.

Table 5.12-1: Lancaster Station City Response Times

	2005 EM	2005 PR	2005 RT	2006 EM	2006 PR	2006 RT
January	5.7	13.6	89.4	5.0	14.9	78.6
February	5.1	14.4	95.2	5.0	14.8	79.8
March	5.2	14.3	96.9	5.8	14.4	89.7
April	5.6	13.7	86.7	4.8	15.3	101.5
May	5.8	15.8	102.8	5.7	15.8	90.2
June	5.6	15.3	100.4	5.2	15.5	81.1
July	5.1	16.0	101.7	6.4	15.0	83.3
August	5.0	15.2	93.0	5.7	14.6	91.7
September	5.5	15.2	108.8	5.4	14.6	78.1
October	5.5	15.8	97.2	5.7	15.5	75.5
November	5.4	14.4	101.2	5.9	15.9	79.5
December	5.2	16.4	93.9	4.9	13.7	67.2
Yearly Average	**5.4**	**15.0**	**97.3**	**5.5**	**15.0**	**83.0**

EM = Emergency PR = Priority RT = Routine
Source: Email, Lt. Gordon Carn, Los Angeles County Sherriff's Department, February 20, 2007.

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a significant impact would occur to police services if the proposed project would:

- 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.

Project Impacts

The number of service calls would increase due to the population increase caused by the proposed project. The service calls expected to be created would be typical to suburban areas and are likely to include vandalism, theft, and domestic disputes. The proposed project would increase the population on the project site by approximately 1,961 residents thus creating the need for approximately three additional sheriff's officers if the current officer/resident ratio is maintained. Response times to the project site for emergency calls are not expected to exceed current calls for emergency service in the vicinity. No new Sheriff's facilities are anticipated to be built in the area. All expanded services would be provided from existing facilities. Therefore, the proposed project would not result in new

or physically altered governmental facilities and there would be no impact related to new construction.

Cumulative Impacts

Future growth from residential subdivisions contained in the related projects totals approximately 8,883 residential units. Using 3.11 persons per dwelling unit (du) and one sheriff's employee per 811 population yields a cumulative need for 34 new police personnel. These 34 new employees represent a 12.1 percent increase over the existing 280 personnel. However, additional patrol services would be provided from existing stations and no new governmental facilities are contemplated to provide police services. Therefore, in relation to the threshold of significance, there would be no cumulative environmental effects related to construction of new police facilities.

Mitigation Measures

No measures are required.

Level of Significance After Mitigation

Implementation of the proposed project would not result in significant impacts to police protection services.

5.12.2 Fire Services

Existing Conditions

The Los Angeles County Fire Department (LACFD) provides fire protection and emergency medical response services to the City of Lancaster. Battalion 11 maintains seven fire stations within the City limits. The project site would be served by three existing fire stations. These stations are located at 50th Street West and Avenue L-14 (#84), Avenue K-8 and 25th Street West (#134) and Avenue J and 40th Street West (#130). Each of these three stations are within 2.6 to 4.0 miles from the project site. Although the project site is located solely in the jurisdiction of Station 130, the other two stations would respond if necessary.[7] Station 84 is served by one engine and both a squad and a patrol with one captain/officer.[8] Station 134 has one engine, one squad, and one captain/officer. Station 130 is the largest of the three. It has two captains/officers, one engine, and one Search and Rescue Vehicle. Station 130 estimated the average response time to the project site to be two minutes but that could vary as a result of traffic conditions and emergency situations.[9] In accordance with Section 15.76 of the City of Lancaster Municipal Code, a Fire Protection fee is collected from all applicants prior to

[7] Telephone conversation, Captain Matthews, Los Angeles County Fire Department, July 23, 2007.

[8] Email, Los Angeles County Fire Department, July 17, 2007.

[9] Telephone conversation, Captain Estrella, Los Angeles County Fire Department, July 23, 2007.

the issuance of building permits. Such fees are adjusted annually to reflect the costs and needs of the City. However, no new fire stations are in the planning stages at this time.

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a significant impact would occur to fire services if the proposed project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire services.

Project Impacts

The proposed project would add 650 dwelling units and increase the population on the project site by approximately 1,961 individuals creating the need for additional fire protection and emergency services. The existing fire stations near the project site would provide adequate service to the proposed project. Each year the City of Lancaster reviews its fire protection needs and plans for new facilities. As new developments come on-line, additional fire stations are constructed. However, no new fire stations are planned at this time, and the proposed project would not create the need for an additional fire station. Therefore, impacts in relation to the threshold of significance regarding the construction of new facilities are less than significant.

Cumulative Impacts

The related projects used in the cumulative analysis include 8,883 dwelling units; new fire stations would be required, the construction of which could create significant environmental impacts. However, these new stations would be subject to additional environmental review and would have appropriate mitigation measures. Accordingly, cumulative impacts related to adverse physical impacts to new or physically altered fire stations would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts with respect to fire protection services would be less than significant.

5.12.3 Water Services

This discussion is based upon an Water Supply Assessment (WSA) prepared by Los Angeles County Waterworks District No. 40, Antelope Valley and dated October 2, 2007 which is contained in Appendix H.

Existing Conditions

The Los Angeles County Water Works District No. 40 (District) provides water service to a large portion of the City of Lancaster and would provide water service to the proposed project. However, the project site is not currently within the District and must be annexed before the District can provide service. The District estimates that each residential unit within its boundaries uses 1,500 gallons of water per day.[10] Water service to the project site would be through existing water mains along the eastern project boundary on 65th Street West and along the northern boundary on Avenue J.

The District receives water from the State Water Project (SWP) through the Antelope Valley-East Kern Water Agency (AVEK) and draws water from groundwater wells. These water supply sources are discussed in more detail below.

AVEK, the third largest contracting agency, has a current contractual Table A Amount of 141,400 acre-feet annually (afa). This volume includes both agricultural and municipal/industrial SWP water, which AVEK distributes to municipal/industrial retailers such as the District, Rosamond Community Services District (RCSD), and Quartz Hill Water District (QHWD), among other water purveyors. Table 5.12-2 provides a summary of recent water volumes imported from AVEK to the District.

Table 5.12-2: District No. 40 Imports from AVEK

	2000	2001	2002	2003	2004
Imported Water (afa)	34,655	30,965	33,442	37,442	36,231

afa = acre-feet annually
Source: 2005 Integrated Urban Water Management Plan for the Antelope Valley.

Each year by October 1st, the contracted agencies provide the Department of Water Resources (DWR) with a request for water delivery up to the full Table A Amount. Actual delivery from DWR may vary from the request due to variances in supply availability resulting from hydrology, storage availability, regulatory or operating constraints, etc. When supply is limited, a reduction of the requested amount is determined per the water allocation rules. In addition to fluctuations in the

[10] Telephone conversation, Herbert Seto, LA County Water District #40, February 16, 2007.

availability of SWP water, the District's ability to use AVEK supply is currently limited in certain areas due to conveyance facility restrictions as well as by the limited 65 million gallons per day (72,809 afa) capacity of the Quartz Hill Treatment Plant.

It is estimated that approximately 119,300 afa of AVEK's full Table A Amount will be available to serve the Antelope Valley, which encompasses the service areas of the District, RCSD, and QHWD, in the future. This amount was determined by taking AVEK's full Table A Amount (141,400 afa) and subtracting out AVEK's "other" future demand outside of the Antelope Valley (22,100 afa for 2010 to 2025). Future "other" demand was based on an average "other" demand from 2000 to 2004 and a future agricultural demand of approximately 7,600 afa from AVEK's draft 2005 Urban Water Management Plan (UWMP). Table 5.12-3 provides a summary of the SWP water demands for the District assuming average water year delivery of the 119,300 afa of AVEK's Table A Amount to the Antelope Valley and existing Table 5.12-3: District No. 40 Wholesale Demand Projections Provided to AVEK.

Table 5.12-3: District No. 40 Wholesale Demand Projections Provided to AVEK

	2010	2015	2020	2025	2030
AVEK demands (afa)	69,800	70,400	70,000	68,600	64,500

afa = acre-feet annually
Source: 2005 Integrated Urban Water Management Plan for the Antelope Valley.

Water Supply Assessment

To meet requirements of California Water Code § 10910, the District prepared a Water Supply Assessment for the proposed project (Appendix H). The assessment includes discussion of the District's total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection period and assesses the ability of the District to meet proposed project water demand in light of other existing and planned future uses. The District's 2005 Integrated Urban Water Management Plan for the Antelope Valley (IUWMP) identifies groundwater and imported State Water Project (SWP) water as the two existing sources of water to supply demand for the District. Table 5.12-4 below shows the mix of water supplies in acre-feet that the District used to meet demands during the five years previous to 2007 and the District's projected demand for year 2027.

Table 5.12-4: District No. 40 Water Supply Mix Projection

	2002	2003	2004	2005	2006	2027
Groundwater (afa)	21,194	16,837	21,348	19,138	12,217	20,000
Imported Water (afa)	33,442	37,442	36,231	35,935	46,946	71,753
Total	54,636	54,279	57.579	55,073	59,163	91,753
Source: Water Supply Assessment for Tentative Tract No. 62757 in the City of Lancaster (10/2/07) afa = acre-feet annually						

The projected amount of imported water available to the District during average years has been estimated under the assumption that all SWP contractors would receive 77 percent of their Table A allocations from the SWP during average years. This estimate is subject to potential change as a result of a recent court decision and global climate change. In August 2007 a U.S. District Court rendered a decision to protect an endangered fish species, the Delta smelt. While state and local water agencies are still analyzing the court ruling, the decision has the potential to result in a significant reduction in water supplies from the SWP to AVEK and the other SWP contractors to ensure compliance with Endangered Species Act requirements. As a result, the District has indicated the amount of imported water available to meet the 2027 supply projection is currently uncertain pending verification of adequate supplies by AVEK.

Surface water supplies, groundwater supplies, aquifer storage, and recharge programs planned by the District to meet future demands are examined in the Water Supply Assessment included as EIR Appendix H.

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would have a significant impact on water service if it would:

- Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; and
- Not have sufficient water supplies available to serve the project from existing resources, or require new or expanded entitlements.

Project Impacts

The proposed project would involve the connection of 650 single-family residential units to the domestic water system. As noted in Section 3, Project Description, the County of Los Angeles, Department of Public Works responded to the Notice of Preparation (NOP). In this letter dated July

20, 2006, it was stated that "the construction of a groundwater well will be a condition of the tract." According to the representative of the County of Los Angeles, Waterworks District, one well is required for every 600 additional units. The well would require approximately one acre of land and would include a pump, purification equipment and a holding tank for 200,000 gallons of water.[11] All wells will be constructed to Department of Health Services (DHS) specifications and pumped tested per state and county standards. With conformance to DHS specifications and state and county standards, impacts related to the construction of new water treatment facilities would be less than significant.

Water demands (based on number of service connections) for single-family residential units are anticipated to be roughly 47,200 acre-feet (af) in the year 2012; demands will be closer to 62,800 af by the year 2025. Water demand for the proposed residential development is estimated at 780 af/yr,[12] The District has indicated that additional water demand from the proposed project is consistent with the population and associated water demand projections for the District in its IUWMP.

However, the District exceeded its self-imposed limit on groundwater pumping of 20,000 afa in 2001, 2002, and 2004. The construction of a new well to serve the proposed project will add to this exceedance. In addition, through the adjudication process, groundwater supplies will likely be further restricted. Finally, AVEK is currently unable to assure the District of the availability of SWP water supplies to meet the requirements of Water Code § 10910, the District is unable to conclude that sufficient future water supplies are available for this project. For these reasons, impacts related to the sufficiency of water supplies to serve the proposed project would be potentially significant.

Cumulative Impacts

Water purveyors within the Antelope Valley have a variety of potential future water supply alternatives available to meet projected demands within the next 20 years.. The need for reliable water supplies is expected to become increasingly important as more of the existing available supplies are used. Accordingly, the water supply strategy for the Antelope Valley includes demand management through conservation, use of recycled water to minimize potable water demands, and water banking to improve the reliability of imported water supplies. However, as these alternatives are not guaranteed sources, and AVEK is currently unable to assure availability of SWP water supplies sufficient to meet future demands, cumulative impacts related to the sufficiency of water supplies are considered potentially significant.

[11] Telephone conversation, Hubert Seto, LA County Waterworks District No. 40, August 7, 2006.

[12] Based on estimated demand of 1.2 acre-feet per year for residential customers; Water Supply Assessment for Tentative Tract No.62757, City of Lancaster (10/2/07).

Mitigation Measures

W-1 Future project residents shall be required to participate in conservation programs and pay any fees, taxes, or levies administered by the District for the acquisition of new or expanded water supply sources.

Section 15.48 of the Lancaster Municipal Code provides for landscape guidelines to promote water conservation and the General Plan addresses water resources and water conservation.

The conservation programs include the use of measures, practices, or incentives implemented by water utilities to permanently reduce the level or change the pattern of demand such as the following demand management measures (DMMs). The following measures are implemented for all residential projects.

- DMM 1. Water survey programs for single-family residential and multi-family residential customers.
- DMM 2. Residential plumbing retrofit.
- DMM 3. System water audits, leak detection, and repair.
- DMM 4. Metering with commodity rates for all new connections and retrofit of existing connections.
- DMM 5. Large landscape conservation programs and incentives.
- DMM 6. High-efficiency washing machine rebate programs.
- DMM 7. Public information programs.
- DMM 8. School education programs.
- DMM 9. Conservation programs for commercial, industrial, and institutional accounts.
- DMM 10. Wholesale agency programs.
- DMM 11. Conservation pricing.
- DMM 12. Water conservation coordinator.
- DMM 13. Water waste prohibition.
- DMM 14. Residential ultra-low-flush toilet replacement programs.

Level of Significance After Mitigation

Until such time as the Antelope Valley-East Kern Water Agency (AVEK) is able to provide assurances to Los Angeles County Water Works District No. 40 (District) that sufficient State Water

Project (SWP) water supplies are available to meet future demands, water supply impacts are considered significant at the project- and cumulative levels.

5.12.4 Wastewater Services

Existing Conditions

Wastewater service to the City of Lancaster is provided by the Los Angeles County Sanitation District No. 14, which would provide service to the project site upon annexation into the District. The Lancaster Reclamation Plant, located at 1865 West Avenue D, serves most of the City. Current capacity is 16 million gallons per day (mgd) and the plant currently processes an average of 14.2 mgd. The District's 2020 Facility Plan includes upgrading the plant to tertiary treatment and increasing capacity to 26 mgd.[13] The District maintains a trunk sewer in Avenue J at 70th Street West. This trunk has a capacity of 13.4 mgd. Thus, the plant has an available capacity of 1.8 mgd in the short-term and 11.8 mgd in the long-term.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, a project would have a significant impact on waste water service if it would:

- Require or result in the construction of new wastewater treatment facilities of expansion of existing facilities, the construction of which could case significant environmental effects; or
- The wastewater treatment provider which serves or may serve the project determines that there is not adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Project Impacts

The project is expected to generate 260 gallons of waste water per day (gpd) per single family dwelling.[14] Based on the 650 units that are planned with the proposed project, a total of 169,000 gallons per day of wastewater would be generated. This constitutes an increase of 1.18 percent in the volume of wastewater treated by the Lancaster Water Reclamation Plant and accounts for approximately 9.4 percent of its remaining capacity. Sufficient capacity is available and no new facilities are needed. Therefore, impacts would be less than significant.

[13] Telephone conversation, Brian Louie, Supervising Engineer, LA County Sanitation District, April 18, 2007.

[14] Ruth Frazen, Engineering Technician, County Sanitation Districts of Los Angeles County, letter dated July 24, 2006.

Cumulative Impacts

As future development occurs within the area, additional demand for wastewater treatment would occur. The letter from the County Sanitation District in response to the NOP indicated that the District would provide capacity consistent with SCAG growth forecasts for the area. The Lancaster Reclamation Plant is planned to increase its capacity by 10 mgd within the next 3 to 4 years. With very few exceptions, the related project listed in the Environmental Setting section is comprised almost entirely of residential projects. The list includes a total of 8,883 dwelling units. The effluent from these units would total 2.29 mgd. Considering that the remaining capacity of the Lancaster Water Reclamation Plant is 1.8 mgd and that another 10 mgd of capacity is planned, sufficient wastewater treatment capacity is available. Therefore, cumulative impacts to wastewater treatment would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts with respect to the wastewater services would be less than significant.

5.12.5 Schools

Existing Conditions

The project site is served by the Antelope Valley Union High School District and the Westside Union School District. The project site is within the attendance boundaries of Sundown Elementary School located at 6151 Avenue J-8, which serves grades K-6. The project site is also within the attendance boundaries of Del Sur School located at 9623 Avenue H and which serves grades K-8. Sundown Elementary School was originally designed to serve 750 students, however, enrollment as of the 2006-2007 school year was approximately 1,035.[15] Del Sur School was originally intended for 1,200 students and is currently operating below capacity at approximately 876 students. The project site is currently within the attendance boundaries of Quartz Hill High School, which is located at 6040 Avenue L. Quartz Hill High School was originally designed for 1,800 students and current enrollment is approximately 3,900 students.[16]

[15] City of Lancaster 2030 General Plan, Master Environmental Assessment, 9.3 School Facilities. 2007. http://www.lancaster2030.info/documents/draft_mea/Sec09.03%20SchoolFacilities.pdf. Accessed July 17, 2007.

[16] Telephone conversation, J.D. Vose, Antelope Valley Union High School District, July 27, 2006 and http://www.avdistrict.org/sarc.htm.

The Westside Union School District is currently overburdened, and there are several new schools in the proposal stage. Although none are in the active construction phase, an EIR was completed for an elementary school site to be located at Avenue J and 50th Street.[17]

Senate Bill (SB) 50 mandates that complete mitigation of school-related impacts are covered by lawful payment of required school impact fees. These fees vary from one district to the next and are separated by the State into three levels.[18] Level I fees are the base statutory fees. If school districts meet certain requirements they can impose Level II fees which are above the statutory level. Level III fees apply if the State were to run out of bond funds after 2006. The Antelope Valley Union High School District, is eligible to collect a maximum Level II fee of $1.57 per square foot of new residential development and a Level III fee of $3.14 per square foot of residential development. The developer impact fee received by Westside Union School District varies according to the availability of State funds for new construction. During periods when funds are available, the district impact fee is a Level II fee of $2.57 per square foot of new residential development. Alternatively, a Level III fee of $5.13 per square foot may be imposed on new residential development when State funds are not available.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, a project would have a significant impact on schools if it would:

- Require or result in the construction of new facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Project Impacts

According to the respective school districts, the 650 dwelling units (dus) are projected to generate 409 elementary school students (0.6283 per du) and 260 high school students (0.40 per du).

Currently, the school facilities within the Antelope Valley Union High School District and the Westside Union School District are over-capacity. The current facilities are inadequate to address the Districts' needs as there are currently unhoused students warranting the assessment of Level II Developer fees. In addition, the Districts anticipate a significant increase in student enrollment based on the numerous housing projects in the planning process pending approval or recently approved.

[17] Telephone conversation, Nellie Thomas, Westside Union School District, July 28, 2006.

[18] City of Lancaster 2030 General Plan, Master Environmental Assessment, 9.3 School Facilities. 2007. http://www.lancaster2030.info/documents/draft_mea/Sec09.03%20SchoolFacilities.pdf. Accessed July 17, 2007.

Several new elementary, middle schools and high schools are being proposed within the Districts. However, there are no immediate plans for construction.

The increase of students generated by the project would have a significant impact on the school district and likely require the construction of new or expanded schools. However, all new schools would be subject to environmental documentation under the CEQA.

