Mountain View Marketplace Project
Initial Study / Mitigated Negative Declaration
Loma Linda, San Bernardino County, California

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Date: January 6, 2014

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SECTION 1: INTRODUCTION

1.1 - Purpose

This document has been prepared in accordance with California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 2100, et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR] Section 1500 et seq.). An Initial Study (IS) is prepared by a Lead Agency to determine if a project may have a significant effect on the environment (State CEQA Guidelines Section 15063[a]), and thus to determine the appropriate level of environmental documentation needed for a project. In accordance with the State CEQA Guidelines Section 15070, a "public agency shall prepare... a proposed negative declaration or mitigated negative declaration…when: (a) The Initial Study shows that there is no substantial evidence…that the project may have a significant impact on the environment, or (b) The Initial Study identifies potentially significant effects but revisions to the project plans or proposal are agreed to by the project proponent (applicant) and such revisions would reduce potentially significant effects to a less-than-significant level." In this circumstance, the lead agency (City of Loma Linda) has made a determination that the proposed Mountain View Marketplace project (Project) would not have a significant effect on the environment, and therefore does not require the subsequent preparation of an Environmental Impact Report (EIR).

As discussed in Section 2, Environmental Checklist and Environmental Evaluation, of this IS, the proposed project would result in certain potentially significant environmental impacts; however, these impacts would be reduced to a less than significant level by implementation of mitigation measures that have been agreed upon and would be implemented by the Lead Agency. Therefore, an IS and Proposed Mitigated Negative Declaration (MND) is the appropriate level of environmental documentation for compliance with the requirements of CEQA. This IS/MND conforms to these requirements and to the content requirements of State CEQA Guidelines Section 15071.

The purpose of this IS is to identify the potential environmental impacts associated with the construction and operation of the proposed Mountain View Marketplace Project in the City of Loma Linda, CA. This IS provides measures that will avoid or mitigate impacts to a less than significant level. Additionally, this IS includes information to substantiate the conclusions made regarding the proposed project's potential to result in significant environmental impacts, and provides the basis for feedback from public agencies, organizations, and the public. Pursuant to Section 15367 of the State CEQA Guidelines, the City of Loma Linda is the Lead Agency for the proposed project and has primary responsibility for approval or denial decisions.

1.2 - Project Location

The proposed Mountain View Marketplace project will be located on approximately 1.07 acres (46,718 square feet) located in the northern portion of the City of Loma Linda, San Bernardino County, California (Exhibit 1). The project site is bound by Mountain View Avenue to the east, the Interstate 10 (I-10) eastbound off ramp to the north, and Rosewood Avenue to the south (Exhibit 2).

A total of six parcels comprise the project site (Assessor's Parcel Numbers [APN] 0281-251-01, 0281-251-02, 0281-251-03, 0281-251-04, 0281-242-12, and 0281-242-29).

1.3 - Project Description

Onsite Development

The proposed Mountain View Marketplace project consists of a new convenience store, gas station, car wash, and separate commercial building pad on the project site (Exhibit 3). Table 1 provides a summary of the proposed project.

Table 1: Project Summary

Project Component	Size (square feet)
Convenience Store	3,354
Gas Station	4,809
Fueling Canopy	1,280
Building Pad	8,176
Paved Areas (Parking Lot, Trash Enclosure)	16,116
Landscape Areas/Stamped Concrete	12,983
Total	**46,718**
Notes: Source: Land Engineering Consultants, Inc., Site Plans, May 2013.	

A total of two major buildings/structures will be constructed as part of the proposed project. The convenience store and adjoining carwash will be built in the northern portion of the project site, and the fueling canopy and gas pumps would be constructed in the southern part. A total of 8 gas pumps will be installed on the project site. An underground storage tank (UST), consisting of a double-walled, fiberglass fuel storage tank with leak detection sensors, will store gas and diesel fuels on the project site. The separate building pad will be located in the western portion of the project site and will support a future commercial retail use. All proposed structural improvements on the project site have been designed to comply with the standards contained in the City of Loma Linda's Zoning Code (Title 17 of the Loma Linda Municipal Code). These proposed buildings/structures will incorporate traditional architectural design, neutral architectural coatings, and a variety of complimentary building materials (Exhibit 4 and Exhibit 5). The project frontages, primarily along Mountain View Avenue and Rosewood Avenue, will include landscaping and decorative groundcover and surfaces (Exhibit 6).

To facilitate construction of the proposed project, four existing single-family residences currently found on the project site will be demolished.

Offsite Development

Offsite improvements, including parkway and median construction and expansion within the public right-of-way, are also required as part of the proposed project. Table 2 provides a summary of the proposed project's offsite improvements, construction of which will be the responsibility of the Applicant.

Table 2: Offsite Improvements

Project Component	Size (square feet)
Paving/Concrete (Parkway)	2,625
Brick Paving (Median)	851
Landscaping (Parkway)	1,822
Landscaping (Median)	961
Total	**6,259**
Source: Land Engineering Consultants, Inc., Site Plans, May 2013.	

1.4 - Intended Uses of this Document

The IS prepared for the proposed project will be used by the City of Loma Linda as supporting environmental documentation for the following discretionary approvals:

- Specific Plan Amendment: A Specific Plan Amendment to change the existing East Valley Corridor Specific Plan designation for the project site from EVC-Single Family Residential to EVC-Commercial.
- Conditional Use Permit: A Condition Use Permit (CUP) to allow for the construction and operating of a gas station with convenience store.
- Variance: A variance to allow for construction of a freeway pole sign that will exceed the sign height maximum. Another variance to allow for the use of a smaller percentage of interior property line landscaping than the required 10 percent coverage.
- Tentative Parcel Map: A Tentative Parcel Map to consolidate the six existing parcels into two parcels.

1.5 - Environmental Setting

The project site currently contains four existing single-family residences, as well as a portion of undeveloped but previously disturbed land in the northern portion of the site. The project site is relatively flat and gently slopes to the southwest, with onsite elevations ranging from 1115 feet above mean seal level (amsl) to 1121 feet amsl.

The City of Loma Linda General Plan's Land Use Map has designated the project site as Commercial, while the City's Zoning Map identifies the project site as Single Residence (R1). The East Valley Corridor Specific Plan overlays the project site, designating the site as EVC-Single Family Residential. Table 3 provides a summary of the zoning district and land use designation associated with each of the parcels that comprise the site.

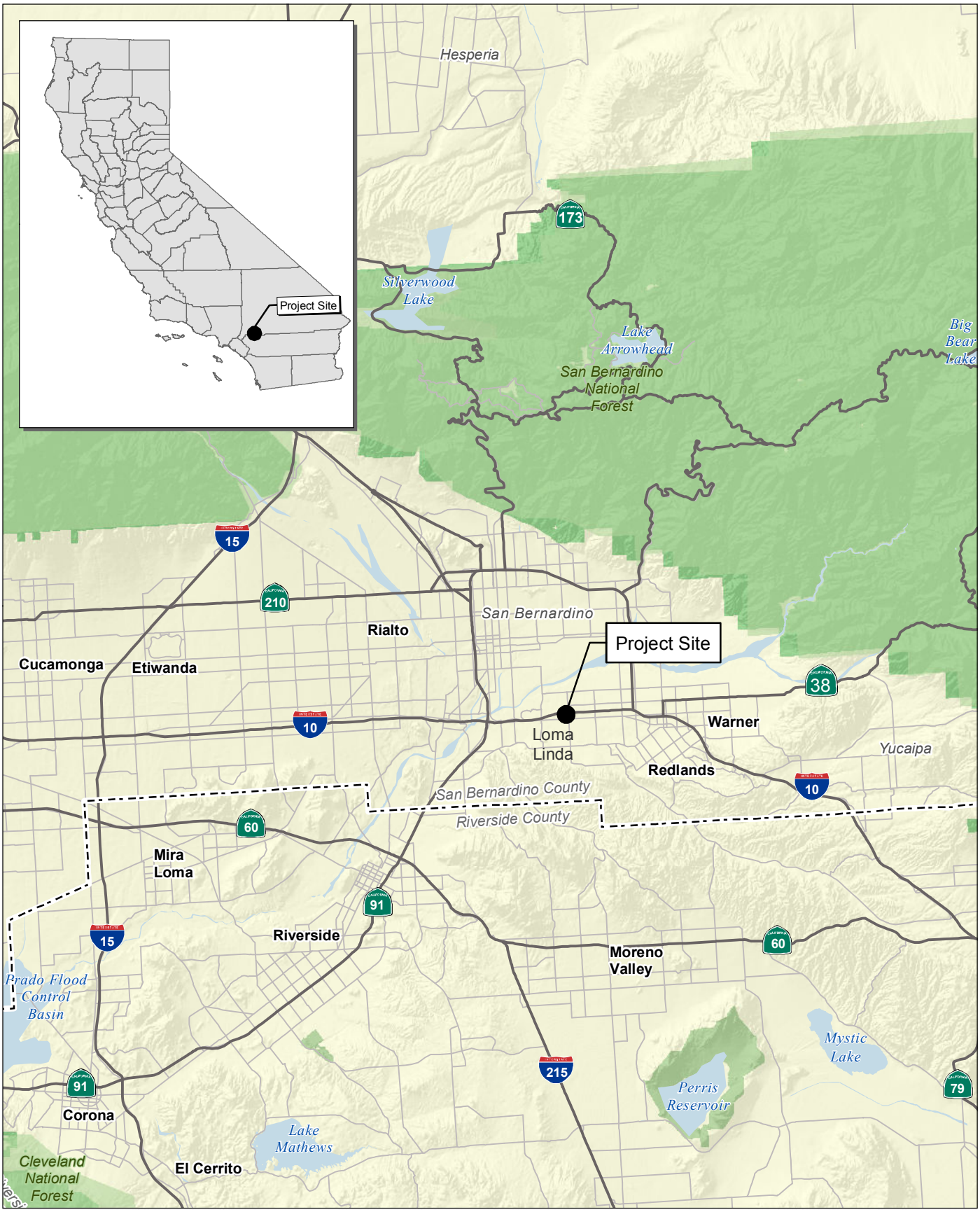
Table 3: Onsite Zoning and Land Use Designation

Parcel (APN)	Existing Zoning/East Valley Corridor Specific Plan Land Use Designation	Proposed Zoning/East Valley Corridor Specific Plan Land Use Designation	Existing General Plan Land Use Designation	Proposed General Plan Land Use Designation
0281-251-01	EVC-Single Family Residential	EVC-Commercial	Commercial	Commercial
0281-251-02	EVC-Single Family Residential	EVC-Commercial	Commercial	Commercial
0281-251-03	EVC-Single Family Residential	EVC-Commercial	Commercial	Commercial
0281-251-04	EVC-Single Family Residential	EVC-Commercial	Commercial	Commercial
0281-242-12	EVC-Single Family Residential	EVC-Commercial	Commercial	Commercial
0281-242-29	EVC-Single Family Residential	EVC-Commercial	Commercial	Commercial
Source: City of Loma Linda, Zoning Map, ND; City of Loma Linda, General Plan Land Use Map, May 2009.				

The project site is bound by Mountain View Avenue to the east, the Interstate 10 (I-10) eastbound off ramp to the north, an existing residential neighborhood to the west, and Rosewood Avenue to the south. Table 4 provides a summary of the land uses surrounding the project site, along with the zoning districts and land use designations associated with each of these neighboring uses.

Table 4: Surrounding Land Uses

Land Use	Zoning/ East Valley Corridor Specific Plan Land Use Designation	General Plan Land Use Designation
North		
Interstate 10 (I-10)	—	—
East		
Mountain View Road	—	—
Undeveloped Property	EVC-General Business	Business Park
South		
Rosewood Avenue	—	—
Single-Family Residences	Commercial	EVC-Single Family Residential
West		
Single-Family Residences	Commercial	EVC-Single Family Residential
City Wellsite	Commercial	EVC-Single Family Residential
Mobile Home Community	Commercial	EVC-General Commercial
Source: City of Loma Linda, Zoning Map, ND; City of Loma Linda, General Plan Land Use Map, May 2009.		



Source: Census 2000 Data, The CaSIL

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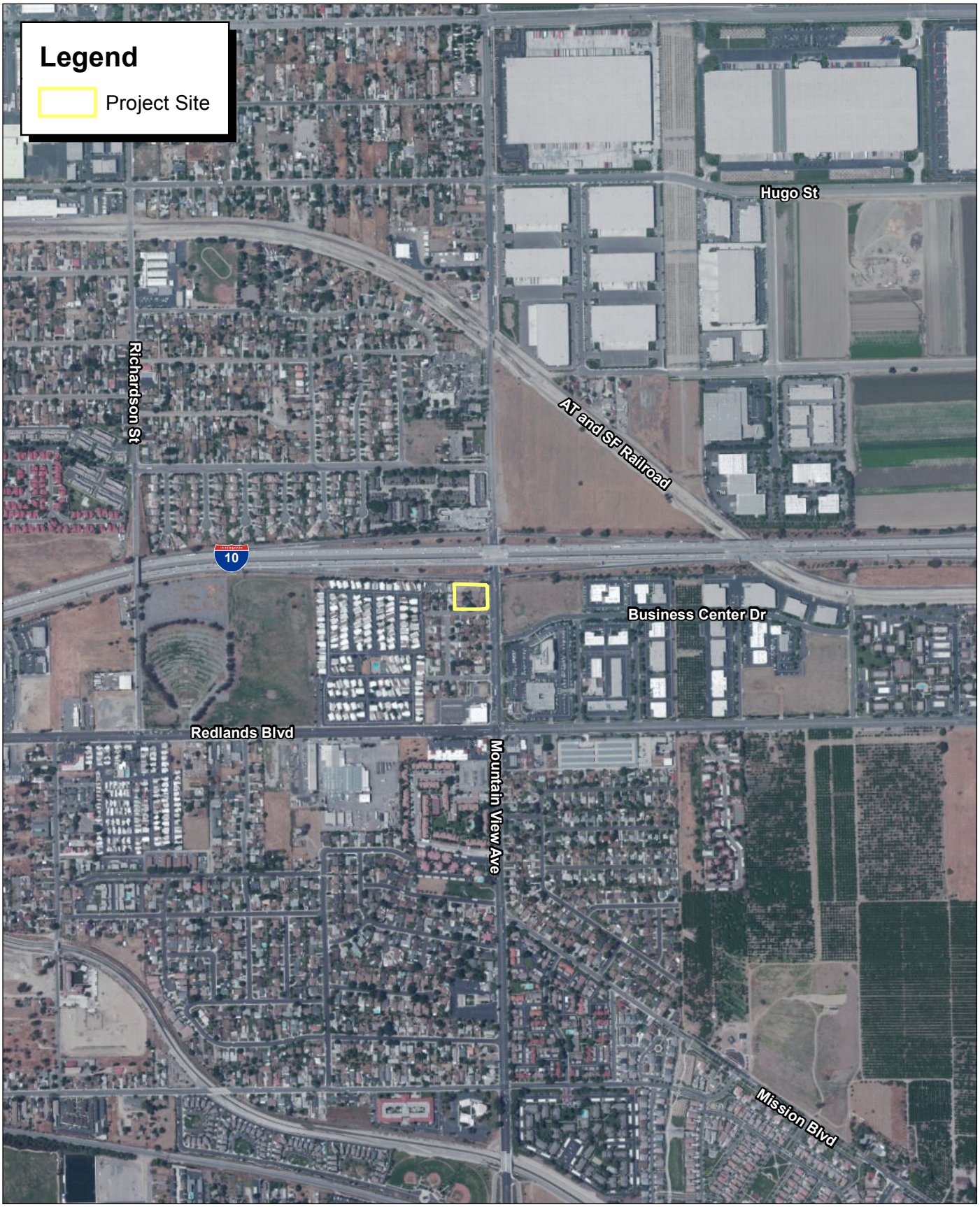
5 2.5 0 5 Miles

Exhibit 1
Regional Location Map



Source: ESRI, National Geographic

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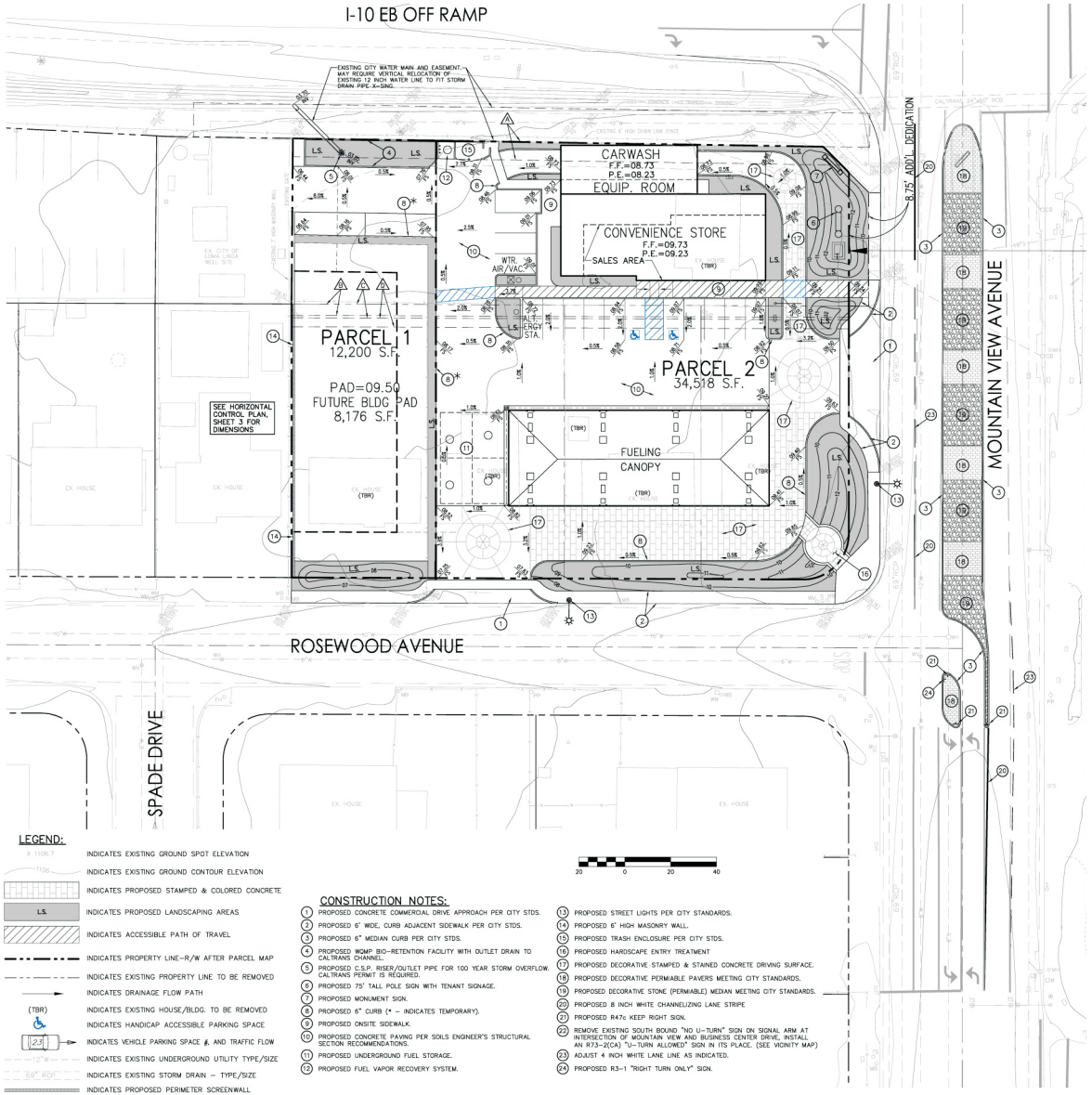
1,000 500 0 1,000 Feet

Exhibit 2
Local Vicinity Map
Aerial Base



Source: Land Engineering Consultants, Inc. 2013

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Exhibit 3
Site Plan

SECTION 2: ENVIRONMENTAL CHECKLIST AND ENVIRONMENTAL EVALUATION

Environmental Factors Potentially Affected

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

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

Environmental Determination

On the basis of this initial evaluation:

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

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

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

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

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

Date: 1-3-2014 Signed: 

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Aesthetics *Would the project:*				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Environmental Evaluation

Would the project:

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. The City of Loma Linda General Plan's Conservation and Open Space Element identifies the hillside portions of the City, and particularly the Hillside Conservation Area, as important visual resources within the City. So important are these part of the City that in 1993, the City's residents passed the Hillside Preservation Initiative preserve the undeveloped hillside areas within the City. The project site is located in a predominantly developed setting, approximately 1.75 miles north of the Hillside Conservation Area. The proposed project has been designed to conform to the size and scale of the surrounding development, and would not alter views of the Hillside Conservation Area to the south. Therefore, impacts associated with scenic vistas will be less than significant.

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

No Impact. The California Department of Transportation (Caltrans) designates State Route 38 (SR-38) between South Fork Campground to State Lane as the only Officially Designated State Scenic Highway in San Bernardino County. This segment of SR-38 is approximately 20 miles northeast of the project site. Because of the extensive distance and the varying topography between the project site and this portion of SR-38, the proposed project will not be located within the viewshed of the roadway. Therefore, no impacts associated with State Scenic Highways will occur.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. The project site is located in a predominantly urbanized setting and currently contains four existing single-family residences, as well as a portion of undeveloped but previously disturbed land in the northern portion of the site. The proposed project will demolish the existing residential uses found on the project site and replace them with a convenience store, gasoline station, carwash, and separate commercial building pad. As required by the City of Loma Linda, the proposed project has been designed to comply with the standards contained in the City's Zoning Code (Title 17 of the Loma Linda Municipal Code). The proposed improvements will incorporate traditional architectural design, neutral architectural coatings, and a variety of complimentary building materials (Exhibit 4 and Exhibit 5). The design standards within the Zoning Code have been established by the City to ensure that both new development projects and existing land uses are visually compatible. The City's approval of the proposed project's final design plans will ensure that the project's design compliments the existing land uses in the project area and is consistent with the design standards contained in the Zoning Code. Therefore, impacts associated with existing visual character or quality will be less than significant.

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

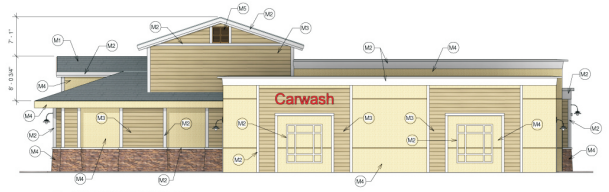
Less Than Significant Impact. The proposed project will introduce new sources of nighttime safety and security lighting to the project site. In addition to the lighting affixed to the convenience store/carwash and gas station buildings/structures, the proposed project will include seven freestanding, 18-foot high, 400 watt, metal halide lights located throughout the project site. These parking lot lights will be required to comply with Section 17.50.130-Artificial illumination, of the Loma Linda Municipal Code, which states:

> Artificial illumination of any structure, lot, or open area including, but not limited to, buildings, signs, parking and storage areas, shall be so installed and arranged as to direct light away from adjoining properties. The intensity of illumination provided shall be sufficiently subdued to prevent any nuisance to other properties and uses in the vicinity. (Ord. 98 § 46.04.09, 1974)

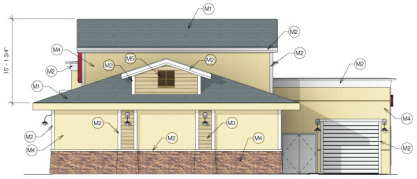
The evaluation of light trespass can be characterized as a subjective exercise because of widely varying personal perceptions, with individual receptors interpreting light impact relatively. Thus, a relative scale to quantify light trespass is employed, not only because of the variable nature of light, but also because its impact is highly subjective. Accordingly, in order to address growing concerns with light trespass, light pollution, obtrusive light, and artificial sky glow, the International Dark-Sky Association (IDA), a recognized authority on light pollution, defines quantitative limits for prescriptive and performance requirements. The IDA published Information Sheet 76, which provides a recommended standard for exterior lighting. The following standard for exterior lighting originating on a property and subsequently projecting onto an adjacent property is the threshold of significance that will be used to analyze the proposed project's lighting impacts:

- Limit the exterior lighting originating on a property to a maximum of 0.5 foot-candle (fc) at a distance of 25 feet beyond the property lines.

