Draft Environmental Impact Report for the

Gless Ranch Proposed Shopping Center

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D Biological Resources Tech Report and MSHCP Consistency Analysis
E Phase I Archaeological Assessment
F Preliminary Geotechnical Evaluation and Preliminary Rock Hardness/Rippability Study
G Phase II Environmental Site Characterization
H Environmental FirstSearch Report
I Final Environmental Noise Assessment
J Traffic Impact Analysis Report
K Urban Decay Analysis
L Western Municipal Water District Will-Serve Letter

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EXECUTIVE SUMMARY

ES-1.1 Introduction

This document serves as the draft environmental impact report (DEIR) for the proposed development of a commercial retail center called "Gless Ranch."

ES-1.2 Document Purpose

This DEIR has been prepared by the City of Riverside (City), as Lead Agency, to inform decision-makers and the public of the potential significant environmental effects associated with the proposed project. This DEIR has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (California Public Resources Code, Section 21000 et seq.) and the Guidelines for Implementation of the California Environmental Quality Act (14 CCR 15000 et seq.) published by the Public Resources Agency of the State of California and in accordance with Riverside's CEQA Guidelines.

As described in Section 15121 (a) and 15362 of the State CEQA Guidelines,[1] an EIR is an informational document which will inform public agency decision-makers and the public of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The purpose of this DEIR, therefore, is to focus the discussion on those potential effects on the environment of the proposed project which the Lead Agency has determined may be significant. In addition, feasible mitigation measures are recommended, when applicable, that could reduce significant environmental impacts or avoid significant environmental impacts.

This DEIR was prepared in accordance with Section 15151 of the State CEQA Guidelines, which define the standards for EIR adequacy:

> *An EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.*

[1] California Code of Regulations Title 14, Chapter 3, Sections 15000-15387.

ES-1.3 Project Location

The proposed project is located in the City, bounded to the north by the unincorporated Riverside County communities of Rubidoux and Jurupa and the cities of Colton and Rialto in San Bernardino County, to the south by unincorporated Riverside County, to the east by the City of Moreno Valley and Riverside County, and to the west by the cities of Corona and Norco and Riverside County (see Figure ES-1, Regional Map and Figure ES-2, Vicinity Map).

Specifically, the approximately 40-acre project site is bounded by Van Buren Boulevard to the north, Barton Street to the east, Gless Ranch Road to the south, and residential development to the west. The project site is located adjacent to single-family residential development on the north, south, and west, and vacant land owned by the March Joint Powers Authority (JPA) to the east (see Figure ES-3, Aerial Map). Project location is further discussed in Section 2.0, Project Description, of this DEIR.

ES-1.4 Project Description

ES-1.4.1 Background

The project site has been used as a citrus grove since approximately 1964. The site supports a packing facility, a warehouse/workshop shed, two mobile homes used as residences for caretakers of the property, and includes five windmill-type fans, six aboveground storage tanks, a mobile fuel storage tank, a fuel dispenser, and containers holding pesticides that serve to support the maintenance and operation of the orange grove. According to the applicant, the windmills are currently inoperable and the storage tanks are not in use.

The site was annexed into the City on November 5, 2002. The approved annexation changed the project site zoning from Agricultural to Commercial. The project site is zoned CR-S-2-X-SP – Commercial Retail, Height and Setback Restriction, and Specific Plan Overlay Zones. The Riverside General Plan 2025 (GP 2025) land use designation is C – Commercial (City of Riverside 2007). . The project site is designated as Commercial in the Orangecrest Specific Plan. The proposed project is therefore consistent with the zoning and land use designation of the GP 2025 and Orangecrest Specific Plan. Background information about the project site is further discussed in Section 2.0, Project Description, of this DEIR.

ES-1.4.2 Project Objectives

Project objectives allow for the analysis of reasonable alternatives to the proposed project. Reasonable alternatives must be analyzed in accordance with Section 15126.6 of the State CEQA Guidelines. The proposed project is intended to meet the following objectives:

- Provide a broad range of retail sales and service with updated, modern, and energy-efficient buildings within the nearby residential community;

- Create a development consistent with the City's land use and general plan designation that will contribute to the maintenance of an economic base that provides high-quality jobs for those who choose to both live and work in Riverside;
- Create short-term construction employment and long-term operational employment;
- Utilize a commercially zoned and designated site that is located within an urbanized area through the development of an economically productive retail project;
- Improve the local and regional economy through job generation and increased tax revenues from the proposed retail uses;
- Incorporate elements of sustainable development to promote the efficient use of energy and water;
- Provide adequate parking facilities to serve the proposed retail uses;
- Provide improved public amenities and infrastructure;
- Develop a retail center with amenities within proximity to nearby residential community in order to reduce vehicles miles traveled to like services.

ES-1.4.3 Required Permits and/or Approval

Implementation of the proposed project may require permits or other forms of approval from public agencies or other entities prior to construction of the proposed commercial retail center. They include but are not limited to, the following:

City of Riverside

Certification of this EIR, parcel map, design review, landscape review, related variance, and other discretionary actions shall be reviewed and/or approved by Planning Staff, City Planning Commission, and/or City Council.

Plan Check process and approval is required.

California Department of Fish and Game (CDFG)

It is anticipated that the site will require a 1600 Streambed Alternation Agreement to fill in the existing drainage on site.

Regional Water Quality Control Board (RWQCB)

National Pollutant Discharge Elimination System (NPDES) General Construction Permits will be required for grading activities of 1 acre or larger. Since the project would disturb more than 1 acre of soil, the applicant must file a Notice of Intent with the RWQCB and obtain a General Construction Activity Stormwater Permit, pursuant to the NPDES regulations established under the Clean Water Act

(CWA). This permit requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which is intended to prevent degradation of surface and ground waters during the grading and construction process.

A report of waste discharge shall be submitted to the RWQCB to obtain either a waste discharge requirement (WDR) or a waiver for any impacts to water of the State.

South Coast Air Quality Management District (SCAQMD)

A fugitive dust control plan submitted to the SCAQMD for approval will be required prior to issuance of grading permits (SCAQMD Rule 403).

ES-1.5 Summary of Environmental Impacts and Mitigation Measures

The following table, Table ES-1, Summary of Environmental Impacts and Mitigation Measures, provides a summary of the impact analysis related to the proposed project. The table identifies a summary of the significant environmental impacts resulting from the project pursuant to the State CEQA Guidelines Section 15123(b)(1), for more detailed discussion, please see Section 4 of this document. Table ES-1 also lists the applicable mitigation measures related to identified significant impacts, as well as the level of significant after mitigation is identified. As stated in Section 2.0 of the DEIR, the Initial Study prepared and circulated with the NOP for public review on the proposed project concluded that the proposed project would not result in significant impacts to Geology and Soils, Land Use/Planning, Mineral Resources, Population/housing, Public Services, and Recreation; therefore, these sections are not addressed in the EIR, and thus not mentioned in Table ES-1.