Under State mandate, payment of developer impact fees fully mitigates impacts to schools under CEQA regardless of the enrollment capacity conditions of the affected schools. These fees would be paid. Therefore impacts to schools are less than significant.

Cumulative Impacts

Future growth in the vicinity of the project site would result in an increased student population and substantially contribute to a significant cumulative impact on public school facilities. The 8,883 single family units identified as related projects would generate approximately 5,581 elementary school students and 3,553 high school students. However, under State mandate, payment of developer impact fees fully mitigates impacts to schools under CEQA regardless of the enrollment capacity conditions of the affected schools. Each development is required to pay these fees. Therefore, cumulative impacts to schools would be less than significant.

Mitigation Measures

S-1 The developer shall be required to pay school fees in accordance with the applicable schedule set forth by the school districts.

Level of Significance After Mitigation

The assessment of development fees to provide a fair-share contribution for expansion of school facilities in compliance with State of California laws and regulations would assure adequate school funding. Impacts to public schools would be less than significant with the implementation of the identified mitigation measure.

5.12.6 Recreation

Existing Conditions

The City of Lancaster maintains 10 parks located throughout its boundaries that total approximately 477 acres in area. The closest park to the project site is Rawley Duntley Park located at 3334 Avenue K. This park is approximately 20 acres and includes two baseball diamonds, two basketball courts, walking trails and picnic areas.

The City of Lancaster 2020 General Plan includes Objective 10.1 that states that sufficient neighborhood and community park facilities should be provided such that a rate of 5.0 acres of parkland per 1,000 residents is achieved and distributed so as to be convenient to Lancaster residents. As of August 2006, the City's rate of parkland was 3.39 acres per 1,000 residents.[19] The General Plan calls for the implementation of a Park Fee to develop a City of Lancaster Park System that includes Neighborhood Parks, Community Parks, Linear Parks, Special Use Parks, Conservancy areas and Regional Parks. The Park System would have 5 acres of Regional Park, Neighborhood Park and Community Park per 1,000 residents

The City is actively pursuing the purchase of land and the development of parks on the west side. A 29-acre site at 65th Street West between Avenue L and Avenue K has been identified. The parks are financed through a combination of developer fees, grants, and budget funds.[20]

At the scoping meeting, mention was made of the effects of the proposed project on the Los Angeles County Riding and Hiking trails and the Antelope Valley Poppy Preserve. The Los Angeles County Hiking and Riding Trails Map[21] indicates that the closest trail to the project site is called the North Side Trail and it runs north to south along 60th Street West between Avenue J and Avenue M and is 0.5 miles from the project site. There is a trail to the south of the project site along Elizabeth Lake Road approximately 5.0 miles from the project site. There is also a trail approximately 4 miles to the west of the project site along 110th Street West between Elizabeth Lake Road and Avenue D. The Antelope Valley Poppy Preserve constitutes 1,745 acres approximately 10 miles west of the project site at 15101 West Lancaster Road. The Preserve has a visitor's center and is open year round. Poppy blooms usually occur in early spring when the Preserve is most heavily visited. Access to the Poppy preserve is from Avenue I which turns into Lancaster Road.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, a significant impact to recreation would occur if the project would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration to the facility would occur or be accelerated.

[19] City of Lancaster 2030 General Plan, Master Environmental Assessment, 9.4 Parks and Recreational Facilities. www.lancaster2030.info/documents/draft_mea/Sec09.04%20ParksRecreation.pdf. Accessed July 16, 2007.

[20] Telephone conversation, Bob Greene, Assistant Director Parks and Recreation Department, City of Lancaster, July 31, 2006.

[21] County of Los Angeles, Department of Parks and Recreation. 2001.

Project Impacts

The proposed project would develop vacant land with approximately 650 dwelling units. It is anticipated that the new housing would generate approximately 1,961 persons, that would be expected to use city parks. As shown in the Schools section, the proposed project is expected to generate 669 students and likely additional pre-school children that would typically use parks. No parks, open space or other recreational amenities are proposed to be developed within this residential tract. According to the City's standard of 5 acres per 1,000 population, 9.8 acres of park land are required. Therefore, the project would increase the current deficit of park space and place additional demands on the existing parks. Impacts on park use would be significant and mitigation is provided.

The proposed project is located 0.5 mile west of the closest hiking trail and 10 miles from the Poppy Preserve. Although the proposed project has no connection to either, the resulting increase in population is likely to add to the use of these trails. Nonetheless, additional use would not have an effect on what is merely a walking path of bare ground or pavement. Therefore impacts are less than significant.

Cumulative Impacts

Future growth in the project vicinity associated with related projects would include 8,883 new homes, thus increasing the need for parks and recreation facilities in the area. However, the payment of park fees and/or the potential for future development of new parks in the area by the City would reduce impacts to less than significant.

Mitigation Measures

P-1 The developer shall be required to provide a 6 acre turn-key park to the City of Lancaster. The park shall be located within the proposed development and include but not be limited to such items as turf/irrigation, perimeter walking path, half basketball court, barbeques, picnic pads and tables, block rest rooms, security lighting, and a children's play area. The specifics of the park shall be up to the discretion of the City of Lancaster Parks and Recreation Department.

Level of Significance After Mitigation

With implementation of the identified mitigation measure, impacts with respect to recreation would be less than significant.

5.12.7 Solid Waste Service

Existing Conditions

Solid waste collection and disposal in the City of Lancaster is provided by Waste Management Incorporated which operates the Antelope Valley Recycling and Disposal Facility (AVRDF) at 1206 West City Ranch Road in Palmdale and the Lancaster Landfilling and Recycling Center (LLRC) at 600 East Avenue F in Lancaster. The AVRDF accepts household waste as well as greenwaste, construction waste and electronic waste. It does not accept hazardous materials.[22] The closure date is not available.[23] The LLRC accepts household waste, appliances, tires, clean dirt, clean asphalt and concrete and green waste.[24] It does not accept hazardous wastes. It is scheduled to close August 8, 2012.[25] Waste Management is proposing to expand the AVRDF by 11 acres. The AVRDF has a maximum permitted daily throughput of 1,400 tons per day and a total capacity of 6,480,000 cubic yards of which 2,978,143 remain.[26] The proposed expansion of the Antelope Valley landfill would add approximately 19 percent to the current 57-acre disposal area but would not add to the throughput capacity. That would add a capacity of approximately 1,231,200 tons, for a total unused capacity of 4,209,343 tons.

The Lancaster Landfill has a maximum permitted daily throughput of 1,700 tons per day and a total remaining capacity of 22,645,000 cubic yards as of June 6, 2001.[27] It is estimated that the current remaining capacity is 15,000,000 cubic yards.[28] Using a figure of 593 pounds per cubic yard[29] the available capacity is 4,447,500 tons. Currently, the throughput of 1,700 tons per day is inadequate to handle the needs of the area, and trucks are turned away. Waste Management is pursuing an increase in the permitted throughput.[30] However, the completion date for this is currently unknown. Waste Management operates a variety of recycling programs within the City of Lancaster to maintain compliance with state regulations.

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[22] Waste Management, AV Recylcing and Disposal Facility, http://www.keepingavclean.com/materials.html, accessed June 25, 2007.

[23] California Integrated Waste Management Board, Antelope Valley Public Landfill I (19-AA-0009), http://www.ciwmb.ca.gov/SWIS/detail.asp?SITESCH=19-AA-0009, accessed June 25, 2007.

[24] http Waste Management, AV Recylcing and Disposal Facility, http://www.keepingavclean.com/materials.html, accessed June 25, 2007.

[25] California Integrated Waste Management Board, Lancaster Landfill and Recycling Center (19-AA-0050), http://www.ciwmb.ca.gov/SWIS/detail.asp?PG=DET&SITESCH=19-AA-0050&OUT=HTML, accessed June 25, 2007.

[26] California Integrated Waste Management Board, City Of Santa Monica Transfer Station (19-AA-0008), http://www.ciwmb.ca.gov/SWIS/Detail.asp?Page=2&PG=DET&OUT=HTML&DD= ALL&COUNTY=Los+Angeles&NAME=&ADV=&FAC=&OPSTATUS=&REGSTATUS=Permitted&LEA, accessed June 25, 2007.

[27] Ibid.

[28] California Integrated Waste Management Board, Antelope Valley Public Landfill I (19-AA-0009), http://www.ciwmb.ca.gov/SWIS/detail.asp?SITESCH=19-AA-0009, accessed June 25, 2007.

[29] Tchobanogulus and Krieth, Handbook of Solid Waste, McGraw-Hill, 2002.

[30] Waste Management, Lancaster Landfill and Recycling Center, http://www.keepingavclean.com/currentproject_l.html, accessed June 25, 2007.

The combined available capacity is 4,209,343 tons for the AVRDF and 4,447,500 tons for the Lancaster Landfill for a total of 8,656,843 tons. The combined throughput capacity is 1,400 tons per day for the Antelope Valley Landfill and 1,700 tons per day for the Lancaster Landfill for a total of 3,100 tons per day.[31]

In addition to the above landfills, there is also the Antelope Valley Environmental Collection Center (AVECC).[32] This facility is located at the AVRDF and is designed specifically for the disposal of household hazardous waste and electronic waste. AVECC is a joint partnership between the Cities of Palmdale and Lancaster, the California Integrated Waste Management Board, the County of Los Angeles, Supervisor Antonovich's office, and Waste Management Inc.

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, a project would have a significant impact to solid waste services if it would:

- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

Project Impacts

According to the California Integrated Waste Management Board disposal rates are estimated to be 0.41 tons of solid waste per year per person. Assuming that the proposed project houses approximately 1,961 residents, the total amount of solid waste anticipated to be generated per year is 804 tons. This is equivalent to 15.46 tons per week or 3.09 tons per day per five-day work week. The 804 tons per year represents less than 0.01 percent of the available capacity of the two landfills serving the area. The 3.09 tons per day represents 0.01 percent of the total permitted throughput of 3,100 tons per day. While this would add to the current problems of excess daily loads, this small percentage increase is not considered significant in the short-term.

Cumulative Impacts

As future development occurs within the area, additional demand for solid waste disposal would occur. The related projects listed in the Environmental Setting section include a total of 8,883 dwelling units. The solid waste generated from these units would total 10,986.26 tons per year, and 42.23 tons per workday. Considering that the current throughput is 3,100 tons per day, the additional

[31] California Integrated Waste Management Board, Facility Search, 2006, http://www.ciwmb.ca.gov/SWIS/Search.asp, accessed July 17, 2007.

[32] Antelope Valley Environmental Collection Center, http://ladpw.org/epd/avecc/, accessed July 17, 2007.

tonnage from the related projects would total 1.36 percent of the total throughput. While this would add to the current problems of excess daily loads, this small percentage increase is not considered significant and cumulative impacts related to solid waste disposal would be less than significant.

Mitigation Measures

Mitigation measures are not required

Level of Significance After Mitigation

Impacts with respect to solid waste services would be less than significant.

5.12.8 Electricity

Existing Conditions

Electricity is one of two major types of energy consumed in the City. Electrical power is provided by Southern California Edison (SCE), and is generated from a combination of oil, natural gas, hydroelectric, nuclear, and renewable sources such as wind and solar energy. Most of the City's energy is consumed by residential, commercial, industrial, agricultural, and transportation uses.

Because the project site is vacant and unused, there is no current, daily electrical demand. Electrical service is provided to the housing tract immediately to the east of the project site via a 12Kv power line along Avenue J.[33]

Thresholds of Significance

Appendix F of the State CEQA Guidelines addresses energy conservation. This analysis addresses the availability of sufficient electrical service for the proposed project.

Project Impacts

The proposed project would convert the vacant and unused project site to urban residential uses that would result in an increased demand for electricity.

Annual electrical demand from build-out of the proposed project is determined by multiplying the number of dwelling units by the average electrical demand factors. For residential units, the electrical demand factor is 5,526.50 KWH/DU/YR.[34] Development of the proposed project at full build-out of

[33] Telephone conversation, Dave Puckett, Service Planner, Southern California Edison, May 23, 2007.

[34] Table A9-11-A, South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993.

650 dwelling units (DU) would result in an increase in demand for electrical service of 3,592,225 kilowatt hours-per-year.

The energy demands of the proposed project have been factored in service plans by SCE who would serve the site. SCE has ongoing plans which analyze electrical demands on a yearly basis to plan for improvements as needed. The adjacent 12 Kv line to the east is sufficient to provide adequate electricity to the proposed project.[35]

SCE is required to provide service to the proposed project and coordination is typical between the applicant/developer and SCE to avoid any notable service disruptions during extension and upgrading of services and facilities. This typical coordination would also ensure that the nature, design, and timing of electrical system improvements are adequate to serve the project. Therefore, less than significant impacts related to the provision of electrical service would result from implementation of the proposed project.

Cumulative Impacts

The related projects include 8,883 dwelling units plus other projects that would require approximately 49.1 million kilowatt hours of electricity per year. The existing and planned facilities owned and operated by SCE usage are projected to adequately serve planned growth in the area. These facilities would be constructed with fees collected by the utility providers. No significant cumulative impacts on future electricity facilities would occur from the development of the proposed project and future developments. Project development would require underground extensions of electrical facilities. These future extensions would be coordinated with SCE to avoid any notable disruptions to existing services.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts with respect to electricity would be less than significant.

[35] Telephone conversation, Dave Puckett, Service Planner, Southern California Edison, May 23, 2007.

5.12.9 Natural Gas

Existing Conditions

In addition to electricity, natural gas is the second major type of energy consumed in the City. The primary natural gas provider in the City is the Southern California Gas Company (SCGC). Current estimates of overall energy consumption indicate that natural gas is consumed primarily by the City's residential land uses.

SCGC operates a local natural gas distribution network, which is supplied by a high-pressure regional transmission system. There is a six inch gas line located in Avenue J at the northeast corner of the proposed project site.[36]

Because the project site is vacant and unused, there is no current daily natural gas demand.

Thresholds of Significance

Appendix F of the CEQA Guidelines addresses energy conservation. This analysis addresses the availability of natural gas to serve the project.

Project Impacts

The proposed project would convert the vacant and unused project site to urban residential uses that would result in an increased demand for natural gas. An estimate of the projected natural gas demand for build-out of the proposed project is calculated by multiplying the number of dwelling units by the natural gas demand factor, as determined by SCGC. Based on a generation factor of 219.1 CF/day/DU[37], the proposed project development of 650 dwelling units (DU) would result in an increase of natural gas consumption of 51.9 million cubic feet per year.

According to a letter received from the SCGC[38], there are adequate natural gas supply and facilities in the area, and a six inch line located in Avenue J is sufficient to service the proposed project.[39] SCGC is required to provide service to the proposed project and coordination is typical between the applicant/developer and SCGC to avoid any notable service disruptions during extension and upgrading of services and facilities. This typical coordination would also ensure that the nature, design, and timing of natural gas system improvements are adequate to serve the project. Because

[36] Telephone conversation, Ron Garcia, Project Manager, Southern California Gas Company, May 23, 2007.

[37] Environ Corporation, City of Ontario General Plan, 1997.

[38] Brigges, Henry; Technical Services, Northern Region, SDGC, January 6, 2005 provided in Appendix A.

[39] Telephone conversation, Ron Garcia, Project Manager, Southern California Gas Company, May 23, 2007.

SCGC has stated it has adequate natural gas supply and facilities in the area of the project site, implementation of the proposed project would not result in a significant impact on natural gas service or facilities.

Cumulative Impacts

The related projects include 8,883 dwelling units plus other projects that would require approximately 709.3 million cubic feet of natural gas per year. The existing and planned facilities owned and operated by SCGC are projected to adequately serve planned growth within the service area. These facilities would be constructed with fees collected by the utility providers. No significant cumulative impacts on future natural gas supplies or facilities would occur from the development of the proposed project. As individual developments within the project site are phased and other offsite developments are implemented, these developments would require extensions of natural gas facilities. These future extensions would be coordinated with SCGC to avoid any notable disruptions to existing services.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Impacts on natural gas services would be less than significant.

5.13 TRANSPORTATION AND TRAFFIC

5.13.1 Introduction

This section addresses the potential impacts relating to vehicle traffic and circulation and is based on the Traffic Impact Study, City of Lancaster GPA 04-05 (Group C-Development C-1) prepared by Meyer, Mohaddes Associates, July 2007, which is included in Appendix I.

5.13.2 Existing Conditions

City of Lancaster General Plan

Chapter V of the City of Lancaster General Plan is entitled, Plan for Physical Mobility and outlines issues, opportunities, and constraints related to streets and highways and alternative transportation modes. Generally, the chapter encourages the development of transportation facilities along with new residential and commercial development. This General Plan is incorporated by reference and is discussed in more detail in the Project Impacts Section.

5.13.3 Existing Transit Operations

The Antelope Valley Transit Authority (AVTA) provides transit services within the study area. However, no transit route provides direct access to the project site. In addition, there is a Metrolink line, which travels from the City of Lancaster to Downtown Los Angeles. The following briefly describes the transit services available within the study area:

AVTA 7 Within the study area, this route provides service along 60th Street West, connecting Palmdale Transportation Center with Downtown Lancaster.

AVTA 12 Within the study area, this route provides service along Avenue J and 30th Street West, primarily connecting Lancaster's City Park and the eastern portion of the city.

Metrolink - Metrolink is a regional commuter rail service, which provides service from Lancaster to the greater Los Angeles area. Six Metrolink trains depart to Los Angeles in the morning hours and six trains arrive in the afternoon and evening hours from Los Angeles.

Traffic Study of Intersections and Street Segments

The traffic study investigated an area stretching from the project site to State Route 14 (SR-14) to the east. The Study Area is shown on Exhibit 5.13-1.

In conjunction with the City of Lancaster, 27 intersections were identified to be analyzed in the traffic study for typical weekday morning and evening peak hour conditions. As noted below with an

asterisk, some of the analyzed intersections are located in, or along the border with the County of Los Angeles. Intersections identified with (F) are future intersections. The study locations include the following:

1. Avenue J & 70th Street West
2. Avenue J & "S" Street (F)
3. Avenue J & 65th Street West
4. Avenue J & 60th Street West
5. Avenue J & 50th Street West
6. Avenue J & 45th Street West
7. Avenue J & 40th Street West
8. Avenue J & 35th Street West
9. Avenue J & 32nd Street West
10. Avenue J & 30th Street West
11. Avenue J & 27th Street West
12. Avenue J & 25th Street West
13. Avenue J & Valley Central Way
14. Avenue J & SR-14 SB Ramps
15. Avenue J-8 & 70th Street West (F)
16. Avenue J-8 & 65th Street West
17. Avenue J-8 & 60th Street West
18. Avenue K & 70th Street West
19. Avenue K & 65th Street West (F)
20. Avenue K & 60th Street West
21. Avenue K & 50th Street West*
22. Avenue K & 45th Street West*
23. Avenue K & 40th Street West
24. Avenue K & 30th Street West
25. Avenue K & 20th Street West
26. Avenue K & SR-14 SB Ramps
27. Avenue K & SR-14 NB Ramps

Additionally, the following six arterial street segments are analyzed:

- 60th Street West south of Avenue J-8
- 70th Street West south of Avenue J-8
- Avenue J east of 65th Street West
- Avenue K east of 60th Street West
- Avenue K between 40th Street West & 45th Street West
- Avenue L between 40th Street West & 50th Street West

Existing Traffic Counts

The morning and evening peak period turning movement traffic counts were conducted on May 16, 17, 23 and 25, 2006 at all of the existing study intersections. The intersection traffic counts were conducted from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM, with the highest single hour of traffic (during the morning and evening peak period) at each location used for purposes of the impact analysis. Appendix I contains the traffic counts for each intersection.