The proposed project's lighting will be located and shielded to prevent light trespass onto surrounding properties. A Conceptual Photometric Lighting Plan (Exhibit 7) has been prepared for the proposed project to evaluate the potential impact of the project's lighting on adjacent properties. As shown on Exhibit 7, all light originating on the project site will be limited to less than 0.5 fc within 25 feet of the project boundary. As such, the proposed project's lighting will comply with both the IDA exterior lighting threshold and the City's Municipal Code. Additionally, all spillover light, regardless of distance from the project boundary, will be limited to the public right-of-way or the uninhabited City wellsite located just northwest of the project site. Neither of these land uses contain light-sensitive receptors. Thus, all lighting used by the proposed project will not impact adjacent land uses, including the residential uses located west of the project site. Therefore, impacts associated with lighting will be less than significant.

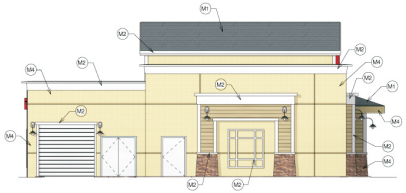


1 NORTH ELEVATION 1/8" = 1'-0"

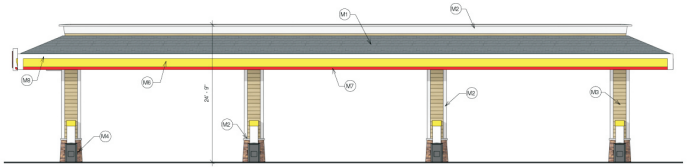


2 EAST ELEVATION 1/8" = 1'-0"

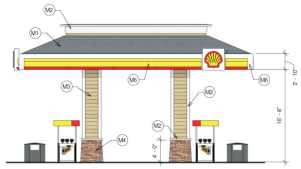
3 SOUTH ELEVATION 1/8" = 1'-0"



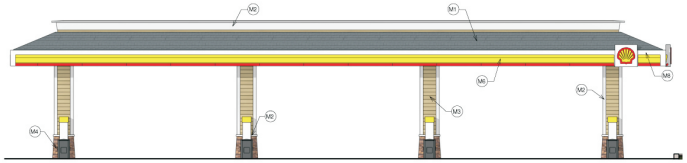
4 WEST ELEVATION 1/8" = 1'-0"



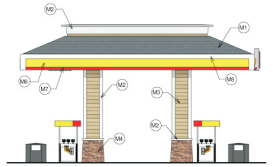
5 CANOPY - NORTH ELEVATION 1/8" = 1'-0"



6 CANOPY - EAST ELEVATION 1/8" = 1'-0"

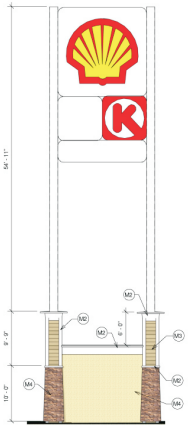


7 CANOPY - SOUTH ELEVATION 1/8" = 1'-0"

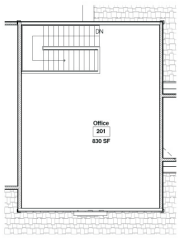


8 CANOPY - WEST ELEVATION 1/8" = 1'-0"

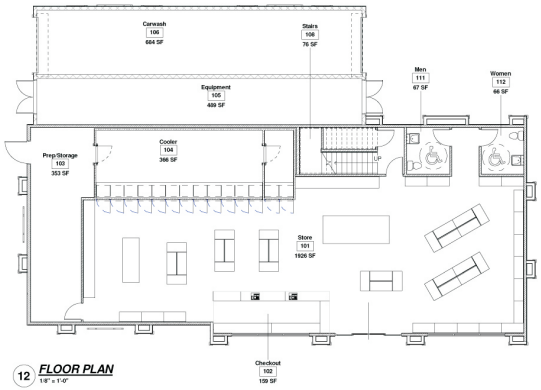
9 DR - MONUMENT SIGN 1/8" = 1'-0"



10 SIGN ELEVATION 1/8" = 1'-0"



11 SECOND FLOOR PLAN 1/8" = 1'-0"



12 FLOOR PLAN 1/8" = 1'-0"

MATERIAL LIST

Material Mark	Material Description
M1	US TILE – PRO TILE – SLATE GRAY
M2	DUNN EDWARD PAINT – VANILLA SHAKE DEW325
M3	CERTAINTEED FIBER CEMENT SIDING W. DUNN EDWARD PAINT – COOL DECEMBER – DEW383
M4	ELDORADO STONE – BLUFFSTONE
M5	DUNN EDWARD PAINT – OLD BOOT DE6133
M6	SHELL - WHITE (DONE BY OTHERS)
M7	SHELL - RED (DONE BY OTHERS)
M8	SHELL - RED (DONE BY OTHERS)

Source: Land Engineering Consultants, Inc. 2013

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Exhibit 4
Elevations

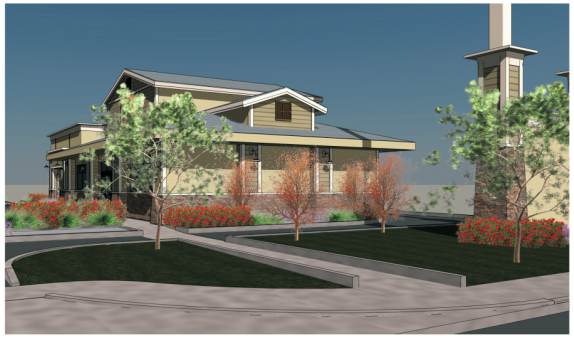
1 Corner View

4 Back View

7 Birds Eye View

6 Rear View

5 Canopy From Street



2 Street View of Store

3 Store Front View

Source: Land Engineering Consultants, Inc. 2013

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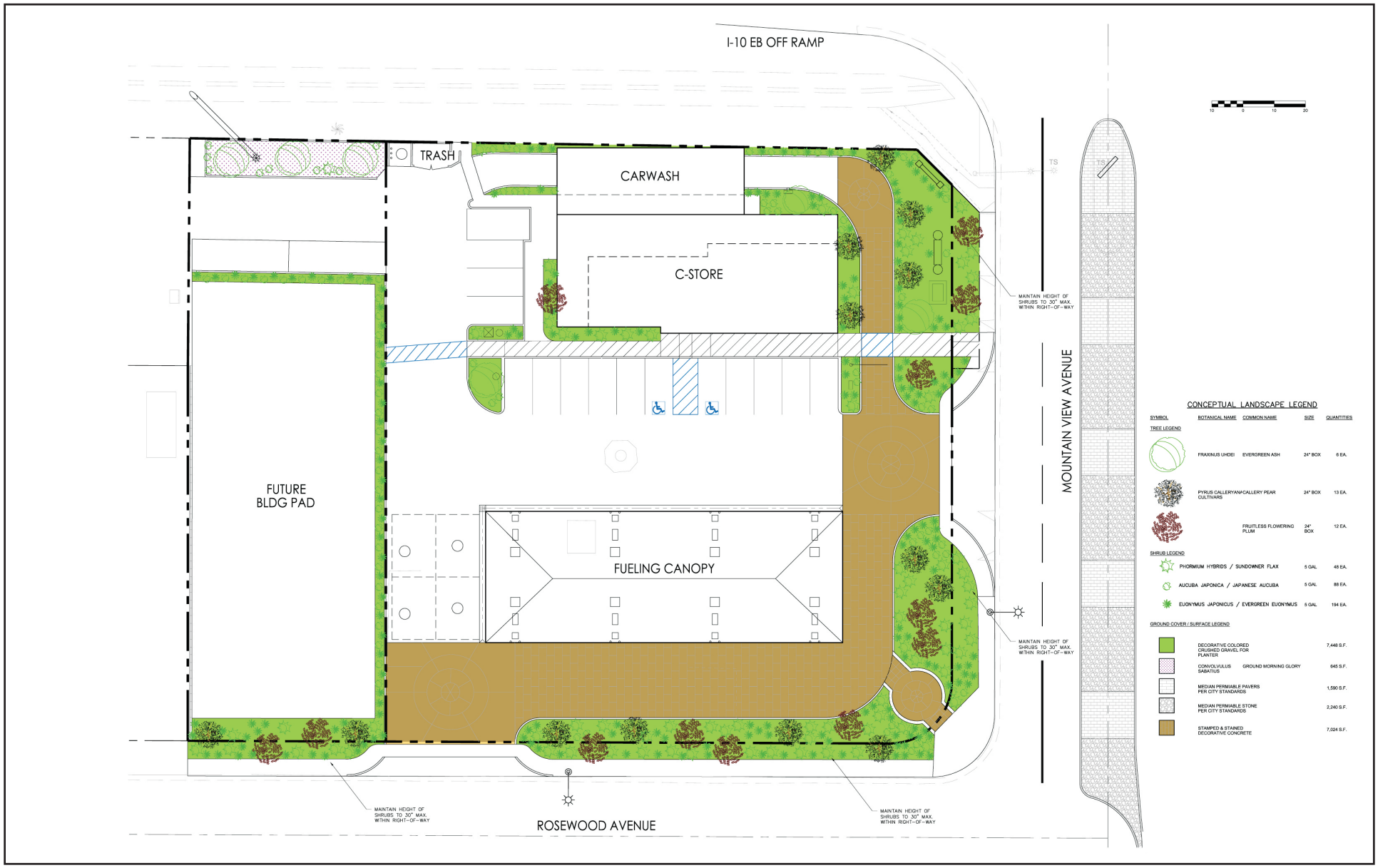
Exhibit 5
3D Views



Source: Land Engineering Consultants, Inc. 2013

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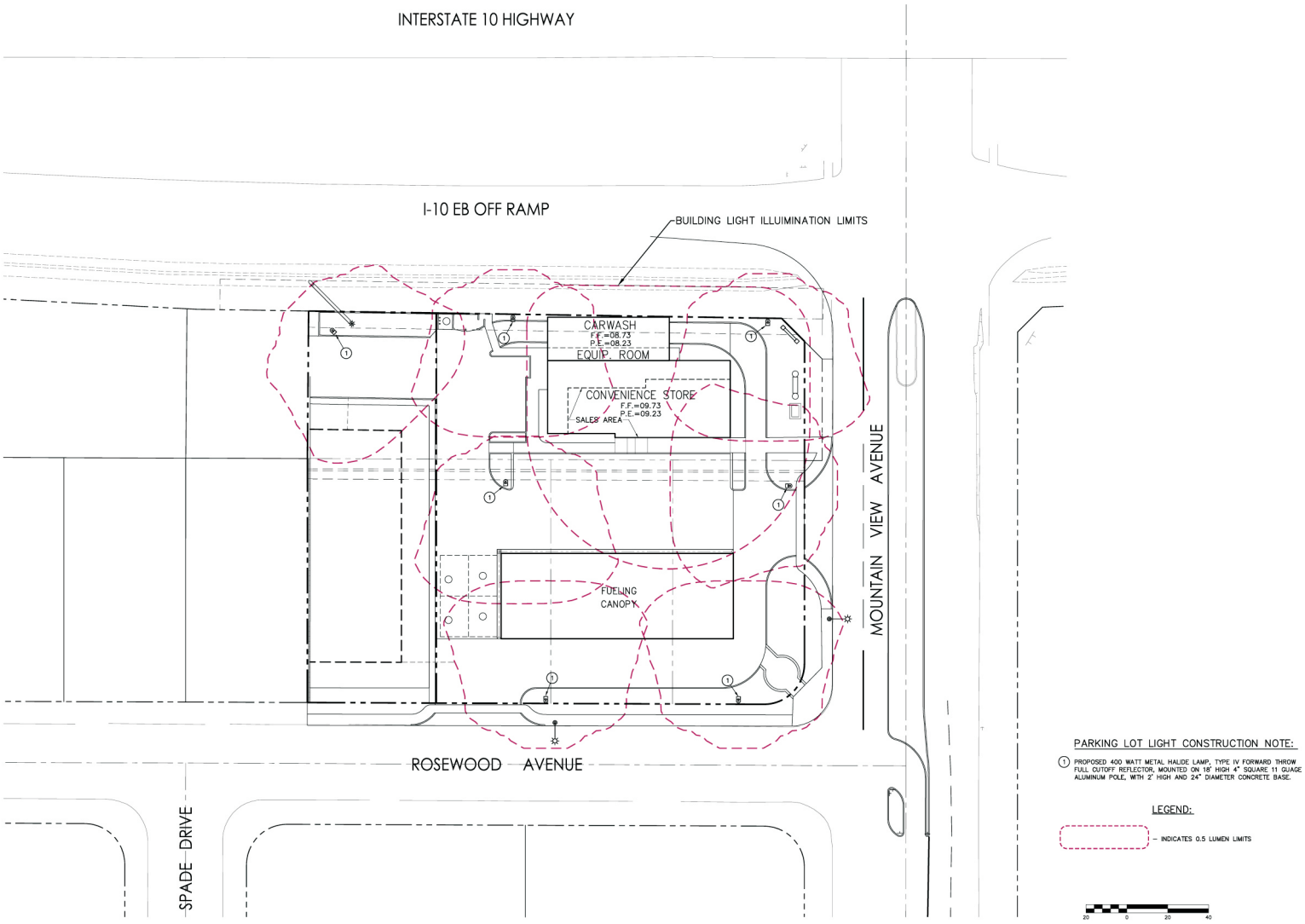
Exhibit 6
Landscape Plan



Source: Land Engineering Consultants, Inc. 2013

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Exhibit 7
Photometric Lighting Plan

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

Environmental Evaluation

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and

forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) identifies the project site and the immediate project area as Urban and Built-up Land. The nearest property designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) is a parcel designated as Prime Farmland located approximately 0.4 miles southeast of the project site along Redlands Boulevard, east of Enterprise Drive. Because of the distance between the project site and this property, the proposed project will not impact existing Prime Farmland, Unique Farmland, or Farmland in the project area, and will not result in conversion of such property to non-agricultural uses. Therefore, no impacts associated with conversion of Important Farmland will occur.

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

No Impact. The California Department of Conservation's Williamson Act Map identifies the project site and the project area as Non-Williamson Act Land, Urban and Built-up Land. The closest property designated as under Williamson Act contract is located several miles east of the project site in the Community of Mentone. Additionally, the City of Loma Linda's Zoning Map identifies the project site as Single Residence (R1), and no parcels zoned as Agricultural (A1) are identified in the project area. Therefore, no impacts associated with agricultural zoning or Williamson Act contracts will occur.

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

No Impact. The California Department of Forestry and Fire Protection's (Cal Fire) Land Cover Map does not identify the project site or the project area as either forestland or timberland. The nearest forested areas are located more than 10 miles north of the project site in the San Bernardino Nation Forest. Therefore, no impacts associated with forestland or timberland zoning will occur.

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

No Impact. Neither the project site nor the project land contains any land identified by Cal Fire as forestland. Therefore, no impacts associated with conversion of forestland will occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The project site is identified as Urban and Built-up Land by the California Department of Conservation FMMP. The closest property designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) is a parcel designated as Prime Farmland located approximately 0.4 miles southeast of the project site. Based on this distance and the nature of the proposed project, the project will not result in the conversion of this Prime Farmland property to non-agricultural use. Therefore, no impacts associated with the conversion of Farmland or forestland will occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
3. Air Quality *Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:*				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) 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)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Environmental Evaluation

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

The following section is based on the information contained within the November 2013 Air Quality and Greenhouse Gas Analysis Report prepared for the proposed project by FirstCarbon Solutions. The Air Quality and Greenhouse Gas Analysis is included as Appendix A of this IS.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact.

According to the 1993 SCAQMD Handbook, there are two key indicators of consistency with the AQMP:

1. Indicator: Whether the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely

attainment of air quality standards or the interim emission reductions specified in the AQMP. Project applicability: applicable and assessed below.

2. Indicator: A project would conflict with the AQMP if it will exceed the assumptions in the AQMP in 2010 or increments based on the year of project build-out and phase. The Handbook indicates that key assumptions to use in this analysis are population number and location and a regional housing needs assessment. The parcel-based land use and growth assumptions and inputs used in the Regional Transportation Model run by the Southern California Association of Governments that generated the mobile inventory used by the SCAQMD for AQMP are not available. Therefore, this indicator is not applicable. Project applicability: not applicable.

Considering the recommended criteria in the SCAQMD's 1993 Handbook, this analysis utilizes the following criteria to address this potential impact:

- Step 1: Project's contribution to air quality violations (SCAQMD's first indictor).
- Step 2: Assumptions in AQMP (SCAQMD's second indictor).
- Step 3: Compliance with applicable emission control measures in the AQMPs.

Step 1: Project's Contribution to Air Quality Violations

According to the SCAQMD, the project is consistent with the AQMP if the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP (FCS 2013). As shown in Impact AIR-2, the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

If a project's emissions exceed the SCAQMD regional thresholds for NO_X, VOC, PM_{10}, or $PM_{2.5}$, it follows that the emissions could cumulatively contribute to an exceedance of a pollutant for which the basin is in nonattainment (ozone, nitrogen dioxide, PM_{10}, $PM_{2.5}$) at a monitoring station in the basin. An exceedance of a nonattainment pollutant at a monitoring station would not be consistent with the goals of the AQMP - to achieve attainment of pollutants. As shown in Impact AIR-3, the project would not exceed the SCAQMD's regional thresholds for NO_X, VOC, PM_{10}, or $PM_{2.5}$. Therefore, the project is less than significant for this criterion.

Step 2: Assumptions in AQMP

It is unknown if the land uses in city/county general plans are used in the projections in the AQMPs. Nevertheless, a discussion in this regard is included in this analysis.

According to Chapter 12 of the SCAQMD's CEQA Air Quality Handbook, the purpose of the General Plan consistency finding is to determine whether a project is inconsistent with the growth assumptions that is incorporated into the air quality plan, and thus whether it would interfere with the region's ability to comply with federal and State air quality standards. . The project site is designated 'Commercial' by the City of Loma Linda General Plan; the project is consistent with this land use designation. Therefore, the project is consistent with the growth projections of the General Plan and, by extension, the AQMP. The project is less than significant for this criterion.

Step 3: Control Measures

This step involves assessing the project's compliance with the control measures in the AQMPs.

2003 AQMP. The 2003 AQMP contains a number of land use and transportation control measures including the following: the District's Stationary and Mobile Source Control Measures; State Control Measures proposed by ARB; and Transportation Control Measures provided by Southern California Association of Governments. ARB's strategy for reducing mobile source emissions include the following approaches: new engine standards; reduce emissions from in-use fleet, require clean fuels, support alternative fuels and reduce petroleum dependency, work with EPA to reduce emissions from national and state sources, and pursue long-term advanced technology measures (FCS 2013). Transportation control measures provided by Southern California Association of Governments include those contained in the Regional Transportation Plans, the most current version of which is the 2008 Regional Transportation Plan. The Regional Transportation Plan has control measures to reduce emissions from on-road sources by incorporating strategies such as high occupancy vehicle interventions, transit, and information-based technology interventions (FCS 2013). The project indirectly would comply with the control measures set by ARB and Southern California Association of Governments.

2007 AQMP. The focus of the 2007 AQMP is to demonstrate attainment of the federal $PM_{2.5}$ ambient air quality standard by 2015 and the federal 8-hour ozone standard by 2024, while making expeditious progress toward attainment of state standards. This is to be accomplished by building upon improvements from the previous plans and incorporating all feasible control measures while balancing costs and socioeconomic impacts. The 2007 AQMP indicates that $PM_{2.5}$ is formed mainly by secondary reactions or sources. Therefore, instead of reducing fugitive dust, the strategy for reducing $PM_{2.5}$ focuses on reducing precursor emissions of SO_X, directly emitted $PM_{2.5}$, NO_X, and VOC.

The Final 2007 AQMP control measures consist of four components. The first component is SCAQMD's Stationary and Mobile Source Control Measures. The Final 2007 AQMP includes 30 short-term and mid-term stationary and seven mobile source control measures for SCAQMD implementation. A complete listing of the measures is in the 2007 AQMP and includes measures such as VOC reductions from gasoline transfer and dispensing facilities, further NO_X reductions from space heaters, localized control program for PM emission hot spots, urban heat island, energy efficiency and conservation, etc. Some of the measures will become new rules and some will be amendments to existing rules. When the rules pass, the owner-operator will follow the applicable rules.

The second component is ARB's Proposed State Strategy, which includes short- and mid-term control measures aimed at reducing emissions from sources that are primarily under state jurisdiction, including on-road and off-road mobile sources, and consumer products. These measures are required in order to achieve the remaining emission reductions necessary for $PM_{2.5}$ attainment. ARB's strategy includes measures such as improvements to California's Smog Check Program, expanded passenger vehicle retirement, cleaner in-use heavy-duty trucks, reductions from port related sources, cleaner off-road equipment, evaporative and exhaust strategies, pesticide strategies,

etc. When these measures are implemented by the ARB, the project would be required to follow them.

The third component is SCAQMD Staff's Proposed Policy Options to Supplement ARB's Control Strategy. SCAQMD staff believe that a combination of regulatory actions and public funding is the most effective means of achieving emission reductions. As such, the 2007 Final AQMP proposes three policy options for the decision makers to consider in achieving additional reductions. The first option is to incorporate the SCAQMD proposed additional control measures as a menu of selections further reducing emissions from sources primarily under state and national jurisdiction. The second option is to have the State fulfill its NO_X emission reduction obligations under the 2003 AQMP by 2010 for its short-term defined control measures plus additional reductions needed to meet the NO_X emission target between 2010 and 2014. The third option is based on the same rate of progress under Policy Option 1, but it relies heavily on public funding assistance to achieve the needed NO_X reductions via accelerated fleet turnover to post-2010 on-road emission standards or the cleanest off-road engine standards in effect today or after 2010. This strategy does not apply to the project.

The fourth component consists of Regional Transportation Strategy and Control Measures provided by Southern California Association of Governments. Transportation plans within the basin are statutorily required to conform to air quality plans in the region, as established by the 1990 Federal Clean Air Act and reinforced by other Acts. The region must demonstrate that its transportation plans and programs conform to the mandate to meet the federal ambient air quality standards in a timely manner. The Regional Transportation Plan, prepared by the Southern California Association of Governments, is developed every 4 years with a 20-year planning horizon to meet the long-term transportation planning requirements for emission reductions from on-road mobile sources within the basin. The biennial Regional Transportation Improvement Program requires that the short-term implementation requirements of the Transportation Conformity Rule be met by Southern California Association of Governments. The first 2 years of the program are fiscally constrained and demonstrate timely implementation of a special category of transportation projects called Transportation Control Measures. In general, Transportation Control Measures are those projects that provide emission reductions from on-road mobile sources, based on changes in the patterns and modes by which the regional transportation system is used. Strategies are grouped into three categories: high occupancy vehicle strategy, transit and systems management, and information-based technology (traveling during a less congested time of day). Southern California Association of Governments approved the transportation measures in the Regional Transportation Plan, which have been included in the region's air quality plans. The Transportation Control Measures will be implemented and will subsequently reduce emissions in the basin.

2012 AQMP. The 2012 AQMP was adopted December 7, 2012. The purpose of the 2012 AQMP for the Basin is to set forth a comprehensive and integrated program that will lead the Basin into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update of the Basin's projections in meeting the federal 8-hour ozone standards. Similarly to the prior AQMPs, the project would comply with all applicable rules and regulations enacted as part of the AQMP. In addition, as discussed in the Regulatory section, the AQMP relies upon the Southern California Association of Governments regional transportation strategy, which is in its adopted 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and 2011 Federal

Transportation Improvement Program. Included in the RTP/SCS are regional transportation strategy and transportation control measures including the following: active transportation (non-motorized transportation - biking and walking); transportation demand management; transportation system management; transit; passenger and high-speed rail; goods movement; aviation and airport ground access; highways; arterials; and operations and maintenance.

SIPs. Geographical areas in the state that exceed the federal air quality standards are called nonattainment areas. The project area is in nonattainment for ozone, PM_{10}, $PM_{2.5}$, and nitrogen dioxide. State Implementation Plans (SIPs) show how each area will attain the federal standards. To do this, the SIPs identify the amount of pollutant emissions that must be reduced in each area to meet the standard and the emission controls needed to reduce the necessary emissions. On September 27, 2007, ARB adopted its State Strategy for the 2007 SIP. In 2009, the SIP was revised to account for emissions reductions from regulations adopted in 2007 and 2008 and clarifies ARB's legal commitment. There are currently proposed revisions and a 2011 Progress Report. The South Coast is currently 94 percent of the way towards achieving the 2014 emissions levels identified in its $PM_{2.5}$ SIP. The SIP takes into account ARB rules and regulations. The project will comply with applicable rules and regulations.