ES-1
Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
AESTHETICS		
Would the project have a substantial adverse effect on a scenic vista?	None	N/A
Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	None	N/A
Would the project substantially degrade the existing visual character or quality of the site and its surroundings?	No feasible mitigation measures exist to remedy the impact of replacing orange groves with buildings.	**Significant and unavoidable**
Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	**AES-1**: In order to avoid all light spill from the project site on adjacent residential uses, the project proponent shall be required to install shielding and use directional devices to ensure the light spill from the site is 0.0. The project proponent shall submit a photometric study confirming the light spill onto residential properties to the west and south of the site results in no light spillage from the project. **AES-2**: All glass to be incorporated into the exterior of building shall be either of low-reflectivity, or accompanied by a non-glare coating.	Less than significant
AGRICULTURAL RESOURCES		
Would the project Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	No feasible mitigation measures can be incorporated to address the conversion of designated farmland.	**Significant and unavoidable**
Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use?	No feasible mitigation measures can be incorporated to address the conversion of existing agricultural lands into non-agricultural lands.	**Significant and unavoidable**

ES-1
Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
AIR QUALITY		
Would the project conflict with or obstruct the implementation of the applicable air quality plan?	None	N/A
Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Construction Emissions: **AQ-1**: In order to address emissions related to construction activities, consistent with SCAQMD Rule 403, it is required that fugitive dust generated by grading and construction activities be kept to a minimum with a goal of retaining dust on the site, by following the dust control measures listed below: a) During clearing, grading, earthmoving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and to create a crust after each day's activities cease. b) During construction, water truck or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas later in the morning and after work is completed for the day and whenever winds exceed 15 miles per hour. c) Soil stockpiled for more than 2 days shall be covered, kept moist, or treated with soil binders to prevent dust generation. d) Reduce speeds on unpaved roads to less than 15 miles per hour. e) Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.	Construction Emissions: **Significant and unavoidable** Operational Emissions: **Significant and unavoidable**

ES-1
Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	f) Dirt and debris spilled onto paved surfaces at the project site and on the adjacent roadways shall be swept, vacuumed, and/or washed at the end of each workday. g) Should minor import/export of soil materials be required, all trucks hauling dirt, sand, soil, or other loose material to and from the construction site shall be tarped and maintain a minimum 2 feet of freeboard. h) At a minimum, at each vehicle egress from the project site to a paved public road, install a pad consisting of washed gravel (minimum-size: 1 inch) maintained in a clean condition to a depth of at least 6 inches and extending at least 30 feet wide and at least 50 feet long (or as otherwise directed by SCAQMD). i) Review and comply with any additional requirements of SCAQMD Rule 403. **AQ-2**: The following measures shall be adhered to during project grading and construction to reduce VOC and NO_x from construction equipment: a) Heavy-duty diesel-powered construction equipment rated at greater than 50 horsepower shall be equipped with Tier 2 or better diesel engines. b) The engine size of construction equipment shall be the minimum size. c) The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest	

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Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	number is operating at any one time. d) Construction equipment shall be maintained in tune per the manufacturer's specifications. e) Catalytic converters shall be installed on gasoline-powered equipment over 50 horsepower. f) Electric equipment shall be utilized in lieu of diesel-powered equipment, where feasible. **AQ-3**: The project developer shall use zero-VOC-content architectural coatings during project construction/application of paints and other architectural coatings to reduce ozone precursors. If zero-VOC paint cannot be utilized, developer shall avoid application of architectural coatings during the peak smog season: July, August, and September. Developer shall procure architectural coatings from a supplier in compliance with the requirements of SCAQMD's Rule 1113 (Architectural Coatings). Operational Emissions: **AQ-4**: In order to address long-term air quality emissions associated with project operation, the following mitigation measure will reduce impacts as shown on Table 4.3-10: • The project developer shall ensure that zero-VOC-content architectural coatings are used for building maintenance to reduce ozone precursors. If zero-VOC paint cannot be utilized, application of architectural coatings should be avoided during the peak smog season: July, August, and September. Architectural	

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Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	coatings shall be procured from a supplier in compliance with the requirements of SCAQMD's Rule 1113 (Architectural Coatings). • Additionally, the project will implement energy conservation design features that would result in exceeding the 2008 Title 24 requirements by a minimum of 15%. Note that this measure applies to the project as a whole rather than to specific building.	
Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O_3 precursors)?	No feasible mitigation can be incorporated which addresses the project's cumulatively considerable emissions from vehicles coming to and from the site.	**Significant and unavoidable**
Would the project expose sensitive receptors to substantial pollutant concentrations?	LST Analysis: **AQ-2:** The following measures shall be adhered to during project grading and construction to reduce VOC and NO_x from construction equipment: a) Heavy-duty diesel-powered construction equipment rated at greater than 50 horsepower shall be equipped with Tier 2 or better diesel engines. b) The engine size of construction equipment shall be the minimum size. c) The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest number is operating at any one time. d) Construction equipment shall be maintained in tune per the manufacturer's specifications.	LST Analysis: **Significant and unavoidable**

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Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
Would the project expose sensitive receptors to substantial pollutant concentrations?	e) Catalytic converters shall be installed on gasoline-powered equipment over 50 horsepower. f) Electric equipment shall be utilized in lieu of diesel-powered equipment, where feasible.	
Would the project create objectionable odors affecting a substantial number of people?	**AQ-5**: In order to address odors from the project, any of the following uses including but not limited to fast food restaurants, bakeries, coffee-roasting facilities, automobile maintenance shops (e.g., tire centers), and laundry/dry cleaning facilities, shall implement an Odor Abatement Plan (OAP). The OAP shall include the following: a) Name and telephone number of contact person(s) at the facility responsible for logging in and responding to odor complaints b) Policy and procedure describing the actions to be taken when an odor complaint is received, including the training provided to the staff on how to respond c) Description of potential odor sources at the facility d) Description of potential methods for reducing odors, including minimizing idling of delivery and service trucks and buses, process changes, facility modifications, and/or feasible add-on air pollution control equipment e) Contingency measures to curtail emissions in the event of a public nuisance complaint.	Less than significant