Exhibit 5.13-2 illustrates the existing AM and PM peak hour traffic volumes at the 27 study intersections. A field inventory was conducted at all study intersection locations.

Source: Meyer, Mohaddes Associates, 2007.

NORTH

Not to scale

Michael Brandman Associates

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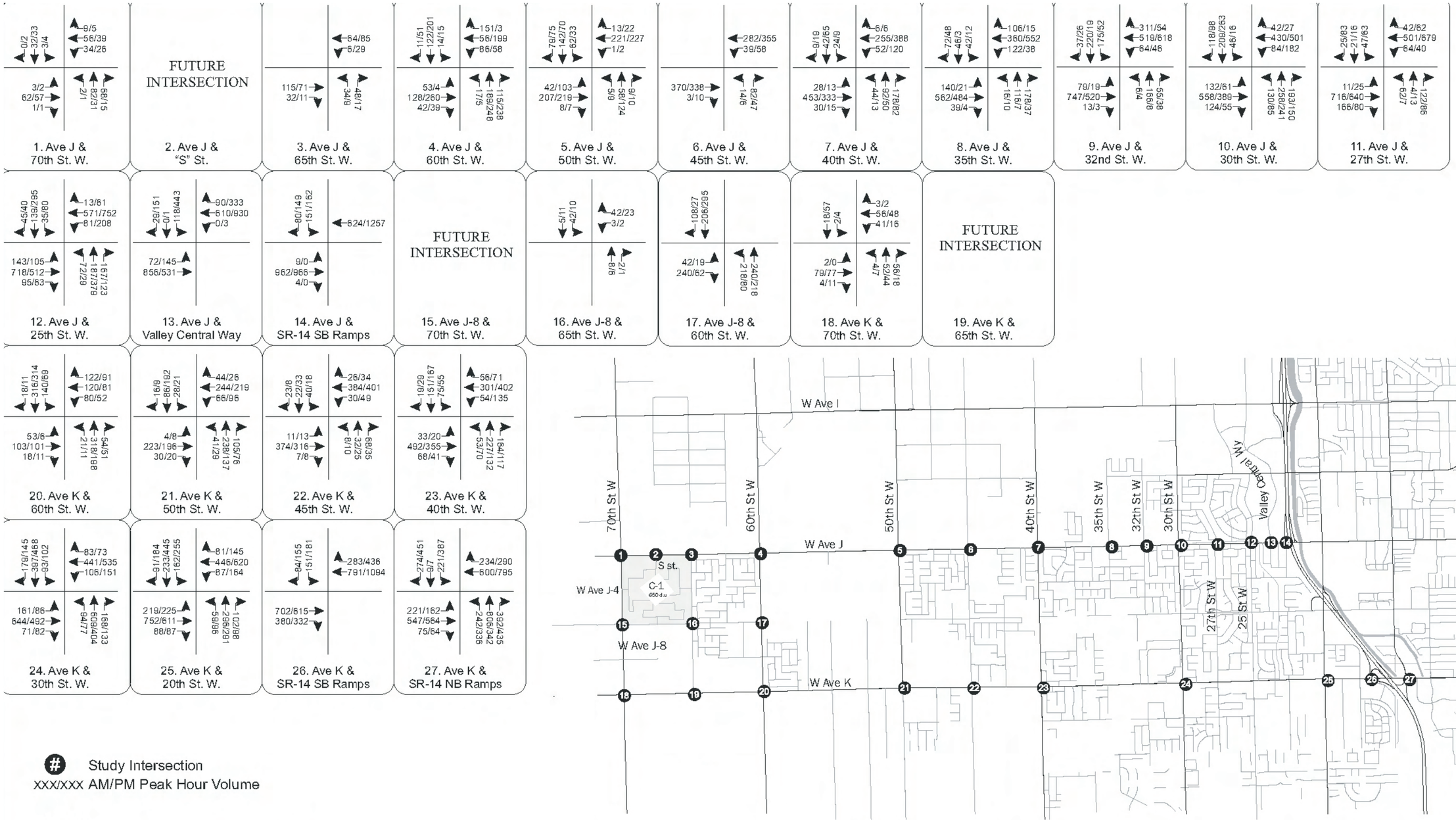
Exhibit 5.13-1
Study Area

CITY OF LANCASTER • TTM 62757
ENVIRONMENTAL IMPACT REPORT



Source: Meyer, Mohaddes Associates, 2007.

NORTH Not to scale

Michael Brandman Associates

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Exhibit 5.13-2
Existing Peak Hour Traffic Volumes

The inventory included review of intersection geometric layout, traffic control, lane configuration, land use, and availability of on-street parking. This information is required for the subsequent traffic impact analysis. Exhibit 5.13-3 illustrates the existing intersection geometrics (lane configurations) for the 27 analyzed intersections.

Existing Roadway Conditions

The project site is served directly by Avenue J, which forms the northern boundary of the site; 70th Street West, which abuts the west side of the project site; and 65th Street West, which abuts the east side of the project site. A brief description of the regional facilities is included below while the major roadways that serve the project site are described in Table 5.13-1. This table summarizes the characteristics of the roadways including the number of lanes, type of median, on-street parking restrictions, and adjacent land uses.

Antelope Valley Freeway (SR-14). The southern terminus of SR 14 occurs at the Golden State Freeway (I-5) where it travels northward through the cities of Palmdale and Lancaster. Within the study area, SR-14 generally provides three lanes in each direction.

Table 5.13-1: Existing Street Characteristics

Street	Segment		NB/EB			SB/WB			Median
	From	To	Lanes	Parking	Land Uses	Lanes	Parking	Land Uses	
Avenue J	70th Street West	30th Street West	1-2	No	Residential/ Vacant	1-2	No	Residential/ Vacant	No
	30th Street West	SR-14	3	No	Commercial/ Residential	3	No	Commercial/ Residential	Yes
Avenue K	70th Street West	30th Street West	1-2	No	Residential/ Vacant	1-2	No	Residential/ Vacant	No
	30th Street West	SR-14	3	No	Commercial/ Residential	3	No	Commercial/ Residential	No
70th Street West	Avenue J	Avenue K	1	No	Vacant	1	No	Vacant	No
60th Street West	Avenue J	Avenue K	1	No	Residential	1	No	Residential	No

Congestion Management Program

The Congestion Management Program (CMP) was created statewide as a result of Proposition 111 and has been implemented locally by the Los Angeles County Metropolitan Transportation Authority (LACMTA). The CMP for Los Angeles County requires that the traffic impact of individual development projects of potential regional significance be analyzed. A specific system of arterial roadways plus all freeways comprise the CMP system. One hundred and sixty-four intersections are identified for monitoring on the system in Los Angeles County.

Within the study area there are three CMP freeway monitoring stations. The location of these stations are along the SR-14 north of Interstate (I) 5, SR-14 north of Angeles Forest Highway, and SR-14 south of State Route 138 (SR-138). The existing demand and capacity for these three locations are shown below. The capacities and demands are based on the values included in the 2004 CMP, which is based on 2003 data. Also shown in the table are the existing morning and evening peak hour Demand-to-Capacity (D/C) ratios and corresponding Level of Service (LOS). As can be seen, two of the three locations operate at LOS E during at least one of the peak hours. These locations are:

- SR-14 north of I-5 (AM Peak SB - LOS E)
- SR-14 south of Angeles Forest Hwy (AM Peak SB - LOS F1, PM Peak NB - LOS E)

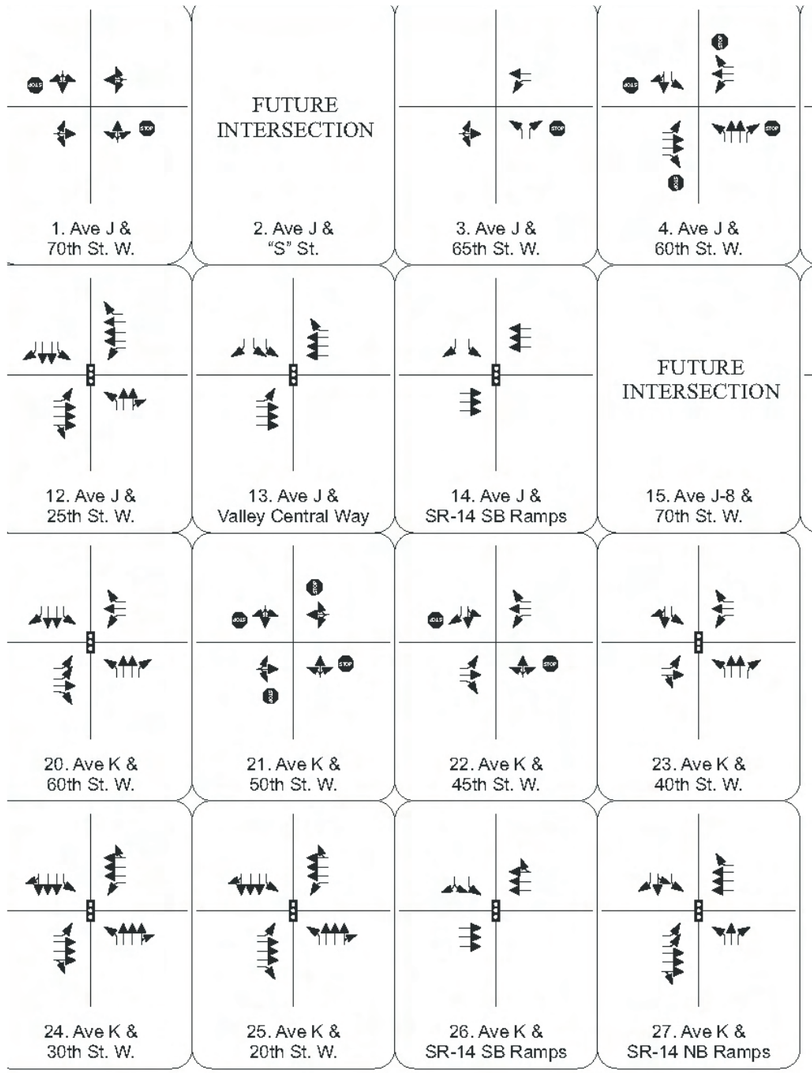
The remaining freeway segment is currently operating at acceptable LOS D.

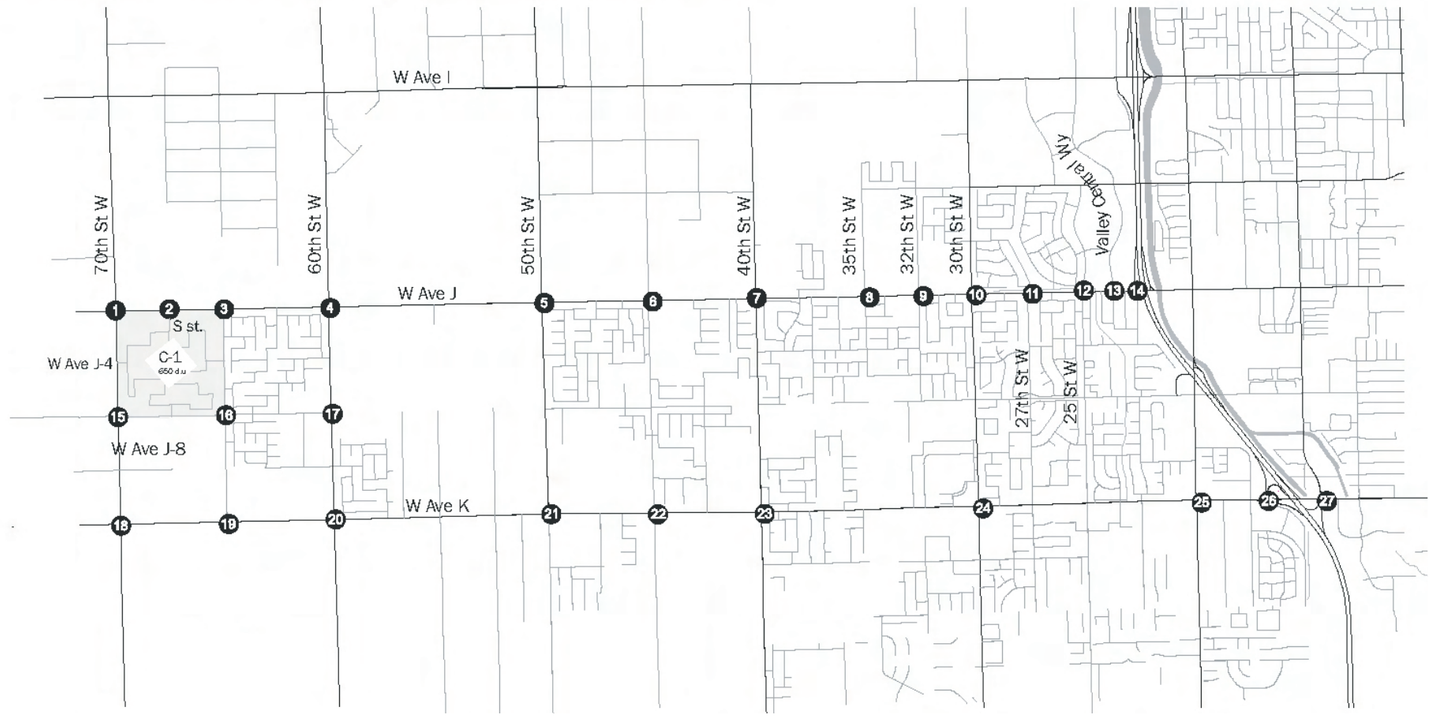
Traffic Operations Analysis Methodology

Traffic operating conditions in the vicinity of the project were analyzed using two methodologies. At the signalized intersections, the "Intersection Capacity Utilization" (ICU) methodology was used. It should be noted that this methodology is consistent with the County of Los Angeles guidelines and is utilized for traffic studies in the City of Lancaster. For the existing unsignalized intersections, the Highway Capacity Manual (HCM) stop-controlled methodology was utilized.

The efficiency of traffic operations at a location is measured in terms of LOS. LOS is a description of traffic performance at intersections. The LOS concept is a measure of average operating conditions at intersections during an hour. It is based on a Volume-to-Capacity (V/C) ratio for signalized locations and delay (in seconds) for stop-controlled intersections. Levels range from A to F with A representing excellent (free-flow) conditions and F representing extreme congestion. The ICU methodology compares the amount of traffic a through or turn lane is able to process (the capacity) to the level of traffic during the peak hours (volume). The critical V/C ratios are combined to determine the ICU value (V/C ratio) for the entire intersection. The HCM method for stop-controlled intersections calculates the average delay, in seconds, per vehicle for each approach and for the intersection as a whole. The delay for the intersection corresponds to a LOS value, which describes the intersection operations. Intersections with vehicular volumes, which are at or near capacity, experience greater congestion and longer vehicle delays.

Table 5.13-2 and Table 5.13-3 describe the LOS concept and the operating conditions expected under each LOS for signalized and stop-controlled intersections.





Source: Meyer, Mohaddes Associates, 2007.

NORTH Not to scale

Michael Brandman Associates

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Exhibit 5.13-3
Existing Lane Configurations

Table 5.13-2: Intersection Level of Service Definitions for Signalized Intersections

ICU/CMA Signalized Intersections		
Level of Service	**Description**	**Volume to Capacity Ratio**
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	0–.600
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	.601–.700
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	.701–.800
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues. This level is typically associated with design practice for peak periods.	.801–.900
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	.901–1.000
F	Forced flow. Represents jammed conditions. Backups form locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	Over 1.000
Source: Highway Capacity Manual, Special Report 209, Transportation Research Board, Washington, D.C., 1985 and Interim Materials on Highway Capacity, NCHRP Circular 212, 1982.		

Table 5.13-3: Intersection Level of Service Definitions for Un-signalized Intersections

Level of Service	Description	Stop-Controlled Intersection Delay (seconds per vehicle)
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	$\leq$ 10
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	>10 and $\leq$ 15
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	>15 and $\leq$ 25
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues.	>25 and $\leq$ 35
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	>35 and $\leq$ 50
F	Forced flow. Represents jammed conditions. Backups form locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	> 50
Source: Highway Capacity Manual, Special Report 209, Transportation Research Board, Washington, D.C., 2000.		

Existing Traffic Operations Analysis

The morning and evening peak hour LOS analyses were conducted for the 27 study intersections based on the measured traffic volumes and the methodologies described previously. All intersection analyses were performed using the TRAFFIX (Traffic Impact Analysis) software program. The existing conditions LOS analysis results are summarized in Table 5.13-4 for the AM and PM peak hours. Appendix I contains the LOS calculation worksheets.

Table 5.13-4: Existing 2006 Level of Service Summary

Intersection	AM Peak Hour		PM Peak Hour	
	V/C or Delay	LOS	V/C or Delay	LOS
1. Avenue J & 70th Street West [a]	10.6	B	10.1	B
2. Avenue J & "S" Street [a]	10.1	B	9.6	A
3. Avenue J & 65th Street West [a]	9.4	A	9.1	A
4. Avenue J & 60th Street West [a]	10.3	B	14.0	B
5. Avenue J & 50th Street West	0.364	A	0.424	A
6. Avenue J & 45th Street West [a]	11.2	B	16.6	C
7. Avenue J & 40th Street West	0.542	A	0.444	A
8. Avenue J & 35th Street West	0.489	A	0.328	A
9. Avenue J & 32nd Street West	0.591	A	0.313	A
10. Avenue J & 30th Street West	0.463	A	0.435	A
11. Avenue J & 27th Street West	0.432	A	0.371	A
12. Avenue J & 25th Street West	0.453	A	0.557	A
13. Avenue J & Valley Central Way	0.319	A	0.553	A
14. Avenue J & SR-14 SB Ramps	0.398	A	0.463	A
15. Avenue J-8 & 70th Street West [a]	9.3	A	9.7	A
16. Avenue J-8 & 65th Street West [a]	9.0	A	9.0	A
17. Avenue J-8 & 60th Street West [a]	35.3	E	13.5	B
18. Avenue K & 70th Street West [a]	7.7	A	7.6	A
19. Avenue K & 65th Street West [a]	0.0	A	10.0	B
20. Avenue K & 60th Street West	0.401	A	0.301	A
21. Avenue K & 50th Street West [a]	15.3	C	12.9	B
22. Avenue K & 45th Street West [a]	21.7	C	20.4	C
23. Avenue K & 40th Street West	0.633	B	0.598	A
24. Avenue K & 30th Street West	0.535	A	0.490	A
25. Avenue K & 20th Street West	0.531	A	0.640	B
26. Avenue K & SR-14 SB Ramps	0.418	A	0.532	A
27. Avenue K & SR-14 NB Ramps	0.899	D	0.829	D

Notes:
[a] Stop-controlled intersection, value represents average delay (in seconds) for the most constrained movement.
Source: Meyer, Mohaddes Associates, City of Lancaster GPA 04-05 (Group C - Development C-1) Traffic Impact Study, July 2007.

LOS D is considered the lowest acceptable LOS in the City of Lancaster and in general for any urban or suburban area. LOS E and F are considered unacceptable operating conditions, which warrant mitigation measures. The results indicate that one of the 27 analyzed intersections is currently operating at LOS E or F during one or both peak hours. The one intersection is:

- Avenue J-8 & 60th Street West (AM peak hour)

The remaining 26 intersections are currently operating at LOS D or better, with several operating at LOS A, during both peak hours.

In addition to the intersections, the following six arterial street segments were analyzed. While the existing LOS for these segments was not calculated, it is known from the analysis conducted on future project levels that all of these segments are operating at LOS D or better.