Summary

In summary, the project would not result in a violation of air quality standards. The project would not exceed the SCAQMD's regional thresholds for NO_X, VOC, PM_{10}, or $PM_{2.5}$. In addition, the project is consistent with the growth assumptions in the applicable AQMP and would comply with all applicable rules and regulations. Therefore, the project would not conflict with the applicable AQMP and would result in a less than significant impact.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact.

Two criteria are used to assess the significance of this impact: (1) the localized construction analysis and (2) the CO hot spot analysis. Regional impact analysis, including both construction and operational regional impacts, is provided in Impact AIR-3.

Localized Construction Analysis

The SCAQMD Governing Board adopted a methodology for calculating localized air quality impacts through localized significance thresholds (also referred to as a LST analysis). Localized significance thresholds represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable state or federal ambient air quality standard. Localized significance thresholds were developed in recognition of the fact that criteria pollutants such as CO, NO_X, and PM_{10} and $PM_{2.5}$ in particular, can have local impacts at nearby sensitive receptors as well as regional impacts. The localized significance thresholds are developed for each source receptor area and are applicable to NO_X, CO, PM_{10}, and $PM_{2.5}$.

The localized significance thresholds appropriate to the project area were obtained from the look-up tables in the SCAQMD Final Localized Significance Threshold Methodology for a 1-acre project in Source Receptor Area 35. In addition to the dependence on geographic location within the SCAQMD (e.g., the Source Receptor Area), the localized thresholds also depend on the distance to the impacted receptor from the source of emissions. The distance to the nearest sensitive receptor is within 25 meters from the boundary of the project.

The localized assessment methodology limits the emissions in the analysis to those generated from onsite activities. The onsite emissions during construction are compared with the localized significance thresholds and are summarized in Table 5. The onsite emissions were generated as discussed in the regional analysis. Onsite emissions are from fugitive dust during grading and off-road diesel emissions. As shown in Table 5, unmitigated emissions during construction do not exceed the localized significance thresholds.

Table 5: Localized Significance Analysis (Construction)

Activity	Onsite Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	15.38	11.33	2.49	1.02
Site Preparation	7.96	6.16	0.78	0.50
Grading	10.59	8.23	1.22	0.94
Building Construction	13.18	9.93	1.01	0.79
Paving	12.52	10.14	1.30	1.00
Architectural Coating	0.93	0.78	0.11	0.08
Maximum Daily Emissions	15.38	11.33	2.49	1.02
Localized Significance Threshold	118	775	4.0	4.0
Exceed Threshold?	No	No	No	No

Notes:
Each of the above activities does not occur at the same time; therefore, the maximum daily emissions represent the maximum emissions that would occur in one day.
Source: FCS Air Quality and Greenhouse Gas Analysis Report, 2013 (Appendix A).

The localized construction analysis uses thresholds that represent the maximum project emissions that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard (FCS 2013). If the project results in emissions that do not exceed the localized significance thresholds, it follows that those emissions would not cause or contribute to a local exceedance of the appropriate ambient air quality standard. The localized construction analysis demonstrates that the project would not exceed the localized significance thresholds for CO, nitrogen dioxide, PM_{10}, or $PM_{2.5}$. Therefore, the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation during construction.

Carbon Monoxide Hot Spot Analysis

Carbon monoxide (CO) "hot spot" thresholds ensure that emissions of CO associated with traffic impacts from a project in combination with CO emissions from existing and forecasted regional traffic do not exceed state or federal standards for CO at any traffic intersection impacted by the project. Project concentrations may be considered significant if a CO hot spot intersection analysis determines that project generated CO concentrations cause a localized violation of the state CO 1-hour standard of 20 ppm, state CO 8-hour standard of 9 ppm, federal CO 1-hour standard of 35 ppm, or federal CO 8-hour standard of 9 ppm.

A carbon monoxide (CO) hot spot is a localized concentration of CO that is above the state or federal 1-hour or 8-hour CO 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 project-impacted intersections, where the concentrations would be the greatest.

This analysis follows guidelines recommended by the CO Protocol (FCS 2013) and the SCAQMD. 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 conditions in areas that experience meteorological conditions favorable to CO accumulation require a detailed analysis. The SCAQMD recommends that a local CO hot spot analysis be conducted if the intersection meets one of the following criteria: 1) the intersection is at LOS D or worse and where the project increases the volume to capacity ratio by 2 percent, or 2) the project decreases LOS at an intersection from C to D.

Using the CALINE4 model, potential CO hot spots were analyzed at the intersections listed in Table 11. These intersections were chosen because they operate at LOS D or worse. There are several inputs to the CALINE4 model. One input is the traffic volumes, which is from the project-specific traffic report. The traffic volumes with the project were used for the following scenarios:

- Existing, intersection #6 (AM peak hour)
- Year 2015, intersection #6 (AM peak hour)
- Year 2035, intersection #2 (PM peak hour)

As shown in Table 6, the estimated 1-hour and 8-hour average CO concentrations at build-out in combination with background concentrations are below the state and federal standards. No CO hot spots are anticipated because of traffic-generated emissions by the project in combination with other anticipated development in the area. Therefore, the mobile emissions of CO from the project are not anticipated to contribute substantially to an existing or projected air quality violation of CO. Therefore, according to this criterion, air pollutant emissions during operation would result in a less than significant impact.

Table 6: Localized Carbon Monoxide Concentrations

Intersection	Peak Hour	Estimated CO Concentration (ppm)	
		1 Hour	8 Hour
Existing, Intersection #6	AM	2.8	2.3
Year 2015, Intersection #6	AM	2.7	2.2
Year 2035, Intersection #2	PM	2.4	2.0
Significance Threshold		20.0	9.0
Significant Impact?		No	No

Notes:
The 1-hour concentration is the CO Hotspot output, plus the 1-hour background concentration of 2.00 ppm.
The 8 hour project increment was calculated by multiplying the 1 hour CALINE4 output by 0.7 (persistence factor), then adding the 8 hour background concentration of 1.74 ppm.
Source: FCS Air Quality and Greenhouse Gas Analysis Report, 2013 (Appendix A).

c) 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)?

Less Than Significant Impact.

To result in a less than significant impact, the following criteria must be true:

1. Regional analysis: emissions of nonattainment pollutants must be below the regional significance thresholds. This is an approach recommended by the SCAQMD in its comment letters.

2. Cumulative health impacts: the project must result in less than significant cumulative health effects from the nonattainment pollutants. This approach correlates the significance of the regional analysis with health effects, consistent with the court decision, *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1219-20.

Note that the voluntary approaches in the SCAQMD's 1993 Handbook are not used in this analysis for the following reasons. The first approach in the 1993 Handbook is a 1-percent-per-year reduction (or 18 percent over 18 years to the year 2010) in project emissions of VOC, NO_X, CO, PM_{10}, and SO_X. This approach is not straightforward and operational reductions are not easy to quantify. The second approach is not applicable because it relies on SCAQMD Regulation XV, which was repealed in 1995 and therefore is not applicable. The third approach is to reduce the rate of growth in vehicle miles traveled and trips. In this approach, the rate of growth in vehicle miles traveled and trips "should be held to the rate of population or household growth." Data that was used by Southern California Association of Governments in the AQMP should be used in this approach; however, that data is not available. Therefore, the approaches in the 1993 SCAQMD Handbook pertaining to cumulative impacts are not used.

Step 1: Regional Analysis

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically exceeded the ambient air quality standard. It follows that if a project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

The South Coast Air Basin is in nonattainment for PM_{10}, $PM_{2.5}$, nitrogen dioxide, and ozone. Therefore, if the project exceeds the regional thresholds for PM_{10}, or $PM_{2.5}$, then it contributes to a cumulatively considerable impact for those pollutants. If the project exceeds the regional threshold for NO_X or VOC, then it follows that the project would contribute to a cumulatively considerable impact for ozone. If the project exceeds the NO_X threshold, it could contribute cumulatively to nitrogen dioxide concentrations.

Regional emissions include those generated from all onsite and offsite activities. Regional significance thresholds have been established by the SCAQMD because emissions from projects in the Basin can potentially contribute to the existing emission burden and possibly affect the attainment and maintenance of ambient air quality standards. Projects within the South Coast Air Basin region with regional emissions in excess of any of the thresholds presented in Table 7 (for construction) and Table 8 (for operation) are considered to have a significant regional air quality impact.

Construction Regional Emissions

Table 7 summarizes construction-related emissions (without mitigation). The information shown in Table 7 indicates that the SCAQMD regional emission thresholds would not be exceeded. Therefore, without mitigation, the short-term construction emissions are considered to have a less than significant regional impact.

Table 7: Construction Air Pollutant Emissions

Source	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	2.14	15.38	11.33	0.02	2.49	1.02
Site Preparation	1.11	7.96	6.16	0.01	0.78	0.50
Grading	1.56	10.59	8.23	0.01	1.22	0.94
Building Construction	1.79	13.18	9.93	0.02	1.01	0.79
Paving	2.08	12.52	10.14	0.01	1.30	1.00
Architectural Coating	52.03	0.93	0.78	0.00	0.11	0.08
Maximum Daily Emissions	52.03	15.38	11.33	0.02	2.49	1.02
Significance Threshold	75	100	550	150	150	55
Significant Impact?	No	No	No	No	No	No

Table 7 (cont.): Construction Air Pollutant Emissions

Source	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Notes: The maximum daily emissions refer to the maximum emissions that would occur in one day; it was assumed that the grading activities do not occur at the same time as the other construction activities; therefore, their emissions are not summed. VOC = volatile organic compounds NO_X = nitrogen oxides CO = carbon monoxide SO_X = sulfur oxides PM_{10} and $PM_{2.5}$ = particulate matter Source: FCS Air Quality and Greenhouse Gas Analysis Report, 2013 (Appendix A).						

Operational Regional Emissions

Operational emissions from emission sources generated both onsite and offsite as estimated by CalEEMod are shown in Table 8 for the summer season. As shown in Table 8, the project's emissions do not exceed the SCAQMD's regional thresholds and are less than significant.

Table 8: Operational Emissions

Source	Summer Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	0.82	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.01	0.01	0.00	0.00	0.00
Mobile	8.77	20.12	65.18	0.10	10.46	0.97
Total	9.59	20.13	65.19	0.10	10.46	0.97
Significance Threshold	55	55	550	150	150	55
Significant Impact?	No	No	No	No	No	No
Notes: VOC = volatile organic compounds NO_X = nitrogen oxides CO = carbon monoxide SO_X = sulfur oxides PM_{10} and $PM_{2.5}$ = particulate matter Source: FCS Air Quality and Greenhouse Gas Analysis Report, 2013 (Appendix A).						

Effective April 12, 2010, the EPA promulgated a new federal ambient air quality standard for nitrogen dioxide. The current SCAQMD significance thresholds do not take into account this new standard. The SCAQMD may update its significance thresholds for NO_X and nitrogen dioxide in late 2010; however, there is no indication regarding what the new thresholds will be. The new federal standard of 0.100 ppm is based on the 3-year average of the 98th percentile of the daily maximum 1-hour average. The state standard is 0.18 ppm, which is not to be exceeded at all. Therefore, the two cannot be easily compared. The maximum 1-hour nitrogen dioxide concentration in the project's region is 0.067 ppm. However, the average of the two most recent years of data for the 98th percentile of nitrogen dioxide is 0.055 ppm. The 98th percentile averaged over three years is below

the maximum concentrations. This analysis uses the current SCAQMD thresholds to determine significance for nitrogen dioxide and NO_X.

The regional significance analysis of construction and operational emissions demonstrates that emissions are below the SCAQMD regional significance thresholds. Therefore, the project does not contribute to a cumulative impact according to this criterion.

Step 2: Cumulative Health Impacts

The Basin is in nonattainment for ozone, nitrogen dioxide, PM_{10}, and $PM_{2.5}$, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as the elderly, children, and the sick). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects. However, the health effects are a factor of the dose-response curve. Concentration of the pollutant in the air (dose), the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the population would experience health effects.

The regional analysis of construction and operational emissions indicates that the project would not exceed the SCAQMD regional significance thresholds. The project would not result in significant cumulative health impacts.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact.

Those who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. For purposes of CEQA, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours, such as residences, hospitals, or convalescent facilities (FCS 2013). Commercial and industrial facilities are not included in the definition because employees do not typically remain onsite for 24 hours. However, when assessing the impact of pollutants with 1-hour or 8-hour standards (such as nitrogen dioxide and carbon monoxide), commercial and/or industrial facilities would be considered sensitive receptors for those purposes.

The closest sensitive receptor is a single family residence located adjacent to the western portion of the project site.

Criteria Pollutant Analysis

Project Construction

The localized construction analysis uses thresholds that represent the maximum emissions for a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard (FCS 2013). The thresholds are developed based on the ambient concentrations of that pollutant for each source receptor area and on the location of the

sensitive receptors. If the project results in emissions under those thresholds, it follows that the project would not cause or contribute to an exceedance of the standard. The standards are set to protect the health of sensitive individuals. If the standards are not exceeded at the sensitive receptor locations, it follows that the receptors would not be exposed to substantial pollutant concentrations.

As identified in Impact AIR-2, the localized construction impact analysis demonstrated that the project would not exceed the localized thresholds for CO, nitrogen dioxide, PM_{10}, or $PM_{2.5}$. Therefore, during construction, the project would not expose sensitive receptors to substantial pollutant concentrations of CO, nitrogen dioxide, PM_{10}, or $PM_{2.5}$.

Project Operation

Regional emissions of NO_X and VOC (ozone precursors) CO, SO_2, PM_{10}, or $PM_{2.5}$ during operation from the project would not expose sensitive receptors to substantial pollutant concentrations.

As shown in Impact AIR-2, the project would not generate a CO hot spot. Therefore, the project would not expose sensitive receptors to substantial CO concentrations.

According to this criterion, air pollutant emissions during operation would result in a less than significant impact.

Toxic Air Pollutants - Construction

The construction equipment would emit diesel particulate matter, which is a carcinogen. However, the diesel particulate matter emissions are short-term in nature. Determination of risk from diesel particulate matter is considered over a 70-year exposure time. Guidance published by the CAPCOA (FCS 2013), Health Risk Assessments for Proposed Land Use Projects, does not include guidance for health risks from construction projects addressed in CEQA; risks near construction projects are expected to be included later when the toxic emissions from construction activities are better understood. The main source of diesel particulate matter from project construction would be grading activity, which is anticipated to be completed within 2 working days. The nearest sensitive receptors (residences) would be located adjacent to the project site to the west. Considering the dispersion of the emissions and the short time frame, exposure to diesel particulate matter would be less than significant.

Toxic Air Pollutants - Operation

The ARB Air Quality and Land Use Handbook contains recommendations that will “help keep California’s children and other vulnerable populations out of harm’s way with respect to nearby sources of air pollution” (FCS 2013), including recommendations for distances between sensitive receptors and certain land uses. These relevant recommendations are assessed as follows:

- **Heavily traveled roads**. ARB recommends avoiding new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. Epidemiological studies indicate that the distance from the roadway and truck traffic densities were key factors in the correlation of health effects, particularly in children. The project does not place sensitive receptors within 500 feet of the heavily traveled roads.

- **Distribution centers**. ARB also recommends avoiding siting new sensitive land uses within 1,000 feet of a distribution center. The project would not result in a new distribution center.
- **Fueling stations**. ARB recommends avoiding new sensitive land uses within 300 feet of a large fueling station (a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities. The project includes a new gasoline dispensing facility with an estimated throughput of 2 million gallons per year. As such, a 50-foot buffer is recommended between the facility and the nearest sensistive land use. As shown in Exhibit 2 and Exhibit 3, the nearest sensitive land use is a single family home adjacent to the project's future building pad. The future building pad is aprroximately 65 feet in width. Therefore, a buffer distance greater than 50 feet would exist between the gasonline dispensing facility and the nearest sensitive land use.
- **Dry cleaning operations**. ARB recommends avoiding siting new sensitive land uses within 300 feet of any dry cleaning operation that uses perchloroethylene. For operations with two or more machines, ARB recommends a buffer of 500 feet. For operations with three or more machines, ARB recommends consultation with the local air district. The project would not result in a new dry cleaning operation.

During operation of the project, the project site will receive occasional deliveries. However, the volume and frequency of deliveries would be relatively low. Therefore, the project would result in a less than significant impact to sensitive receptors from project operation.

e) Create objectionable odors affecting a substantial number of people?

Less than significant impact.

Background Information

Odors can cause a variety of responses. The impact of an odor results from interacting factors such as frequency (how often), intensity (strength), duration (in time), offensiveness (unpleasantness), location, and sensory perception.

Odor is typically a warning system that prevents animals and humans from consuming spoiled food or toxic materials. Odor-related symptoms reported in a number of studies include nervousness, headache, sleeplessness, fatigue, dizziness, nausea, loss of appetite, stomach ache, sinus congestion, eye irritation, nose irritation, runny nose, sore throat, cough, and asthma exacerbation (FCS 2013).

The SCAQMD's role is to protect the public's health from air pollution by overseeing and enforcing regulations (FCS 2013). The SCAQMD's resolution activity for odor compliance is mandated under California Health & Safety Code Section 41700, and falls under SCAQMD Rule 402. This rule on Public Nuisance Regulation states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not

apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals."

The SCAQMD indicates that the number of overall complaints has declined over the last five years. Over the last four years, odor complaints make up 50 to 55 percent of the total nuisance complaints. Over the past decade, odors from paint and coating operations have decreased from 27 to 7 percent and odors from refuse collection stations have increased from 9 to 34 percent (FCS 2013).

Project Analysis

The SCAQMD recommends that odor impacts be addressed in a qualitative manner. Such an analysis shall determine whether the project would result in excessive nuisance odors, as defined under the California Code of Regulations and Section 41700 of the California Health and Safety Code, and thus would constitute a public nuisance related to air quality.

Diesel exhaust and VOC would be emitted during construction of the project, which are objectionable to some; however, emissions are short-term in nature only lasting as long as the construction equipment operates, would disperse rapidly from the project site, and therefore would not be at a level to induce a negative odor response.

The odors from the operation of the project would include the occasional odors from trash and recycling, and odors from the gasoline service station. Fuel pumps and on-site trash facilities would be located approximately 100 feet from the nearest sensitive receptor, which is located adjacent to the western boundary of the project site. However, trash would be stored in enclosed containers and be subject to regular maintenance and removal. In addition, the project is required to comply with SCAQMD Rule 461 (Gasoline Transfer and Dispensing), which requires fuel tanks to have ARB-certified vapor recovery systems, as well has vent valves, thereby reducing the potential for release of odor from these sources. Furthermore, a commercial building is proposed on the future building pad on the western portion of the project site. That future building would provide an additional barrier from the aforementioned odor sources and nearest sensitive receptors. Therefore, because of the project configuration, distance to the nearest receptor, air dispersion, the use of trash enclosures, and compliance with SCAQMD Rule 461, potential odor emissions would be minimized and the project would not induce a negative odor response to nearby sensitive receptors.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4. Biological Resources *Would the project:*				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Environmental Evaluation

The following section is based on the information contained within the November 2013 Cultural Resources Survey prepared for the proposed project by FirstCarbon Solutions. The Cultural Resources Survey is included as Appendix B of this IS.

Would the project:

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

Less Than Significant With Mitigation Incorporated. The project site is located in a predominantly developed setting and currently contains four existing single-family residences, as well as a portion of undeveloped but previously disturbed land in the northern portion of the site. Plant species presently found on the project site consist of non-native and ruderal species, such as mowed turf grass associated with the existing residential uses, red brome (*Bromus rubens*), ripgut brome (*Bromus diandrus*), wild oats (*Avena fatua*), Russian thistle (*Salsola tragus*), and short-podded mustard (*Hirschfeldia incana*). No native plant species occur on the project site. Together, these onsite plant species form a non-native, non-cohesive plant community not known to support any candidate, sensitive, or special status plant species.

Based upon the developed nature of the project area, wildlife species that could potentially occur in the surrounding area include common species typically found in urban/developed settings such as mourning dove (*Zenaida macroura*), desert cottontail (*Sylvilagus audubonii*), and western fence lizard (*Sceloporus occidentalis*). The onsite plant communities are not known to support any candidate, sensitive, or special status wildlife species. However, existing trees currently found on the project site may potentially contain resident or nesting avian species protected by the Migratory Bird Treaty Act of 1918. As a result, Mitigation Measures BIO-1a and BIO-1b will be required to reduce impacts to less than significant. Therefore, with implementation of mitigation, impacts associated with sensitive species will be less than significant.

MM BIO-1a Because of the presence of suitable nesting habitat on the project site, all demolition and construction activities shall occur outside the general nesting season from February through August. If demolition and construction activities must occur within the nesting season, the Applicant shall retain the services of a qualified biologist to survey the project site no more than 30 days prior to start of any demolition and construction activities. The biologist shall survey the project site for nesting birds. In the event that the biologist determines that such species occur on the project site, MM BIO-1b shall also be required.

MM BIO-1b In the event that nesting birds protected under the Migratory Bird Treaty Act of 1918 (MBTA); candidate, sensitive, or special status species; or any other species of note are determined to occur on the project site, no construction activities shall occur within the vicinity of the nest until all fledglings have left the nest and the biologist has evidence that the nest is no longer active. If construction activities must occur within 200-feet of an active nest, the Applicant shall procure the services of a biological monitor to ensure that no direct take of the active nest occurs.

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

Less Than Significant Impact. Plant species presently found on the project site consist of non-native and ruderal species, such as mowed turf grass associated with the existing residential uses, red brome (*Bromus rubens*), ripgut brome (*Bromus diandrus*), wild oats (*Avena fatua*), Russian thistle (*Salsola tragus*), and short-podded mustard (*Hirschfeldia incana*). No native plant species occur on the project site. Together, these onsite plant species form a non-native, non-cohesive plant community not known to support any candidate, sensitive, or special status plant species. Therefore, impacts associated with sensitive natural communities will be less than significant.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. According to United States Fish and Wildlife Service (USFWS), wetlands are lands transitional between terrestrial and aquatic systems where the water table is at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports hydrophytes, (2) the substrate is predominantly undrained hydric soil, and (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year. None of these attributes are found on the project site.

No drainage features are located on the project site, and a review of the U.S. Geological Survey's Redlands Quadrangle 7.5 Minute topographical map confirms that no "blue line" features occur onsite. Thus, no jurisdictional waters of the State or United States are expected to traverse the project site. Therefore, no impacts associated with federal protected wetlands will occur.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

Less Than Significant With Mitigation Incorporated. The onsite plant communities are not known to support any candidate, sensitive, or special status wildlife species. However, existing trees currently found on the project site may potentially contain resident or nesting avian species protected by the Migratory Bird Treaty Act of 1918. As a result, Mitigation Measures BIO-1a and BIO-1b will be required to reduce impacts to less than significant. Therefore, with implementation of mitigation, impacts associated with wildlife nursery and nesting sites will be less than significant.

Additionally, the project site is located in a predominantly urbanized setting and is bound by roadways and existing development. No habitat that may potentially support significant wildlife species occurs directly adjacent to the project site, and thus, the site is not currently used as a wildlife corridor. Therefore, no impacts associates with wildlife corridors will occur.