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Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
BIOLOGICAL RESOURCES		
Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	**BIO-1**: To mitigate potential impacts related to Migratory Bird Treaty Act (MBTA), prior to any clearing of the orange groves or any natural vegetation on site that occurs during the nesting bird season (approximately February 1 through August 31), a pre-clearing nesting bird survey should be conducted within 72 hours of the start of clearing activities. This survey should extend to any areas within 300 feet of the project boundary that support potential raptor nesting habitat (i.e., large trees or similar artificial structures such as utility poles or towers). This survey is necessary to determine if there are any active nests within the project site and in the immediate vicinity of the site. If active raptor nests are located, then work should not occur within 300 feet of these nests while the nest are active and young are still dependent on the nests, as determined by a qualified biologist. The survey results shall be submitted to the planning department for review, which will occur prior to grading permit issuance.	Less than significant
Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	**BIO-2**: To mitigate potential impacts related to the unvegetated ephemeral drainage under the jurisdiction of CDFG, the developer shall implement the mitigation required by CDFG. Mitigation options include on site, off site, in lieu fee mitigation, or a combination of all in order to comply with the 1602 Streambed Alteration Agreement.	Less than significant
Would the project 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?	None	N/A

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Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	None	N/A
Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	None	N/A
Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	None	N/A
CULTURAL RESOURCES		
Would the project cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	None	N/A
Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	**CUL-1**: In the unlikely event that potential historical or unique archaeological resources are encountered during construction, grading should be temporarily redirected and/or suspended. The find should be immediately evaluated by a qualified archaeologist. If the find is determined to be a historical or unique archaeological resource, work may continue on other parts of the site while historical or unique archaeological resource mitigation takes place. Additionally, contingency funding for avoidance measures or appropriate mitigation should be available.	Less than significant
Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	**CUL-2**: In the unlikely event that paleontological resources such as vertebrate, plant, or invertebrate fossils are discovered during construction or site disturbance, work shall stop and the City of Riverside Planning Department shall be contacted so that a qualified paleontologist can be	Less than significant

ES-1
Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
	consulted to determine the extent or quality of the find and make recommendations for further action, if necessary.	
Would the project disturb any human remains, including those interred outside of formal cemeteries?	**CUL-1**: In the unlikely event that potential historical or unique archaeological resources are encountered during construction, grading should be temporarily redirected and/or suspended. The find should be immediately evaluated by a qualified archaeologist. If the find is determined to be a historical or unique archaeological resource, work may continue on other parts of the site while historical or unique archaeological resource mitigation takes place. Additionally, contingency funding for avoidance measures or appropriate mitigation should be available.	Less than significant
GREENHOUSE GAS EMISSIONS		
Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**GHG-1**: The following measures shall be adhered to during project grading and construction to reduce VOC and NO_x from construction equipment: a) Heavy-duty diesel-powered construction equipment rated at greater than 50 horsepower shall be equipped with Tier 2 or better diesel engines. b) The engine size of construction equipment shall be the minimum size. c) The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest number is operating at any one time. d) Construction equipment shall be maintained in tune per the manufacturer's specifications. e) Catalytic converters shall be installed on gasoline-powered equipment over 50 horsepower. f) Electric equipment shall be utilized in lieu of diesel-	**Significant and Unavoidable**

ES-1
Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	powered equipment, where feasible. **GHG-2**: In order to address long-term air quality emissions associated with project operation, the applicant shall incorporate the following energy conservation measures into project building plans: • The project will implement energy conservation design features that would result in exceeding the 2008 Title 24 requirements by a minimum of 15%. Note that this measure applies to the project as a whole rather than to specific building.	
Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Project to be consistent with the strategies and measures in the CARB's Climate Change Scoping Plan as well as mitigation measures suggested by the Attorney General and CAPCOA.	Less than Significant
HAZARDS AND HAZARDOUS MATERIALS		
Would the project be located on a site that 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?	**HAZ-1:** The City shall ensure, through conditions on the grading permit, that the upper 6 inches of soil located in the area of soil staining should be removed, as directed by an on-site environmental specialist, and transported, under manifest, to an approved soil recycling company, in accordance with currently accepted standards of practice and law. **HAZ-2:** Earthwork removals within the project site that take place during grading activities should be monitored by an experienced environmental consultant in the event unusual subsurface conditions are encountered and/or to provide recommendations in the event signs of chemical residues are detected. Chains of custody shall be provided by the project applicant to the City for verification.	Less than Significant

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Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
Would the project be located on a site that 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?	**HAZ-3:** All use of hazardous materials and disposal of hazardous wastes during project grading to remove any potentially contaminated soils would be required to comply with state Title 22 and federal Title 40 requirements. The transport and off-site disposal of any hazardous waste found within the site during the associated site preparation work would also be required to comply with these hazardous waste management protocols. Chains of custody shall be provided by the project applicant to the City for verification.	
HYDROLOGY AND WATER QUALITY		
Would the project violate any water quality standards or waste discharge requirements? Would the project 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 preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)? Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site? Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration	None	N/A

ES-1
Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site? Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? Would the project substantially degrade water quality?		
NOISE		
Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	**NOISE-1**: In order to mitigate the noise impact associated with construction noise, and in order to meet the City's noise criteria related to construction noise, the applicant shall ensure prior to grading or demolition permit issuance that: • All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers. • Construction noise reduction methods such as shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible. Unattended construction vehicles shall not idle for more than 5 minutes when located within 200 feet from residential properties. • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from or shielded from the residences located along the western and southern boundaries. • The tree-chipping operation shall be located a minimum of 400 feet from any existing homes.	Less than significant

ES-1
Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	• During construction, stockpiling and vehicle staging areas shall be located as far as practical from noise sensitive receptors, or at least 200-feet from residential properties. A plan shall be provided to the City's Planning Department identifying the staging areas prior to issuance of a construction permit. • Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow surrounding property owners and residents to contact the job superintendent if necessary. In the event the City receives a complaint, appropriate corrective actions shall be implemented and a report of the action provided to the reporting party. **NOISE-2**: In order to mitigate for the impacts related to exceeding the City's noise standards, as well as to mitigate the noise associated with the proposed docking and loading bays associated with the buildings identified as Majors 1, 2, and 3 on the site plan, and the proposed auto repair/tire facility, the project shall construct a 6- to 8-foot-high (as measured from the top of slope) masonry block sound wall along the west and south sides of the project site. With implementation of these sound walls the noise levels would be reduced by approximately 7 to 15 dBA at the adjacent residences and would mitigate the noise impact.	
Would the project result in exposure of persons to or generation of excessive groundbourne vibration or groundborne noise levels?	None needed since impacts were found to be less than significant.	N/A
Would the project create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	**NOISE-2**: In order to mitigate for the impacts related to exceeding the City's noise standards, as well as to mitigate the noise associated with the proposed docking and	Less than significant