- 60th Street West south of Avenue J-8
- 70th Street West south of Avenue J-8
- Avenue J east of 65th Street West
- Avenue K east of 60th Street West
- Avenue K between 40th Street West & 45th Street West
- Avenue L between 40th Street West & 50th Street West

City of Lancaster General Plan Goals and Objectives

The City's General Plan includes the following regarding traffic and circulation.

Goal 14 A well balanced transportation and circulation system which provides for the efficient and safe transport of goods and people within and through the City of Lancaster; and which balances concerns for mobility with concerns for safety and the quality of the City's living environment.

Objective 14.1 Maintain a hierarchical system which balances the need for free traffic flow with economic realities, such that streets are designed to handle normal traffic flows with tolerances to allow for potential short-term delays (Level of Service "D") at peak hours. (see Table V-1).

Objective 14.2 Promote a roadway system, which balances the need to move vehicles while protecting environmental, aesthetic, and quality of life issues.

Objective 14.3 Achieve a balance between the supply of parking and demand for parking, recognizing the desirability and availability of alternative to the use of private automobile.

Objective 14.4 Reduce reliance of the use of automobiles and increase average ridership (AVR) to 1.5 by promoting alternative to the use of the private automobile, including ridesharing, non-motorized transportation (bicycle, pedestrian) and the use of public transit.

Objective 14.5 Ensure the availability of adequate means to safely move commodities within and through the City of Lancaster, including availability of truck routes, pipelines, and utility corridors, in such a manner as to minimize impacts on adjacent land uses and enhance Lancaster residents' quality of life.

Discussion of the project's consistency with the General Plan Goals and Objectives is provided in Section 5.9, Land Use and Planning.

5.13.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a significant impact would occur regarding traffic if the proposed project would,

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a level of service (LOS) standard established by the county congestion management agency for designated roads or highways;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)

Additionally, the City of Lancaster standard for peak-hour intersection LOS is LOS D or better. To determine whether the addition of project-generated trips at a study intersection results in a significant impact, the City determines if the addition of project-generated trips reduces the peak-hour LOS from acceptable operation (LOS D or better) to deficient operations (E or F). A significant project-related impact occurs at a study intersection where the existing LOS is E or F if the addition of project-generated trips changes the delay by the values shown in Table 5.13-5.

Table 5.13-5: City of Lancaster Thresholds of Significance

Pre-Project LOS	Signalized Intersections	Unsignalized Intersections
	Project V/C Increase	Project Percentage Delay Increase
E	0.02	2%
F	0.02	2%

5.13.5 Project Impacts

Impacts Related to Increasing Traffic and Exceeding an LOS Standard

To evaluate the potential impact of the proposed project on local traffic conditions, future traffic volumes were forecast in the study area at the project's buildout horizon year (2012) under conditions without the proposed project. The future without project condition provides a basis for assessing the potential significant impacts of the proposed project.

Future Without Project

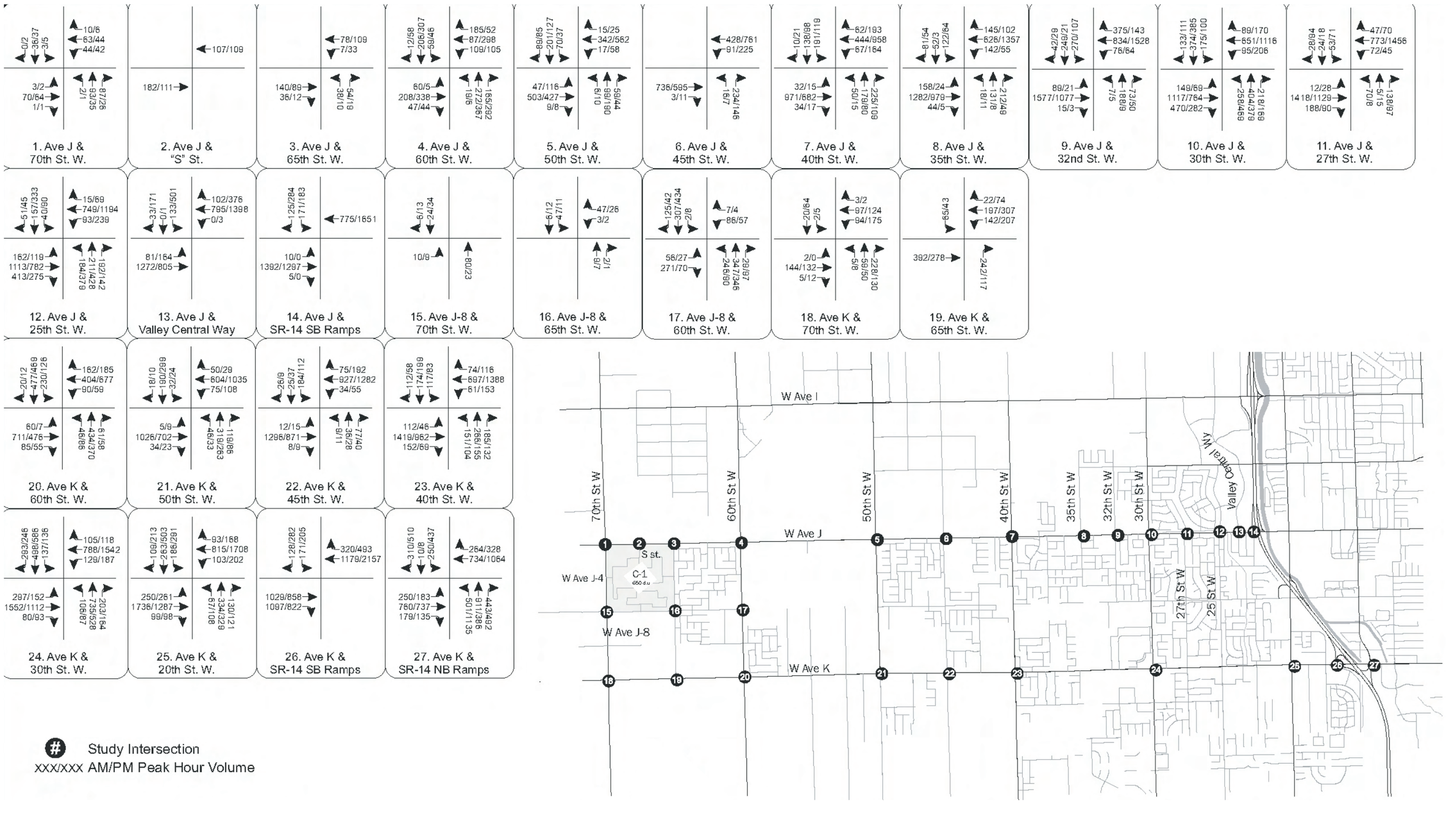
Per the City of Lancaster, the anticipated buildout year of the proposed project is expected to be 2012. The projection of Year 2012 Without Project traffic consists of existing traffic plus ambient traffic growth (general background regional growth of two percent per year).

In addition to the ambient growth factor, traffic from specific related projects in the area was assigned to the street network. The specific projects that were identified in conjunction with City staff for inclusion in the Future Without Project scenario consisted of over 100 projects (see previous Table 4-1). The majority of these projects are located west of SR-14 between Avenues J and M. The related projects considered in the traffic study also included the GPAs associated with the "Group A Projects" located to the northwest of the project site. Traffic data for these projects were obtained directly from the traffic studies being conducted for the Group A projects.

The resulting future without project peak hour traffic volumes at the 27 analyzed intersections, including the ambient growth factor and the specific traffic associated with the related projects, are illustrated in Exhibit 5.13-4.

Future Without Project Traffic Analysis

Based on the future forecasts, the levels of service at the analyzed intersections were calculated for the morning and evening peak hours. Table 5.13-6 summarizes the peak hour levels of service results. Appendix I contains the LOS calculation worksheets.



Source: Meyer, Mohaddes Associates, 2007.

NORTH Not to scale

Michael Brandman Associates

Exhibit 5.13-4
Future without Project Peak Hour Traffic Volumes

Table 5.13-6: Future Without Project Level of Service Summary

Intersection	AM Peak Hour		PM Peak Hour	
	V/C or Delay	LOS	V/C or Delay	LOS
1. Avenue J & 70th Street West [a]	11.1	B	10.6	B
2. Avenue J & "S" Street [a]	10.5	B	9.9	A
3. Avenue J & 65th Street West [a]	9.6	A	9.3	A
4. Avenue J & 60th Street West [a]	13.4	B	29.7	D
5. Avenue J & 50th Street West	0.600	A	0.706	C
6. Avenue J & 45th Street West [a]	17.4	C	65.4	F
7. Avenue J & 40th Street West	1.004	F	0.968	E
8. Avenue J & 35th Street West	0.795	C	0.639	B
9. Avenue J & 32nd Street West	0.806	D	0.563	A
10. Avenue J & 30th Street West	0.753	C	0.885	D
11. Avenue J & 27th Street West	0.599	A	0.547	A
12. Avenue J & 25th Street West	0.637	B	0.807	D
13. Avenue J & Valley Central Way	0.409	A	0.663	B
14. Avenue J & SR-14 SB Ramps	0.497	A	0.618	B
15. Avenue J-8 & 70th Street West [a]	9.4	A	9.9	A
16. Avenue J-8 & 65th Street West [a]	9.0	A	9.0	A
17. Avenue J-8 & 60th Street West [a]	333.3	F	35.9	E
18. Avenue K & 70th Street West [a]]	9.4	A	9.8	A
19. Avenue K & 65th Street West [a]	59.6	F	42.4	E
20. Avenue K & 60th Street West	0.878	D	0.724	C
21. Avenue K & 50th Street West [a]	395.3	F	478.6	F
22. Avenue K & 45th Street West [a]	OVRFL	F	OVRFL	F
23. Avenue K & 40th Street West	1.388	F	1.217	F
24. Avenue K & 30th Street West	0.797	C	0.767	C
25. Avenue K & 20th Street West	0.735	C	0.924	E
26. Avenue K & SR-14 SB Ramps	0.516	A	0.824	D
27. Avenue K & SR-14 NB Ramps	0.994	E	1.406	F

Notes:
[a] Two-Way Stop-controlled intersection, value represents average delay (in seconds) for the most constrained movement.
OVRFL = Intersection operating at oversaturated conditions.
Source: Meyer, Mohaddes Associates, City of Lancaster GPA 04-05 (Group C - Development C-1) Traffic Impact Study, July 2007.

As shown, nine of the 27 study intersections would operate at levels of service E or F under "Future Without Project" conditions during one or both of the peak hours. This represents an increase of eight intersections over existing conditions. The intersections are:

- Avenue J & 45th Street West (PM peak hour)
- Avenue J & 40th Street West (both peak hours)
- Avenue J-8 & 60th Street West (both peak hours)
- Avenue K & 65th Street West (both peak hours)
- Avenue K & 50th Street West (both peak hours)
- Avenue K & 45th Street West (both peak hours)
- Avenue K & 40th Street West (both peak hours)
- Avenue K & 20th Street West (PM peak hour)
- Avenue K & SR-14 NB Ramps (both peak hours)

It should be recognized that the poor operating conditions at these eight locations under "Future Without Project" conditions would indicate that traffic improvements would be needed at these intersections even if the proposed project were not constructed.

The remaining 18 analyzed intersections are projected to operate at acceptable LOS (i.e., LOS D or better) during both peak hours for future conditions without the envisioned proposed project.

Future With Project

The following section describes the methodology for developing the project related trip estimates, the assignment of these trips and the resulting traffic conditions with the proposed project at the 27 analyzed intersections.

Forecast Trip Generation of the Project

Future conditions with the proposed project include estimates of trip generation due to the proposed project. Traffic generation estimates for the proposed project were developed through the application of trip generation rates obtained from the ITE Trip Generation, 7th Edition. Table 5.13-7 summarizes the estimated trip generation for the proposed project.

Table 5.13-7: Project Trip Generation

Land Use Description	ITE Code	Size	Daily	AM Peak Hour			PM Peak Hour		
			Trips	In	Out	Total	In	Out	Total
Single Family Homes	210	650 dus[a]	6,221	122	366	488	414	243	657

[a] Trip rate is 9.57 daily trips per dwelling unit.
[b] Dwelling Units
Source: Meyer, Mohaddes Associates, City of Lancaster GPA 04-05 (Group C - Development C-1) Traffic Impact Study, July 2007.

As shown, the proposed the project is expected to generate approximately 6,221 daily trips of which 488 would occur during the morning peak hour and 657 during the evening peak hour.

Trip Distribution of the Project

The geographic distribution of trips generated by the project is based on the demographics of the area, the street system that serves the site, and the level of accessibility of the routes to and from the project site. Input from City staff was also utilized in the development of the project trip distribution pattern. Exhibit 5.13-5 illustrates the distribution pattern for the proposed project near the project site. In general, it is expected that the majority (85 percent) of the trips are expected to travel to and from the City of Lancaster to the south; the remaining trips would split between downtown Lancaster destinations (10 percent) and northbound trips on SR-14 (5 percent).

Project-Only Traffic Volumes

Utilizing the trip generation estimates and the trip distribution pattern described above, the project trips were assigned to the street network. The peak-hour trip generation for the proposed project estimates are presented in Exhibit 5.13-5. The resulting project-only morning and evening peak-hour traffic volumes are illustrated in Exhibit 5.13-6 for the 27 analyzed intersections.

Future With Project Traffic Analysis

The proposed project-only peak-hour traffic volumes were then added to the "Future Without Project" traffic projections. The resulting "Future With Project" morning and evening peak hour traffic volumes together with the corresponding LOS are shown in Table 5.13-8.

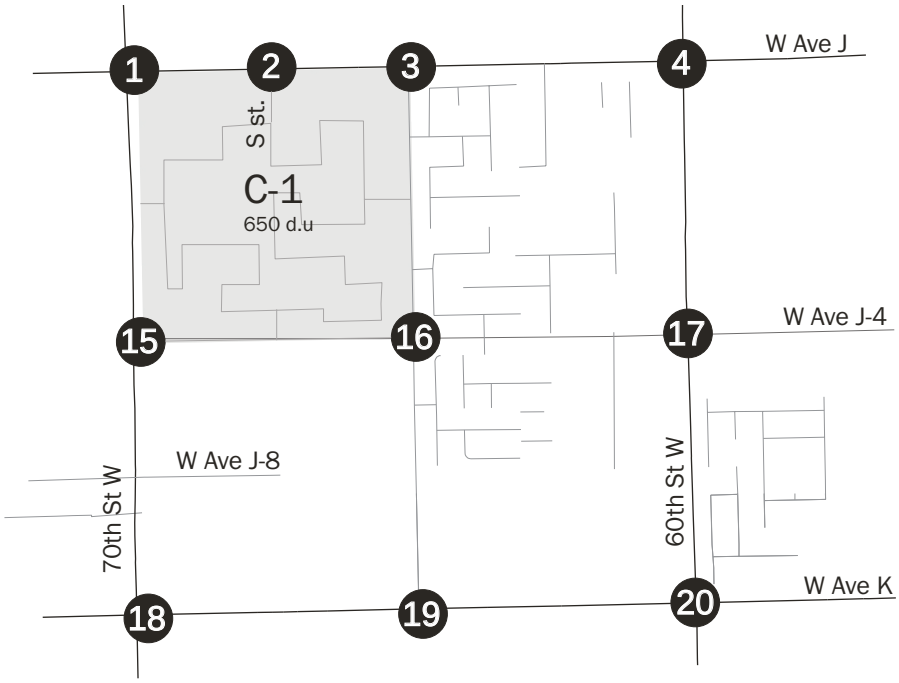
As shown, 12 of the 27 study intersections would operate at LOS E or F under "Future With Project" conditions during one or both of the peak hours, an increase of three intersections over No-Project conditions. The intersections are:

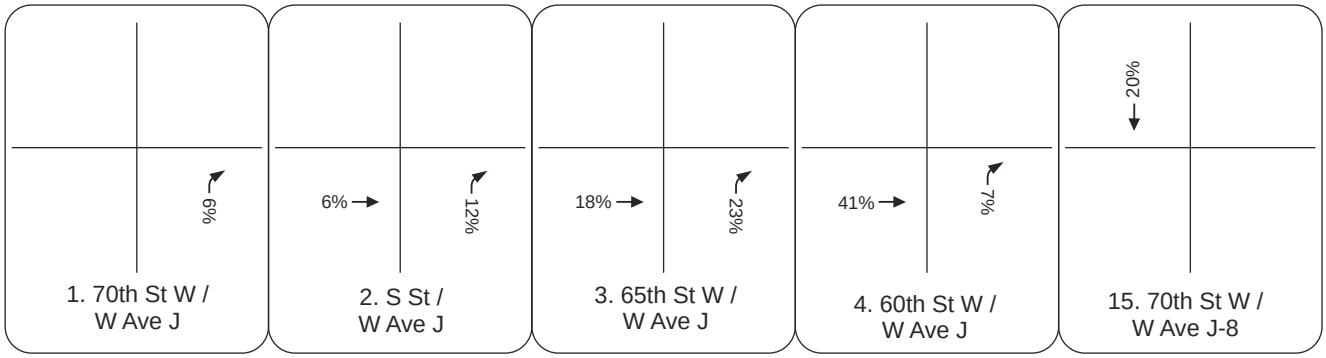
- Avenue J & 60th Street West (PM peak hour)
- Avenue J & 45th Street West (PM peak hour)

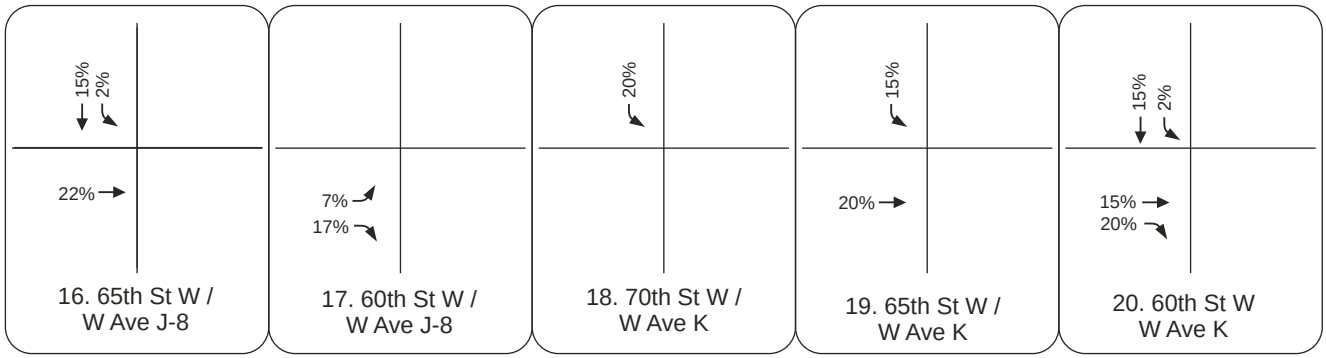
- Avenue J & 40th Street West (both peak hours)
- Avenue J & 30th Street West (PM peak hour)
- Avenue J-8 & 60th Street West (both peak hours)
- Avenue K & 65th Street West (both peak hours)
- Avenue K & 60th Street West (AM peak hour)
- Avenue K & 50th Street West (both peak hours)
- Avenue K & 45th Street West (both peak hours)
- Avenue K & 40th Street West (both peak hours)
- Avenue K & 20th Street West (PM peak hour)
- Avenue K & SR-14 NB Ramps (both peak hours)

The above 12 locations would experience significant impacts.

The remaining 15 analyzed intersections are projected to operate at acceptable levels (LOS D or better) under conditions with the project for both peak hours.