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

Less Than Significant Impact. Several non-native, ornamental trees associates with the existing single-family residences are currently located on the project site. To facilitate construction and operation of the proposed project as designed, these existing trees will be removed during the demolition phase of the project, and replaced as part of landscaping activities. Chapter 17.74-Tree Placement, Landscape Materials, and Tree Removal of the Loma Linda Municipal Code regulates the removal of certain trees, including street trees located within the public right-of-way, parkways, and easements, and landmark trees growing on private property. A permit is required to remove any such tree, as established in Section 17.74.070-Permit Required of the Municipal Code:

> To ensure proper street tree selection and protection of the urban forest, no person shall excavate within the drip line or ten feet of a tree (whichever is greater), or install, replace, or alter any tree designated as a landmark (on private property with owner's consent) or any tree located within city parkways, (street rights-of-way), or street tree easements, without first obtaining a permit as specified in Section 17.74.080 - 17.74.100. (Ord. 468 § 1 (part), 1992)

As defined above, none of the trees presently located on the project site would be considered a street tree located within the public right-of-way, parkways, or easements, or a landmark tree growing on private property. Thus, the provisions contained in Chapter 17.74, and particularly Section 17.74.070, of the City's Municipal Code, will not apply to the proposed project. Additionally, although the proposed project will remove the existing trees from the project site, the project will ultimately replace these trees with new trees and other landscaping, as shown on Exhibit 6. Therefore, impacts associated with tree preservation ordinances will be less than significant.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The project site is not located within the boundary of any Habitat Conservation Plan, Natural Community Conservation Plan, or any other approved habitat conservation plan. Therefore, no impacts associated with conservation plans will occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
5. Cultural Resources *Would the project:*				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Environmental Evaluation

The following section is based on the information contained within the November 2013 Cultural Resources Survey prepared for the proposed project by FirstCarbon Solutions. The Cultural Resources Survey is included as Appendix B of this IS.

Would the project:

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

Less Than Significant Impact. The project site is located in a predominantly developed setting and currently contains four existing single-family residences, as well as a portion of undeveloped but previously disturbed land in the northern portion of the site. To facilitate construction of the proposed project, these existing buildings will be demolished.

In relation to the State CEQA Guidelines, a site or structure may be considered an historical resource if it is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California (PRC §5020.1[j]), or if it meets the criteria for listing on either the National Register (NR) or the California Register of Historical Resources (CR) (14 CFR §4850). CEQA allows local historic resource guidelines to serve as the CR criteria, if enacted by local legislation, to act as the equivalent of the State criteria. Chapter 17.80, Historic Preservations, of the Loma Linda Municipal Code establishes local historic resource designation criteria, while Section 17.80.100 of the City's Municipal Code adopts the State Historical Building Code to provides alternative building regulations for the rehabilitation, preservation, restoration, or relocation of structures designated as cultural resources.

Typically, researchers in California use a 45-year age threshold following State Historic Preservation Office (SHPO) recommendations. If the potentially historical resource has integrity and any one of the criteria noted below are met at the State-level of analysis, the resource would be considered significant and a direct impact to the cultural resource would be considered a significant impact on the environment:

- Criteria 1: Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Criteria 2: Is associated with the lives of persons important in our past;
- Criteria 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possesses high artistic values; and
- Criteria 4: Has yielded, or may be likely to yield, information important in prehistory or history.

The four existing single-family residences are all characteristic "Minimalist Traditional" tract homes built in 1952 as part of the Santa Ana Homes Unit No. 1 Tract 3415, according to County of Riverside records. These residential structures vary between two and three bedrooms and between 820 sq ft and 1,106 sq ft. Most aspects of these residences appear to be primarily original with some evidence of modification and remodel. The condition of these residential structures vary between poor, fair, and good condition.

Aside from their age, the four single-family residences fail to meet any of the four CR significance criteria listed above. These residential structures are not associated with significant events or important persons, do not embody distinctive architectural or aesthetic characteristics or represent the work of an important individual, and are highly unlikely to yield important historical local or State information. Thus, although these buildings are approximately 61 years of age, significant historical resource criteria is not met. Therefore, impacts associated with historical resources will be less than significant.

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

Less Than Significant With Mitigation Incorporated. Review of the project site shows that the modern ground surface has been previously disturbed as a result of prior development activity. Archaeological cultural resources exposed on the modern ground surface are unlikely to survive intact under these conditions. Since the proposed project will include a gas station, construction of the project will require moderate earthmoving activity to make room for an underground gas storage tank. It is possible, although unlikely, that buried archaeological resources could be uncovered during grading, excavation, and other subsurface construction activity. In the event that archaeological resources are inadvertently encountered during construction activity, Mitigation Measures CR-1 and CR-2 will be required. Following implementation of mitigation, impacts associated with archaeological resources will be less than significant.

MM CR-1 Archaeological and Paleontological sensitivity training must be undertaken before project-related earthmoving commences. The purpose of training is to provide the Applicant and developmental managers an understanding of what is required under PRC Section 21083.2(i), which is associated with the possibility that cultural resource deposits may be accidentally encountered during construction. The training session must be led by a RPA-qualified archaeologist approved by the City of Loma Linda. Contractor staff engaged in project-related earthmoving and any staff who will operate earthmoving equipment during rough grading must attend the training session.

MM CR-2 It is always possible that ground-disturbing activities during construction may uncover previously unknown, buried cultural resources. In the event that buried cultural resources are discovered during construction, operations shall stop within 50 feet of the find and the Applicant and/or the Applicants representative shall immediately contact the City. The City shall then contact a qualified archaeologist to determine whether the find requires further study. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The archaeologist shall make recommendations concerning appropriate measures that will be implemented to protect the resource(s), including but not limited to excavation and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and evaluated for significance in terms of CEQA criteria.

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

Less Than Significant With Mitigation Incorporated. According to the City of Loma Linda General Plan Conservation and Open Space Element, previous geological mapping of the City indicated the presence of four sedimentary units, with two of the sedimentary units having a high potential for paleontological resources. Since construction of the proposed project will require moderate earthmoving activity, it is possible, although unlikely, that buried paleontological resources could be uncovered during grading, excavation, and other subsurface construction activity. In the event that paleontological resources are inadvertently encountered during construction activity, Mitigation Measures CR-1 and CR-2 will be required. Following implementation of mitigation, impacts associated with paleontological resources will be less than significant.

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

Less Than Significant With Mitigation Incorporated. No evidence of human remains is found on the project site, and there are no historical records of the site being used as a burial ground or cemetery. As such, the potential of remains being encountered on the project site during construction activity is remote, especially considering the level of previous development on and adjacent to the site. However, there is always a possibility that grading, excavation, and other subsurface construction

activity could encounter unknown buried human remains. In the event of an accidental discovery or recognition of any human remains, Mitigation Measures CR-3 will be required. Following implementation of mitigation, impacts associated with human remains will be less than significant.

MM CR-3 In the event of the accidental discovery or recognition of any human remains on the project, CEQA Guidelines §15064.5; Health and Safety Code §7050.5; Public Resources Code §5097.94 and §5097.98 must be followed. If during the course of project development 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 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 Native American Heritage Commission (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 within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.
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 descendant or on the project site 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 48 hours after being notified by the commission.
   - The descendant identified fails to make a recommendation.
   - The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
6. Geology and Soils *Would the project:*				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Environmental Evaluation

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. According to the California Division of Mines and Geology's Special Studies Zones Map for the Redlands Quadrangle, two Alquist-Priolo Earthquake Fault Zones are located in the general project area, one associated with the San Jacinto Fault that occurs approximately three miles south of the project site, and the other associated with the San Andreas Fault located roughly six mils northeast of the site. As a result, the project site is located outside of an Alquist-Priolo Zone. Therefore, no impacts associated with fault rupture

ii) Strong seismic ground shaking?

Less Than Significant Impact. As a whole, the Southern California region is a very active seismic area, with much of the region subject to earthquakes of moderate to high magnitude. The City of Loma Linda General Plan's Public Health and Safety Element identifies major faults that have the potential to affect the City. According to Table 10.A in the Public Health and Safety Element, the San Jacinto, San Andreas, Cucamonga, Ellsinore, and Newport-Inglewood Faults are located between approximately 0 and 48 miles from the City and have the potential to produce earthquakes between 6.5 and 8.25 magnitude on the Richter Scale. A number of smaller and/or less active faults also occur in the general project area. As a result, and like all other development projects in the City and throughout the Southern California Region, the proposed project will be required to comply with all applicable standards contained in the 2010 California Building Code (CBC), including Section 1613-Earthquake Loads. Compliance with the CBC will ensure that structural integrity will be maintained in the event of an earthquake. Therefore, impacts associated with strong ground shaking will be less than significant.

iii) Seismic-related ground failure, including liquefaction?

No Impact. The City of Loma Linda General Plan's Public Health and Safety Element identifies Liquefaction Zones located in the City. According to Figure 10.1 of the Public Health and Safety Element, the project site is located outside of an area susceptible to liquefaction. Therefore, no impacts associated with liquefaction will occur.

iv) Landslides?

No Impact. The project site is relatively flat and gently slopes to the southwest. Geological features typically associated with landslides, include hillsides or riverbanks, are not located in the immediate

project area. Additionally, the Figure 10.1 of the City of Loma Linda General Plan's Public Health and Safety Element identifies Steep Slopes and Slope Instability Areas. The project site is located outside of an area susceptible to landslides. Therefore, no impacts associated with landslide will occur.

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

Short-Term Construction Impacts

Less Than Significant Impact. Demolition and construction activities associated with the proposed project will include grading, light excavation, and other earthmoving activities that have the potential to cause substantial erosion on the project site. Since the proposed project will disturb one or more acres of land, the project will be required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). Construction activities subject to the Construction General Permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The Construction General Permit requires implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will generally contain a site map(s) showing the construction perimeter, existing and proposed buildings, storm water collection and discharge points, general pre- and post-construction topography, drainage patterns across the site, and adjacent roadways.

The SWPPP must also include project construction features designed to prevent erosion and protect the quality of stormwater runoff, known as Best Management Practices (BMPs). Construction BMPs may include, but not limited to, stabilized construction entrances, straw wattles on embankments, and sediment filters on existing inlets. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants, should the BMPs fail; and a sediment monitoring plan, should the site discharge directly into a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit lists all elements that must be contained in a SWPPP.

The preparation, implementation, and participation with both the NPDES General Permit and the Construction General Permit, including the SWPPP and BMPs, will reduce project demolition and construction effects on erosion to acceptable levels. Therefore, short-term construction impacts associated with erosion will be less than significant.

Long-Term Operational Impacts

Less Than Significant Impact. The proposed project consists of a new convenience store, gas station, car wash, and separate building pad on the project site. Under the existing conditions, the majority of the project site surrounding the existing single-family residences consists of bare earth interspersed with ornamental trees and non-native, ruderal vegetation. Currently, much of the undeveloped but previously disturbed areas surrounding the existing residential buildings lack the vegetative groundcover to adequately prevent wind and water erosion.

Under the proposed project, 33,735 square feet out of the project site's 46,718 square feet will consist of impervious improvements such as the convenience store/carwash and gas station structures, separate commercial building pad, and parking lot. These improvements will stabilized and retain onsite soils while preventing erosion during storm events. Additionally, the project site's

12,983 square feet of landscape areas will also help to stabilize and retain onsite soils. Therefore, long-term operational impacts associated with erosion will be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

No Impact. As the following addresses, the proposed project will not be located on an unstable or potentially unstable geologic unit or soil that would potentially result in landslide, lateral spreading, subsidence, liquefaction, or collapse. Therefore, no impacts associated with unstable geologic units or soils will occur.

Landslides

The project site is relatively flat and gently slopes to the southwest. Geological features typically associated with landslides, include hillsides or riverbanks, are not located in the immediate project area. Additionally, the Figure 10.1 of the City of Loma Linda General Plan's Public Health and Safety Element identifies Steep Slopes and Slope Instability Areas. The project site is located outside of an area susceptible to landslides.

Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. As failure tends to propagate as block failures, it is difficult to analyze and estimate where the first tension crack will form. However, there are no open faces within the general project area where lateral spreading could occur.

Subsidence

Land subsidence is a gradual settling or sudden sinking of the Earth's surface owing to subsurface movement of earth materials. Subsidence is most often attributed to human activity, mainly from the removal of subsurface water. More than 80 percent of the identified subsidence throughout the United States is a result of exploitation of groundwater, with the increasing development of land and water resources threatening to exacerbate existing land subsidence problems and initiate new ones (U.S. Geological Survey 2013). Other principal causes of subsidence are aquifer system compaction, drainage of organic soils, underground mining, hydrocompaction, natural compaction, sinkholes, and thawing permafrost (U.S. Geological Survey 2000).

Compaction of soils in some aquifer systems can accompany excessive groundwater pumping and is the single largest cause of subsidence. Excessive pumping of such aquifer systems has resulted in permanent subsidence and related ground failures. In some systems, when large amounts of water are pumped, the subsoil compacts, thus reducing in size and number the open pore spaces in the soil the previously held water. This can result in a permanent reduction in the total storage capacity of the aquifer system.

According to the City of Loma Linda General Plan, the City is located above the Bunker Hill Basin, a vast aquifer underlying the eastern San Bernardino Valley. Groundwater in this basin is replenished from rainfall and snowmelt from the San Bernardino Mountains and the basin is considered a reliable source of water. The estimated safe yield of this basin is many times greater than current water extraction. As a result, land subsidence, which is often a byproduct of the exploitation of groundwater, would also not be considered a substantial issue in the project area. Therefore, impacts associated with subsidence will be less than significant.

Liquefaction

The City of Loma Linda General Plan's Public Health and Safety Element identifies Liquefaction Zones located in the City. According to Figure 10.1 of the Public Health and Safety Element, the project site is located outside of an area susceptible to liquefaction.

Collapse

The project site is not underlain by natural or manmade subsurface features that are typically associated with collapse, including mining or extraction operations or karst topography. Therefore, no impacts associated with collapse will occur.

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

Less Than Significant Impact. Expansive soils typically consist of clay and other similar poorly-drained soils. According to the Natural Resources Conservation Service's Web Soil Survey, the entirety of the project site is underlain by Hanford Sandy Loam (HbA), which is comprised of only a small percentage of clay soils and is considered a well-drained. Therefore, impacts associated with expansive soils will be less than significant.

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

No Impact. The proposed project will connect to the municipal sewer system and would not require an alternative method of wastewater conveyance. Therefore, no impacts associated with septic or alternative wastewater disposal systems will occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
7. Greenhouse Gas Emissions *Would the project:*				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Environmental Evaluation

The following section is based on the information contained within the November 2013 Air Quality and Greenhouse Gas Analysis Report prepared for the proposed project by FirstCarbon Solutions. The Air Quality and Greenhouse Gas Analysis is included as Appendix A of this IS.

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact.

Threshold Development

A variety of agencies have developed greenhouse gas emission thresholds and/or have made recommendations for how to identify a threshold. However, the thresholds for projects in the jurisdiction of the SCAQMD remain in flux. The California Air Pollution Control Officers Association explored a variety of threshold approaches, but did not recommend one approach (FCS 2013). The ARB recommended approaches for setting interim significance thresholds (FCS 2013), in which a draft industrial project threshold suggests that non-transportation related emissions under 7,000 $MTCO_2e$ per year would be less than significant; however, the ARB has not approved those thresholds and has not published anything since then. The Bay Area Air Quality Management District and the San Joaquin Valley Air Pollution Control District have both developed greenhouse gas thresholds. However, those thresholds are not applicable to the project since the project is under the jurisdiction of the SCAQMD. The SCAQMD is in the process of developing thresholds, as discussed below.

On December 5, 2008, the SCAQMD Governing Board adopted an interim greenhouse gas significance threshold for stationary sources, rules, and plans where the SCAQMD is lead agency (SCAQMD permit threshold). The SCAQMD permit threshold consists of five tiers, as follows:

- Tier 1 consists of evaluating whether or not a project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 is a screening threshold level to determine significance using a 90 percent emission capture rate approach and is 10,000 $MTCO_2e$ per year (with construction emissions amortized over 30 years and added to operational emissions).
- Tier 4 was not approved in the interim greenhouse gas threshold.
- Tier 5 would allow the project proponent to purchase offsite mitigation to reduce greenhouse gas emissions to less than the screening level (in Tier 3).

The SCAQMD is in the process of preparing recommended significance thresholds for greenhouse gases for local lead agency consideration (SCAQMD draft local agency threshold); however, the SCAQMD Board has not approved the thresholds as of the date of the NOP (FCS 2013). The current draft thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to a project's operational emissions. If a project's emissions are under one of the following screening thresholds, then the project is less than significant:
  - All land use types: 3,000 $MTCO_2e$ per year
  - Based on land use type: residential: 3,500 MTCO2e per year; commercial: 1,400 $MTCO_2e$ per year; or mixed use: 3,000 $MTCO_2e$ per year
- Tier 4 has the following options:
  - Option 1: Reduce emissions from business as usual by a certain percentage; this percentage is currently undefined
  - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
  - Option 3, 2020 target for service populations (SP), which includes residents and employees: 4.8 $MTCO_2e$/SP/year for projects and 6.6 $MTCO_2e$/SP/year for plans;
  - Option 3, 2035 target: 3.0 $MTCO_2e$/SP/year for projects and 4.1 $MTCO_2e$/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD discusses its draft thresholds in the following excerpt (FCS 2013):

> The overarching policy objective with regard to establishing a GHG [greenhouse gas] significance threshold for the purposes of analyzing GHG impacts pursuant to CEQA is to establish a performance standard or target GHG reduction objective that will ultimate contribute to reducing GHG emissions to stabilize climate change. Full implementation of the Governor's Executive Order S-3-05 would reduce GHG emissions 80 percent below 1990 levels or 90 percent below current levels by 2050. It is anticipated that achieving the Executive Order's objective would contribute to worldwide efforts to cap GHG concentrations at 450 ppm, thus, stabilizing global climate.
>
> As described below, staff's recommended interim GHG significance threshold proposal uses a tiered approach to determining significance. Tier 3, which is expected to be the primary tier by which the AQMD will determine significance for projects where it is the lead agency, uses the Executive Order S-3-05 goal as the basis for deriving the screening level. Specifically, the Tier 3 screening level for stationary sources is base on an emission capture rate of 90 percent for all new or modified projects. A 90 percent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to some type of CEQA analysis, including a negative declaration, a mitigated negative declaration, or an environmental impact.
>
> Therefore, the policy objective of staff's recommended interim GHG significance threshold proposal is to achieve an emission capture rate of 90 percent of all new or modified stationary source projects. A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that staff estimates that these GHG emissions would account for less than one percent of future 2050 statewide GHG emissions target (85 $MMTCO_2e$/year). In addition, these small projects would be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory.

In summary, the SCAQMD's draft threshold uses the Executive Order S-3-05 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap carbon dioxide concentrations at 450 ppm, thus, stabilizing global climate.

Thresholds of Significance for this Project

To determine whether the project is significant, this project uses the SCAQMD draft local agency tiered threshold. The threshold is as follows:

- Tier 1: The project is not exempt under CEQA; go to Tier 2.
- Tier 2: There is no greenhouse gas reduction plan applicable to the project; go to Tier 3.
- Tier 3: project greenhouse gas emissions compared with the threshold: 3,000 $MTCO_2e$ per year (see analysis below).
- Tier 4, option 1: Reduce greenhouse gas emissions from business as usual* by 28.4 percent. The California 2020 emissions target is 427 $MMTCO_2e$ and the 2020 baseline (without any AB 32 related regulations) is 596 $MMTCO_2e$ (FCS 2013). Therefore, a 28.4 percent reduction is required to reduce emissions to the target. Note that the most recent forecast of 2020 emissions is 506.8 MMTCO2e, which includes reductions from regulations such as Pavley I and the Renewable Portfolio Standard (FCS 2013).
- Tier 4, option 3: 4.8 $MTCO_2e$/SP/year (see analysis below).

* Business as usual for purposes of the greenhouse gas significance threshold is defined as pre-AB 32. Business as usual greenhouse gas emissions refer to emissions using protocol and emission factors from the period of 2004-2006 (prior to the adoption of AB 32 and related greenhouse gas regulations) and also do not take into account project design features or mitigation measures to reduce greenhouse gas emissions. The California Air Resources Board's Scoping Plan indicates that business as usual is "projected emissions in 2020 without any greenhouse gas reduction measures (business-as-usual case). The 2020 business-as-usual forecast does not take any credit for reductions from measures included in this Plan, including the Pavley greenhouse gas emissions standards for vehicles, full implementation of the Renewables Portfolio Standard beyond current levels of renewable energy, or the solar measures" (FCS 2013).

Section 15064.4(b) of the CEQA Guideline amendments for greenhouse gas emissions state that a lead agency may take into account the following three considerations in assessing the significance of impacts from greenhouse gas emissions.

- **Consideration #1**: The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration #2**: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration #3**: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Greenhouse Gas Inventory

This analysis is restricted to greenhouse gases identified by AB 32, which include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The project would generate a variety of greenhouse gases during construction and operation, including several defined by AB 32 such as carbon dioxide, methane, and nitrous oxide.

The project may also emit greenhouse gases that are not defined by AB 32. For example, the project may generate aerosols. Aerosols are short-lived particles, as they remain in the atmosphere for about one week. Black carbon is a component of aerosol. Studies have indicated that black carbon has a high global warming potential; however, the Intergovernmental Panel on Climate Change states that it has a low level of scientific certainty (FCS 2013). Water vapor could be emitted from evaporated water used for landscaping, but this is not a significant impact because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks rather than emissions from project-related activities. The project would emit nitrogen oxides and volatile organic compounds, which are ozone precursors. Ozone is a greenhouse gas; however, unlike the other greenhouse gases, ozone in the troposphere is relatively short-lived and can be reduced in the troposphere on a daily basis. Stratospheric ozone can be reduced through reactions with other pollutants.

Certain greenhouse gases defined by AB 32 would not be emitted by the project. Perfluorocarbons and sulfur hexafluoride are typically used in industrial applications, none of which would be used by the project. Therefore, it is not anticipated that the project would emit perfluorocarbons or sulfur hexafluoride.

An upstream emission source (also known as life cycle emissions) refers to emissions that were generated during the manufacture of products to be used for construction of the project. The upstream emissions were not estimated because they are not within the control of the project and to do so would be speculative. Additionally, the California Air Pollution Control Officers Association White Paper on CEQA and Climate Change supports this conclusion by stating, “The full life-cycle of GHG [greenhouse gas] emissions from construction activities is not accounted for . . . and the information needed to characterize [life-cycle emissions] would be speculative at the CEQA analysis level” (FCS 2013). Therefore, pursuant to CEQA Guidelines Sections 15144 and 15145, upstream /life cycle emissions are speculative and no further discussion is necessary.

Construction

The project would emit greenhouse gases from upstream emission sources and direct sources (combustion of fuels from worker vehicles and construction equipment). Greenhouse gas emissions from project construction equipment and worker vehicles are shown in Table 9. The emissions are from all phases of construction.

Table 9: Construction Greenhouse Gas Emissions

	Emissions ($MTCO_2e$)		
	Onsite	Offsite	Subtotal
Demolition	5.40	1.86	7.26
Site Preparation	0.43	0.02	0.45
Grading	1.08	0.10	1.18
Building Construction	58.68	9.89	68.57
Paving	2.33	0.40	2.73
Architectural Coating	0.60	0.14	0.74
Total	—	—	80.93
Averaged over 30 years	2.70		

Notes:
$MTCO_2e$ = metric tons of carbon dioxide equivalents = pounds per day x days x 0.0005.
FCS Air Quality and Greenhouse Gas Analysis Report, 2013 (Appendix A).

Operation

Operational or long-term emissions occur over the life of the project. The operational emissions for the project are shown in Table 10.

Table 10: Project Operational Greenhouse Gases

Source	Emissions ($MTCO_2e$ per year)
Mobile	1,325.72
Natural gas	1.30
Electricity	47.83
Water	5.17
Waste	3.91
Subtotal - Operation	1,383.93
Subtotal - Construction (averaged over 30 years)	2.70
Total	1,386.63
Threshold	3,000.00
Does project exceed threshold?	No

Notes:
$MTCO_2e$ = metric tons of carbon dioxide equivalents
FCS Air Quality and Greenhouse Gas Analysis Report, 2013 (Appendix A).

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact.

In its 2009 General Plan, the City of Loma Linda adopted the Conservation and Open Space Element, which addresses global climate change with the following goals and policies that are applicable to proposed project:

9.8.1 Guiding Policy

Minimize greenhouse gas emissions that are reasonably attributable to the City's discretionary land use decisions and internal government operations, with the goal of reducing Loma Linda's greenhouse gas emissions to 1990 levels by 2020.

Implementing Policies

Compact Community Measures

b. Facilitate employment opportunities that offer low vehicle use and minimize the need for automobile trips, such as live/work, telecommuting, satellite work centers, and home occupations, in addition to implementation of mixed-use development strategies.

c. Encourage patterns of commercial development that support use of public transit, including modifying development regulations to facilitate commercial and/or mixed use projects at sites near transit stops.