ES-1
Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
Would the project create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	loading bays associated with the buildings identified as Majors 1, 2, and 3 on the site plan, and the proposed auto repair/tire facility, the project shall construct a 6- to 8-foot-high (as measured from the top of slope) masonry block sound wall along the west and south sides of the project site. With implementation of these sound walls the noise levels would be reduced by approximately 7 to 15 dBA at the adjacent residences and would mitigate the noise impact.	
Would the project create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	**NOISE-1**: In order to mitigate the noise impact associated with construction noise, and in order to meet the City's noise criteria related to construction noise, the applicant shall ensure prior to grading or demolition permit issuance that: • All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers. • Construction noise reduction methods such as shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible. Unattended construction vehicles shall not idle for more than 5 minutes when located within 200 feet from residential properties. • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from or shielded from the residences located along the western and southern boundaries. • The tree-chipping operation shall be located a minimum of 400 feet from any existing homes.	Less than significant

ES-1
Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
Would the project create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	• During construction, stockpiling and vehicle staging areas shall be located as far as practical from noise sensitive receptors, or at least 200-feet from residential properties. A plan shall be provided to the City's Planning Department identifying the staging areas prior to issuance of a construction permit. • Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow surrounding property owners and residents to contact the job superintendent if necessary. In the event the City receives a complaint, appropriate corrective actions shall be implemented and a report of the action provided to the reporting party.	
TRAFFIC		
Would the project 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? Would the project 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?	**TRAFFIC-1:** Alessandro Boulevard at Arlington Avenue/Chicago Avenue: Widen and/or restripe Alessandro Boulevard to provide a third northbound left-turn lane. Widen and/or restripe Arlington Avenue for three westbound departure lanes. Modify the existing traffic signal. **TRAFFIC-2:** Barton Street at Van Buren Boulevard: Widen and/or restripe Barton Street to provide an exclusive southbound right-turn lane. Modify the existing traffic signal. **TRAFFIC-3:** Wood Road at Van Buren Boulevard: Provide a fair-share contribution towards or construct the following improvements. Widen and/or restripe Van Buren Boulevard and convert the exclusive westbound right-turn lane to a	**Significant** and unavoidable impacts

ES-1
Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
Would the project 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? Would the project 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?	shared through/right-turn lane. Modify the existing traffic signal. **TRAFFIC-4:** Alessandro Boulevard at Arlington Avenue/Chicago Avenue: Provide a fair-share contribution towards or construct the following improvements. Widen and/or restripe Chicago Avenue to provide a third westbound left-turn lane. Modify the existing traffic signal. **TRAFFIC-5:** Trautwein Road/Cole Avenue at Van Buren Boulevard: Provide a fair-share contribution towards or construct the following improvements. Widen and/or restripe Trautwein Road/Cole Avenue to provide an exclusive northbound right-turn lane and a second southbound through lane. Widen and/or restripe Van Buren Boulevard to provide a third eastbound through lane and a second westbound left-turn lane. Modify the existing traffic signal. **TRAFFIC-6:** Barton Street at Van Buren Boulevard: Provide a fair-share contribution towards or construct the following improvements. Modify the traffic signal and install a northbound right-turn overlap phase. **TRAFFIC-7:** Barton Street at Gless Ranch Road: Provide a fair-share contribution towards or construct the following improvements. Widen and/or restripe Barton Street to provide a second northbound through lane and a second northbound departure lane.	

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Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
Would the project conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	None	N/A
URBAN DECAY ANALYSIS		
Would the project result in diversion of sales from existing retail facilities severe enough to result in business closings and subsequent long-term vacancies? Would the project result in business closures significant enough in scale (i.e., in terms of the total square footage affected and/or loss of key "anchor" tenants) to affect the viability of existing shopping centers?	None	N/A
UTILITIES		
Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid	None	N/A

ES-1
Summary of Environmental Impacts and Mitigation Measures

Brief Summary of Environmental Impact Analysis	Mitigation Measures	Level of Impact After Mitigation
waste disposal needs? Would the project comply with federal, state, and local statutes and regulations related to solid waste?		
ENERGY CONSERVATION		
Would the project result in wasteful, inefficient, or unnecessary consumption of energy? Would the project conflict with existing energy standards and regulations? Would the project place a significant demand on local and regional energy supplies or require a substantial amount of additional capacity?	None	N/A