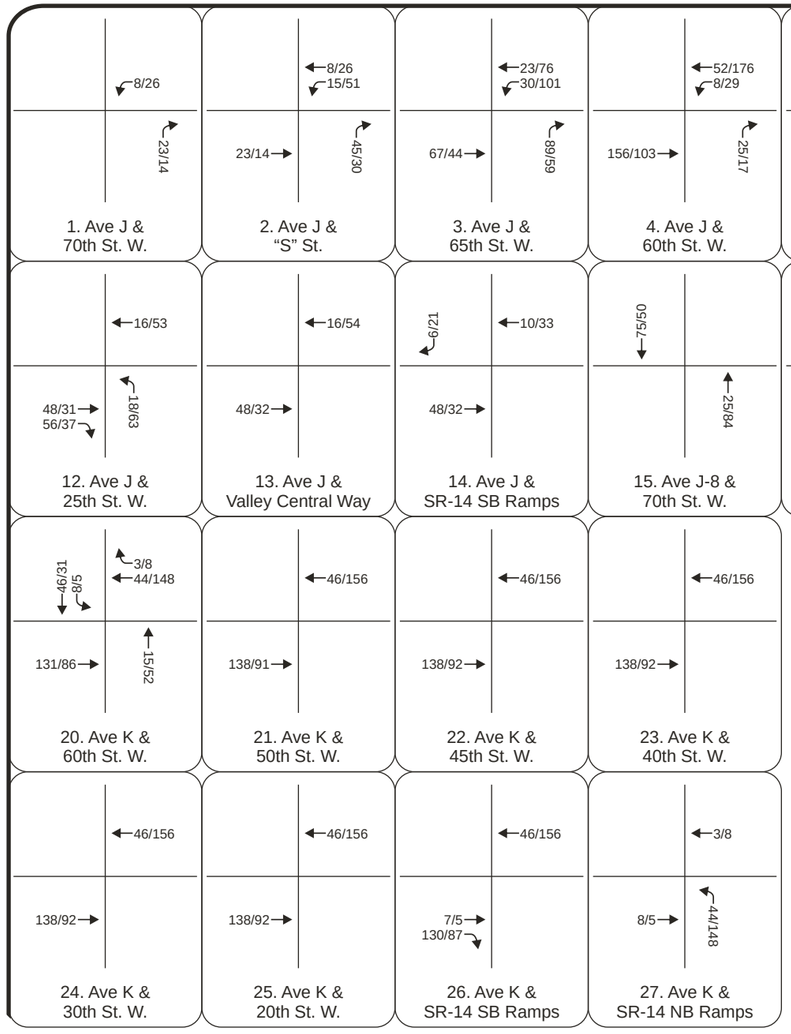
Source: Meyer, Mohaddes Associates, 2006.

NORTH

Not to scale

Michael Brandman Associates

Exhibit 5.13-5
General Trip Distribution Pattern



Source: Meyer, Mohaddes Associates, 2006.

NORTH Not to scale

Michael Brandman Associates

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Exhibit 5.13-6
Project Only Peak Hour Traffic Volumes

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ENVIRONMENTAL IMPACT REPORT

Table 5.13-8: Future With Project Level of Service Summary

Intersection	Peak Hour	Existing Conditions		Future w/o Project		Future with Project		Significant Impact?
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	
1. Avenue J & 70th Street West	AM	10.6	B	11.1	B	11.3	B	No
	PM	10.1	B	10.6	B	11.1	B	No
2. Avenue J & "S" Street	AM	10.1	B	10.5	B	11.6	B	No
	PM	9.6	A	9.9	A	11.6	B	No
3. Avenue J & 65th Street West	AM	9.4	A	9.6	A	10.5	B	No
	PM	9.1	A	9.3	A	9.8	A	No
4. Avenue J & 60th Street West	AM	10.3	B	13.4	B	16.0	C	No
	PM	14.0	B	29.7	D	75.4	**F**	Yes
5. Avenue J & 50th Street West	AM	0.364	A	0.600	A	0.713	C	No
	PM	0.424	A	0.706	C	0.834	D	No
6. Avenue J & 45th Street West	AM	11.2	B	17.4	C	21.1	C	No
	PM	16.6	C	65.4	F	107.4	**F**	Yes
7. Avenue J & 40th Street West	AM	0.542	A	1.004	**F**	1.117	**F**	Yes
	PM	0.444	A	0.968	**E**	1.096	**F**	Yes
8. Avenue J & 35th Street West	AM	0.489	A	0.795	C	0.851	D	No
	PM	0.328	A	0.639	B	0.703	C	No
9. Avenue J & 32nd Street West	AM	0.591	A	0.806	D	0.844	D	No
	PM	0.313	A	0.563	A	0.606	B	No
10. Avenue J & 30th Street West	AM	0.463	A	0.753	C	0.807	D	No
	PM	0.435	A	0.885	D	0.977	**E**	Yes
11. Avenue J & 27th Street West	AM	0.432	A	0.599	A	0.620	B	No
	PM	0.371	A	0.547	A	0.572	A	No
12. Avenue J & 25th Street West	AM	0.453	A	0.637	B	0.670	B	No
	PM	0.557	A	0.807	D	0.860	D	No
13. Avenue J & Valley Central Way	AM	0.319	A	0.409	A	0.419	A	No
	PM	0.553	A	0.663	B	0.674	B	No
14. Avenue J & SR-14 SB Ramps	AM	0.398	A	0.497	A	0.507	A	No
	PM	0.463	A	0.618	B	0.638	B	No

Table 5.13-8 (Cont.): Future With Project Level of Service Summary

Intersection	Peak Hour	Existing Conditions		Future w/o Project		Future with Project		Significant Impact?
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	
15. Avenue J-8 & 70th Street West	AM PM	9.3 9.7	A A	9.4 9.9	A A	10.1 11.0	B B	No No
16. Avenue J-8 & 65th Street West	AM PM	9.0 9.0	A A	9.0 9.0	A A	11.0 10.2	B B	No No
17. Avenue J-8 & 60th Street West	AM PM	35.3 13.5	E B	333.3 35.9	**F** **E**	532.4 60.4	**F** **F**	Yes Yes
18. Avenue K & 70th Street West	AM PM	7.7 7.6	A A	9.4 9.8	A A	9.9 11.1	A B	No No
19. Avenue K & 65th Street West	AM PM	0.0 10.0	A B	59.6 42.4	**F** **E**	234.6 109.1	**F** **F**	Yes Yes
20. Avenue K & 60th Street West	AM PM	0.401 0.301	A A	0.9 0.7	D C	0.969 0.830	**E** D	Yes No
21. Avenue K & 50th Street West	AM PM	15.3 12.9	C B	395.3 478.6	**F** **F**	483.8 596.8	**F** **F**	Yes Yes
22. Avenue K & 45th Street West	AM PM	21.7 20.4	C C	OVRFL OVRFL	**F** **F**	OVRFL OVRFL	**F** **F**	Yes Yes
23. Avenue K & 40th Street West	AM PM	0.633 0.598	B A	1.388 1.217	**F** **F**	1.474 1.315	**F** **F**	Yes Yes
24. Avenue K & 30th Street West	AM PM	0.535 0.490	A A	0.797 0.767	C C	0.826 0.799	D C	No No
25. Avenue K & 20th Street West	AM PM	0.531 0.640	A B	0.735 0.924	C **E**	0.764 0.957	C E	No Yes
26. Avenue K & SR-14 SB Ramps	AM PM	0.418 0.532	A A	0.516 0.824	A D	0.525 0.857	A D	No No
27. Avenue K & SR-14 NB Ramps	AM PM	0.899 0.829	**D** **D**	0.994 1.406	**E** **F**	0.994 1.500	**F** **F**	Yes Yes

Source: Meyer, Mohaddes Associates, City of Lancaster GPA 04-05 (Group C - Development C-1) Traffic Impact Study, July 2007.

Arterial Segment Analysis

In addition to the intersection LOS analysis, the project's potential impact on six arterial segments was analyzed. The six street segments include:

- 60th Street West south of Avenue J-8
- 70th Street West south of Avenue J-8
- Avenue J east of 65th Street West
- Avenue K east of 60th Street West
- Avenue K between 40th Street West & 45th Street West
- Avenue L between 40th Street West & 50th Street West

"Future Without Project" daily projections were developed similar to the peak hour projections for the intersections. The future daily volumes without the proposed project consist of the existing daily volumes adjusted for ambient traffic growth (general background regional growth of two percent per year to the year 2012) plus the daily traffic expected from specific related projects in the area, assigned to the street network in the same way the peak hour traffic was assigned. The "Future Without Project" daily volumes are presented in Table 5.13-9.

The "Future With Project" conditions daily volumes on the arterial segments consist of the proposed project's daily traffic added to the "Future Without Project" daily volumes. The proposed project's daily volumes were assigned according to the project trip distribution illustrated in Exhibit 5.13-6.

Arterial Segment Impacts

V/C ratios and corresponding levels of service were developed for the "Future With Project" daily volumes along the six analyzed street segments. The impact analysis for the street segments are also summarized in the last few columns of Table 5.13-9. It is anticipated that the six arterial street segments would provide adequate capacity to maintain a LOS D or better based on the projected daily volumes. Therefore, impacts to arterial segments are less than significant.

Table 5.13-9: Arterial Segments Impact Analysis

Segment	Existing Daily Volumes	Related Project ADT	Future w/o Project	Total Project ADT	% of Project Traffic	Project Related Volume	Future ADT	Future Capacity			V/C	LOS
								class	# of lanes ea. Dir	vpd		
60th Street West south of Avenue J-8	8,986	2,421	12,485	6,221	17%	1,057	13,542	Primary	1	15,600	0.87	D
70th Street West south of Avenue J-8	1,445	0	1,618	6,221	15%	933	2,551	Primary	1	15,600	0.16	A
Avenue J east of 65th Street West	1,997	895	3,131	6,221	41%	2,550	5,682	Primary	2	32,900	0.17	A
Avenue K east of 60th Street West	3,094	9,389	12,855	6,221	37%	2,302	15,156	Primary	2	32,900	0.46	A
Avenue K between 40th Street West & 45th Street West	11,361	14,048	26,773	6,221	37%	2,302	29,074	Primary	2	32,900	0.88	D
Avenue L between 40th Street West & 50th Street West	22,012	15,362	40,016	6,221	15%	933	40,949	Primary	3	49,300	0.83	D

ADT = average daily trips vpd = vehicles per day
Source: Meyer, Mohaddes Associates, City of Lancaster GPA 04-05 (Group C - Development C-1) Traffic Impact Study, July 2007.

Impacts Related to Congestion Management Program

Future Conditions Without Project (2012)

"Future Without Project" freeway segment demands were obtained by applying a 2% per year growth factor to the Existing (2003) values and then adding the peak-hour traffic volumes from the related projects, discussed previously in the intersection analysis. Utilizing these projections, the "Future Without Project" operating conditions along the analyzed freeway segments were assessed. The results of the LOS analysis are summarized in the top portion of Table 5.13-10. As can be seen, all three locations would operate at LOS F0, F1, F2 or F3 in the peak direction during one or both peak hours.

Table 5.13-10: CMP Freeway Segment Analysis

CMP Station	Freeway Route	Post Mile	Location	Northbound								Southbound							
				AM Peak Hour				PM Peak Hour				AM Peak Hour				PM Peak Hour			
				Demand	Cap	D/C	LOS	Demand	Cap	D/C	LOS	Demand	Cap	D/C	LOS	Demand	Cap	D/C	LOS
Existing																			
1022	14	R26.00	n/o Junction Route 5	2,639	10,000	0.26	A	8,363	10,000	0.84	D	9,386	10,000	0.94	**E**	3,547	10,000	0.35	B
1023	14	R54.20	s/o Angeles Forest Hwy	1,816	4,000	0.45	B	4,000	4,000	1.00	**F (0)**	4,000	4,000	1.00	**F (0)**	2,101	4,000	0.53	B
1024	14	R73.00	s/o State Route R-138	1,379	4,000	0.34	A	1,267	4,000	0.32	A	1,022	4,000	0.26	A	1,602	4,000	0.40	B
Future Without Project [a] [b]																			
1022	14	R26.00	n/o Junction Route 5	3,837	10,000	0.38	B	12,316	10,000	1.23	**F (0)**	13,237	10,000	1.32	**F (1)**	5,625	10,000	0.56	C
1023	14	R54.20	s/o Angeles Forest Hwy	2,938	4,000	0.73	C	7,412	4,000	1.85	**F (3)**	7,098	4,000	1.77	**F (3)**	4,062	4,000	1.02	**F (0)**
1024	14	R73.00	s/o State Route R-138	2,660	4,000	0.67	C	4,991	4,000	1.25	**F (0)**	4,294	4,000	1.07	**F (0)**	3,946	4,000	0.99	**E**
Future With Project [a]																			
1022	14	R26.00	n/o Junction Route 5	3,922	10,000	0.39	B	12,605	10,000	1.26	**F (1)**	13,493	10,000	1.35	**F (1)**	6,084	10,000	0.61	C
1023	14	R54.20	s/o Angeles Forest Hwy	3,032	4,000	0.76	C	7,731	4,000	1.93	**F (3)**	7,380	4,000	1.84	**F (3)**	4,568	4,000	1.14	**F (0)**
1024	14	R73.00	s/o State Route R-138	2,782	4,000	0.70	C	5,405	4,000	0.35	**F (2)**	4,660	4,000	1.16	**F (0)**	4,603	4,000	1.15	**F (0)**

Source: Meyer, Mohaddes Associates, City of Lancaster GPA 04-05 (Group C - Development C-1) Traffic Impact Study, July 2007.

Future Conditions With Project

The proposed project traffic volumes were added to the "Future Without Project" traffic volumes at the three analyzed freeway segments. The resulting peak hour traffic volumes are also shown in Table 5.13-10. The same segments discussed above are expected to operate at poor levels of service (LOS F0, F1, F2 or F3) under future conditions with the project.

Project Impacts

The CMP has established thresholds for determining a significant impact. The CMP states that a significant project impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C or in this case D/C > 0.02), causing or worsening LOS F.

Based on the above significance criteria and the projected operating conditions with the proposed project, the proposed project is expected to create significant impacts along the three analyzed freeway segments during the following peak periods and directions:

- SR-14 north of I-5 (AM Peak SB, PM Peak NB)
- SR-14 south of Angeles Forest Hwy (AM Peak SB, PM Peak SB & NB)
- SR-14 south of SR-138 (AM Peak SB , PM Peak SB & NB)

The remaining periods/directions are not expected to be significantly impacted by the proposed project. This is a significant impact for which no mitigation measures are available to the lead agency.

Impacts Related to Increased Hazards Caused by a Design Feature and Inadequate Emergency Access

The proposed project would be designed in accordance with the standards of the City of Lancaster for street width, curbs and turn radius. These standards take into account the ability of emergency vehicles to traverse the area and access the homes. The Los Angeles County Fire Department would be required to approve the final subdivision design in accordance with emergency access requirements. The proposed project includes the widening of adjacent streets to provide turn lanes into the project site. Appropriate traffic controls such as stop signs would be provided. There are no impacts related to design feature hazards or inadequate emergency access.

5.13.6 Cumulative Impacts

The cumulative Year 2012 scenario includes traffic volumes associated with development in the project vicinity. Therefore, the analysis provided in this section is considered a project-level and cumulative traffic analysis. As discussed, significant traffic impacts would occur in the Year 2012

with the development of the proposed project and the development of the related projects listed in Section 4.2.

Regarding alternative means of transportation, the proposed project perpetuates a pattern of auto dependant developments and limits the introduction of facilities such as bike trails and transit stops. The related projects also are not expected to include such facilities, and the cumulative effect is to develop a large area of the City without provisions for alternative transportation. Cumulative effects regarding the lack of alternative transportation are significant.

5.13.7 Mitigation Measures

As discussed, 12 intersections are expected to be impacted by the proposed project. Mitigation measures were developed for these impacted locations, which would result in improving these locations to less than significant levels. The mitigation measures were developed for these locations and their effectiveness was analyzed. These measures were designed to increase capacity and included operational improvements and potential physical improvements. The applicant shall construct or contribute fair share fees to the satisfaction of the City of Lancaster to implement all of the following mitigation measures.

T-1 *Avenue J & 60th Street West* - Install a traffic signal.

T-2 *Avenue J & 45th Street West* - Install a traffic signal. In addition, widen the westbound Avenue J approach from one left-turn lane and one shared through/right-turn lane to consist of one left-turn lane, one through lane, and one shared through/right lane.

T-3 *Avenue J & 40th Street West* - Widen the westbound Avenue J approach from one left-turn lane and one shared through/right-turn lane to consist of one left-turn lane, one through lane, and one shared through/right lane.

T-4 *Avenue J & 30th Street West* - Re-stripe the northbound 30th Street West approach of the intersection from one left-turn lane, two through lanes, and one right-turn lane to consist of two left-turn lanes, one through lane, and one right-turn lane.

T-5 *Avenue J-8 & 60th Street West* - Install stop signs on the north and south legs of the intersection to convert this location into a four-way stop controlled intersection.

T-6 *Avenue K & 65th Street West* - Install stop signs on the east and west legs of the intersection. This would convert this location into a four-way stop controlled intersection. Additionally, widen the 65th Street West eastbound and westbound approaches from a shared left-though-right turn lane to consist of one left-turn lane and one through/right-turn lane.

T-7 *Avenue K & 60th Street West* - Re-stripe the 60th Street West eastbound approach from two left-turn lanes, one through lane, and one right-turn lane to consist of one left-turn lane, two trough lanes. and one right-turn lane. Additionally, widen the westbound 60th Street West approach from one left-turn lane, one through lane, and one right-turn lane to consist of one left-turn lane, two through lanes, and one right-turn lane.

T-8 *Avenue K & 50th Street West* - Install a traffic signal. Widen the Avenue K northbound approach from one shared left-through-right turn lane to consist of one through/left-turn lane and a right-turn lane. Widen the Avenue K southbound approach from one shared left-through-right lane to consist of one left-turn lane and one through/right-turn lane. Widen the 50th Street West eastbound and westbound approaches from one shared left-through-right turn lane to consist of one left-turn lane, two through lanes, and one right-turn lane.

T-9 *Avenue K & 45th Street West*- Install a traffic signal. Widen the Avenue K eastbound and westbound approaches from one left-turn lane, one through lane, and one right-turn lane to consist of one left-turn lane, two through lanes, and one right-turn lane.

T-10 *Avenue K & 40th Street West* - Widen the Avenue K eastbound approach from one left-turn lane and one shared through-right lane to consist of one left-turn lane, one through lane, and one through/right-turn lane. Widen the Avenue K westbound approach from one left-turn lane, one through lane, and one right-turn lane to consist of one left-turn lane, two through lanes, and one right-turn lane.

T-11 *Avenue K & 20th Street West* - Widen the Avenue K westbound approach from one left-turn lane, two through lanes, and one through-right lane to consist of one left-turn lane, three through lanes, and one right-turn lane.

T-12 *Avenue K & SR-14 NB Ramps* – Widen the northbound approach from one left-turn lane, one through lane, and one right-turn lane to consist of two left-turn lanes, one through lane, and one right-turn lane. As it requires work in the State highway right-of-way, it should be noted that the implementation of this mitigation measure would require consultation and coordination with Caltrans staff.

T-13 The applicant shall dedicate right-of-way and install bike lanes and transit stops along Avenue J.

The proposed lane configurations for the above intersections are illustrated on Exhibit 5.13-7.