Energy Conservation and Air Quality Measures

e. Consider light-colored surfacing on pavements and rooftops where feasible to reduce heat absorption.

f. As part of the development review process, work with builders to maximize energy conservation benefits in the placement of buildings on a site with regard to sun and natural breezes.

g. Actively support provision of infrastructure needed for alternative fuel vehicles, including fueling and charging stations. Review and consider revising applicable codes applying to refueling and recharging infrastructure to facilitate their inclusion in new development where appropriate.

i. Preserve and encourage planting trees in neighborhoods to provide shade in summer and reduce heat loss in winter. Successful methods include placing trees to the west and northwest of houses to shade from the hot summer sun and grouping trees to protect them from harsh elements and support their longevity. Trees can reduce air temperatures 5-10° F from shading and evapotranspiration (water in leaves converting into vapor, cooling the air).

Transportation Measures

m. Promote transit routes and link neighborhoods with transit.

n. Encourage businesses and public agencies to offer telecommuting as a work alternative, and allow corporate satellite work centers near housing concentrations to enable residents who are employees of out-of-city businesses to reduce their commutes.

o. Require new development to incorporate features that reduce energy used for transportation, including pedestrian and bicycle pathways, and access to transit (where available).

s. As appropriate, require new development and redevelopment projects to address the following: bicycle and pedestrian access internally and to other areas; safe access to public transportation and construction of paths that connect with other non-motorized routes; safe road crossings at major intersections for school children and seniors; and secure, weatherproof bicycle storage facilities. Ensure that such facilities will have ongoing maintenance.

u. Encourage the use of public transit and alternative modes of transportation through land use designations and zoning which cluster employment centers with a mix of other uses, and project design that incorporates car pool areas, "park and ride" facilities and similar incentives.

However, no General Plan greenhouse gas policies are directly applicable to the project. However, in collaboration with its partnership cities, the San Bernardino Associated Governments has recently drafted the San Bernardino County Regional Greenhouse Gas Reduction Plan (Reduction Plan) for the purposes of inventorying GHG emissions and planning for their reduction. As one of the 21 Partnership Cities, the City of Loma Linda will have to opportunity to adopt a climate action plan based on the Reduction Plan, as long as it is eventually approved and certifies its EIR.

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, the ARB adopted the Climate Change Scoping Plan (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020.

The Scoping Plan contains a variety of strategies to reduce the State's emissions. As shown in Table 11, the strategies are not applicable to the project.

Table 11: Inapplicable Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	Reason Why Not Applicable
1. California Cap-and-Trade Program Linked to Western Climate Initiative. Implement a broad-based California Cap-and-Trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.	When this cap-and-trade system begins, products or services (such as electricity) would be covered and the cost of the cap-and-trade system would be transferred to the consumers.
2. California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	This is a statewide measure that cannot be implemented by a project applicant or lead agency. When this measure is initiated, the standards would be applicable to the light-duty vehicles that would access the project site.
3. Energy Efficiency. Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	This is a measure for the state to increase its energy efficiency standards.
4. Renewable Portfolio Standard. Achieve 33 percent renewable energy mix statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.	Southern California Edison, which would provide power to the project, is in the process of increasing the percent of renewable energy in its portfolio. It is required to increase this percentage by the year 2020 pursuant to various regulations.
5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.	This is a statewide measure that cannot be implemented by a project applicant or lead agency. When this measure is initiated, the standard would be applicable to the fuel used by vehicles that would access the project site.
6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles. This measure refers to SB 375.	The project is not related to developing greenhouse gas emission reduction targets.
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.	When this measure is initiated, the standards would be applicable to the light-duty vehicles that would access the project site.

Table 11 (cont.): Inapplicable Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	Reason Why Not Applicable
8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
9. Million Solar Roofs Program. Install 3,000 MW of solar-electric capacity under California's existing solar programs.	This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs.
10. Medium/Heavy-Duty Vehicles. Adopt medium and heavy-duty vehicle efficiency measures.	This is a statewide measure that cannot be implemented by a project applicant or lead agency. When this measure is initiated, the standards would be applicable to the vehicles that access the project site.
11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.	The project is not an industrial land use.
12. High Speed Rail. Support implementation of a high-speed rail system.	This is a statewide measure that cannot be implemented by a project applicant or lead agency.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	The state is to increase the use of green building practices. The project would implement some green building strategies through existing regulation.
14. High Global Warming Potential Gases. Adopt measures to reduce high global warming potential gases.	When this measure is initiated, it would be applicable to the high global warming potential gases that would be used by the project (such as in air conditioning and refrigerators).
15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	The project would not contain a landfill. The State is to help increase waste diversion. The project would reduce waste with implementation of mitigation.
16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	The project site is in an urban, built-up condition. No forested lands exist onsite.
17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.	This is a measure for state and local agencies.

Table 11 (cont.): Inapplicable Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	Reason Why Not Applicable
18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.	The project site is in an urban, built-up condition. No grazing, feedlot, or other agricultural activities that generate manure occur onsite or are proposed to be implemented by the project.
Source: FCS Air Quality and Greenhouse Gas Analysis Report, 2013 (Appendix A).	

The project would comply with all applicable State and regional greenhouse gas regulations. Furthermore, the project is less than the SCAQMD's draft significance thresholds for project-generated greenhouse gases. Therefore, the project would generate a less than significant impact.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
8. Hazards and Hazardous Materials *Would the project:*				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☒	☐	☐
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Environmental Evaluation

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Short-Term Construction Impacts

Less Than Significant With Mitigation Incorporated. During construction of proposed project, hazardous or potentially hazardous materials will be routinely handled in small quantities on the project site. These hazardous materials would include gasoline, diesel fuel, lubricants, and other petroleum-based products used to operate and maintain construction equipment and vehicles. This handling of hazardous materials will be a temporary activity and coincide with the short-term construction phase of the proposed project. Any handling of hazardous materials will be limited in both quantities and concentrations. Hazardous materials associated with operation and maintenance of construction equipment and vehicles may be stored on the project site, although only the amounts needed are expected to be kept onsite, and excessive amounts are not expected to be stored. Removal and disposal of hazardous materials from the project site will be conducted by a permitted and licensed service provider. Any handling, transporting, use, or disposal would comply with all applicable federal, State, and local agencies and regulations, including the U.S. Environmental Protection Agency (EPA); the California Department of Transportation (Caltrans); the California Department of Toxic Substances Control (DTSC); the California Department of Industrial Relations (Cal/OSHA); the Resource Conservation and Recovery Act (RCRA); and the San Bernardino County Fire Department (SBCFD) (the Certified Unified Program Agency [CUPA] for San Bernardino County).

Because of the age of the four existing single-family residences located on the project site, there is a possibility that potentially hazardous buildings materials such as asbestos-containing materials (ACM), lead-based paint, PCBs, or mercury may be encountered during demolition of these structures. If present, removal of these materials from the project site will be conducted by contractors licensed and permitted to handle these materials in accordance with all applicable federal, State, and local regulations. As such, Mitigation Measure HAZ-1 will be required to reduce potential impacts to acceptable levels of significance. Therefore, with the implementation of mitigation, short-term construction impacts associated with the handling of hazardous materials will be less than significant.

Long-Term Operational Impacts

Less Than Significant Impact. During the operation phase of the project, hazardous or potentially hazardous materials will be routinely handled, stored, and dispensed on the project site. Since the proposed project includes a gas station, an underground storage tank (UST) will store gas and diesel fuel on the project site. The UST will consist of double-walled, fiberglass fuel storage tank with leak detection sensors. Because of the nature of the proposed project, and in particular the gas station, the project will be subject to routine inspection by federal, State, and local regulatory agencies with jurisdiction over fuel dispensing facilities. In order to remain operational, the proposed project, including the UST and all associated fuel delivery infrastructure (i.e., gas pumps), will be required to

comply with all applicable federal, State, and local regulation, including, but not limited to those provisions established by Section 2540.7, Gasoline Dispensing and Service Stations, of the California Occupational Safety and Health Regulations; Chapter 38, Liquefied Petroleum Gases, of the California Fire Code; RCRA; and the SBCFD. Collectively, the routine inspection of the gas station, the UST, and all associated fuel delivery infrastructure, along with the continued mandated compliance with all federal, State, and local regulations, will ensure that the proposed project is operated in a non-hazardous manner. Therefore, long-term impacts associated with handling, storing, and dispensing of hazardous materials will be less than significant.

MM HAZ-1 Prior to the demolition of the four existing single-family residences located on the project site, the structures shall be evaluated for the presence of asbestos-containing material (ACM), lead-based paints, PCBs, or mercury prior to their demolition. The evaluation shall be conducted by a Cal-OSHA certified ACM and lead-based paint contractor. Any ACM or lead identified as a result of the evaluation shall be removed by a Cal-OSHA certified ACBM and lead-based paint contractor and be transported and disposed of offsite in accordance with regulatory requirements.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant With Mitigation Incorporated. As addressed in Impact 8a), any handling, storing, or dispensing activities associated with hazardous or potentially materials will comply with all applicable federal, State, and local agencies and regulations. Both short-term construction and long-term operation of the proposed project would comply with all applicable federal, State, and local agencies and regulations with the policies and programs established by agencies such as the EPA, Caltrans, DTSC, Cal/OSHA, RCRA, and the SBCFD. Adherence with the applicable policies and programs of these agencies will ensure that any interaction with hazardous materials will occur in the safest possible manner, reducing the opportunity for the accidental release of hazardous materials into the environment. Any handling of hazardous materials will be limited in both quantities and concentrations. As mandated by the U.S. Occupational Safety and Health Administration (OSHA), all hazardous materials stored onsite will be accompanied by a Material Safety Data Sheet (MSDS), which, in the case of accidental release, will inform onsite personnel as to the necessary remediation procedures.

However, Because of the age of the four existing single-family residences located on the project site, there is a possibility that potentially hazardous buildings materials such as asbestos-containing materials (ACM), lead-based paint, PCBs, or mercury may be encountered during demolition of these structures. If present, removal of these materials from the project site will be conducted by contractors licensed and permitted to handle these materials in accordance with all applicable federal, State, and local regulations. As such, Mitigation Measure HAZ-1 will be required to reduce potential impacts to acceptable levels of significance. Therefore, with the implementation of mitigation, impacts associated with the release of hazardous materials will be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. The Redlands Kindercare (10451 Commerce Street, Redlands, CA) is located approximately 0.2 miles southeast of the project site. As previously addressed, all hazardous or potentially hazardous materials would comply with all applicable federal, State, and local agencies and regulations with the policies and programs established by agencies such as the EPA, Caltrans, DTSC, Cal/OSHA, RCRA, and the SBCFD. Adherence with the applicable policies and programs of these agencies will ensure that any interaction with hazardous materials will occur in the safest possible manner, reducing the opportunity for the accidental release of hazardous materials into the environment. As such, the possibility of an accidental release of hazardous or potentially hazardous materials on the project affecting the Redlands Kindercare site is remote. Therefore, impacts associated with the handling of hazardous materials within 0.25 mile of a school will be less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. According to a records search using the California Department of Toxic Substances Control's (DTSC) EnvirStor database, the project site is not identified as a hazardous materials site. Additionally, no such site is located adjacent to the project site or within the general project area. Therefore, no impacts associated with hazardous materials sites will occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Less Than Significant With Mitigation Incorporated. The nearest public airport to the project site is the San Bernardino International Airport (formerly Norton Air Force Base), which is located approximately 1.7 miles north of the project site, just north of the Santa Ana River. The airport is currently operating as a general aviation and cargo airport and does not presently support commercial aviation. An Airport Land Use Compatibility Plan (ALUCP) has not been adopted for the airport. As such, compatibility/safety zones have yet to be identified around the airport.

As part of the proposed project, a variance will be required to allow for construction of a freeway pole sign that will exceed the sign height maximum established by the City of Loma Linda for the EVC-Commercial zoning district. Since an ALUCP has yet to be adopted for the San Bernardino International Airport, it is currently unknown whether the height of the freeway pole sign will comply with the height provisions contained in the ALUCP. The Federal Aviation Administration (FAA), however, has established height requirements for land uses located within certain distances of airports. As a result, in lieu of an adopted ALUCP, it is recommended that the freeway pole sign comply with all applicable FAA regulations regarding height, as outlined in Mitigation Measure HAZ-1. Following implementation of mitigation, impacts associated with public airport hazards will be less than significant.

MM HAZ-2 Prior to final project approval by the City of Loma Linda, the Applicant shall demonstrate to the City that the proposed project's freeway pole sign and other planned buildings and improvements comply with all applicable provisions regarding maximum height requirements established by Federal Aviation Regulations Part 77, Objects Affecting Navigable Airspace.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. There are no private airstrips located within the project vicinity. Therefore, no impact associated with private airstrip hazards will occur.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The City of Loma Linda General Plan Circulation Element identifies Mountain View Avenue in the project area as a Six-Lane Undivided Highway. Although not specifically identified in an emergency evacuation plan, Mountain View Avenue, as a Six-Lane Undivided Highway, would be expected to serve as an evacuation route in the event of an emergency or disaster. As addressed in section 16, Transportation and Traffic, of this IS, the proposed project will not impact traffic operations along Mountain View Avenue to the extent that emergency response or evacuation would be impeded. Therefore, impacts associated with emergency response or evacuation will be less than significant.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. According to Figure 10.3 of the City of Loma Linda General Plan Public Health and Safety Element, the project site is located away from an urban wildland interface area and well outside of a hazardous wildland fire area. Therefore, impacts associated with wildlands fire will be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
9. Hydrology and Water Quality *Would the project:*				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of 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?	☐	☐	☒	☐
d) 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?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Environmental Evaluation

The following section is based on the information contained within the Preliminary Drainage Study prepared for the proposed project by Land Engineering Consultants. The Preliminary Drainage Study is included as Appendix C of this IS.

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Short-Term Construction Impacts

Less Than Significant Impact. Project construction would include grading and other earthmoving activities that have the potential to degrade water quality and violate water quality standards. As a result, the proposed project must comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit. The NPDES Permit Program, which is administer in the project area by the Santa Ana Regional Water Quality Control Board (RWQCB), helps control water pollution by regulating point sources that discharge pollutants into receiving waters. Project operation must also comply with the NPDES General Permit.

Additionally, since the proposed project would disturb one or more acres of soil, the project would be required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). Construction activities subject to the Construction General Permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The Construction General Permit requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would contain a site map(s) showing the construction perimeter, existing and proposed buildings, storm water collection and discharge points, general pre- and post-construction topography, drainage patterns across the site, and adjacent roadways.

The SWPPP must also include project construction features designed to protect against stormwater runoff, known as Best Management Practices (BMPs), as well as the locations of these BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants, should the BMPs fail; and a sediment monitoring plan, should the site discharge directly into a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP.

The development, implementation, and participation with both the NPDES General Permit and the Construction General Permit would reduce project construction affects on water quality to acceptable levels. The Construction General Permit would require preparation and implementation of a SWPPP, which in turn would require the incorporation of BMPs. Therefore, short-term construction impacts associated with water quality standards will be less than significant.

Long-Term Operation Impacts

Less Than Significant Impact. The project site currently contains four existing single-family residences, as well as a portion of undeveloped but previously disturbed land in the northern portion

of the site. Collectively, these four residential buildings create an impervious development footprint of approximately 7,825 square feet. Under the proposed project, 33,735 square feet out of the project site's 46,718 square feet will consist of impervious improvements such as the convenience store/carwash and gas station structures, separate commercial building pad, and parking lot, while 12,983 square feet will be comprised of landscaped areas. Thus, the proposed project will decrease the amount of pervious areas found on the project site, which could potentially increase the amount and/or rate of onsite surface flows as a result of the increased quantity of impervious surfaces.

Under the existing conditions, however, onsite surface flows are not contained only to the project site, but are permitted to discharge onto surrounding properties and the adjacent public right-of-way, which potentially allows for onsite constituents to be conveyed offsite. According to the Preliminary Drainage Study prepared for the proposed project, a new bio-retention/detention basin will be constructed on the northwest portion of the project site, just north of the separate commercial building pad and west of the convenience store/carwash. During a storm event, onsite surface flows will be collected and conveyed in a controlled manner through the project site and direct towards the bio-retention/detention basin. Only during medium to large storm events will a limited amount of runoff be permitted to discharge into the existing Caltrans channel located along the northern project boundary during. Once in the bio-retention/detention basin, onsite surface flows, as well as any constituents contained within, will be allowed to infiltrate into subsurface soils and ultimately into subsurface aquifers. Therefore, long-term operational impacts associated with water quality standards will be less than significant.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?

Groundwater Supplies

Less Than Significant Impact. According to the San Bernardino Valley Municipal Water District's 2010 San Bernardino Valley Urban Water Management Plan (UWMP), the City of Loma Linda depends on groundwater from six wells to supply 100 percent of its total water supply. The UWMP contains existing and projected water supplies and demands for the City of Loma Linda during normal and dry-year scenarios. Table 12 provides projected multiple-dry year supplies and demands, which represent water supplies and demands during extended periods of drought conditions when supplies would be reduced.

Table 12: Projected Multiple-Dry Year Supplies and Demands

Description		2015	2020	2025	2030	2035
Multiple-Dry Year First Year Supply	Supply Totals[a]	8,822	9,422	9,922	10,222	10,622
	Demand Totals[b]	6,392	6,026	6,401	6,799	7,221
	Difference	2,430	3,395	3,521	3,423	3,401
	Difference as Percent of Supply	28%	36%	35%	33%	32%
	Difference as Percent of Demand	38%	56%	55%	50%	47%
Multiple-Dry Year First Year Supply	Supply Totals[a]	8,823	9,423	9,923	10,223	10,623
	Demand Totals[b]	6,392	6,026	6,401	6,799	7,221
	Difference	2,432	3,397	3,523	3,425	3,402
	Difference as Percent of Supply	28%	36%	35%	33%	32%
	Difference as Percent of Demand	38%	56%	55%	50%	47%
Multiple-Dry Year First Year Supply	Supply Totals	8,809	9,409	9,909	10,209	10,609
	Demand Totals[1]	6,392	6,026	6,401	6,799	7,221
	Difference	2,417	3,382	3,508	3,410	3,387
	Difference as Percent of Supply	27%	36%	35%	33%	32%
	Difference as Percent of Demand	38%	56%	55%	50%	47%

Notes:
1. In dry periods, demands assume to increase 10 percent above normal Year demands.
Source: San Bernardino Valley Municipal Water District, Urban Water Management Plan (UWMP), 2010.

Based on final buildout acreages found in the General Plan's Land Use Element Table 2.D, and projected water deliveries found in the UWMP's Table 8-15, it is estimated that commercial uses such as the proposed project have an annual water demand approximately 3.46 acre feet per year (afy). Based on the project site's 1.07 acres, the proposed project's water demand is estimated to be roughly 3.7 afy, or 3,303 gallons per day (gpd). As provided in Table 12, this estimated water demand will represent only a nominal percentage (0.001 percent or less) of projected surplus (projected supply minus project demand) for the single- and multiple dry year scenarios. Therefore, impacts associated with groundwater supplies will be less than significant.

Groundwater Recharge

Less Than Significant Impact. Currently, the existing residential buildings found on the project site create an impervious development footprint of approximately 7,825 square feet. Under the

proposed project, 33,735 square feet out of the project site's 46,718 square feet will consist of impervious improvements, while 12,983 square feet will be comprised of landscaped areas. Thus, the proposed project will decrease the amount of pervious areas found on the project site, which could potentially affect infiltration of onsite surface flows.

Under the existing conditions, however, onsite surface flows are not contained only to the project site, but are permitted to discharge onto surrounding properties and the adjacent public right-of-way, which reduces the opportunity for onsite infiltration. According to the Preliminary Drainage Study prepared for the proposed project, a new bio-retention/detention basin will be constructed on the northwest portion of the project site. During a storm event, onsite surface flows will be collected and conveyed in a controlled manner through the project site and direct towards the bio-retention/detention basin. Only during medium to large storm events will a limited amount of runoff be permitted to discharge into the existing Caltrans channel located along the northern project boundary during. Once in the bio-retention/detention basin, onsite surface flows will be allowed to infiltrate into subsurface soils and ultimately into subsurface aquifers. Therefore, impacts associated with groundwater recharge will be less than significant.

c) Substantially alter the existing drainage pattern of 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?

Less Than Significant Impact. According to the Preliminary Drainage Study prepared for the proposed project, a new bio-retention/detention basin will be constructed on the northwest portion of the project site, just north of the separate commercial building pad and west of the convenience store/carwash. During a storm event, onsite surface flows will be collected and conveyed in a controlled manner through the project site and direct towards the bio-retention/detention basin. Only during medium to large storm events will a limited amount of runoff be permitted to discharge into the existing Caltrans channel located along the northern project boundary during. Although the amount of onsite surface flows could potentially increase as a result of the increased quantity of impervious surfaces found on the project site, under the project conditions, the amount of onsite flows being conveyed offsite will decrease, as a larger percentage of flows will be contained to the project site and adjacent drainage features. Therefore, impacts associated with existing drainage patterns and erosion will be less than significant.

d) 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?

Less Than Significant Impact. As addressed in Impact 9c), although the amount of onsite surface flows could potentially increase as a result of the increased quantity of impervious surfaces found on the project site, under the project conditions, the amount of onsite flows being conveyed offsite will decrease, as a larger percentage of flows will be contained to the project site and adjacent drainage features. Therefore, impacts associated with existing drainage patterns and flooding will be less than significant.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. A new bio-retention/detention basin will be constructed on the northwest portion of the project site. During a storm event, onsite surface flows will be collected and conveyed in a controlled manner through the project site and direct towards the bio-retention/detention basin. Only during medium to large storm events will a limited amount of runoff be permitted to discharge into the existing Caltrans channel located along the northern project boundary during. Although the amount of onsite surface flows could potentially increase as a result of the increased quantity of impervious surfaces found on the project site, under the project conditions, the amount of onsite flows being conveyed offsite will decrease, as a larger percentage of flows will be contained to the project site and adjacent drainage features. Therefore, impacts associated with stormwater drainage capacity will be less than significant.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. The State and RWQCBs assess water quality data for California's waters every two years to determine if they contain pollutants at levels that exceed protective water quality criteria and standards. This biennial assessment is required under Section 303(d) of the Federal Clean Water Act. Within the general project area, three water bodies have been identified by the Santa Ana RWQCB as impaired under Section 303(d). These water bodies include: San Timoteo Creek (Reach 3), located approximately 6 miles southeast of the project site; Santa Ana River (Reach 5), located roughly 1.2 miles to the north; and City Creek, located approximately 2.8 miles north of the site.

During the construction phase, the project would be required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). The Construction General Permit requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would contain a site map(s) showing the construction perimeter, existing and proposed buildings, storm water collection and discharge points, general pre- and post-construction topography, drainage patterns across the site, and adjacent roadways.

The SWPPP must also include project construction features designed to protect against stormwater runoff, known as Best Management Practices (BMPs), as well as the locations of these BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for “non-visible” pollutants, should the BMPs fail; and a sediment monitoring plan, should the site discharge directly into a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP.

The development, implementation, and participation with both the NPDES General Permit and the Construction General Permit would reduce project construction affects on water quality to acceptable levels. The Construction General Permit would require preparation and implementation of a SWPPP, which in turn would require the incorporation of BMPs.

During the operational phase, a new bio-retention/detention basin will be constructed on the northwest portion of the project site. During a storm event, onsite surface flows will be collected and conveyed in a controlled manner through the project site and direct towards the bio-retention/detention basin. Only during medium to large storm events will a limited amount of runoff be permitted to discharge into the existing Caltrans channel located along the northern project boundary during. Once in the bio-retention/detention basin, onsite surface flows, as well as any constituents contained within, will be allowed to infiltrate into subsurface soils and ultimately into subsurface aquifers.