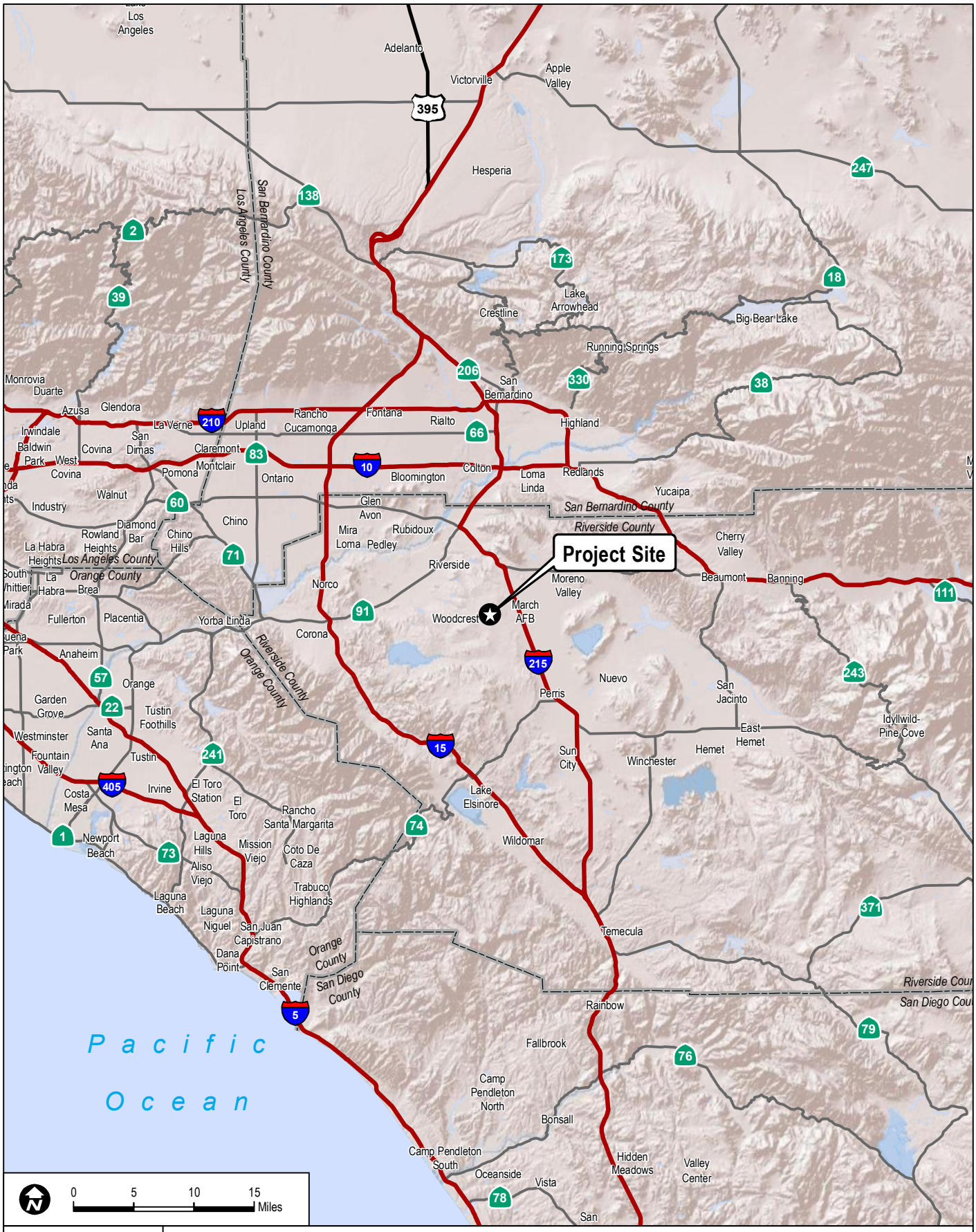

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FIGURE ES-1

Regional Map

GLESS RANCH DEIR

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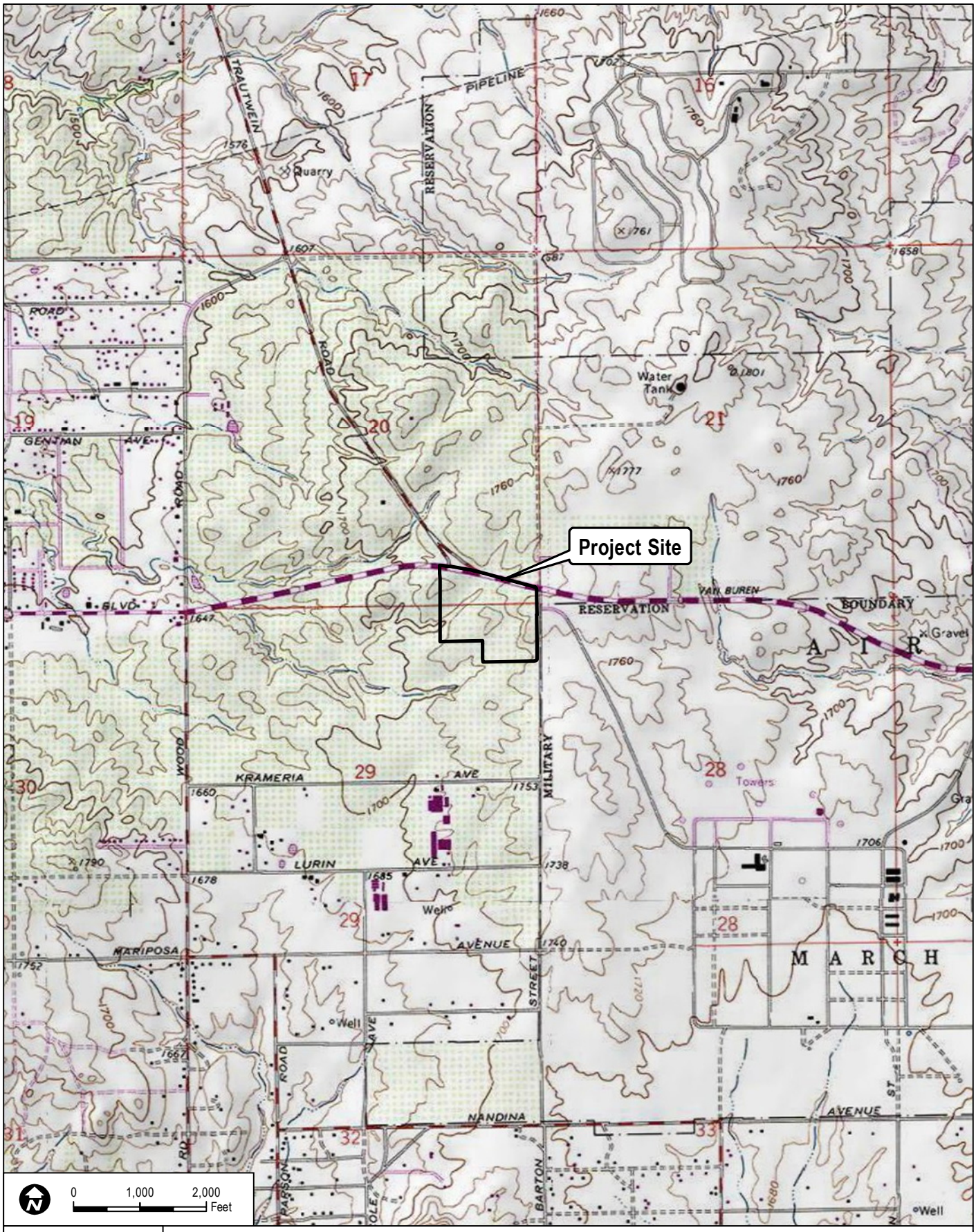

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SOURCE: USGS 7.5-Minute Series Riverside East Quadrangle.