5.13.8 Level of Impact After Mitigation

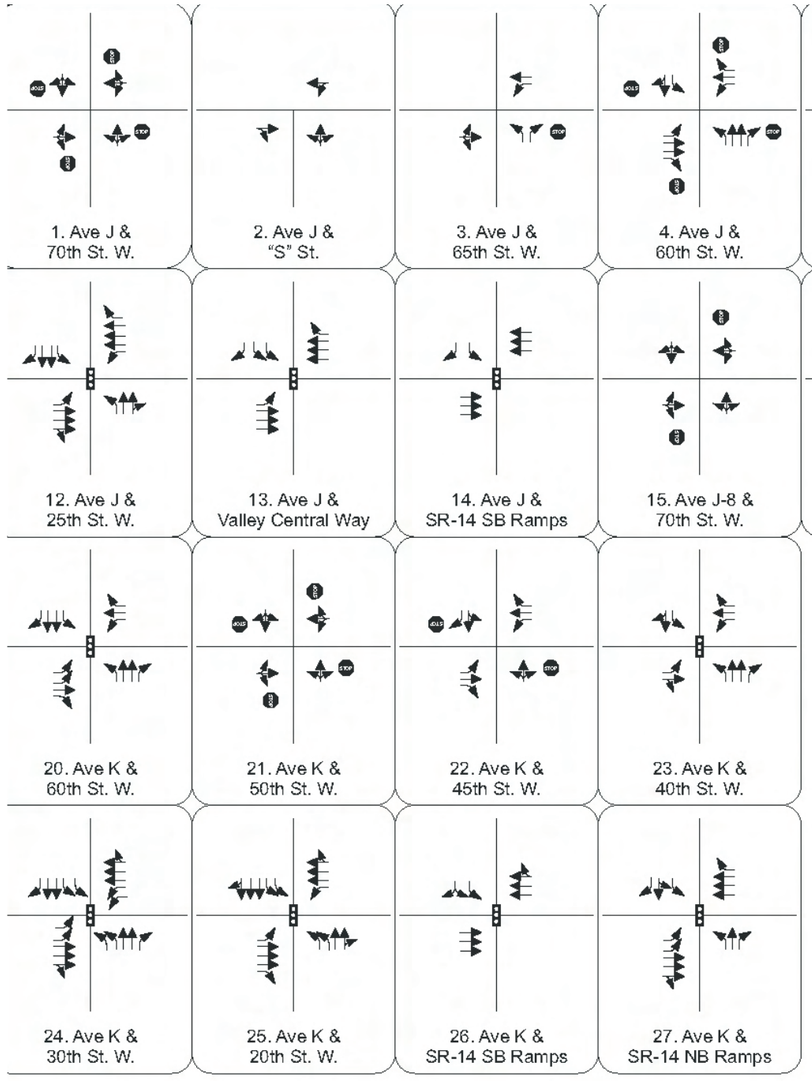
Table 5.13-11 shows the results of the peak hour LOS analysis with the proposed intersection mitigation measures. Implementation of the proposed mitigation measures would result in the

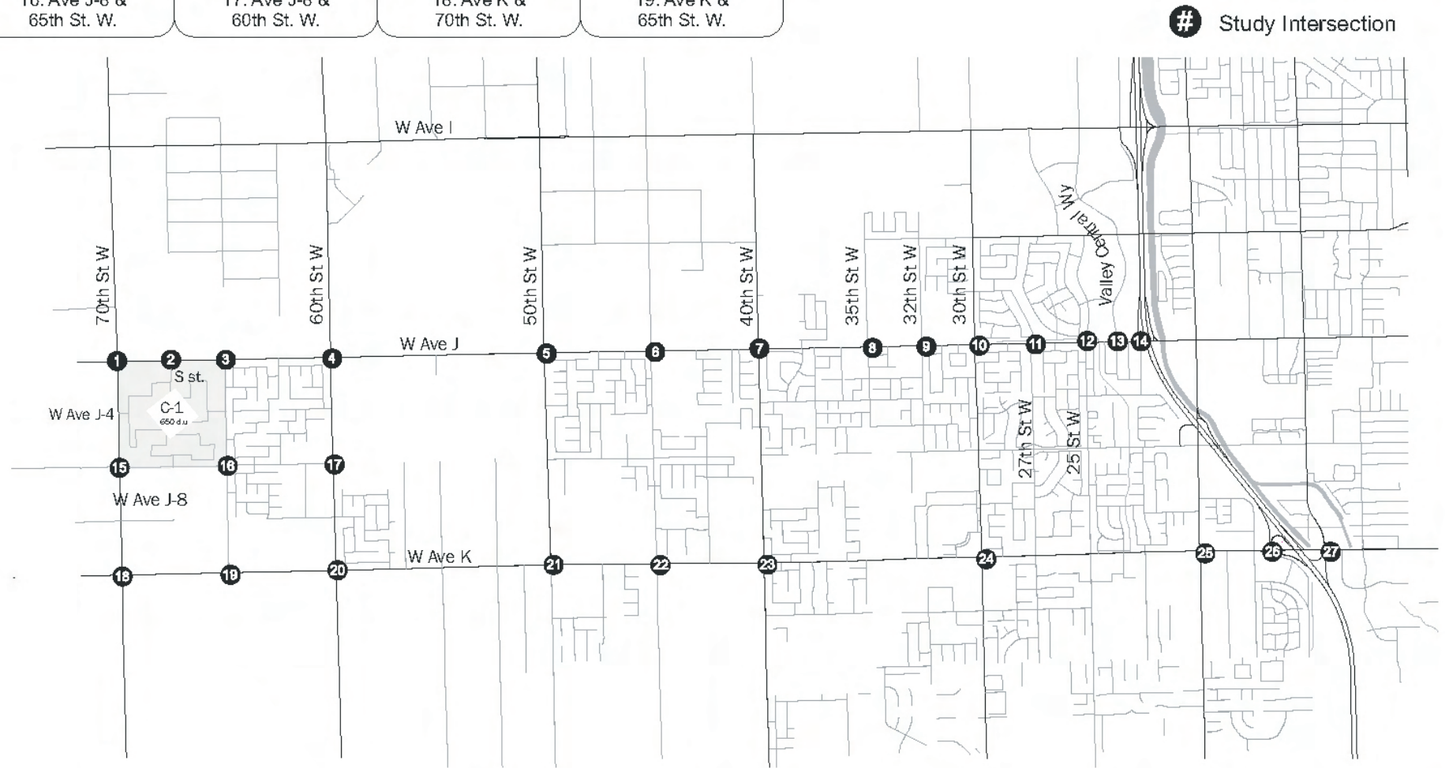
affected intersections achieving a LOS of D or higher. Therefore, impacts to affected intersections after mitigation are less than significant.

However, impacts related to the congestion on SR 14 and the Congestion Management Plan remain significant and unavoidable.

These impacts cannot be mitigated by the lead agency. Therefore, impacts remain significant and unavoidable; and a statement of overriding considerations will be necessary.

The dedication of right-of-way for future bike lanes and transit stops will mitigate the effect of the lack of facilities for alternative transportation.





Source: Meyer, Mohaddes Associates, 2007.

NORTH Not to scale

Michael Brandman Associates

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Exhibit 5.13-7
Future Lane Configurations

Table 5.13-11: Level of Service Summary - With Mitigation Measures

Intersection	Peak Hour	Existing Conditions		Future w/o Project		Future with Project		Significant Impact?
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	
4. Avenue J & 60th Street West	AM	10.3	B	13.4	B	0.441	A	No
	PM	14.0	B	29.7	D	0.628	B	No
6. Avenue J & 45th Street West	AM	11.2	B	17.4	C	0.588	A	No
	PM	16.6	C	65.4	**F**	0.554	A	No
7. Avenue J & 40th Street West	AM	0.542	A	1.004	**F**	0.769	C	No
	PM	0.444	A	0.968	**E**	0.674	B	No
10. Avenue J & 30th Street West	AM	0.463	A	0.753	C	0.885	D	No
	PM	0.435	A	0.885	D	0.825	C	No
17. Avenue J-8 & 60th Street West	AM	35.3	E	333.3	**F**	30.3	C	No
	PM	13.5	B	35.9	**E**	23.4	C	No
19. Avenue K & 65th Street West	AM	0.0	A	59.6	**F**	19.1	C	No
	PM	10.0	B	42.4	**E**	17.6	C	No
20. Avenue K & 60th Street West	AM	0.401	A	0.9	D	0.706	C	No
	PM	0.301	A	0.7	C	0.574	A	No
21. Avenue K & 50th Street West	AM	15.3	C	395.3	**F**	0.755	C	No
	PM	12.9	B	478.6	**F**	0.690	B	No
22. Avenue K & 45th Street West	AM	21.7	C	OVRFL	**F**	0.758	C	No
	PM	20.4	C	OVRFL	**F**	0.676	B	No
23. Avenue K & 40th Street West	AM	0.633	B	1.388	**F**	0.895	D	No
	PM	0.598	A	1.217	**F**	0.833	D	No
25. Avenue K & 20th Street West	AM	0.531	A	0.735	C	0.713	C	No
	PM	0.640	B	0.924	**E**	0.899	D	No
27. Avenue K & SR-14 NB Ramps	AM	0.899	D	0.994	**E**	0.850	D	No
	PM	0.829	D	1.406	**F**	0.827	D	No

Notes:
[a] Two-Way Stop-controlled intersection, value represents average delay (in seconds) for the most constrained movement.
[b] Four-Way Stop-controlled intersection, value represents average delay (in seconds) of all intersection approaches.
OVRFL: Intersection operating at oversaturated conditions
Source: Meyer, Mohaddes Associates, City of Lancaster GPA 04-05 (Group C - Development C-1) Traffic Impact Study, July 2007.

SECTION 6
SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

Section 5 of this EIR provides a description of the potential environmental impacts from the implementation of the proposed project, as well as mitigation measures proposed to reduce the environmental impacts to the maximum extent feasible. After implementation of the proposed mitigation, the following impacts associated with the proposed project would remain significant:

- Aesthetics. The proposed project would adversely affect the scenic quality of the site.
- Air Quality. The proposed project would:
    - Generate significant short-term air quality impacts during construction from NO_x and particulate matter (PM_{10} and $PM_{2.5}$ emissions)
    - Generate significant operational impacts during project occupancy from CO and PM_{10} emissions
    - Generate cumulative health impacts during grading from particulate matter (PM_{10} and $PM_{2.5}$) ground-level ozone
    - Generate cumulative health impacts during operation from PM_{10}
- Land Use and Planning. The proposed project is not consistent with the General Plan Goals 1, 2, 17, 18, 19 and 20; and Objectives 1.7, 3.1, 3.3, 3.5, 3.8, 14.2, 14.4, 16.1, 17.1, 18.2, and 19.1 concerning cumulative land use development patterns. Also, the proposed project is not consistent with the Southern California Association of Governments (SCAG) Compass Vision Growth Plan, nor the Regional Transportation Plan. Additionally, the proposed project is inconsistent with two policies of the SCAG Regional Comprehensive Plan and Guide concerning quality of life and one related to air quality.
- Public Services and Utilities. Water Service. The water demand for the proposed project is estimated at 780 af/yr. The Los Angeles County Water Works District No. 40 (District) has indicated that additional water demand from the proposed project is consistent with the population and associated water demand projections for the District in its IUWMP. However, the Antelope Valley-East Kern Water Agency (AVEK) is currently unable to assure the District of the availability of State Water Project (SWP) water supplies to meet the requirements of Water Code § 10910, and the District is unable to conclude that sufficient future water supplies are available for the proposed project and future projects.
- Transportation and Traffic. The proposed project would create impacts on three segments of SR-14 that exceed the thresholds of the Congestion Management Plan.

These significant unavoidable adverse impacts would occur if the development objectives identified in Section 5 of this EIR were met.

SECTION 7
OTHER LONG-TERM IMPLICATIONS

7.1 GROWTH-INDUCING IMPACTS

There are two types of growth inducing impacts that a proposed project may have: direct and indirect. To assess the potential for growth-inducing impacts, the proposed project's characteristics that may encourage and facilitate activities that individually or cumulatively affect the environment must be evaluated.

Direct growth inducing impacts occur when the development of a proposed project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional developments in the same area. Also included in this category are projects that remove physical obstacles to population growth, such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area. Construction of these types of infrastructure projects cannot be considered isolated from the development they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth are those, which may provide a catalyst for future unrelated development in an area such as a new residential community that requires additional commercial uses to support residents.

As discussed in Section 3, Project Description, of this document, the proposed project involves the construction of 650 residential dwellings units. In addition to the proposed land use, onsite and offsite infrastructure improvements would be required that are related to stormwater collection and conveyance, domestic and reclaimed water supply, wastewater treatment, utility infrastructure, and transportation-related improvements. The proposed land use and related infrastructure improvements are not part of the overall land use plan contained in the General Plan of the City of Lancaster and the project will contribute to substantial area wide growth and growth inducing impacts.

7.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT TO RESOURCES

Approval and implementation of the actions related to the proposed project would result in the loss of open space and potential farming or grazing land. This open space has been identified as a visual resource for hikers and bikers.

Approval and implementation of the actions related to the proposed project would result in an irretrievable commitment of non-renewable resources such as energy supplies. The energy resource

demands would be used for construction activities, heating and cooling of buildings, transportation of people and goods, as well as lighting and other energy associated needs.

Non-renewable resources would be committed primarily in the form of fossil fuels, and would include fuel, oil, natural gas, and gasoline used by vehicles and equipment associated with the construction of the proposed project. Those resources include, but are not limited to, lumber and other forest products, sand and gravel, photochemical construction materials, steel, copper, lead, and water. Since alternative energy sources such as solar and wind energy are not currently in widespread use, it is unlikely that any real savings in non-renewable energy supplies (i.e. oil and gas) would be realized in the immediate future.

More specifically, the primary effect of the development of the proposed project would be the commitment of approximately 160 acres of potential agricultural land to a non-open space use. The financial and material investments that would be required of the applicant and the City would result in further commitments of land resources making it likely that the same or similar uses would continue in the future. Implementation of the proposed project represents a long-term commitment to urbanization. Environmental changes associated with the implementation of the proposed project would result in alterations of the physical environment. If the proposed project is approved, and subsequently implemented, new structures would be built, additional utilities would be constructed, and circulation improvements would be made.

7.3 CUMULATIVE IMPACTS

Section 15130 of the CEQA Guidelines requires the consideration of cumulative impacts within an EIR. Cumulative impacts are defined as two or more individual effects which, when considered together, are considerable or which, compound or increase other effects. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment, which results from the projects when added to other related projects. In identifying projects which may contribute to cumulative impacts, the CEQA Guidelines allow the use of either a specific list of past, present, and reasonably anticipated future projects, providing related or cumulative impacts, including those that are outside of the control of the lead agency. A list of related projects, provided by the City, is referenced in Section 4.2, Related Projects, of this document. Cumulative impacts are separately discussed within each environmental issue section.

SECTION 8
ALTERNATIVES TO THE PROPOSED PROJECT

8.1 INTRODUCTION

The CEQA Guidelines requires an EIR to describe a range of alternatives to the proposed project, or to the location of the proposed project, which would feasibly achieve most of the basic objectives of the proposed project, but would avoid or substantially lessen any of the significant effects identified in the analysis. An EIR is not required to consider every conceivable alternative to a proposed project. Rather, an EIR must consider a reasonable range of alternatives that are potentially feasible; an EIR is not required to consider alternatives that are infeasible. No alternatives other than those discussed here were considered.

Alternatives must be considered even if they would impede, to some degree, the attainment of project objectives or be more costly. The determination of feasibility of project alternatives may include, but not be limited to, factors such as site suitability, economic viability, infrastructure, plan consistency, regulatory and jurisdictional limitations, and control of an alternative site, if applicable.

The analysis contained in this section compares each of the alternatives to the proposed project, and includes an analysis of each alternative regarding each of the environmental issues evaluated for the proposed project. In addition, the analysis of alternatives includes the assumption that all applicable mitigation measures associated with the proposed project would be implemented with an alternative. However, mitigation measures may be scaled or reduced in relation to the magnitude of the impacts associated with the alternative.

One of the alternatives must be identified as an Environmentally Superior Alternative. The Environmentally Superior Alternative is the one that would result in the fewest or least significant environmental impacts. If the Environmentally Superior Alternative that is identified is the No Project Alternative, then an Environmentally Superior Alternative must be selected from the remaining alternatives. Section 8.5 identifies and discusses the Environmentally Superior Alternative and includes Table 8-3 that compares the impacts of the alternatives.

The City has identified the following three alternatives:

- No Project - No Development Alternative
- Existing General Plan Alternative
- Reduced Density Alternative

8.2 NO PROJECT - NO DEVELOPMENT ALTERNATIVE

8.2.1 Description

The No Project - No Development Alternative assumes that the proposed project would not occur and the project site would remain in its current condition. No other development projects would be anticipated to occur on the project site.

Aesthetics

Under this alternative, no development would occur on the project site. Therefore, no changes to the current scenic vistas would occur. Under this alternative, the light and glare impacts associated with the proposed project would be avoided altogether. Impacts under this alternative would be less than the proposed project.

Agriculture Resources

Under the proposed project, no significant impacts to agricultural resources would occur. However, continued opportunities for grazing or farming activities on the site would be lost if the property were developed. Thus, under the No Project Alternative, the less than significant impacts to agricultural resources would be further reduced. Impacts to agriculture resources under the No Project Alternative would be less than the proposed project.

Air Quality

Under the proposed project, potentially significant air quality impacts related to short-term, construction and long-term operations were identified. After implementation of mitigation measures, there would be significant short-term air quality impacts from NO_x, PM_{10}, and $PM_{2.5}$ emissions, and significant long-term air quality impacts from CO and PM_{10}. This means that the proposed project would significantly cumulatively contribute to cumulative ground-level ozone concentrations and may cause health impacts from the project's cumulative contribution to ozone and particulate matter exposure. Additionally, the project would result in a significant impact to global climate change from its contribution of greenhouse gases. Under the No Project - No Development Alternative, the potentially significant impacts related to air quality and climate change resulting from the proposed project would be eliminated. Therefore, this alternative would result in avoiding significant impacts to air quality associated with the proposed project.

Biological Resources

Under the proposed project, potentially significant impacts were identified related to the burrowing owl bird species. These potentially significant impacts would be to a less than significant level with implementation of the recommended mitigation measures.

Under the No Project - No Development Alternative, the project site would continue to be available for these species. Therefore, this alternative would result in avoiding the impacts to biological resources associated with the proposed project. The impacts related to biological resources would be less than to the proposed project.

Cultural Resources

Under the proposed project, the possibility exists for potentially significant subsurface cultural resources to occur on the site. Under the proposed project, potentially significant impacts to Native American resources, archaeological resources or paleontological resources could occur during construction-related activities. With the implementation of the recommended mitigation measures, these impacts would be reduced below the level of significance.

Under this alternative, no development would occur and no disturbance of possible subsurface cultural resources would result. Therefore, this alternative would result in avoiding significant impacts to cultural resources associated with the proposed project. Impacts related to cultural resources would be less than those associated with the proposed project.

Geology and Soils

Under the proposed project, potentially significant impacts related to seismically-induced ground shaking and structural damage related to placing buildings in an area known to experience earthquakes and known to have compressible and corrosive soils would be reduced below the level of significance with implementation of standard building code practices and replacement and compaction of fill material.

Under this alternative, no structures would be built thereby avoiding the significant geology and soils impacts. Therefore, the impacts related to geology and soils would be less than those associated with the proposed project.

Hazards and Hazardous Materials

Under the proposed project, less than significant impacts were identified relating to the introduction of household hazardous wastes, emergency access and evacuation, and risk of wild fires. Potential impacts due to pesticides in the soil were identified; mitigation would reduce these potential impacts to a less than significant level.