Based on the preceding, neither construction nor operation of the proposed project will substantially degrade water quality, including the water quality of the three water bodies listed above. Therefore, impacts associated with the degradation of water quality will be less than significant.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. According to the Federal Emergency Management Agency's (FEMA) Flood Rate Insurance Map (FIRM) FEMA Flood Insurance Rate Map for the project area (FIRM Community Panel Number 06071C8703H), the project site is located within Zone X, which has been determined by FEMA to be outside of both the 100-year and 500-year floodplains. Additionally, the proposed project does not include any residential use. Therefore, no impacts associated with placing housing within a 100-year flood hazard area will occur.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. The FEMA FIRM for the project area shows the project site as being located within Zone X, which has been determined by FEMA to be outside of both the 100-year and 500-year floodplains. Therefore, no impacts associated with placing structures within a 100-year flood hazard area will occur.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less Than Significant Impact. According to the City of Loma Linda General Plan's Public Health and Safety Element, flooding of San Timoteo Creek, Mission Channel, and the Santa Ana River could potentially produce flooding within the City. However, as addressed in Impact 9g) above, the project site is located outside of both the 100-year and 500-year floodplains, as determined by FEMA. Additionally, the General Plan's Public Health and Safety Element states that the northern portion of the City is located within the inundation area of the Seven Oaks Dam, the failure of which while not likely, could potentially impact the City. However, the Seven Oaks Dam is a dry dam that serves to decrease peak water flows during spring runoff and storm events. In the unlikely event of dam failure, potential inundation effects would be decreased as a result of the dam only holding large amounts of water during substantial storm events, which are infrequent within the predominantly dry climate of the Southern California region. Furthermore, the Dam is routinely inspected by the

County of San Bernardino to ensure structural integrity, which further reduces the potential for dam failure. Therefore, impacts associated with flooding will be less than significant.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. Because of the project site's inland location, relatively flat onsite and adjacent topography, and lack of adjacent water body, the proposed project will not be susceptible to seiche, tsunami, or mudflow. Therefore, no impacts associated with seiche, tsunami, or mudflow will occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
10. Land Use and Planning *Would the project:*				
a) Physically divide an established community?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	☐	☐	☐	☒

Environmental Evaluation

Would the project:

a) Physically divide an established community?

Less Than Significant Impact. The physical division of an established community typically refers to the construction of a linear feature, such as a major highway or railroad tracks, or removal of a means of access such as a local road or bridge that would impair mobility within an existing community or between a community and outlying area. The project site is located at the northwestern corner of an existing residential neighborhood located west of Mountain View Avenue, north of Rosewood, East of Citrus Street, and South of I-10. The project site is located along the periphery of this residential neighborhood, and thus site's conversion from residential use to commercial will not impede movement within the neighborhood. Additionally, the proposed project will not substantially affect circulation along the project adjacent Rosewood Avenue, which will continue to provide access to and from the residential neighborhood. Therefore, impacts associated with physical division of an established community will be less than significant.

b) 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?

Less Than Significant Impact. The City of Loma Linda General Plan's Land Use Map has designated the project site as Commercial, while the City's Zoning Map identifies the project site as Single Residence (R1). The East Valley Corridor Specific Plan overlays the project site, designating the site as EVC-Single Family Residential.

Since the East Valley Corridor Specific Plan identifies the project site as EVC-Single Family Residential, the proposed project will require a Specific Plan Amendment, as well as other discretionary approvals by the City, as part of the project approval process:

- Specific Plan Amendment: A Specific Plan Amendment to change the existing East Valley Corridor Specific Plan designation for the project site from EVC-Single Family Residential to EVC-Commercial.
- Conditional Use Permit: A Condition Use Permit (CUP) to allow for the construction and operating of a gas station with convenience store.
- Variance: A variance to allow for construction of a freeway pole sign that will exceed the sign height maximum. Another variance to allow for the use of a smaller percentage of interior property line landscaping than the required 10 percent coverage.
- Tentative Parcel Map: A Tentative Parcel Map to consolidate the six existing parcels into two parcels.

The Specific Plan Amendment will be considered by the City according to the provisions set forth in Chapter 5, Amending the Specific Plan, of the East Valley Corridor Specific Plan, as well as the standards established by City for General Plan, Specific Plan, and Zoning Amendments. Once approved, the Specific Plan Amendment will allow for the development of the proposed project's commercial use on the project site. Additionally, the proposed project is required to comply with all applicable goals and policies of the City's General Plan, and all applicable provisions of the Municipal Code, which includes the City's Zoning Code (Title 17 of the Loma Linda Municipal Code). Compliance with the City's General Plan, Municipal Code, and Zoning Code will be reviewed by the City prior to final project approval. Therefore, impacts associated with land use plans, policies, or regulations will be less than significant.

c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?

No Impact. The project site is not located within the boundary of any Habitat Conservation Plan, Natural Community Conservation Plan, or any other approved habitat conservation plan. Therefore, no impacts associated with conservation plans will occur.

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

Environmental Evaluation

Would the project:

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

No Impact. The project site does not contain any known mineral resources. The City of Loma Linda General Plan's Open Space and Conservation Element does not identify any such mineral resources within the general project area. Therefore, no impacts associated with mineral resources will occur.

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

No Impact. The project site is not identified by the City of Loma Linda General Plan's Land Use Map or the City's Zoning Map as a mineral recovery site. Additionally, as addressed in Impact 11a) above, no known mineral resources are located on or around the project site, and thus, no mineral extraction operations occur on or near the site. Therefore, no impacts associated with mineral resources will occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
12. Noise *Would the project result in:*				
a) 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?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Environmental Evaluation

The following section is based on the information contained within the September 2013 Noise Impact Analysis prepared for the proposed project by Kunzman Associates. The Noise Impact Analysis is included as Appendix D of this IS.

To better understand and evaluate the proposed project's potential effects on the project area's noise environment, a summary of the existing noise conditions is provided as follows:

Existing Land Uses and Sensitive Receptors

The State of California defines sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Schools, libraries, churches, hospitals, and residential uses make up the majority of these areas. There are currently single-family residences located both south and west of the project site. The Interstate (I) 10 Freeway and I-10 eastbound off ramp are located just north of the project site. The land east of the project site and Mountain View Avenue is currently vacant.

Ambient Noise Measurements

An American National Standards Institute (ANSI Section SI4 1979, Type 1) Larson Davis model LxT sound level meter was used to document existing ambient noise levels. Two 15-minute daytime noise measurements were taken between 2:19 PM and 2:57 PM on June 24, 2013. Ambient noise levels are provided in Table 13 and measurement output is included in the Noise Impact Analysis (Appendix D).

Noise measurements were taken south and southwest of the project site and adjacent to single-family residences that may be affected by project generated noise. Ambient noise levels ranged between 55.9 and 63.4 $dBAL_{eq}$. Traffic noise generated on the I-10 Freeway and Mountain View Avenue are the dominant noise sources in the project area. No other noise sources were notable.

Table 13: Measured Ambient Noise Levels

Name	Time	Measurement Period	Description	Existing Ambient Noise Levels (dBA)					
				L_{eq}	L_{max}	L_2	L_8	L_{25}	L_{50}
NM1	2:19-2:34 PM	15 min	Vehicle on I-10 Freeway dominant	55.9	63.4	59.5	58.0	56.8	55.5
NM2	2:42-2:57 PM	15 min	Vehicle on I-10 Freeway and Mountain View Avenue dominant	63.4	76.2	67.4	65.0	63.7	62.8
Source: Kunzman Associates, Inc., 2013.									

Would the project:

a) 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?

Short-Term Construction Noise

Less Than Significant With Mitigation Incorporated. The closest receptors to the project site are the single-family residences located just west and south of the project site. These single-family residential dwellings will be impacted by short-term noise levels associated with project construction activities. These activities will include noise generated by the transport of workers and movement of construction materials to and from the project site, and from demolition, ground clearing, grading, excavation, and general building activities.

Construction noise will vary depending on the construction process, type of construction equipment, location of the construction activity with respect to receptors, the construction proposed to complete each construction task (i.e., hours and days of the week), and the duration of the construction work. The initial phase of construction would involve demolition of the existing single-family residences, followed by mass grading of the project site. Site development (i.e., fine grading, trenching, and paving), building construction, architectural coatings application, and paving would follow.

Mass grading is expected to produce the highest construction noise levels. Grading of the project site is estimated to require a grader, backhoe, dozer, excavator, and water truck. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation, followed by three to four minutes at lower power settings. Typical noise sources and noise levels associated with the site grading phase of construction are provided in Table 14.

Table 14: Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 ft.)	Suggested Maximum Sound Levels for Analysis (dBA at 50 ft.)
Rock Drills	83 to 99	96
Jack Hammers	75 to 85	82
Pneumatic Tools	78 to 88	85
Pumps	74 to 84	80
Dozers	77 to 90	85
Scrapers	83 to 91	87
Haul Trucks	83 to 94	88
Cranes	79 to 86	82

Table 14 (cont.): Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 ft.)	Suggested Maximum Sound Levels for Analysis (dBA at 50 ft.)
Portable Generators	71 to 87	80
Rollers	75 to 82	80
Tractors	77 to 82	80
Front-End Loaders	77 to 90	86
Hydraulic Backhoe	81 to 90	86
Hydraulic Excavators	81 to 90	86
Graders	79 to 89	86
Air Compressors	76 to 89	86
Trucks	81 to 87	86
Source: Kunzman Associates, Inc., 2013.		

A typical eight-hour construction day would generate 84 dBA CNEL at a distance of 50 feet from the noise source, on average. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Maximum noise events could reach up to 94dBA at approximately 35 feet from the single family residences located south of the project site, and up to 105 dBA at the single-family residential dwellings located approximately 10 feet west of site. Although these would be relatively high single noise events, resulting in potential short-term intermittent annoyances, the effect in long-term ambient noise levels would be small when averaged over a longer period of time.

The Loma Linda Municipal Code Section 9.20.070, Temporary Permit Procedures - Construction Noise, states that the owner or operator of a noise source which violates, or potentially violates, any of the provisions of the Municipal Code may file an application with the City Manager for a temporary noise waiver from the provisions of Municipal Code Sections 9.20.030 and 9.20.050. Specifically, Section 9.20.070 (C) states that:

> Developers that are involved with building construction and subdivision grading may exceed maximum noise levels between the hours of seven AM and eight PM, Monday through Friday, provided that all equipment is properly equipped with standard noise muffling apparatus specifically for such equipment (i.e., exhaust mufflers). Heavy construction is not permitted on weekends, or national holidays.

Since project construction noise could potentially exceed noise thresholds set forth by the Loma Linda Municipal Code, Mitigation Measure NOI-1 will be required to ensure that the Applicant files an application with the City Manager for a temporary noise waiver from the provisions of Municipal

Code Sections 9.20.030 and 9.20.050. Along with filing of the temporary noise waiver, project construction activities must also comply will all other applicable noise standards in the Municipal Code, which establishes permitted hours for construction activities as long as all construction equipment uses noise-reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer. With the implementation of Mitigation Measure NOI-1, the project construction activities would comply with noise standards established by the City. Therefore, with mitigation, short-term construction impacts associated with noise standards will be less than significant.

MM NOI-1 Prior to final project approval by the City of Loma Linda, the Applicant shall file an application with the City Manager for a temporary noise waiver from the provisions of Municipal Code Sections 9.20.030 and 9.20.050. Approval of this noise waiver shall be received from the City prior to the start of demolition activities on the project site.

Long-Term Construction Noise

Offsite Noise

Less Than Significant Impact. To calculate project generated increases in ambient noise levels, as well as overall noise levels with project operation, Existing and Existing Plus Project conditions noise levels were modeled for each roadway segment included in the Traffic Impact Analysis (Appendix E) prepared for the proposed project study. Noise levels at the nearest receptor to each affected road segment were modeled using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model. Modeling output is included in the Noise Impact Analysis (Appendix D).

Modeled Existing conditions traffic noise levels range between 46.9-72.8dBA CNEL at the nearest sensitive receptors along each road segment, while the modeled Existing Plus Project conditions traffic noise levels range between 60.8-72.9dBA CNEL. The proposed project is expected to increase the existing ambient noise levels by 0.3-13.9dBA CNEL. The results of the Existing and Existing Plus Project conditions traffic noise models are provided in Table 15.

Table 15: Comparison of Existing and Existing Plus Project Traffic Noise Levels

Roadway	Segment	Distance from Roadway Centerline to Receiver (ft)	Modeled Noise Levels (dBA CNEL)		
			Existing	Existing Plus Project	% Increase
Mountain View Drive	South of Rosewood Drive	40	72.8	72.9	0.08
	North of Rosewood Drive	n/a	69.5	69.5	0.08
Redlands Boulevard	East of Mountain View Drive	90	67.1	67.1	0.03
	West of Mountain View Drive	75	67.5	67.6	0.07

Table 15 (cont.): Comparison of Existing and Existing Plus Project Traffic Noise Levels

Roadway	Segment	Distance from Roadway Centerline to Receiver (ft)	Modeled Noise Levels (dBA CNEL)		
			Existing	Existing Plus Project	% Increase
Rosewood Drive	East of Mountain View Drive	20	46.9	60.8	13.91

Notes:
The above traffic noise levels only represent traffic noise on each particular road segment and not overall ambient noise.
Source: Kunzman Associates, Inc., 2013.

The largest increase (13.9dBA) would occur along Rosewood Drive and will primarily impact the few single-family residences located directly south of the project site. As provided in Table 13, existing average hour noise levels in this area already reach up to 63 dB Leq. When combining two noise levels that differ between 2 and 3 dB, the resulting increase is 2 dB. Thus, the resulting noise level with the addition of project generated traffic would be 65 dBA CNEL, a 2 dB increase over existing noise levels. This 2dB increase would not be a substantial increase in noise levels and project generated traffic noise levels would not exceed 65 dBA at sensitive receptors. Therefore, long-term offsite operational impacts associated with noise standards will be less than significant.

Onsite Noise

Less Than Significant Impact. Exterior noise levels of up to 70 dBA CNEL are considered to be acceptable at single-family residences and conditionally acceptable up to 75 dBA CNEL. Project operational noise would result in a significant noise impact if it causes ambient noise levels to exceeds 70 dBA CNEL or cause an increase of 3 dBA CNEL or greater over existing ambient noise levels.

Stationary noise sources/areas on the project site would include the gas pump area, the car wash, parking lot areas, delivery areas, and rooftop mechanical equipment. A worst-case operational noise scenario was modeled to assess potential impacts to nearby sensitive receptors. Worksheets are included in the Noise Impact Analysis (Appendix D).

Worst-case modeling assumptions include six idling automobiles, one heavy truck, one medium truck, a fully operating HVAC on the convenience store, and operation of the car wash and associated car wash vacuums. Every noise source was modeled as a worst-case scenario without the inclusion of any attenuation from proposed buildings, slopes, or existing barriers. All of these sources would most likely not be emitting noise simultaneously, but they were modeled as such to mimic a worst-case scenario. The noise level at the nearest sensitive receptor to the noisiest events is the single-family residence located immediately west of the project site. Worst-case noise levels would reach up to 79.8 $dBAL_{eq}$ at this residential dwelling. However, the dominant source of noise (79 dBA) would be from the heavy truck pass-by, which would be a short-term event. As provided in

Table 13, the residential uses within the project vicinity are already exposed to short-term (maximum) noise levels up to 76.2 dBA.

Two other scenarios, one without the fuel truck and one without any trucks were also modeled (see the worksheets included in the Noise Impact Analysis [Appendix D]). Noise levels under these scenarios would be 71.9 $dBAL_{eq}$ and 64.7 $dBAL_{eq}$, respectively.

Delivery of gasoline, diesel, and convenience store goods would vary depending on market needs, but is expected to occur five to six times a week. Commercial truck delivery activities are not known at this time. Truck access to the project site will be via Mountain View Avenue and Rosewood Drive. Low speed and idling trucks can generate maximum noise levels of up to 79dBA at 50 feet away. This noise event could occur with a heavy truck entering the driveway at the northeast corner of the project site. It is not, however, expected to last for more than a few minutes, and thus would not exceed or substantially contribute to the CNEL or a permanent increase in noise levels. Project operation noise would generally be less than 65 $dBAL_{eq}$.

Sources of noise from parking lots will also be audible at nearby receptors. These include tire noise, slamming of doors, and pedestrians. These events have the potential to exceed 70 $dBAL_{max}$ at 50 feet from the source. The facility proposes 10 parking stalls on the south side of the proposed convenience store. A parking lot is not considered to be a serene environment and the traffic noise from the I-10 Freeway and the adjacent streets will provide a masking effect over the short-term, single event noise occurrences common to parking lots.

Operational noise will not result in a violation of the City of Loma Linda noise standards, but will cause temporary increases in noise levels. These temporary increases would be significant at nearby single-family residences if they occur during nighttime hours. However, the project operations activities must comply will all other applicable noise standards in the Loma Linda Municipal Code, including Municipal Code Section9.20.050, which limits truck deliveries for commercial or industrial land use types adjacent to residential properties to the hours between 7:00 a.m. and 10 p.m. Therefore, long-term onsite operational impacts associated with noise standards will be less than significant.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Short-Term Construction Vibration

Less Than Significant Impact. Construction activities can result in varying degrees of ground vibration, depending on the equipment used on the construction site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. Table 16 provides approximate vibration levels for particular construction activities. This data provides a reasonable estimate for a wide range of soil conditions.

Table 16: Vibration Source Levels for Construction Equipment

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level (LV) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58
Source: Kunzman Associates, Inc., 2013.		

Generally, a vibration impact would be considered significant if it involves any construction-related or operations-related impacts in excess of 0.05 inches per second RMS vertical velocity at the nearby sensitive receptors (0.035 inches per second is barely perceptible).

Project construction activities could potentially produce vibration felt by adjacent land uses. However, construction of the project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. Although the primary sources of vibration during construction would be from bulldozers, vibratory rollers and other vibratory equipment could be used during installation of pavement over the project site. As shown in Table 16, a vibratory roller could produce up to a peak particle velocity (PPV) of up to 0.21 inch per second at 25 feet.

The closest receptors to the project site are the single-family residences located approximately 10 feet from the western edge of the project boundary. It is anticipated that a bulldozer could be used at a distance of 25 feet from the western property line and vibratory equipment could be used at the property line, resulting in groundborne vibration levels of up to 0.29 PPV for short periods of time at the adjacent single-family residential dwellings. The Transportation and Construction Induced Guidance Manual prepared for Caltrans identifies 0.3 PPV as the threshold for potential structural damage to older residential structures. Thus, the proposed project will not result in building

damage. Therefore, short-term construction impacts associated with groundborne vibration will be less than significant.

Long-Term Operational Vibration

Less Than Significant Impact. A few heavy trucks can be expected to visit the project site to deliver fuel on a regular basis. These trucks would not be anticipated to exceed 0.10 in/sec peak particle velocity (PPV) at 10 feet (Caltrans 2002). Predicted operational-related vibration levels at the nearest offsite structures, which are located in excess of 25 feet from the traveled roadway segments, would not be anticipated to exceed even the most conservative threshold of 0.2 inch/second PPV. Therefore, long-term operational impacts associated with groundborne vibration will be less than significant.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. Loma Linda Municipal Code Section 9.20.030, Land Use Compatibility for Community Noise Environments, states that the City's noise standards for the City to follow and help determine what type of noises are nuisances and are unacceptable to the community. As address in Impact 12a), once operational, the proposed project will require delivery of gasoline, diesel, and convenience store goods approximately five to six times a week. Commercial truck delivery activities are not known at this time. Truck access to the project site will be via Mountain View Avenue and Rosewood Drive. Low speed and idling trucks can generate maximum noise levels of up to 79dBA at 50 feet away. This noise event could occur with a heavy truck entering the driveway at the northeast corner of the project site. It is not, however, expected to last for more than a few minutes, and thus would not exceed or substantially contribute to the CNEL or a permanent increase in noise levels. Project operation noise would generally be less than 65 $dBAL_{eq}$.

Sources of noise from parking lots will also be audible at nearby receptors. These include tire noise, slamming of doors, and pedestrians. These events have the potential to exceed 70 $dBAL_{max}$ at 50 feet from the source. The facility proposes 10 parking stalls on the south side of the proposed convenience store. A parking lot is not considered to be a serene environment and the traffic noise from the I-10 Freeway and the adjacent streets will provide a masking effect over the short-term, single event noise occurrences common to parking lots.

Operational noise will not result in a violation of the City of Loma Linda noise standards, but will cause temporary increases in noise levels. These temporary increases would be significant at nearby single-family residences if they occur during nighttime hours. However, the project operations activities must comply will all other applicable noise standards in the Loma Linda Municipal Code, including Municipal Code Section9.20.050, which limits truck deliveries for commercial or industrial land use types adjacent to residential properties to the hours between 7:00 a.m. and 10 p.m. Therefore, long-term onsite operational impacts associated with permanent ambient noise level increases will be less than significant.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant With Mitigation Incorporated. Loma Linda Municipal Code Section 9.20.030, Land Use Compatibility for Community Noise Environments, states that the City's noise standards for the City to follow and help determine what type of noises are nuisances and are unacceptable to the community. Thus, noise levels that comply with the City's noise standards are assumed to be a non-nuisance and acceptable within the community. As addressed in Impact 12a), the closest receptors to the project site are the single-family residences located just west and south of the project site. These single-family residential dwellings will be impacted by short-term noise levels associated with project construction activities. These activities will include noise generated by the transport of workers and movement of construction materials to and from the project site, and from demolition, ground clearing, grading, excavation, and general building activities.

Since project construction noise could potentially exceed noise thresholds set forth by the Loma Linda Municipal Code, Mitigation Measure NOI-1 will be required to ensure that the Applicant files an application with the City Manager for a temporary noise waiver from the provisions of Municipal Code Sections 9.20.030 and 9.20.050. Along with filing of the temporary noise waiver, project construction activities must also comply will all other applicable noise standards in the Municipal Code, which establishes permitted hours for construction activities as long as all construction equipment uses noise-reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer. With the implementation of Mitigation Measure NOI-1, the project construction activities would comply with noise standards established by the City. Therefore, with mitigation, short-term construction impacts associated with temporary ambient noise level increases will be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less Than Significant Impact. The nearest public airport to the project site is the San Bernardino International Airport (formerly Norton Air Force Base), which is located approximately 1.7 miles north of the project site, just north of the Santa Ana River. The airport is currently operating as a general aviation and cargo airport and does not presently support commercial aviation. An Airport Land Use Compatibility Plan (ALUCP) has not been adopted for the airport. As such, noise compatibility contours have yet to be identified around the airport. However, a review of other ALUP in the project area, including the ALUCPs prepared for the Redlands Municipal Airport and Ontario International Airport, shows that while noise compatibility contours can extend several thousand feet beyond an airport's runway, the majority of the most restrictive noise compatibility zones are within several hundred feet of the runway and/or extend linearly from each end of the runway. As such, it is not anticipated that the project site would be located within a noise compatibility contour, which would limit the types of land uses that could be developed on the project site once the ALUCP is eventually adopted. Additionally, as a commercial use, the proposed project could be subjected to increased noise levels, including air traffic noise, without substantial impacts. Therefore, impacts associated with public airport noise will be less than significant.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. There are no private airstrips located within the project vicinity. Therefore, no impact associated with private airstrip noise will occur.

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

Environmental Evaluation

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact. The proposed project does not include any land uses that typically induce population growth. A temporary labor force will be required to construct the proposed project. The short-term nature of this temporary construction workforce will not induce substantial population growth. Additionally, a permanent labor force will be needed top operate the proposed project. Again, the workforce necessary to operate the proposed convenience store, gas station, carwash, and the future occupant on the separate commercial building pad will be nominal, and will not induce substantial population growth. Therefore, impacts associated with inducement of population growth will be less than significant.

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

Less Than Significant Impact. The project site currently contains four existing single-family residences, as well as a portion of undeveloped but previously disturbed land in the northern portion of the site. To facilitate construction of the proposed project, four existing single-family residences currently found on the project site will be demolished.

According to the U.S. Census Bureau's American Community Survey, there are approximately 9,179 housing units located throughout the City of Loma Linda, roughly 8,486 of which are occupied units and 711 of which are vacant. Based on the City's total housing inventory, removal of the four

residential buildings from the project site will account for only a nominal percentage (approximately 0.05 percent) of the 8,486 housing units located in the City. Additionally, it is assumed that the loss of the four single-family residences will not represent a substantial burden on the City's total housing inventory since roughly 711 housing units are vacant and available in the City. Therefore, impacts associated with displacement of existing housing will be less than significant.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Less Than Significant Impact. As addressed in Impact 13b) above, removal of the four residential buildings from the project site will account for only a nominal percentage (approximately 0.05 percent) of the 8,486 housing units located in the City. It is assumed that the loss of the four single-family residences will not represent a substantial burden on the City's total housing inventory since roughly 711 housing units are vacant and available in the City. Thus, those residing in the four single-family residences located on the project site have numerous existing housing options available within the City without the need for construction of replacement housing units. Therefore, impacts associated with displacement of existing housing will be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
14. Public Services *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

Environmental Evaluation

Would the project:

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?