FIGURE ES-2
Vicinity Map

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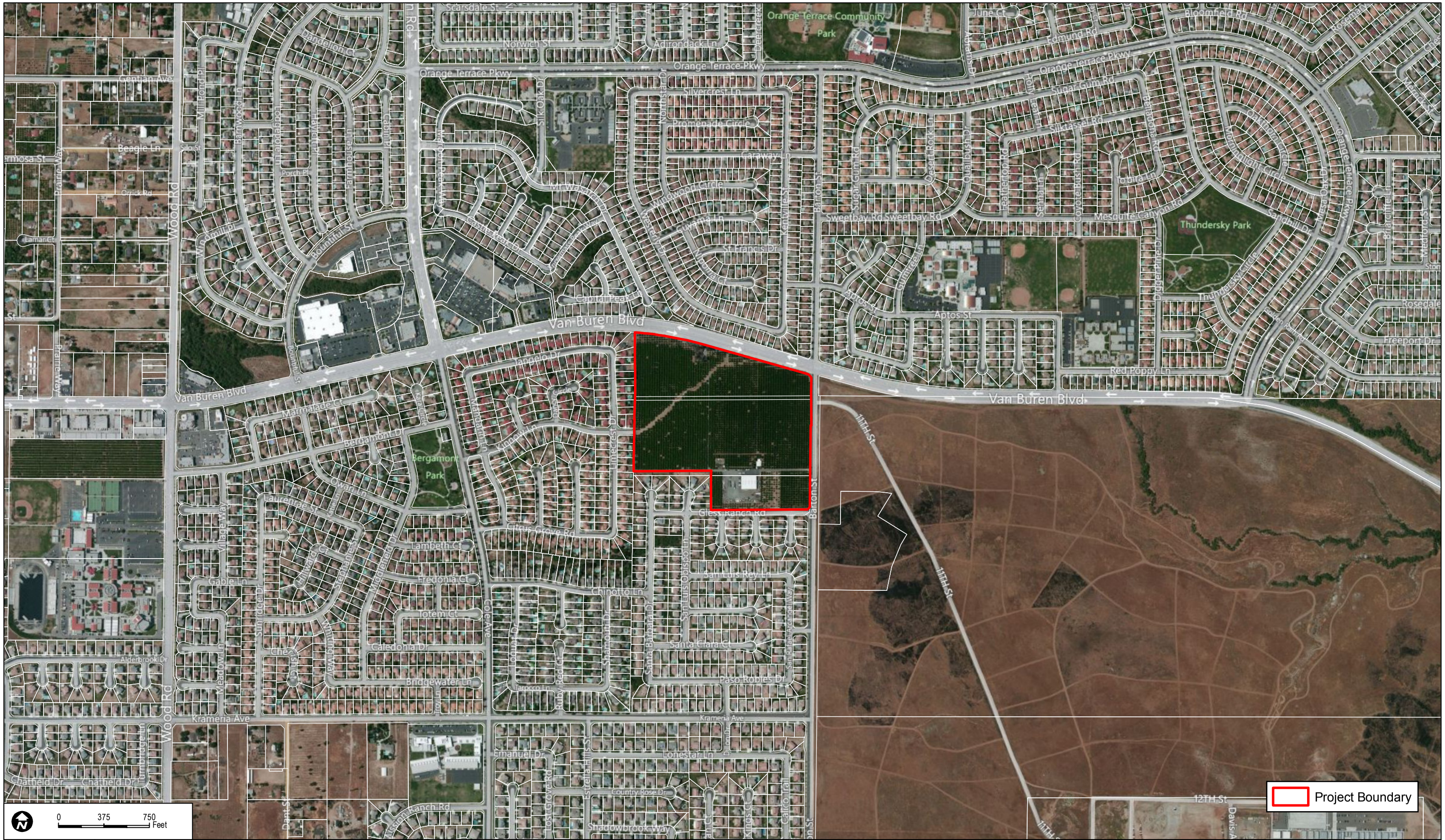

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SOURCE: Bing Maps; Parcels: County of Riverside, Project Boundary: City of Riverside

GLESS RANCH DEIR

FIGURE ES-3

Aerial Photograph

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ES-1.6 Areas of Controversy/Issues to be Resolved

Section 15123(b) (2) of the State CEQA Guidelines requires that areas of controversy known to the lead agency must be stated in the EIR summary. Issues of interest to the public and public agencies were identified during the 30-day public comment period of the Initial Study and Notice of Preparation (NOP). A Public Scoping Session was held before the City of Riverside Planning Commission on January 6, 2011.

Written comments from agencies in response to the NOP were received from:

- Riverside Transit Authority
- Department of Toxic Substances Control
- California Department of Fish and Game
- South Coast Air Quality Management District
- Native American Heritage Commission

Written comments from property owners in response to the NOP were received from:

- Armando G. Arroyo
- Mike and Kerrie Hudson
- Kathy Dawson
- Diana Brown
- Efren and Jacki Espinosa
- Teresa Egan
- Cathryn Van Der Linden
- Kimberly Foy with Johnson and Sedlack
- Francisco Cuevas
- Ms. Lynch
- Steven and Wendy Swift
- Norm and Patti Isabelle
- David Cannella.

Verbal comments received at the January 6, 2011, Public Scoping Session were received from the following people:

- Bonnie Alvarez

- Kelline Crocker
- Sally Brickholder
- Norm Isabelle
- Katherine Vanderlinden

The Initial Study, NOP, distribution list, and comment letters received during the NOP review period are included in Appendix A of this DEIR.

Section 15123(b)(3) of the State CEQA Guidelines requires that an EIR identify issues to be resolved; this includes the choice among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved for the proposed project include decisions by the City as to whether this DEIR adequately describes the potential environmental impacts of the proposed project, the recommended mitigation measures should be adopted or modified, additional mitigation measures need to be applied, the proposed project should or should not be approved as proposed, or the proposed project should be modified based on the alternatives considered in this DEIR.

Areas in which the City will need to make Statements of Overriding Considerations (i.e. significant impacts were identified, and no feasible mitigation measures could reduce impacts to less than significant levels were identified) include: Aesthetics – related to scenic views of the orange groves on site being removed; Agricultural Resources – related to the loss of designated Farmland; Air Quality – related to construction and operational emissions being above SCAQMD significant thresholds; Greenhouse Gas Emissions – related to the project creating GHG's that could contribute to climate change; and Traffic – related to impacts to intersections outside the control of the City of Riverside.

ES-1.7 Summary of Project Alternatives

Section 15126.6 of the State CEQA Guidelines identifies the parameters within which consideration and discussion of alternatives to the proposed project should occur. As stated in this section of the guidelines, alternatives must focus on those that are reasonably feasible and that attain most of the basic objectives of the proposed project. Each alternative must be capable of avoiding or substantially lessening any significant effects of the proposed project. The direct significant environmental effects that result from the proposed project before mitigation include impacts to aesthetics, agricultural resources, air quality, biological resources, cultural resources, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, traffic, urban decay analysis, utilities and service systems, and energy conservation. The proposed project will result in direct significant impacts to aesthetics, agricultural resources, air quality, greenhouse gas emissions, and some traffic thresholds for which there is no feasible mitigation. All other issues areas can either be found to be less than significant or less than significant with mitigation measures incorporated. Cumulatively, the project contributes to significant impacts to agricultural, air quality, greenhouse gas emissions, and traffic. The rationale for selecting the

alternatives to be evaluated and a discussion of the "No Project" alternative are also required, per Section 15126.6.