Under this alternative, no development would occur and no hazardous materials would be introduced and no persons would be exposed to the risk of wildfires or pesticides. Therefore, the impacts related to hazards would be less than associated with the proposed project.

Hydrology and Water Quality

Under the proposed project, potentially significant impacts related to siltation, erosion, and flooding resulting from the increased runoff were identified, but would be reduced below the level of significance with implementation of the Best Management Practices (BMPs).

Under this alternative, no development would occur and no impermeable surfaces would be introduced to the site. Therefore, this alternative would result in the impacts to hydrology and water quality associated with the proposed project. As a result, impacts related to hydrology and water quality would be less than those associated with the proposed project.

Land Use and Planning

Under the proposed project, significant impacts were identified related to incompatibilities with several of the Goals and Objectives of the City of Lancaster General Plan. Although the proposed project is similar to other projects in the immediate vicinity, project related impacts were considered significant. The proposed project, together with the other similar projects proposed in this area, would continue to spread and intensify the conflict with the goals and polices of the General Plan, the SCAG Compass Vision Growth Plan, the Regional Comprehensive Plan and Guide, and the Regional Transportation Plan. Therefore, the project would result in a significant cumulative impact relating to land use and planning.

Under this alternative, no development would occur and the open space would remain. Therefore, the impacts related to land use and planning would be less than those associated with the proposed project.

Noise

Under the proposed project, potentially significant impacts related to noise were identified that would result from construction-related activities and, depending on the locations of sensitive receptors, the potential to exceed established City noise standards due to an increase in traffic. With the implementation of the recommended mitigation measures, these impacts would be reduced to below the level of significance.

Under this alternative, the potential exposure to persons from construction-related noise impacts and potential to exceed City noise standards would be avoided because no development would occur. Therefore, this alternative would result in avoiding the noise impacts associated with the proposed project. Therefore, the impacts related to noise would be less than those associated with the proposed project.

Population and Housing

Under the proposed project, population and housing were found to be consistent with the regional growth forecasts developed by Southern California Association of Governments (SCAG). However, the proposed project's share of total new growth projected within the City is considered significant.

Under this alternative, no development would occur and population would not be increased. The No Project Alternative would avoid the proposed project's contribution to significant City of Lancaster growth, as forecast by SCAG.

Public Services, Recreation, and Utilities

Under the proposed project, no significant impacts were identified related to the provision of police or fire service, wastewater conveyance and treatment capacity, or solid waste landfill capacity. Although the proposed project was found to have a potentially significant impact to recreational facilities and public schools, mitigation measures are included that would reduce the impact to less than significant levels. Although the Antelope Valley has a variety of potential future water supply alternatives, these are not guaranteed sources. As a result, project specific impacts related to the sufficiency of water supplies would be significant and unavoidable. Additionally, cumulative impacts relevant to water supplies would be significant and unavoidable.

This alternative would result in avoiding or lessening the less than significant impacts to public services and utilities associated with the proposed project. Specifically, impacts related to public services, recreation, and utilities would be less than those associated with the proposed project; cumulative impacts for water supply would be reduced with the No Project Alternative project.

Under this alternative, the additional school-age children would not be generated. Thus, there would be no need for additional and/or expanded school facilities. Therefore, this alternative would result in avoiding the less than significant school impacts services associated with the proposed project. The impacts related to schools would be less than those associated with the proposed project.

Transportation and Traffic

Under the proposed project, potentially significant impacts related to an increase in traffic were identified at the study intersections for Year 2012. With the implementation of the recommended mitigation measures, all intersections would operate at or above established City level of service thresholds. However, the analysis determined that the project would cause segments of State Route (SR) 14 to operate at levels of service above the thresholds of the Congestion 8Management Plan creating significant and unavoidable impacts. Although the proposed project would fail to provide facilities for alternative means of transportation, mitigation measures include the dedication of additional rights-of-way for bicycle paths and bus turnouts that would reduce impacts to less than significant.

Under this alternative, the potential impacts related to traffic would be avoided because no development would occur. Therefore, this alternative would result in avoiding significant impacts to transportation and circulation that would occur in Year 2012 as a result of the proposed project. Subsequently, the impacts related to traffic would be less than those associated with proposed project.

8.3 EXISTING GENERAL PLAN ALTERNATIVE

8.3.1 Description

Under the Existing General Plan Alternative, the project site would be developed in accordance with existing General Plan designation and zoning. This would allow for the development of approximately 64 residential dwelling units each located on 2.5-acre lots. All other components of the proposed project would remain the same.

Aesthetics

Under the proposed project, potentially significant light and glare impacts would be mitigated to less than significant levels, though significant and unavoidable impacts related to the change in the existing visual character would occur. Under this alternative, the development would be less dense and there would be opportunities for retention of open space, landscaping, and view corridors. The significant impacts associated with the proposed project would be reduced to less than significant levels. Therefore, the impacts related to aesthetics would be less than those associated with the proposed project.

Agriculture

Under the proposed project, no significant impacts to agricultural resources would occur. However, any potential for grazing or farming would be lost if the property were developed. These impacts would not change under the alternative, because the property would still be developed and any

realistic opportunity for farming would be lost. Therefore, the impacts related to agriculture would be the same as the proposed project.

Air Quality

Under the proposed project, potentially significant air quality impacts related to short-term, construction and long-term operations were identified. After implementation of mitigation measures, there would be significant short-term air quality impacts from NO_x, PM_{10}, and $PM_{2.5}$ emissions, and significant long-term air quality impacts from CO and PM_{10}. This means that the project would significantly cumulatively contribute to ground-level ozone concentrations and may cause health impacts from the project's cumulative contribution to ozone and particulate matter exposure. Additionally, the project would result in a significant impact to global climate change from its contribution of greenhouse gases.

Under this alternative, the potentially significant impacts related to air quality resulting from the proposed project would be lessened. Residential lots of 2.5 acres typically leave much of the topography in its existing condition and do not include as much grading. Short-term impacts related to grading and construction would be lessened because the site would require less mass grading and much of the site could remain in its existing condition or only be landscaped. Long-term impacts would lessen because of the lower amount of vehicle traffic, and the emissions for CO and PM_{10} would be reduced to less than the AVAQMD thresholds. There would be fewer vehicle trips resulting in less greenhouse gas emissions. Therefore, impacts to air quality under this alternative would be less than the proposed project. As with the proposed project, this alternative would comply with the AVAQMD's 2004 OAP. As a result, the impacts related to air quality would be less than those associated with the proposed project.

Biological Resources

Under the proposed project, potentially significant impacts were identified related to the burrowing owl and nesting bird species. These potentially significant impacts would be reduced below the level of significance with implementation of the recommended mitigation measures.

Under this alternative, grading and disturbance of habitat would be less than the proposed project. The potential for retention of some habitat for plant and animal species may still remain within the much larger lots resulting from development under the current General Plan designation and zoning. Therefore, this alternative would result in avoiding or lessening the impacts to biological resources associated with the proposed project. Impacts related to biological resources would be less than those associated with the proposed project.

Cultural Resources

Under the proposed project, the possibility exists for potentially significant subsurface cultural resources to occur on the site. Under the proposed project, potentially significant impacts to Native American resources, archaeological resources or paleontological resources could occur during construction-related activities. With the implementation of the recommended mitigation measures, these impacts would be reduced below the level of significance.

Under this alternative, less development would occur, but the potential for disturbance of possible subsurface cultural resources would remain. Therefore, this alternative would not result in avoiding the possible subsurface impacts to cultural resources associated with the proposed project. As a result, the impacts related to cultural resources would be the same as the proposed project.

Geology and Soils

Under the proposed project, potentially significant impacts related to seismically-induced ground shaking and structural damage related to placing buildings in an area known to experience earthquakes and known to have compressible and corrosive soils would be reduced below the level of significance with the implementation of mitigation measures.

Under this alternative, fewer structures would be built in an area subject to potential seismic and soils hazards. Therefore, the impacts related to geology and soils would be less than those associated with the proposed project.

Hazards and Hazardous Materials

Under the proposed project, less than significant impacts were identified relating to the introduction of household hazardous wastes, emergency access and evacuation, and risk of wild fires.

Under this alternative, the less than significant impact from the introduction of household hazardous wastes would be further reduced due to the lower number of houses, but the risk of exposure to wild fires would remain, as with the proposed project. Therefore, this alternative would result in approximately the same level of impacts related to hazards as with the proposed project.

Hydrology and Water Quality

Under the proposed project, potentially significant impacts related to siltation, erosion, and flooding resulting from the increased runoff associated with more impermeable surfaces were identified, but would be reduced below the level of significance with implementation of the BMPs.

Under this alternative the lower density would reduce the amount of grading thus reducing the potential for erosion and siltation. Also, the amount of impermeable surfaces would decrease the runoff from the site. Therefore, the impacts related to hydrology and water quality would be less than those associated with the proposed project.

Land Use and Planning

Under the proposed project, significant impacts were identified related to incompatibilities with several of the Goals and Objectives of the City of Lancaster General Plan. Although the proposed project is similar to other projects in the immediate vicinity, project related impacts were considered significant. The proposed project, together with the other similar projects proposed in this area, would continue to spread and intensify the conflict with the goals and polices of the General Plan, the SCAG Compass Vision Growth Plan, the Regional Comprehensive Plan and Guide, and the Regional Transportation Plan. Therefore, the project would result in a significant cumulative impact relating to land use and planning.

Under this alternative, development would be less dense and there would be more opportunities for view corridors, retention of open space, and landscaping. Therefore, this alternative would provide an opportunity for development that integrates the open space character with urban character, and thereby lessens the less than significant land use and planning policy impacts. Therefore, the impacts related to land use and planning would be less than those associated with the proposed project.

Noise

Under the proposed project, potentially significant impacts related to noise were identified that would result from construction-related activities and, depending on the locations of sensitive receptors, the potential to exceed established City noise standards due to an increase in traffic. With the implementation of the recommended mitigation measures, these impacts would be reduced below the level of significance.

Under this alternative, the potential exposure of persons to construction-related noise impacts and potential to exceed City noise standards would be lessened because construction activity would be lessened. The lesser amount of development would result in less generation of noise. Therefore, this alternative would result in avoiding or lessening the less than significant impacts to noise associated with the proposed project. Therefore, the impacts related to noise would be less than those associated with the proposed project.

Population and Housing

Under the proposed project, the population and housing were found to be consistent with the regional growth forecasts developed by SCAG. Therefore, the increase in population would have only those environmental impacts identified in other sections of this EIR.

This alternative would result in less population but would remain within the SCAG growth provisions. This alternative would have similar to impacts the proposed project. Therefore, the impacts related to population and housing would be similar to the proposed project.

Public Services and Utilities

Under the proposed project, no significant impacts were identified related to the provision of police or fire service, wastewater conveyance and treatment capacity, or solid waste landfill capacity. Although the proposed project was found to have a potentially significant impact to recreational facilities and public schools, mitigation measures are included that would reduce the impact to less than significant. Although Antelope Valley has a variety of potential future water supply alternatives, these are not guaranteed sources. As a result, project specific impacts related to the sufficiency of water supplies would be potentially significant. Additionally, cumulative impacts relevant to water supplies would be significant and unavoidable.

The Existing General Plan Alternative would result in a smaller population and lessen the less than significant impacts to public services and utilities associated with the proposed project. Therefore, the impacts related to public services and utilities would be decreased in comparison to the proposed project.

Under the proposed project, potentially significant impacts related to school facilities were identified. The proposed project would generate approximately 409 elementary school students and 260 high school students. These impacts would be reduced below the level of significance with implementation of the recommended mitigation measures.

Under this alternative, 41 elementary school students and 26 high school students would be generated, representing a significant reduction in student generation (see Table 8-1). Subsequently, this alternative would result in lessening the less than significant impacts to school services associated with the proposed project. Therefore, the impacts related to schools would be less than those associated with the proposed project.

Table 8-1: Comparison of Public Service Demand

Public Service	Planning Factor	Proposed Project	Existing General Plan Alternative	Difference
Police	1 sworn officer/ per 811 population	3 officers	<1 officer	2 officers
Fire	Response Time	Adequate	Adequate	None
Elementary Schools (K-8)	0.6283 students/ per du	409	41	368
High Schools (9-12)	0.40 students/ per du	260	26	234
Water Service	391,021 gallons/ per year/ per du	254,163,780 gallons/ per year	20,825,010 gallons/ per year	233,338,770 gallons/ per year
Waste Water Service	260 gal/ per day/du	169,000 gal/d	16,644 gal/d	152,360 gal/day
Solid Waste Service	0.41 tons/per year/ per capita	1,450 tons/ per year	143 tons/ per year	1,307 tons/ per year

Transportation and Traffic

Under the proposed project, potentially significant impacts related to an increase in traffic were identified at study intersections for Year 2012. With the implementation of the recommended mitigation measures, all intersections would operate at or above established City level of service thresholds. However, the analysis determined that the project would cause segments of SR-14 to operate at levels of service above the thresholds of the Congestion Management Plan creating significant and unavoidable impacts.

Under this alternative, the potential impacts related to traffic would be greatly reduced due to the lower number of vehicle trips. The proposed project is forecast to generate 6,221 trips per day, and this alternative would generate only 622 trips per day. This alternative would also be largely automobile-dependent, but the larger lots would provide opportunities for bicycle lanes and bus turnouts. Therefore, this alternative would likely result in avoiding the significant impacts to transportation and circulation that would occur in Year 2012 associated with the proposed project. Thus impacts related to transportation and circulation would be less than those associated with the proposed project.

8.4 REDUCED DENSITY ALTERNATIVE

8.4.1 Description

The Reduced Density Alternative would allow for 400 single-family homes, and allow additional common area landscaping, pocket parks, and pedestrian pathways/bikeways connecting to Avenue J. The reduced density relative to the proposed project could allow additional bike lanes and bus

turnouts along Avenue J and a street layout pattern that would allow view corridors to the south towards the Tehachapi Mountains. However, this alternative would still require a General Plan Amendment and zone change.

Aesthetics

Under the proposed project, potentially significant light and glare impacts would be mitigated to less than significant levels, though significant and unavoidable impacts related to the change in the existing visual character and quality of the site would occur.

Under this alternative, the same type of residential development would occur and light and glare impacts would be similar to the proposed project. However, with increased opportunities for common open space, and the addition of landscaping and view corridors, impacts related to the change in visual character would be reduced. Depending upon the specific concept design and layout, this alternative could have the potential to reduce the aesthetic impact of the proposed project to less than significant levels. Therefore, the impacts related to aesthetics would be less than those associated with the proposed project.

Agriculture

Under the proposed project, no significant impacts to agricultural resources would result from implementation of the proposed project. However, any potential for grazing farming would be lost if the property were developed.

Under the Reduced Density Alternative, the property would be completely developed and impacts to agriculture would be similar to those of the proposed project.

Air Quality

Under the proposed project, potentially significant air quality impacts related to short-term, construction and long-term operations were identified. After implementation of mitigation measures, there would be significant short-term air quality impacts from NO_x, PM_{10}, and $PM_{2.5}$ emissions, and significant long-term air quality impacts from CO and PM_{10}. This means that the project would significantly cumulatively contribute to ground-level ozone concentrations and may cause health impacts from the project's cumulative contribution to ozone and particulate matter exposure. Additionally, the project would result in a significant impact to global climate change from its contribution of greenhouse gases.

Under this alternative, the significant impacts related to air quality resulting from the proposed project would be lessened. The short-term construction-related impacts would remain similar to the proposed project because the entire site would be graded. However, the long-term impacts would be lessened by the fewer vehicle trips associated with the reduction in the number of homes by 250 dwelling units. The operational emissions of NO_x, CO, and PM_{10} would be reduced to below the AVAQMD threshold levels and greenhouse gas emissions would be less. Therefore, Reduced Density Alternative would result in lessening significant impacts to air quality associated with the proposed project.

Biological Resources

Under the proposed project, potentially significant impacts were identified related to the burrowing owl and bird species. These potentially significant impacts would be reduced below the level of significance with implementation of the recommended mitigation measures.

Under this alternative, the entire site would be developed and habitat would be removed in the same manner as the proposed project. Therefore, this alternative would result in impacts to biological resources similar to those associated with the proposed project.

Cultural Resources

Under the proposed project, the possibility exists for potentially significant subsurface cultural resources to occur on the site. Under the proposed project, potentially significant impacts to Native American resources, archaeological resources or paleontological resources could occur during construction-related activities. With the implementation of the recommended mitigation measures, these impacts would be reduced below the level of significance.

Under this alternative, development of the entire site would occur, and the potential for disturbance of possible subsurface cultural resources would remain the same as the proposed project. Therefore, this alternative would result in impacts to cultural resources similar to those associated with the proposed project.

Geology and Soils

Under the proposed project, there are potentially significant impacts related to seismically-induced ground shaking and structural damage related to placing buildings in an area known to experience earthquakes and known to have compressible soils. With implementation of the suggested mitigation measures, however, these impacts would be reduced to below the level of significance.

Under this alternative, although fewer residential structures would be built, geology and soils impacts would still be less than significant. Therefore, this alternative would result in impacts that are similar to those of the proposed project.

Hazards and Hazardous Materials

Under the proposed project, less than significant impacts were identified relating to the introduction of household hazardous wastes, emergency access and evacuation, and risk of wild fires

Under this alternative, the introduction of household hazardous wastes would be slightly less due to the lower number of houses, and the risk due to wildfires would be the same as the proposed project. Therefore, this alternative would result in impacts that are similar to those of the proposed project.

Hydrology and Water Quality

Under the proposed project, potentially significant impacts related siltation, erosion, and flooding resulting from the increased runoff associated with more impermeable surfaces were identified, but would be reduced below the level of significance with implementation of the BMPs.

Under this alternative, the entire site would be graded, and therefore siltation and erosion impacts would be similar to the proposed project. However, the additional open space and landscaping would reduce the area of impermeable surfaces and slightly reduce the stormwater runoff from the site. Thus, this alternative, the less than significant impacts related to hydrology would be further lessened in comparison to the proposed project.

Land Use and Planning

Under the proposed project, significant impacts were identified related to incompatibilities with several of the Goals and Objectives of the City of Lancaster General Plan. Although the proposed project is similar to other projects in the immediate vicinity, project related impacts were considered significant. The proposed project, together with the other similar projects proposed in this area, would continue to spread and intensify the conflict with the goals and polices of the General Plan, the SCAG Compass Vision Growth Plan, the Regional Comprehensive Plan and Guide, and the Regional Transportation Plan. Therefore, the project would result in a significant cumulative impact relating to land use and planning.

Under this alternative, less residential development would occur and it would be attractively landscaped and arranged. The tract design would provide view corridors and more foliage and

landscaping. Therefore, this alternative would provide a development that is more consistent with the General Plan Goals and thereby lessen the less than significant impacts.

Noise

Under the proposed project, potentially significant impacts related to noise were identified that would result from construction-related activities and, depending on the locations of sensitive receptors, the potential to exceed established City noise standards due to an increase in traffic. With the implementation of the recommended mitigation measures, these impacts would be reduced below the level of significance.

Under this alternative, fewer homes would be constructed, resulting in slightly reduced construction phase noise, and proportionately fewer project trips on surrounding streets following development of the site. The reduced project traffic generation would result in slight reductions in ambient traffic noise as compared with the proposed project. Therefore, the impacts related to noise would be less than those associated with the proposed project.

Population and Housing

Under the proposed project, the population and housing associated with the proposed project were found to be consistent with the regional growth forecasts and the housing needs developed by SCAG. Therefore, the increase in population would have only those environmental impacts identified in other sections of this EIR.

This alternative would generate lower population but would remain within the SCAG growth provisions. Therefore, this alternative would have effects similar to the proposed project.