Less Than Significant Impact. Fire protection services in the City of Loma Linda are provided by the Fire and Rescue Division of the Department of Public Safety. Fire and Rescue Division personnel serving the City consists of two Chief Officers, six Captains, six Engineers, six Firefighter/Paramedics, and 10 part-time Firefighters participating in the Paid Call Program. Fire Station No. 251 (11325 Loma Linda Drive,) serves the City, housing two triple-combination engines, one aerial multi-purpose ladder truck, one brush engine, one water tender, one paramedic fire/rescue squad, one portable lighting/rehab trailer, and one rescue/backup paramedic squad.

According to the General Plan's Public Services and Facilities Element, the City has established a response goal of a five-minute response time (including three-minute running time) to be maintained for 80 percent of emergency fire, medical, and hazardous materials calls on a citywide response area basis. The proposed project will demolish the existing residential uses found on the project site and replace them with a convenience store, gasoline station, carwash, and separate commercial building pad. Thus, the project site is currently developed and presently served by the Fire and Rescue Division. As a result, the proposed project will not be introduce development to an area not currently served by the Fire and Rescue Division, and as such, would not impede the Fire and Rescue Division from meeting its established response goal. The proposed project will be served

by the existing Fire and Rescue Division facilities and construction of new or expansion of current Fire and Rescue Division facilities will not be required. Therefore, impacts associated with Fire and Rescue Division facilities will be less than significant.

b) Police protection?

Less Than Significant Impact. Police protection services in the City of Loma Linda are provided by the San Bernardino Sheriff's Department. Sheriff's Department serving the City currently consists of 12 sworn officers and 5 non-sworn (civilian) employees. Sheriff's Department Headquarters, Central Station (655 East Third Street) serves the City, although the City also provide a workstation at City Hall, which provides Sheriff's deputies with an area for completing reports, conducting interviews, and crime prevention.

According to the General Plan's Public Services and Facilities Element, the City has established a response goal of a 3.25-minute response time from the time of dispatch. The proposed project will demolish the existing residential uses found on the project site and replace them with a convenience store, gasoline station, carwash, and separate commercial building pad. Thus, the project site is currently developed and presently served by the Sheriff's Department. As a result, the proposed project will not be introduce development to an area not currently served by the Sheriff's Department, and as such, would not impede the Sheriff's Department from meeting its established response goal. The proposed project will be served by the existing Sheriff's Department facilities and construction of new or expansion of current Sheriff's Department facilities will not be required. Therefore, impacts associated with Sheriff's Department facilities will be less than significant.

c) Schools?

No Impact. Public education services in the City of Loma Linda are provided by the Redlands Unified School District (RUSD) and the Colton Joint Unified School District (CJUSD). The nearest school to the project site is RUSD's Victoria Elementary, which is located approximately 0.5 miles northwest of the site. As addressed in Impact 13a) above, the proposed project does not include any land uses that typically induce population growth, and will not require a substantial temporary or permanent labor force. Thus, the proposed project will not generate a substantial increase in the elementary, middle, and high school residential population that would require public education. Therefore, no impacts associated with RUSD or CJUSD facilities will occur.

d) Parks?

No Impact. The proposed project does not include any land uses that are typically induce population growth, and will not require a substantial temporary or permanent labor force. Thus, the proposed project will not generate a substantial increase in the residential population or the number of residents who would patronize parks. Therefore, no impacts associated with parks will occur.

e) Other public facilities?

No Impact. The proposed project does not include any land uses that are typically induce population growth, and will not require a substantial temporary or permanent labor force. Thus, the proposed

project will not generate a substantial increase in the residential population or the number of residents who would patronize libraries, community centers, or other public facilities. Therefore, no impacts associated with public facilities will occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
15. Recreation				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Environmental Evaluation

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. As addressed in Impact 13a) above, the proposed project does not include any land uses that are typically induce population growth, and will not require a substantial temporary or permanent labor force. Thus, the proposed project will not generate a substantial increase in the residential population or the number of residents who would patronize recreation facilities. Therefore, no impacts associated with recreational facilities will occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

No Impact. The proposed project consists of a new convenience store, gas station, car wash, and separate commercial building pad. The proposed project, however, will not include recreation facilities. Additionally, the proposed project does not include any land uses that are typically induce population growth, and will not require a substantial temporary or permanent labor force. Thus, the proposed project will not generate a substantial increase in the residential population or the number of residents who would patronize recreation facilities. As a result, the construction of new or the expansion of current recreational facilities will not be required. Therefore, no impacts associated with recreational facilities will occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
16. Transportation/Traffic *Would the project:*				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☒	☐	☐
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

Environmental Evaluation

The following section is based on the information contained in the December 2013 Traffic Impact Analysis prepared for the proposed project by Kunzman Associates. The Traffic Impact Analysis is included as Appendix E of this IS.

To better understand and evaluate the proposed project's potential effects on the project area's circulation system, a summary of the existing transportation and traffic conditions is provided as follows:

Study Area

Regional access to the project site is provided by the Interstate (I) 10 Freeway. Local access is provided by various roadways in the project vicinity. The east-west roadways that will be most affected by the proposed project include Rosewood Drive, Business Center Drive, Sun Avenue, and Redlands Boulevard. The north-south roadway expected to provide local access includes Mountain View Avenue.

A series of scoping discussions were conducted with the City of Loma Linda to define the desired analysis locations for each future analysis year. In addition, the San Bernardino Associated Governments (SANBAG) staff has also been contacted to discuss the proposed project and its associated travel patterns.

No analysis is required further than 5 miles from the project site. The roadway elements that must be analyzed are dependent on both the analysis year (Opening Year or Year 2035) and project generated traffic volumes. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the two-way traffic volumes on the roadway segments near the project site. All arterial segments are required to be included in the analysis when the anticipated project volume equals or exceeds 50 two-way trips in the peak hours. The requirement is 100 two-way peak hour trips for freeways.

The proposed project does not contribute traffic greater than the freeway threshold volume of 100 two-way peak hour trips to the Interstate (I) 10 Freeway. However, the project contributes traffic greater than the arterial link threshold volume of 50 two-way trips in the peak hours on facilities serving intersections in the City of Loma Linda. This means that the City of Loma Linda must notify the California Department of Transportation (Caltrans), who also must also be provided with a copy of the traffic impact analysis, once the document is accepted by the City of Loma Linda. (Note: The purpose of this notification is to allow the California Department of Transportation to identify opportunities to make improvements to intersections concurrent with adjacent development, at considerably less cost and disruption than would occur if it were done after-the-fact).

Existing Roadway System

The number of through lanes for existing roadways and the existing intersection controls are identified. Regional access to the project site is provided by the I-10 Freeway. Local access is provided by various roadways in the project vicinity. The east-west roadways that will be most affected by the proposed project include Rosewood Drive, Business Center Drive, Sun Avenue, and Redlands Boulevard. The north-south roadway expected to provide local access includes Mountain View Avenue.

Existing Volumes

The existing average daily traffic volumes were obtained from the 2012 Traffic Volumes on California State Highways by Caltrans and factored from peak hour counts (see Appendix E) obtained by Kunzman Associates, Inc. using the following formula for each intersection leg:

PM Peak Hour (Approach + Exit Volume) x 11.5 = Daily Leg Volume.

(This is a conservative estimate and may overestimate the average daily traffic volumes.)

Existing intersection traffic conditions were established through morning, mid-day, and evening peak hour traffic counts obtained by Kunzman Associates, Inc. from July/August 2013 (Appendix E). Explicit peak hour factors have been calculated using the data collected for this effort as well. The morning, mid-day, and evening peak hour traffic volumes were identified by counting the two-hour periods from 7:00 AM to 9:00 AM, 11:30 AM to 1:30PM and 4:00 PM to 6:00 PM.

Existing Level of Service

The existing delay and Level of Service (LOS) for the intersection in the project vicinity are provided in Table 17. The study area intersections currently operates within acceptable LOS during the peak hours for existing traffic conditions, except for the following study area intersections that are currently operating at unacceptable LOS during the peak hours:

- Mountain View Avenue (NS) at:
  - Rosewood Drive (EW)
  - Sun Avenue (EW)

Table 17: Existing Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay LOS[2]		
		Northbound			Southbound			Eastbound			Westbound					
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Mid-Day	Evening
Mountain View Avenue (NS) at:																
I-10 Freeway WB Ramps (EW) #1	TS	1.5	1.5	0	0	1.5	0.5	0	0	0	1	0.5	0.5	24.0-C	18.7-B	18.9-B
I-10 Freeway EB Ramps (EW) #2	TS	0	1.5	0.5	1	2	0	0.5	0.5	1	0	0	0	24.8-C	15.5-B	25.3-C
Rosewood Drive (EW) #4	CSS	1	2	0	0	1.5	0.5	1	0	d	0	0	0	56.9-F	25.5-D	27.0-D
Business Center Drive (EW) #5	TS	0	2.5	0.5	1	2	0	0	0	0	1	0	d	14.7-B	12.9-B	13.2-B
Sun Avenue (EW) #6	CSS	1	1.5	0.5	1	1.5	0.5	0	1	0	0	0	1	25.8-D	12.9-B	25.5-D
Redlands Boulevard (EW) #7	TS	1	1.5	0.5	2	2	1	1	2	d	1	2	d	26.8-C	25.4-C	28.0-C

Notes:
1 When a right turn lane is designated, the lane can be either striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = *de facto* Right Turn Lane.
2 Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the 2000 Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
3 TS = Traffic Signal; CSS = Cross Street Stop
4 Restrict to right turns in/out and left turns in only.
5 Allow southbound u-turn movements.
Source: Kunzman Associates, Inc., 2013.

Existing delay worksheets are provided in Appendix E.

Planned Transportation Improvements and Relationship to General Plan

Figure 6.5 of the City of Loma Linda General Plan Circulation Element shows existing and future roadways in the City. This figure shows the nature and extent of arterial highways that are needed to adequately serve the ultimate development depicted by the General Plan Land Use Element.

Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less Than Significant With Mitigation Incorporated. The definition of an intersection deficiency has been obtained from the City of Loma Linda General Plan and Measure V. The City's General Plan and Measure V state that peak hour intersection operations of Level of Service (LOS) C or better are generally acceptable. To assure the adequacy of various public services and prevent degradation of the quality of life experienced by the residents of Loma Linda, all new development projects shall assure by implementation of appropriate mitigation measures that, at a minimum, LOS is maintained at a minimum of LOS C throughout the City, except where the current LOS is lower than LOS C. In any location where the LOS is below LOS C at the time an application for a development project is submitted, mitigation measures shall be imposed on that development project to assure, at a minimum, that the LOS is maintained at LOS that are no worse than those existing at the time an application for development is filed. In any location where the LOS is LOS F at the time an application for a development project is submitted, mitigation measures shall be imposed on that development project to assure, at a minimum, that the volume to capacity ratio is maintained at a volume to capacity ratio that is no worse than that existing at the time an application for development is filed. Projects where sufficient mitigation to achieve the above stated objectives is infeasible shall not be approved unless and until the necessary mitigation measures are identified and implemented.

For freeway facilities, the Congestion Management Program (CMP) controls the definition of deficiency for purposes of this study. The CMP definition of deficiency is based on maintaining a LOS standard of LOS E or better, except where an existing LOS F condition is identified in the CMP. A CMP deficiency is, therefore, defined as any freeway segment operating or projected to operate at LOS F, unless the segment is identified explicitly in the CMP document.

The identification of a CMP deficiency requires further analysis in satisfaction of CMP requirements, including:

- Evaluation of the mitigation measures required to restore traffic operations to an acceptable level with respect to CMP Level of Service standards.

- Calculation of the project share of new traffic on the impacted CMP facility during peak hours of traffic.
- Estimation of the cost required to implement the improvements required to restore traffic operations to an acceptable LOS as described above.

Future Level of Service

Existing Plus Project

The Existing Plus Project delay and Level of Service (LOS) for the study area roadway network are provided in Table 18. Table 18 presents delay values based on the geometrics at the study area intersections without and with improvements. Existing Plus Project delay calculation worksheets are provided in Appendix E.

Table 18: Existing Plus Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay LOS[2]		
		Northbound			Southbound			Eastbound			Westbound					
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Mid-Day	Evening
Mountain View Avenue (NS) at:																
I-10 Freeway WB Ramps (EW) #1	TS	1.5	1.5	0	0	1.5	0.5	0	0	0	1	0.5	0.5	25.6-C	19.6-B	19.7-B
I-10 Freeway EB Ramps (EW) #2	TS	0	1.5	0.5	1	2	0	0.5	0.5	1	0	0	0	28.7-C	16.3-B	31.4C
Project Driveway (EW) -#3	**CSS**	0	2	0	0	1.5	0.5	0	0	**1**	0	0	0	16.7-C	12.9-B	13.1-B
Rosewood Drive (EW) #4																
Without Improvements	CSS	1	2	0	0	1.5	0.5	1	0	d	0	0	0	25.1-D	13.6-B	15.2-C
With Improvements[4]	CSS	1	2	0	0	1.5	0.5	0	0	**1**	0	0	0	17.2-C	12.6-B	12.7-B
Business Center Drive (EW) #5																
Without Improvements	TS	0	2.5	0.5	1	2	0	0	0	0	1	0	d	16.8-B	15.0-B	15.8-B
With Improvements[5]	TS	0	2.5	0.5	1	2	0	0	0	0	1	0	d	17.1-B	15.0-B	16.0-B
Sun Avenue (EW) #6																
Without Improvements	CSS	1	1.5	0.5	1	1.5	0.5	0	1	0	0	1	0	26.8-D	13.2-B	12.1-D
With Improvements[5]	CSS	1	1.5	0.5	1	1.5	0.5	1	1	0	0	1	0	21.1-C	13.2-B	16.8-C
Redlands Boulevard (EW) #7	CSS	1	1.5	1.5	2	2	1	0.5	2	d	1	2	d	8.9-C	25.5-C	28.4-C

Table 18 (cont): Existing Plus Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay LOS[2]		
		Northbound			Southbound			Eastbound			Westbound					
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Mid-Day	Evening
Project South Driveway (NS) #4																
Rosewood Drive (EW) #8	CSS	0	2	0	0	**1**	0	1	0.5	0	0	0.5	0.5	8.9-A	8.8-A	8.9-A

Notes:
1 When a right turn lane is designated, the lane can be either striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = *de facto* Right Turn Lane; **1** = Improvement
2 Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the 2000 Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
3 TS = Traffic Signal; CSS = Cross Street Stop
4 Restrict to right turns in/out and left turns in only.
5 Allow southbound u-turn movements.
Source: Kunzman Associates, Inc., 2013.

For Existing Plus Project traffic conditions, the following study area intersections are projected to operate at an unacceptable LOS during the peak hours (Note: The following study intersections have been identified above as also operating at an unacceptable LOS during Existing traffic conditions):

- Mountain View Avenue (NS) at:
  - Rosewood Drive (EW)
  - Sun Avenue (EW)

For Existing Plus Project traffic conditions, study area intersections are projected to operate within acceptable Levels of Service during the peak hours.

Opening Year (2015) Without Project

The Opening Year (2015) delay and LOS for the study area roadway network without the proposed project are provided in Table 19 presents delay values based on geometrics at the study area intersections without and with improvements. Opening Year (2015) Without Project delay calculation worksheets are provided in Appendix E.

Table 19: Opening Year (2015) Without Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay LOS[2]		
		Northbound			Southbound			Eastbound			Westbound					
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Mid-Day	Evening
Mountain View Avenue (NS) at:																
I-10 Freeway WB Ramps (EW) #1	TS	1.5	1.5	0	0	1.5	0.5	0	0	0	1	0.5	0.5	24.6-C	19.0-B	19.3-B
I-10 Freeway EB Ramps (EW) #2	TS	0	1.5	0.5	1	2	0	0.5	0.5	1	0	0	0	26.4-C	15.9-B	29.6-C
Rosewood Drive (EW) #4																
Without Improvements	CSS	1	2	0	0	1.5	0.5	1	0	d	0	0	0	59.2-F	25.9-D	30.0-D
With Improvements4	CSS	1	2	0	0	1.5	0.5	0	0	**1**	0	0	0	15.2-C	11.8-B	11.7-B
Business Center Drive (EW) #5																
Without Improvements	TS	0	2.5	0.5	1	2	0	0	0	0	1	0	d	14.9-B	13.0-B	13.4-B
With Improvements5	TS	0	2.5	0.5	1	2	0	0	0	0	1	0	d	15.1-B	13.1-B	13.5-B
Sun Avenue (EW) #6	CSS	1	1.5	0.5	1	1.5	0.5	0	1	0	0	1	0	30.9-D	12.9-B	14.0-B
Redlands Boulevard (EW) #7	CSS	1	1.5	0.5	2	2	1	1	2	d	1	2	d	27.0-C	25.5-C	28.7-C

Notes:
1 When a right turn lane is designated, the lane can be either striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = *de facto* Right Turn Lane; **1** = Improvement
2 Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the 2000 Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
3 TS = Traffic Signal; CSS = Cross Street Stop
4 Restrict to right turns in/out and left turns in only.
5 Allow southbound u-turn movements.
Source: Kunzman Associates, Inc., 2013.

For Opening Year (2015) Without Project traffic conditions, the following study area intersections are projected to operate at unacceptable LOS during the peak hours (Note: The following study intersections have been identified above as also operating at an unacceptable LOS during Existing traffic conditions):

- Mountain View Avenue (NS) at:
  - Rosewood Drive (EW)
  - Sun Avenue (EW)

The study area intersections are projected to operate within acceptable LOS during the peak hours for Opening Year (2015) Without Project traffic conditions, with improvements.

Opening Year (2015) With Project

The Opening Year (2015) delay and LOS for the study area roadway network with the proposed project are provided in Table 20. Table 20 presents delay values based on geometrics at the study area intersections without and with improvements. Opening Year (2015) With Project delay calculation worksheets are provided in Appendix E.

Table 20: Opening Year (2015) With Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay LOS[2]		
		Northbound			Southbound			Eastbound			Westbound					
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Mid-Day	Evening
Mountain View Avenue (NS) at:																
I-10 Freeway WB Ramps (EW) #1	TS	1.5	1.5	0	0	1.5	0.5	0	0	0	1	0.5	0.5	26.5-C	20.0-C	20.2-C
I-10 Freeway EB Ramps (EW) #2	TS	0	1.5	0.5	1	2	0	0.5	0.5	1	0	0	0	30.7-C	16.7-B	34.7C
Project Driveway (EW) -#3	**CSS**	0	2	0	0	1.5	0.5	0	0	**1**	0	0	0	17.0-C	13.1-B	13.3-B
Rosewood Drive (EW) #4																
- Without Improvements	CSS	1	2	0	0	1.5	0.5	1	0	d	0	0	0	27.9-D	14.6-B	16.6-C
- With Improvements4	CSS	1	2	0	0	1.5	0.5	0	0	**1**	0	0	0	17.7-C	12.9-B	13.0-B
Business Center Drive (EW) #5																
- Without Improvements	TS	0	2.5	0.5	1	2	0	0	0	0	1	0	d	17.1-B	15.0-B	15.9-B
- With Improvements5	TS	0	2.5	0.5	1	2	0	0	0	0	1	0	d	17.3-B	15.1-B	16.2-B
Sun Avenue (EW) #6																
- Without Improvements	CSS	1	1.5	0.5	1	1.5	0.5	0	1	0	0	1	0	23.3-D	13.1-B	17.9-C
- With Improvements5	CSS	1	1.5	0.5	1	1.5	0.5	0	1	0	0	1	0	24.3-C	13.1-B	14.3-B
Redlands Boulevard (EW) #7	CSS	1	1.5	0.5	2	2	1	1	2	d	1	2	d	27.1-C	25.7-C	29.2-C
Project South Driveway (NS) #4																
Rosewood Drive (EW) #8	CSS	0	0	0	0	**1**	0	0.5	0.5	0	0	0.5	0.5	8.9-A	8.8-A	9.0-A

Table 20 (cont.): Opening Year (2015) With Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay LOS[2]		
		Northbound			Southbound			Eastbound			Westbound					
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Mid-Day	Evening

Notes:
1 When a right turn lane is designated, the lane can be either striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = *de facto* Right Turn Lane; **1** = Improvement
2 Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the 2000 Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
3 TS = Traffic Signal; CSS = Cross Street Stop
4 Restrict to right turns in/out and left turns in only.
5 Allow southbound u-turn movements.
Source: Kunzman Associates, Inc., 2013.

For Opening Year (2015) With Project traffic conditions, the following study area intersections are projected to operate at unacceptable LOS during the peak hours, without improvements (Note: The following study intersections have been identified above as also operating at an unacceptable LOS during Existing traffic conditions):

- Mountain View Avenue (NS) at:
  - Rosewood Drive (EW)
  - Sun Avenue (EW)

As shown in Table 20, the study area intersections are projected to operate within acceptable LOS during the peak hours for Opening Year (2015) With Project traffic conditions, with improvements.

Year 2035 Without Project

The Year 2035 delay and LOS for the study area roadway network without the proposed project are provided in Table 14.

Table 14 presents delay values based on the geometrics at the study area intersections without and with improvements. Year 2035 Without Project delay calculation worksheets are provided in Appendix E.

Table 21: Year 2035 Without Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay LOS[2]		
		Northbound			Southbound			Eastbound			Westbound					
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Mid-Day	Evening
Mountain View Avenue (NS) at:																
I-10 Freeway WB Ramps (EW) #1																
- Without Improvements	TS	1.5	1.5	0	0	1.5	0.5	0	0	0	1	0.5	0.5	27.4-C	24.0-C	27.9 -C
- With Improvements	TS	**2**	2	0	0	2	**1**	0	0	0	1	0.5	0.5	20.3-B	17.5-B	26.6-C
I-10 Freeway EB Ramps (EW) #2																
- Without Improvements	TS	0	1.5	0.5	1	2	0	0.5	0.5	1	0	0	0	29.1-C	20.6-C	99.9-F[4]
- With Improvements	TS	0	2	**1**	**2**	2	0	0.5	0.5	1	0	0	0	23.1-C	17.7-B	28.2-C
Rosewood Drive (EW) #4																
- Without Improvements	CSS	1	2	0	0	1.5	0.5	1	0	d	0	0	0	107.8-F	43.1-E	82.1-F
- With Improvements[4]	CSS	1	2	0	0	1.5	0.5	0	0	**1**	0	0	0	17.9-C	13.7-B	14.1-B
Business Center Drive (EW) #5																
Without Improvements	TS	0	2.5	0.5	1	2	0	0	0	0	1	0	d	11.3-B	9.9-A	8.5-A
With Improvements5	TS	0	2.5	0.5	1	2	0	0	0	0	1	0	d	11.6-B	10.0-B	8.9-A
Sun Avenue (EW) #6																
Without Improvements	CSS	1	1.5	0.5	1	1.5	0.5	0	1	0	0	1	0	30.3-D	15.7-C	26.4-D
With Improvements[5]	CSS	1	1.5	0.5	1	1.5	0.5	0	1	0	0	1	0	23.0-C	15.7-C	21.5-C

Table 21 (cont.): Year 2035 Without Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay LOS[2]		
		Northbound			Southbound			Eastbound			Westbound					
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Mid-Day	Evening
Redlands Boulevard (EW) #7																
- Without Improvements	CSS	1	1.5	0.5	2	2	1	1	2	d	1	2	d	28.4-C	28.4-C	40.1-D
- With Improvements[5]	CSS	1	1.5	**1**	2	2	1	1	**3**	**1>**	1	**3**	**1>**	26.5-C	26.5-C	34.2-C

Notes:
L = Left T = Through R = Right d = de facto Right Turn Lane 1 = Improvement

1 When a right turn lane is designated, the lane can be either striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
2 Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
3 TS = Traffic Signal; CSS = Cross Street Stop
4 99.9-F = Delay High, Intersection Unstable, Level of Service F.
5 It should be noted that the Opening Year Without Project delay has a worse Level of Service than the Opening Year With Project delay. This is caused by the project adding traffic volumes to the non-critical movements at the intersection; therefore, decreasing the average delay for the entire intersection.
6 Restrict to right turns in/out and left turns in only.
7 Allow southbound u-turn movements.
8 A portion of the eastbound left turn movements is reassigned to the Rosewood Drive intersection with southbound u-turn movements at Mountain View Avenue/Business Center Drive.