ES-1.7.1 Alternatives Evaluated in Preparation of Gless Ranch

This DEIR includes an evaluation of the following alternatives:

- No Project Alternative: Existing orange grove would remain and continue operation
- Alternative 1: Keep Natural Blueline Stream Features Alternative
- Alternative 2: Mixed-Use Development Alternative
- Alternative 3: Scaled-Down Commercial Center Alternative
- Alternative 4: Residential Development Alternative

ES-1.7.1.1 No Project Alternative

The No Project Alternative assumes that the project site would not be developed and the existing orange grove would remain and continue operation.

ES-1.7.1.2 Alternative 1: Keep Natural Blueline Stream Features Alternative

Keeping the Natural Blueline Stream Features Alternative would retain and enhance the existing unvegetated, ephemeral drainage located across the site. Retaining and enhancing the drainage will provide a natural aesthetic feature to the site design, making it more pedestrian and community friendly. Citrus trees could be planted along/near the drainage feature. It is assumed there would be a minimum building setback of 50 feet from the drainage feature. The Target and home improvement center will remain as the anchor tenants on site, along with six pads and the existing fruit stand. Courtyards will be provided at the westerly end of Target and the home improvement center for the employees. A pedestrian bridge will be constructed at the southwesterly portion of the drainage feature near the home improvement center so that both employees and visitors are able to access the entire shopping center. This alternative will reduce the number of pads on site and reduce the overall project footprint by approximately 118,000 square feet.

ES-1.7.1.3 Alternative 2: Mixed-Use Development Alternative

The Mixed-Use Development Alternative proposes a horizontal type mixed-use development with commercial use along the frontage of Van Buren Boulevard and Barton Street and residential development toward the southerly and westerly portion of the site. A General Plan Amendment and Rezoning would be required for the mixed-use zoning. The residential development will consist of two 2-story, multiple-family housing units (condominiums/apartments). Commercial uses would be placed northerly of the site, away from the residential development to the south and west property lines.

Target will serve as the anchor tenant along the northeast portion of the site. The development will feature restaurants, a bank, the existing fruit stand and other light commercial type uses as permitted by the Commercial Zoning Code (Ch. 19.150). Walking paths will link the residential and commercial type uses to provide connection within the mixed-use development.

ES-1.7.1.4 Alternative 3: Scaled Down Commercial Center Alternative

The Scaled-Down Commercial Center Alternative would involve the development of a commercial retail center similar to that proposed; however, the size of the project would be less. Instead of developing a site with up to 420,000 square feet of retail commercial space with 15 tenants, an approximate total of 250,000 square feet would be constructed (an approximate 40% reduction in total building square footage). The site would be prepared, graded, and designed in the same manner as the proposed project, but would be pulled away from residences to the south and west, and pulled farther north. This project alternative would involve the development of a smaller retail development that would include only two retail stores—Target and another midsize tenant (i.e., grocery store). These two main retail anchor tenants will be set back farther from the residential uses (closer to Van Buren Boulevard) with the addition of more rows of citrus trees to serve as a landscape buffer along the southerly and westerly side of the site.

ES-1.7.1.5 Alternative 4: Residential Development Alternative

The Residential Development Alternative would consist of single-family residential development. A General Plan Amendment and Rezoning from commercial to residential designation would be required as part of the entitlement process. The proposed zoning would be R-1-7000, single-family residential to match the existing surrounding residential development pattern. The density would be approximately four dwelling units per acre, which would result in approximately 140 to 150 residential lots with associated roads, sidewalk, open space, and utility improvements. The citrus trees could be incorporated as backyard landscaping in the residential lots and within the open space areas. The overall aesthetics of the residential development will be similar to the surrounding residences and avoid large scale retail buildings and parking lot lights.

Table ES-2, Comparison of Alternatives, provides a summary of the alternatives impact analysis considered in the DEIR and identifies the areas of potential environmental effects per CEQA, and ranks each alternative as better, the same, or worse than the proposed project with respect to each area. The analysis comparing the impacts of the alternatives with the proposed project is discussed further in Section 7.3 of the DEIR.

Table ES-2
Comparison of Alternatives

Environmental Issue Area	Proposed Project	No Project	Alternative 1 – Keep Natural Blueline Stream Feature	Alternative 2 – Mixed Use Development	Alternative 3 – Scaled Down Commercial Center	Alternative 4 – Residential Developme nt
Aesthetics	Significant and Unavoidable	Better	Better	Same	Better	Better
Agricultural Resources	Significant and Unavoidable	Better	Same	Same	Same	Same
Air Quality	Significant and Unavoidable	Better	Better	Worse	Better	Worse
Biological Resources	Less than Significant Impacts with Mitigation Incorporated	Better	Better	Same	Same	Same
Cultural Resources	Less than Significant Impacts with Mitigation Incorporated	Better	Same	Same	Same	Same
Greenhouse Gas Emissions	Significant and Unavoidable	Better	Same	Same	Same	Same
Hazards and Hazardous Materials	Less than Significant Impacts with Mitigation Incorporated	Same	Same	Same	Same	Same
Hydrology and Water Quality	Less than Significant	Worse	Better	Same	Better	Same
Noise	Less than Significant Impacts with Mitigation Incorporated	Better	Same	Better	Better	Better
Transportation/ Traffic	Significant and Unavoidable	Better for traffic impacts. Worse for alternate modes of transportation.	Better	Worse	Better	Worse
Utilities and Service Systems	Less than Significant Impacts	Worse	Same	Worse	Better	Worse

References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

California Public Resources Code, Section 21000–21177. California Environmental Quality Act, as amended.

City of Riverside. 2007. Riverside General Plan 2025.

1.0 INTRODUCTION

1.1 Purpose and Scope

The purpose of this draft environmental impact report (DEIR) is to disclose the potential environmental consequences of the proposed Gless Ranch commercial retail center. The general location of the proposed project is illustrated in Figures 1.0-1, Regional Map and Figure 1.0-2, Vicinity Map. The proposed Gless Ranch development constitutes a "project" as defined in the State California Environmental Quality Act (CEQA) Guidelines Section 15378. The City of Riverside (City) is the lead agency in preparing this DEIR in accordance with California Environmental Quality Act of 1970 (CEQA) statutes (California Public Resources Code, Section 21000 et seq.) and implementing State CEQA Guidelines (14 CCR 15000 et seq.).