Public Services and Utilities

Under the proposed project, no significant impacts were identified related to the provision of police or fire service, wastewater conveyance and treatment capacity or solid waste landfill capacity. Although the proposed project was found to have a potentially significant impact to recreational facilities and public schools, mitigation measures are included that would reduce the impact to less than significant. Although Antelope Valley has a variety of potential future water supply alternatives, these are not guaranteed sources. As a result, project specific impacts related to the sufficiency of water supplies would be potentially significant. Nonetheless, cumulative impacts relevant to water supplies would be significant and unavoidable

This alternative would decrease the forecast population on the site by approximately 746 persons. This would thereby lessen the demand for public services and lessen the less than significant impacts to public services and utilities associated with the proposed project.

Under the proposed project, potentially significant impacts related to impacts on school facilities were identified due to the addition of 669 school-age children that would be generated. Nonetheless, payment of appropriate school impact fees would reduce the impact to below the level of significance.

Under this alternative less population would be generated and the opportunity to integrate pocket parks in the project design could result in additional recreational resources. Under the Reduced Density Alternative, the projected population of 1,267 persons would generate the demand for 6.2 acres of parkland. Therefore, this alternative would lessen the impacts related to recreation.

Under the Reduced Density alternative, less school-age children would be generated; thus lessening the less than significant impacts to school services associated with the proposed project. Table 8-9 compares the public service impacts of the Reduced Density Alternative.

Table 8-2: Comparison of Public Service Demand

Public Service	Planning Factor	Proposed Project	Reduced Density Alternative	Difference
Police	1 sworn officer/ per 811 population	3 officers	2 officers	1 officer
Fire	Response Time	Adequate	Adequate	None
Elementary Schools (K-8)	0.6283 students/ per du	409 students	254 students	155 students
High Schools (9-12)	0.40 students/ per du	260	162	98
Water Service	391,021 gallons/ per year/ per du	254,163,780 gallons/ per year	156,408,480 gallons/ per year	97,755,300 gallons/ per year
Waste Water Service	260 gal/ day per du	169,000 gal/day	104,780 gal/day	64,220 gal/day
Solid Waste Service	0.41 tons per year/ per capita	1,450 tons/ per year	889 tons/ per year	561 tons/ per year

Transportation and Traffic

Under the proposed project, potentially significant impacts related to an increase in traffic were identified at study intersections for Year 2012. With the implementation of the recommended mitigation measures, all intersections would operate at or above established City level of service

thresholds. However, the analysis determined that the project would cause segments of SR-14 to operate at levels of service above the thresholds of the Congestion Management Plan creating significant, and unavoidable impacts.

Under this alternative, the potential impacts related to traffic would be lessened due to the lower number of commuter vehicle trips during the peak hours. The proposed project is forecast to generate 6,221 trips per day, and this alternative would generate 3,857 trips per day. Therefore, this alternative would generate less vehicle trips and tend to lessen the significant impacts associated with the proposed project. This alternative would provide facilities for alternative transportation such as bike lanes, bus turnouts, and shorter connections from homes to the major street. Therefore, this alternative would result in lessening the significant impacts to transportation and circulation that would occur in Year 2012 associated with the proposed project.

8.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As previously discussed in Section 8.1, the CEQA Guidelines requires that one of the alternatives be identified as the Environmentally Superior Alternative. In addition, if the Environmentally Superior Alternative identified is the No Project Alternative, then an Environmentally Superior Alternative must also be identified from the remaining alternatives.

Table 8-3 provides a summary of each alternative related to the thirteen environmental issues evaluated in Section 5 of the DEIR, and includes the level of significance associated with the proposed project in order to facilitate a thorough comparison of the alternatives. Section 5 of this document provides a detailed discussion of each environmental issue.

Table 8-3: Comparison of Alternatives

Environmental Issue	Proposed Project	No Project- No Development Alternative	Existing General Plan Alternative	Reduced Density Alternative
Aesthetics	S	NS	NS(-)	NS
Agricultural Resources	NS	NS	NS	NS
Air Quality	S	NS	S(-)	S(-)
Biological Resources	PS	NS	PS(-)	PS(-)
Cultural Resources	PS	NS	PS	NS
Geology and Soils	PS	NS	PS(-)	PS(-)
Hazards and Hazardous Materials	NS	NS	NS(-)	NS(-)

Table 8-3 (Cont.): Comparison of Alternatives

Environmental Issue	Proposed Project	No Project- No Development Alternative	Existing General Plan Alternative	Reduced Density Alternative
Hydrology and Water Quality	PS	NS	PS(-)	PS(-)
Land Use Planning	PS	NS (-)	NS(-)	NS(-)
Noise	PS	NS	PS(-)	(PS-)
Population and Housing	NS	NS	NS (-)	NS
Public Services/Recreation and Utilities	PS	NS	PS (-)	PS(-)
Transportation and Circulation	S	NS	S(-)	S(-)
Growth Inducement and Commitment of Resources	NS	NS	NS	NS
B-Beneficial NS-Not Significant Impact PS-Potentially Significant S-Significant (+/-) Increase/Lessened Impact in comparison to Proposed Project				

A project alternative must be able to feasibly attain most of the basic objectives of the proposed project. As stated in Section 3.2, Project Background and History, the basic objectives of the project are to provide moderate priced housing for the growing population and to provide a reasonable return on investment to the developer. Additional objectives include designing and landscaping the project to create an aesthetically pleasing environment while still providing land use that is consistent with the policies and objectives of the General Plan.

Based on the analysis contained in this section, the Environmentally Superior Alternative is the No Project - No Development Alternative. The Environmentally Superior Alternative from the remaining two alternatives is the Existing General Plan Alternative. However, it is not clear whether the Existing General Plan Alternative is capable of providing moderately-priced new housing. Because the cost of the land and the needed infrastructure improvements would be spread over very few homes, the resulting large-lot homes could exceed moderate price limits.

Finally, although no specific design or layout is available for the Reduced Density Alternative, which proposes approximately 400 single-family residential units, the potential for increased common open space, landscaping, pedestrian pathways/bikeways and view corridors into and through the site indicates this concept is environmentally superior to the proposed project. This Reduced Density Alternative is also feasible and achieves the project objectives. Therefore, the Reduced Density Alternative is the recommended, environmentally superior alternative.

SECTION 9
ORGANIZATIONS AND PERSONS CONSULTED

9.1 PUBLIC AGENCIES

City of Lancaster

Planning Department ..... Jocelyn Swain, Associate Planner - Environmental
City Manager's Office ..... Mark Bozigian, Assistant City Manager
Parks, Recreation & Arts Department ..... Bob Greene, Assistant Department Director
Department of Housing and Neighborhood Rehabilitation ..... Elizabeth Brubaker, Director of Housing and Neighborhood Rehabilitation

Los Angeles County

Sheriff's Department ..... Lt. Gordon Carn
Fire Department ..... Capt. Sutro
Sanitation District ..... Charles Boehmke, Supervisor

Special Districts

Westside Union School District ..... Nellie Thomas, Administrative Assistant
Antelope Valley Union High School District ..... J. D. Vose, Assistant Superintendent
Antelope Valley East Kern Water Agency ..... Mike Flood, Engineer

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Noise Measurements (ROMA Environmental) ..... Roma Stromberg

SECTION 11
REFERENCES

Air Quality Management District. AQMD Handbook. Website: www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html

Antelope Valley Air Quality Management District. 2004 Ozone Attainment Plan. April 20.

Antelope Valley Air Quality Management District. 2004 Ozone Attainment Plan. Website: http://www.avaqmd.ca.gov/RulesPlans/documents/AVOzonePlanFinal.pdf.

Antelope Valley Air Quality Management District. 2004 Ozone Attainment Plan, April 20.

Antelope Valley Air Quality Management District. 2005. CEQA and Federal Conformity Guidelines. May.

Antelope Valley Environmental Collection Center. Website: http://ladpw.org/epd/avecc/. Accessed July 17, 2007.

Antelope Valley Environmental Collection Center. Website: http://ladpw.org/epd/avecc/. Accessed July 17, 2007.

Antelope Valley Transit Authority. Website: www.avta.com/transit/routes/route7.pdf. Accessed September 7, 2006.

Antelope Valley Union High School District, Website: http://www.avdistrict.org/sarc.htm.

Antelope Valley Union High School District. Website: http://www.avdistrict.org/sarc.htm

Bolt, Beranek and Newman. 1971. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.

Bozigian, Mark. Assistant City Manager, City of Lancaster. Personal communication: telephone. July 27, 2006.

Brigges, Henry. Technical Services, Northern Region, SDGC. January 6, 2005.

Brubaker, Elizabeth. Director of Housing and Neighborhood Rehabilitation, City of Lancaster. Personal communication: telephone. October 9, 2006.

California Air Resources Board. Air Quality Data Statistics, Top 4 Summary. Website: www.arb.ca.gov/adam/welcome.html. (The data are from the Lancaster-43301 Division Street station). Accessed August 6, 2006

California Codes, Government Code. Section 65350-65362. Website: http://www.aroundthecapitol.com/code/getcode.html?file=./gov/65001-66000/65350-65362. Accessed July 17, 2007.

California Department of Conservation. California Farmland Conversion Report 1998-2002. Website: http://www.conservation.ca.gov/DLRP/fmmp/pubs/1998-2000/FCR/FCR_98_00_ch123.pdf. Accessed July 16, 2007

California Department of Conservation. Land Evaluation & Site Assessment Model Thresholds. Website: http://www.consrv.ca.gov/DLRP/qh_lesa.htm. Accessed August 2006.

California Department of Conservation. Land Evaluation & Site Assessment Model. Website: http://www.consrv.ca.gov/DLRP/qh_lesa.htm. Accessed August 2006.

California Department of Finance. January 2006 Estimates. Website: http://www.dof.CA.gov/HTML/DEMOGRAP/Reports/Estimates/El/documents/E-1table.xls. Accessed May 22, 2007.

California Department of Transportation, Environmental Program. 1997. Transportation Project-Level Carbon Monoxide Protocol. December.

California Environmental Protection Agency, Office of Environmental Health Hazard Assessment. 1998. Executive Summary for the "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant.

California Environmental Protection Agency. Office of Environmental Health Hazard Assessment. Executive Summary for the "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant," 1998.

California Geological Survey. Table 4 Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of May 1, 1999. Website: http://www.consrv.ca.gov/cgs/rghm/ap/affected.htm. Accessed August 24, 2006.

California Integrated Waste Management Board. Antelope Valley Public Landfill I (19-AA-0009). Website: http://www.ciwmb.ca.gov/SWIS/detail.asp?SITESCH=19-AA-0009. Accessed June 25, 2007.

California Integrated Waste Management Board. Antelope Valley Public Landfill I (19-AA-0009). http://www.ciwmb.ca.gov/SWIS/detail.asp?SITESCH=19-AA-0009. Accessed June 25, 2007.

California Integrated Waste Management Board. City Of Santa Monica Transfer Station (19-AA-0008). Website: http://www.ciwmb.ca.gov/SWIS/Detail.asp?Page=2&PG=DET&OUT=HTML&DD=ALL&COUNTY=Los+Angeles&NAME=&ADV=&FAC=&OPSTATUS=&REGSTATUS=Permitted&LEA. Accessed June 25, 2007.

California Integrated Waste Management Board. Facility Search, 2006. Website: http://www.ciwmb.ca.gov/SWIS/Search.asp. Accessed July 17, 2007.

California Integrated Waste Management Board. Lancaster Landfill and Recycling Center (19-AA-0050). Website: http://www.ciwmb.ca.gov/SWIS/detail.asp?PG=DET&SITESCH=19-AA-0050&OUT=HTML. Accessed June 25, 2007.

California, State of. General Plan Guidelines. Modified from 1998.

Carn, Captain. Lieutenant Los Angeles County Sheriffs Department. Personal communication: telephone. July 24, 2006.

Carn, Gordon. Lieutenant, Los Angeles County Sheriff's Department. Personal communication: e-mail. February 20, 2007.

Church & Flynn Consulting Engineers. 2007. Hydrological Impact Report for Tract 062757, City of Lancaster, California. April 10.

City of Lancaster. 1997. Lancaster General Plan Environmental Impact Report.

City of Lancaster. 2006. General Plan Amendment 04-05 Zone Change 04-06 Tentative Tract Map 062757 Initial Study. May 18.

City of Lancaster. 2020 General Plan. Adopted October 28, 1997 and last revised January 17, 2007.

City of Lancaster. 2030 General Plan, Master Environmental Assessment, 9.3 School Facilities. Website: http://www.lancaster2030.info/documents/draft_mea/Sec09.03%20SchoolFacilities.pdf. Accessed July 17, 2007.

City of Lancaster. City of Lancaster 2030 General Plan, Master Environmental Assessment, 9.3 School Facilities. Website: http://www.lancaster2030.info/documents/draft_mea/Sec09.03%20SchoolFacilities.pdf. Accessed July 17, 2007.

City of Lancaster. City of Lancaster 2030 General Plan, Master Environmental Assessment, 9.4 Parks and Recreational Facilities. Website: www.lancaster2030.info/documents/draft_mea/Sec09.04%20ParksRecreation.pdf. Accessed July 16, 2007.

County of Los Angeles, Department of Parks and Recreation. 2001.

Environ Corporation. 1997. City of Ontario General Plan.

Estrella, Captain. Los Angeles County Fire Department. Personal communication: telephone. July 23, 2007.

Flood, Mike. Antelope Valley-East Kern Water Agency. Personal communication. July 25, 2006.

Frazen, Ruth. Engineering Technician, County Sanitation Districts of Los Angeles County. Personal communication: letter. July 24, 2006.

Garcia, Ron. Project Manager, Southern California Gas Company. Personal communication: telephone. May 23, 2007.

Geological Survey, Seismic Hazards Zonation Program. Website: http://www.conservation.ca.gov/cgs/shzp/. Accessed October 11, 2007.

Greene, Bob. Assistant Director Parks and Recreation Department, City of Lancaster. Personal communication: telephone. July 31, 2006.

Krazan and Associates, Inc. 2006. Limited Geotechnical Engineering Investigation (Geotechnical Feasibility Study) Proposed G-C EIR 1 Development 70th Street West and Avenue J, Lancaster, California. May 19.

Los Angeles County Department of Public Works. 2005 Integrated Urban Water Management Plan for the Antelope Valley.

Los Angeles County Fire Department. Personal Communication: e-mail. July 17, 2007.

Los Angeles County Fire Department. Personal communication: e-mail. July 17, 2007.

Los Angeles County Waterworks District No. 40, Antelope Valley. 2007. Water Supply Assessment for Tentative Tract No.62757, City of Lancaster. October 2.

Louie, Brian. Supervising Engineer, Los Angeles County Sanitation District. Personal communication: telephone conversation. April 18, 2007.

Mallet, Lieutenant. Training Officer, California State Prison. Personal communication: telephone. April 23, 2007.

Matthews, Captain. Los Angeles County Fire Department. Personal communication: telephone. July 23, 2007.

Meyer, Mohaddes Associates. 2007. City of Lancaster CPA 04-05 (Group C - Development C-1) Traffic Impact Study. July.

Michael Brandman Associates. 2006. Acoustical Analysis Report For Royal Investors Residential Project. October 9.

Michael Brandman Associates. 2006. Phase I Environmental Site Assessment Lancaster C-1 (Tract 062757). August 30.

Michael Brandman Associates. 2007. Biological Resources Assessment, Tentative Tract Map 62757, General Plan Amendment 04-05, Zone Change 04-06. July 25.

Michael Brandman Associates. 2007. Burrowing Owl Focused Survey General Plan Amendment/Zone Change C-1, Tentative Tract Map 062757. February 22.

Michael Brandman Associates. 2007. Phase I Cultural Resource Assessment and Paleontological Records Review Avenue J and 70th Street West - TTM 062757. July 24.

Michael Brandman Associates. 2007. Phase I Cultural Resource Assessment and Paleontological Records Review Avenue J and 70th Street West - TTM 062757. July 24.

Puckett, Dave. Service Planner, Southern California Edison. Personal communication: telephone. May 23, 2007.

Roma Environmental. 2007. Noise Measurements for City of Lancaster C-1 Project; General Plan Amendment 04-05. February 28.

Santero, Captain. Los Angeles County Fire Department. Personal communication. August 2006.

Seto, Herbert. Los Angeles County Water District #40. Personal communication. February 16, 2 007

Seto, Hubert. Los Angeles County Waterworks District No. 40. Personal communication. August 7, 2006.

South Coast Air Quality Management District. 1993. CEQA Air Quality Handbook, Table A9-11-A.

South Coast Air Quality Management District. 2001. CEQA Air Quality Handbook. Chapter 3, Basic Air Quality Information (Version). November.

South Coast Air Quality Management District. 2006. Air Quality Significance Thresholds. http://www.aqmd.gov/ceqa/handbook/signthres.doc. October 2006.

South Coast Air Quality Management District. Draft-Methodology to Calculate PM2.5 and PM2.5 Significance Thresholds, August 2006. Website: www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html.

South Coast Air Quality Management District. Rule 403. Amended June 3, 2005.

Southern California Area Governments. 2004. City Projections. http://www.scag.ca.gov/forecast/downloads/2004GF.xls. Accessed March 1, 2007.

Southern California Area Governments. 2006. Housing Element Compliance and Building Permit Issuance in the SCAG Region. April.

Southern California Association of Governments. 1996. Regional Comprehensive Plan and Guide..

Southern California Association of Governments. Destination 2030: 2004 Regional Transportation Plan. Website: http://www.scag.ca.gov/rtp2004/2004/Final/FINAL_2004_RTP.pdf. Accessed July 23, 2007.

Southern California Association of Governments. Regional Housing Needs Assessment. Website: http://api.ucla.edu/RHNA /Regional Housing Needs Assessment/Final Numbers/Frame.htm. Accessed May 22, 2007.

Sutro, Captain. Los Angeles County Fire Department. Personal communication. July 2006.

Tchobanogulus and Krieth. 2002. Handbook of Solid Waste, McGraw-Hill.

Thomas, Nellie. Westside Union School District. Personal communication. July 28, 2006

Thomas, Nellie. Westside Union School District. Personal communication. April 19, 2007.

Transportation Research Board. 1985. Highway Capacity Manual, Special Report 209 and Interim Materials on Highway Capacity, NCHRP Circular 212, 1982.

U.S. Environmental Protection Agency, Construction Site Stormwater Runoff Control, http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=4, accessed April 2007.

U.S. Environmental Protection Agency. Air Trends. Sulfur Dioxide. 2004. Website: www.epa.gov/airtrends/sulfur.html

U.S. Environmental Protection Agency. Particulate Matter, Health and Environment. Website: http://www.epa.gov/air/particlepollution/health.html Accessed October 2007.

U.S. Environmental Protection Agency. Six Common Air Pollutants. Health and Environmental Impacts of NOx. Website: http://www.epa.gov/air/urbanair/nox/hlth.html

US Geological Survey Del Sur 7.5' Quadrangle. 1974.

US Geological Survey Geologic Map of the West Lancaster 7.5' Quadrangle. 1974

Vose, J. D. Antelope Valley Union High School District. Personal communication. July 27, 2006.

Waste Management. AV Recycling and Disposal Facility. Website: http://www.keepingavclean.com/materials.html. Accessed June 25, 2007.

Waste Management. Lancaster Landfill and Recycling Center. Website: http://www.keepingavclean.com/currentproject_l.html. Accessed June 25, 2007.

Waste Management. Lancaster Landfill and Recycling Center. Website: http://www.keepingavclean.com/currentproject_l.html, page titled. Accessed June 25, 2007.