Source: Kunzman Associates, Inc., 2013.

For Year 2035 Without Project traffic conditions, the following study area intersections are projected to operate at unacceptable LOS during the peak hours, without improvements:

- Mountain View Avenue (NS) at:
  - I-10 Freeway EB Ramps (EW)
  - Rosewood Drive (EW)
  - Sun Avenue (EW)
  - Redlands Boulevard (EW)

As shown in Table 14, the study area intersections are projected to operate within acceptable LOS during the peak hours for Year 2035 Without Project traffic conditions, with improvements.

Year 2035 With Project

The Year 2035 delay and LOS for the study area roadway network with the proposed project are shown in Table 22.

Table 22 shows delay values based on the geometrics at the study area intersections, without and with improvements. Year 2035 With Project delay calculation worksheets are provided in Appendix E.

Table 22: Year 2035 With Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay LOS[2]		
		Northbound			Southbound			Eastbound			Westbound					
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Mid-Day	Evening
Mountain View Avenue (NS) at:																
I-10 Freeway WB Ramps (EW) #1																
-Without Improvements	TS	1.5	1.5	0	0	1.5	0.5	0	0	0	1	0.5	0.5	29.2-C	25.0-C	31.5-C
-With Improvements	TS	**2**	2	0	0	2	**1**	0	0	0	1	0.5	0.5	21.6-C	18.2-B	30.0-C
I-10 Freeway EB Ramps (EW) #2																
-Without Improvements	TS	0	1.5	0.5	1	2	0	0.5	0.5	1	0	0	0	33.3-C	22.7-C	99.9-F4
-With Improvements	TS	0	2	**1**	**2**	2	0	0.5	0.5	1	0	0	0	25.1-C	18.6-B	32.1-C
Project Driveway (EW) #3	**CSS**	0	2	0	0	1.5	0.5	0	0	**1**	0	0	0	21.2-C	15.7-C	17.4-C
Rosewood Drive (EW) #4																
-Without Improvements	CSS	1	2	0	0	1.5	0.5	1	0	d	0	0	0	43.4-E	19.0-C	30.8-D
-With Improvements	CSS	1	2	0	0	1.5	0.5	0	0	1	0	0	0	21.7-C	15.5-C	16.5-C
Business Center Drive (EW) #5																
-Without Improvements	TS	0	2.5	0.5	1	2	0	0	0	0	1	0	d	13.6-B	12.3-B	12.6-B
-With Improvements6	TS	0	2.5	0.5	1	2	0	0	0	0	1	0	d	13.8-B	12.3-B	13.0-B
Sun Avenue (EW) -#6	CSS	1	1.5	0.5	1	1.5	0.5	0	1	0	0	1	0	31.4-D	16.0-C	27.3-D
Redlands Boulevard (EW) #7																
-Without Improvements	CSS	1	1.5	0.5	2	2	1	1	2	d	1	2	d	28.7-C	28.6-C	41.0-D
-With Improvements	CSS	1	2	**1**	2	2	1	1	**3**	**1>**	1	**3**	**1>**	26.7-C	26.7-C	34.9-C

Table 22 (cont.): Year 2035 With Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay LOS[2]		
		Northbound			Southbound			Eastbound			Westbound					
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Mid-Day	Evening
Project South Driveway (NS) at:																
Rosewood Drive (EW) -#8	**CSS**	0	0	0	0	**1**	0	0.5	0.5	0	0	0.5	0.5	8.9-A	8.8-A	8.9-A

Notes:
1 When a right turn lane is designated, the lane can be either striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = *de facto* Right Turn Lane; 1 = Improvement
2 Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the 2000 Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
3 TS = Traffic Signal; CSS = Cross Street Stop
4 99.9-F = Delay High, Intersection Unstable, Level of Service F.
Source: Kunzman Associates, Inc., 2013.

For Year 2035 With Project traffic conditions, the following study area intersections are projected to operate at unacceptable LOS during the peak hours:

- Mountain View Avenue (NS) at:
  - I-10 Freeway EB Ramps (EW)
  - Rosewood Drive (EW)
  - Sun Avenue (EW)
  - Redlands Boulevard (EW)

As shown in Table 22, the study area intersections are projected to operate within acceptable LOS during the peak hours for Year 2035 With Project traffic conditions, with improvements.

Required Improvements and Costs

Improvements that will eliminate all anticipated roadway operational deficiencies throughout the study area have been identified for Opening Year (2015) and Year 2035 traffic conditions. The improvements were determined through the operations analysis of Section IV of the Traffic Impact Analysis (Appendix E).

The approximate costs for the Year 2035 improvements have generally been estimated using cost guidelines in the CMP Handbook (see Appendix E). The needed improvements and resulting costs are provided in Table 23 for study area intersections.

Table 23: Summary of Intersection Improvements and Costs

Intersection	Improvement	Total Cost ($)
Mountain View Avenue (NS) at:		
I-10 Freeway WB Ramps (EW)-#1	Construct Additional NB Left Turn Lane[1]	Nexus[2]
	Construct SB Right Turn Lane[1]	Nexus[2]
I-10 Freeway EB Ramps (EW)-#2	Construct NB Right Turn Lane[1]	Nexus[2]
	Construct Additional SB Left Turn Lane[1]	Nexus[2]
Rosewood Drive (EW)-#4	Restrict to right turns in/out and left turns in only	50,000
Business Center Drive (EW)-#5	Allow SB U-Turn Movements	10,000
Redlands Boulevard (EW)-#7	Construct NB Right Turn Lane[1]	50,000
	Construct Additional EB Through Lane[1]	Nexus[2]
	Construct EB Right Turn Lane W/Overlap[1]	60,000
	Construct Additional WB Through Lane[1]	Nexus[2]
	Construct WB Right Turn Lane W/Overlap[1]	60,000
	Total	230,000

Table 23 (cont.): Summary of Intersection Improvements and Costs

Intersection	Improvement	Total Cost ($)

Notes:
1 Improvements are only needed for Year 2035.
2 Improvement is included within the 2011 San Bernardino Associated Governments (SANBAG) Development Mitigation Nexus Study.
Source: Kunzman Associates, Inc., 2013.

Project Contribution and Fair Share Costs

The project fair share contributions have also been calculated for Year 2035 improvement locations. The project share of cost has been based on the proportion of project peak hour traffic contributed to the improvement location relative to the total new peak hour Year 2035 traffic volume.

Table 24 provides a summary of improvement cost and project cost shares at the Year 2035 intersection improvement locations. The intersection fair share cost calculations are based on the highest of the morning, mid-day, or evening peak hour traffic volumes.

Table 24: Project Fair Share Intersection Traffic Contribution

Intersection	Total Cost ($)	Existing Traffic	Year 2035 With Project Traffic	Project Traffic	Total New Traffic	Project Percent (%) of New Traffic	Project Cost ($) Share[1]
Mountain View Avenue (NS) at:							
Rosewood Drive (EW) -#4	50,000						
-Morning Peak Hour		2,207	2,931	198	724	27.3	13,650
-Mid-Day Peak Hour		1,771	2,496	198	725	27.3	13,650
-Evening Peak Hour		2,145	3,504	246	1,359	18.1	9,050
Business Center Drive (EW) -#5	10,000						
-Morning Peak Hour		2,221	2,880	125	659	19.0	1,900
-Mid-Day Peak Hour		1,826	2,471	125	645	19.4	1,940
-Evening Peak Hour		2,158	3,431	154	1,273	12.1	1,210
Redlands Boulevard (EW) -#7	170,000						
-Morning Peak Hour		2,718	3,767	50	1,049	4.8	8,160
-Mid-Day Peak Hour		2,621	3,695	50	1,074	4.7	7,990
-Evening Peak Hour		3,051	4,870	60	1,819	3.3	5,610
Total	230,000						23,750

Table 24 (cont.): Project Fair Share Intersection Traffic Contribution

Intersection	Total Cost ($)	Existing Traffic	Year 2035 With Project Traffic	Project Traffic	Total New Traffic	Project Percent (%) of New Traffic	Project Cost ($) Share[1]
Notes: [1] The project cost share is the highest amount for either the morning, mid-day, or evening peak hour.							

Project Improvements and Mitigation

Project-Level Mitigation

MM TRAN-1a The proposed project shall construct Mountain View Avenue from the north project boundary to Rosewood Drive at its ultimate half-section width, including landscaping and parkway improvements, in conjunction with development.

MM TRAN-1b The proposed project shall construct Rosewood Drive from the west project boundary to Mountain View Avenue at its ultimate half-section width, including landscaping and parkway improvements, in conjunction with development.

MM TRAN-1c The project site shall provide sufficient parking spaces to meet City of Loma Linda parking code requirements in order to service onsite parking demand.

MM TRAN-1d Onsite traffic signing and striping shall be implemented in conjunction with detailed construction plans for the proposed project.

MM TRAN-1e Sight distance at each project access shall be reviewed with respect to California Department of Transportation/City of Loma Linda standards in conjunction with the preparation of final grading, landscaping, and street improvement plans.

Cumulative-Level Mitigation

MM TRAN-2 The proposed project shall contribute on a fair share basis, through an adopted traffic impact fee program, in the implementation of the recommended intersection lane improvements or freeway improvements, or in dollar equivalent in lieu mitigation contributions, or in the implementation of additional capacity on parallel routes to offset potential impacts to study area intersections. Such actions shall be consistent with the needed improvements for study area intersections as provided in the Traffic Impact Analysis prepared for the proposed project, and the improvement cost and project cost shares at the Year 2035 intersection improvement locations as provided in the Traffic Impact Analysis.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less Than Significant with Mitigation Incorporated. As addressed above, for facilities identified in the Congestion Management Program (CMP), including intersections, segments, and freeways, the CMP definition of deficiency is based on maintaining a LOS standard of LOS E or better, except where an existing LOS F condition is identified in the CMP. A CMP deficiency is, therefore, defined as any facility operating or projected to operate at LOS F, unless the facility is identified explicitly in the CMP document. If the facility is specifically identified in the CMP document as operating at LOS F, then a 10 percent or more degradation in the quantitative measure used to determine the LOS (such as delay, V/C, or travel speed) will comprise a deficiency, which must be addressed by a deficiency plan.

In the immediate project area, the I-10 Freeway, Mountain View Avenue, and Redlands Boulevard are identified, among others, as CMP facilities. Impact 16a) details the proposed project's potential impacts on both the local City of Loma Linda and regional CMP study area roadway network. As determined above, Mitigation Measures TRAN-1a through TRAN-1e and TRAN-2 will be required to reduce the proposed project's potential effects on intersection and roadway operations in the study area, including those possible impacts to CMP facilities, to acceptable levels of significance. Therefore, with mitigation, impacts associated with CMP facilities will be less than significant.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Less Than Significant With Mitigation Incorporated. As addressed in Impact 8e), the nearest public airport to the project site is the San Bernardino International Airport (formerly Norton Air Force Base), which is located approximately 1.7 miles north of the project site, just north of the Santa Ana River. The airport is currently operating as a general aviation and cargo airport and does not presently support commercial aviation. An Airport Land Use Compatibility Plan (ALUCP) has not been adopted for the airport. As such, compatibility/safety zones have yet to be identified around the airport.

As part of the proposed project, a variance will be required to allow for construction of a freeway pole sign that will exceed the sign height maximum established by the City of Loma Linda for the EVC-Commercial zoning district. Since an ALUCP has yet to be adopted for the San Bernardino International Airport, it is currently unknown whether the height of the freeway pole sign will comply with the height provisions contained in the ALUCP. The Federal Aviation Administration (FAA), however, has established height requirements for land uses located within certain distances of airports. As a result, in lieu of an adopted ALUCP, it is recommended that the freeway pole sign comply with all applicable FAA regulations regarding height, as outlined in Mitigation Measure HAZ-1. Therefore, following implementation of mitigation, impacts associated with air traffic airport hazards will be less than significant.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. As provided in Table 18, Table 20, and Table 15, the project driveways from Mountain View Avenue and Rosewood Drive will operate at acceptable LOS for Existing, Opening Year (2015), and Year 2035 traffic conditions. As such, the location of these driveways will not contribute to potential traffic or queuing impacts that could be considered a hazardous design feature. Additionally, planned offsite improvements, including parkway and median construction and expansion within the public right-of-way, will not alter the current alignment, width, or capacity of the adjacent roadways, and as a result, will also not be considered a hazardous design feature. Therefore, impacts associated with hazardous design feature will be less than significant.

e) Result in inadequate emergency access?

Less Than Significant Impact. The project site will be accessible via two project driveways, one from Mountain View Avenue, and the other from Rosewood Drive. To ensure that emergency responders have adequate access to the project site, these driveways, as well as the internal circulation driveways, have been designed in accordance with City of Loma Linda standards related to width, clearance, and turning radius. Therefore, impacts associated with emergency access will be less than significant.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Less Than Significant Impact. The project site is currently bound by an approximately six-foot wide sidewalk along Mountain View Avenue. Additionally, Figure 6.6 of the City of Loma Linda General Plan Circulation Element identifies a future Class II Bicycle Facility along Mountain View Avenue, although no designated bike lanes are currently located on either Mountain View Avenue or Rosewood Drive. Further, no public transit facilities/bus stops are located adjacent to the project site.

The proposed project will include construction and improvements within Mountain View Avenue, Rosewood Avenue, and the public right-of-way that bounds the project site. As part of these improvements, a 6-foot wide sidewalk will be constructed around both the eastern and western edge of the project site, which will improve pedestrian access to both the project site and surrounding land uses. Once constructed, none of these planned improvement will impede the City's ability to incorporate the future Class II Bicycle Facility along Mountain View Avenue, nor will these improvements interfere with the public transit facilities/bus stops in the project area. Therefore, impacts associated with the adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities will be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
17. Utilities and Service Systems *Would the project:*				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Environmental Evaluation

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact. The City of Loma Linda receives wastewater treatment from the San Bernardino Municipal Water Department Water Reclamation Plant (WRP), which is operated by the City of San Bernardino. The WRP is a regional secondary treatment facility that employees primary and secondary treatment processes to meet the discharge standards of the National Pollutant Discharge Elimination Permit (NPDES) issued to the facility by the State of California Regional Water

Quality Control Board (RWQCB). Although the WRP is permitted to treat up to 41 million gallons per day of wastewater, the facility currently receives closer to 33 mgd, equating to approximately eight mgd of surplus treatment capacity. Secondary treated wastewater from the WRP discharges to an offsite tertiary treatment facility operated jointly by the City of San Bernardino and the City of Colton. The Rapid Infiltration and Extraction (RIX) facility within the WRP receives approximately 33 mgd of secondary treated wastewater from the WRP and the City of Colton's treatment facility. Natural bio-filtration is employed through the use of percolation basins, and ultra-violet (UV) disinfection is used to meet the State of California Title 22 tertiary standards, in addition to the discharge standards specified in a separate NPDES permit issued to the RIX facility. RIX treated wastewater consistently meets or exceeds required discharge standards.

The proposed project consists of a new convenience store, gas station, car wash, and separate commercial building pad on the project site. Of all these project components, the car wash will potentially produce the greatest need for the conveyance and disposal of wastewater. However, the carwash will include a graywater recycling system, which will collect and filter/treat graywater from previous carwashes for reuse with future carwashes. By employing this recycling system, no graywater will be discharged into the municipal sewer system for wastewater treatment. The other project components will generate only a modest amount of wastewater, primarily associated with onsite bathroom/kitchen facilities. This wastewater production will represent only a nominal percentage of the 41 mgd of permitted wastewater treatment capacity, especially when considering that the WRP currently has approximately eight mgd of surplus treatment capacity, and will not cause the WRP to exceed its permitted capacity. Therefore, impacts associated with wastewater treatment requirements will be less than significant.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Water Facilities

Less Than Significant Impact. As addressed in Impact 9b), based on final buildout acreages found in Table 2.D of the General Plan's Land Use Element, and projected water deliveries found in Table 8-15 of the UWMP, it is estimated that commercial uses such as the proposed project have an annual water demand approximately 3.46 acre feet per year (afy). Based on the project site's 1.07 acres, the proposed project's water demand is estimated to be roughly 3.7 afy, or 3,303 gallons per day (gpd). As provided in Table 12, this estimated water demand will represent only a nominal percentage (0.001 percent or less) of projected surplus (projected supply minus project demand) for the single- and multiple dry year scenarios. The UWMP's projected water supplies and demands are based on the assumption of existing facilities, capacities, and entitlements, and do not take into account new or expanded facilities, capacities, and entitlements. Therefore, impacts associated with water facilities will be less than significant.

Wastewater Treatment Facilities

Less Than Significant Impact. The proposed project consists of a new convenience store, gas station, car wash, and separate commercial building pad on the project site. Of all these project

components, the car wash will potentially produce the greatest need for the conveyance and disposal of wastewater. However, the carwash will include a graywater recycling system, which will collect and filter/treat graywater from previous carwashes for reuse with future carwashes. By employing this recycling system, no graywater will be discharged into the municipal sewer system for wastewater treatment. The other project components will generate only a modest amount of wastewater, primarily associated with onsite bathroom/kitchen facilities. This wastewater production will represent only a nominal percentage of the 41 mgd of permitted wastewater treatment capacity, especially when considering that the WRP currently has approximately eight mgd of surplus treatment capacity, and will not cause the WRP to exceed its permitted capacity. Therefore, impacts associated with wastewater treatment facilities will be less than significant.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. According to the Preliminary Drainage Study (Appendix C) prepared for the proposed project, a new bio-retention/detention basin will be constructed on the northwest portion of the project site, just north of the separate commercial building pad and west of the convenience store/carwash. During a storm event, onsite surface flows will be collected and conveyed in a controlled manner through the project site and direct towards the bio-retention/detention basin. Only during medium to large storm events will a limited amount of runoff be permitted to discharge into the existing Caltrans channel located along the northern project boundary during.

The bio-retention/detention basin is one component of the proposed project. The potential environmental effects of construction and operation of the bio-retention/detention basin has been evaluated throughout Section 2, Environmental Checklist and Environmental Evaluation, of this IS. Therefore, impacts associated with new or expanded storm water drainage facilities will be less than significant.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. It is estimated that commercial uses such as the proposed project have an annual water demand approximately 3.46 acre feet per year (afy). Based on the project site's 1.07 acres, the proposed project's water demand is estimated to be roughly 3.7 afy, or 3,303 gallons per day (gpd). As provided in Table 12, this estimated water demand will represent only a nominal percentage (0.001 percent or less) of projected surplus (projected supply minus project demand) for the single- and multiple dry year scenarios. The UWMP's projected water supplies and demands are based on the assumption of existing facilities, capacities, and entitlements, and do not take into account new or expanded facilities, capacities, and entitlements. Therefore, impacts associated with water supplies will be less than significant.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. The proposed project consists of a new convenience store, gas station, car wash, and separate commercial building pad on the project site. Of all these project components, the car wash will potentially produce the greatest need for the conveyance and disposal of wastewater. However, the carwash will include a graywater recycling system, which will collect and filter/treat graywater from previous carwashes for reuse with future carwashes. By employing this recycling system, no graywater will be discharged into the municipal sewer system for wastewater treatment. The other project components will generate only a modest amount of wastewater, primarily associated with onsite bathroom/kitchen facilities. This wastewater production will represent only a nominal percentage of the 41 mgd of permitted wastewater treatment capacity, especially when considering that the WRP currently has approximately eight mgd of surplus treatment capacity, and will not cause the WRP to exceed its permitted capacity. Therefore, impacts associated with wastewater treatment capacity will be less than significant.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. Solid waste produced in the City of Loma Linda is collected and transported by Republic Services to the County of San Bernardino's 366-acre San Timoteo Sanitary Landfill, located just south of the City of Redlands. The San Timoteo landfill has 114 acres permitted for disposal, a permitted daily throughput of 2,000 tons, and a remaining total capacity of 13,605,488 cubic yards. Solid waste generation rates published by the California Department of Resources Recycling and Recovery (CalRecycle) state that commercial uses such as the proposed project can produce 5 pounds of refuse per 1,000 square feet of floor space. Based upon this solid waste generation rate and the proposed project's 17,619 square feet of floor space (convenience store, gas station, fueling canopy, building pad), the project will produce approximately 88 pounds of refuse per day. This solid waste production will represents only a nominal percentage (roughly 0.002 percent) of the San Timoteo Sanitary Landfill's daily permitted capacity. Therefore, impacts associated with permitted landfill capacity will be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant Impact. All collection, transportation, and disposal of any solid waste generating by the proposed project will comply with all applicable federal, State, and local statutes and regulations. Solid waste produced in the City of Loma Linda is collected and transported by Republic Services, who is permitted and licensed to collect and transport solid waste in the City of Loma Linda. Once collected, solid waste is transported to the County of San Bernardino's San Timoteo Sanitary Landfill, which has the 114 acres permitted for disposal. Both Republic Services' and the County's facilities and operations are periodically inspected by regional and State agencies for compliance with all applicable statutes and regulations.

Any hazardous materials (e.g., asbestos containing materials) collected on the project site during either construction or operation of the project will be transported and disposed of by a permitted and licensed hazardous materials service provider at a facility permitted to accept such hazardous materials. Therefore, impacts associated with solid waste statutes and regulations will be less than significant.

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

Environmental Evaluation

Would the project:

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

Less Than Significant With Mitigation Incorporated. As addressed above in Section 2.4, Biological Resources, of this IS, the project site is located in a predominantly developed setting and currently contains four existing single-family residences, as well as a portion of undeveloped but previously disturbed land in the northern portion of the site. Plant species presently found on the project site consist of non-native and ruderal species. No native plant species occur on the project site. Together, these onsite plant species form a non-native, non-cohesive plant community not known to support any candidate, sensitive, or special status plant species. The onsite plant communities are not known to support any candidate, sensitive, or special status wildlife species. However, existing trees currently found on the project site may potentially contain resident or nesting avian species protected by the Migratory Bird Treaty Act of 1918. As a result, Mitigation Measures BIO-1a and BIO-

1b will be required to reduce impacts to less than significant. Therefore, with implementation of mitigation, impacts associated with sensitive species will be less than significant.

Additionally, as discussed earlier in Section 2.5, Cultural Resources, of this IS, aside from their age, the four single-family residences fail to meet any of the four CR significance criteria. Furthermore, a review of the project site shows that the modern ground surface has been previously disturbed as a result of prior development activity, and cultural resources remains exposed on the modern ground surface are unlikely to survive intact under these conditions. It is possible, although unlikely, that buried archaeological or paleontological resources or human remains could be uncovered during grading, excavation, and other subsurface construction activity. In the event that any of such cultural resources is inadvertently encountered during construction activity, Mitigation Measures CR-1 through CR-3 will be required. Following implementation of mitigation, impacts associated with currently unknown buried cultural resources will be less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less Than Significant With Mitigation Incorporated. As discussed throughout Section 2, Environmental Checklist and Environmental Evaluation, of this IS, environmental impacts associated with both the construction and operation of the proposed project will be less than significant with the incorporation of previously identified mitigation. The development of the proposed project combined with other past, present, and reasonably foreseeable future projects in the broader project area could potentially result in cumulative environmental impacts, if these projects, collectively, would exceed the previously identified environmental impact thresholds. However, the proposed project's individual impacts will be less than significant with implementation of mitigation, and thus, the project's contribution to any potential cumulative impacts will be less than significant.

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

Less Than Significant With Mitigation Incorporated. As discussed throughout Section 2, Environmental Checklist and Environmental Evaluation, of this IS, with the incorporation of previously identified mitigation, all environmental impacts associated with both the construction and operation of the proposed project would be less than significant. Therefore, the proposed project will not result in a substantial adverse effect, either directly or indirectly, on human beings.

SECTION 3: REFERENCES

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