The approximately 40-acre project site is located within the City and is bounded by Van Buren Boulevard to the north, Barton Street to the east, Gless Ranch Road to the south, and residential development to the west. The project site is located adjacent to a single-family residential development on the north, south, and west, and vacant land owned by the March Joint Powers Authority (JPA) to the east.

The 40-acre project site has been used as a citrus grove since approximately 1964, which continues to operate today. Sometime after 1980, the existing commercial fruit stand on the site was constructed. The proposed project involves removing the existing orange groves and associated structures (with the exception of the existing fruit stand which will be retained and expanded as part of the larger project), and proposes the construction of a commercial retail center totaling no more than 420,000 square feet. The commercial retail center will include a Target store, a home improvement center, and other retail pads (i.e., grocery store, drive-thru restaurant, bank, tire center).

Environmental impact reports (EIRs) are informational documents "which will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project" (14 CCR Section 15121). The purpose of this DEIR is to present the evaluation of the anticipated environmental effects of the proposed project.

This DEIR is intended for use by both decision makers (i.e., City Planning Commission and City Council) and the general public. It provides relevant information concerning the potential environmental effects associated with the construction and operation of a proposed commercial development.

1.2 Compliance with CEQA

1.2.1 Format

Section 1.0 of this DEIR covers the summary requirements of CEQA as required by Section 15123 of the State CEQA Guidelines. Sections ES-1.4 and 3.0 also cover the project description requirements of

CEQA by discussing the project location (Section ES-1.3), the project objectives (Section ES-1.4.2), and a statement of document purpose and intended use (Sections ES-1.2).

Issues identified in the initial study (IS), prepared by the City for the proposed project, found to have no impact, are provided in Appendix A of this document. This EIR has been formatted to address the issues found to be potentially significant in the IS. For the issue areas found to be potentially significant in the IS, there is a corresponding EIR section. Each EIR section includes an existing setting discussion which describes the physical environmental conditions within the project area, as they exist at the time the NOP was prepared and is considered the baseline physical condition by which the City determines whether an impact is considered to be significant (Section 15125(a) of the *State CEQA Guidelines*). Section 15125(d) of the *State CEQA Guidelines* require that an EIR "discuss any inconsistencies between the proposed project and applicable general plans and regional plans" which will be addressed in any applicable EIR section. Each EIR section also includes an analysis performed to determine the amount and degree of impact that is associated with the project. For all significant environmental impacts, mitigation measures, where feasible, are implemented in order to reduce the impact to a level below significant.

The analysis of impacts and identification of mitigation measures are derived from technical reports that are included as technical appendices to this document and from other informational resources as listed in the references section of this document.

1.2.2 Environmental Procedures

The basic purposes of CEQA are to:

1. Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities;
2. Identify the ways that environmental damage can be avoided or significantly reduced;
3. Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible;
4. Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved (14 CCR Section 15002).

The EIR process typically consists of three parts: (1) the Notice of Preparation (NOP) (including the IS), (2) Draft EIR (DEIR), and (2) Final EIR. Pursuant to Section 15063 of the State CEQA Guidelines, the City prepared an IS (Environmental Checklist) for the proposed project in order to determine if the project would have a significant effect on the environment. The NOP was intended to encourage interagency communication concerning the proposed action and provide sufficient background information about the proposed action so that agencies, organizations, and individuals could respond with specific comments and

questions on the scope and content of the DEIR. Based upon the findings of fact contained within the NOP/IS, the City concluded that an EIR should be prepared. The NOP for an EIR and a description of potential adverse impacts were distributed to the State Clearinghouse, responsible agencies, property owners within a 1,000-foot radius, and other interested parties on December 17, 2010. Pursuant to Section 15082 of the State CEQA Guidelines, recipients of the NOP were requested to provide responses within 30 days after their receipt of the NOP. During the 30-day public review period of the NOP, the City held a public scoping meeting on January 6, 2011, to gather additional public input on the project. Copies of the NOP (including the IS) and the NOP distribution list are located in Appendix A. All comments received during the NOP public notice period and at the public scoping meeting were considered during the preparation of this DEIR. Written comments received on the NOP are included in Appendix A of this DEIR.

Based on the scope of analysis for this DEIR, including comments received during the NOP public scoping period, the following issues were determined to be potentially significant and are therefore addressed in Section 4.0–Section 4.13 of this document:

- Aesthetics
- Agriculture Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Traffic
- Urban Decay Analysis
- Utilities and Service Systems
- Energy Conservation

Other CEQA-mandated environmental topics, such as geology and soils, land use/planning (with the exception of potential conflicts with the MSHCP which is analyzed in the biological resources section of the DEIR), mineral resources, population and housing, public services, and recreation, were not found to be significant based on the results of the IS. These issues are addressed in Section 2.0 of this DEIR.

As the designated lead agency, the City has assumed responsibility for preparing this document. The decision to implement the proposed project is within the purview of the City Planning Commission and City Council. The City will use the information included in this DEIR to consider potential impacts to the physical environment associated with the project when making the decision to implement the project. As set forth in Section 15021 of the State CEQA Guidelines, the City, as lead agency, has the duty to avoid or minimize environmental damage where feasible. Furthermore, Section 15021(d) states that:

> CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency shall prepare a statement of overriding considerations as described in Section 15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment.

In accordance with CEQA, the public agencies will be required to make findings for each environmental impact of the project that cannot be mitigated to below a level of significance. If the lead agency determines that the benefits of the proposed project outweigh unmitigated, significant environmental effects, the agency will be required to adopt a statement of overriding considerations stating the reasons supporting their action notwithstanding the project's significant environmental effects.

The DEIR will be made available for review to the public and public agencies for 45 days to provide comments on the "sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated" (14 CCR Section 15204).

1.2.3 Incorporation by Reference

Information provided in the (1) Environmental Impact Report for the City of Riverside General Plan (State Clearinghouse Number 2004021108; certified by the City in November 2007) (General Plan EIR), (2) Findings and Statement of Overriding Considerations for the General Plan EIR, (3) Addendum to the Final EIR, and (4) Second Addendum to the Final EIR, were reviewed in order to assist environmental review of the proposed project. Accordingly, these documents are incorporated by reference. (CEQA Guidelines section 15150). These documents available for review at Riverside City Hall Planning Division, 3900 Main Street Riverside, CA 92522, the City of Riverside Main Library 3581 Mission Inn Avenue, Riverside, CA 92501 as well as on the City's website at www.riversideca.gov.

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FIGURE 1.0-1

Regional Map

GLESS RANCH DEIR

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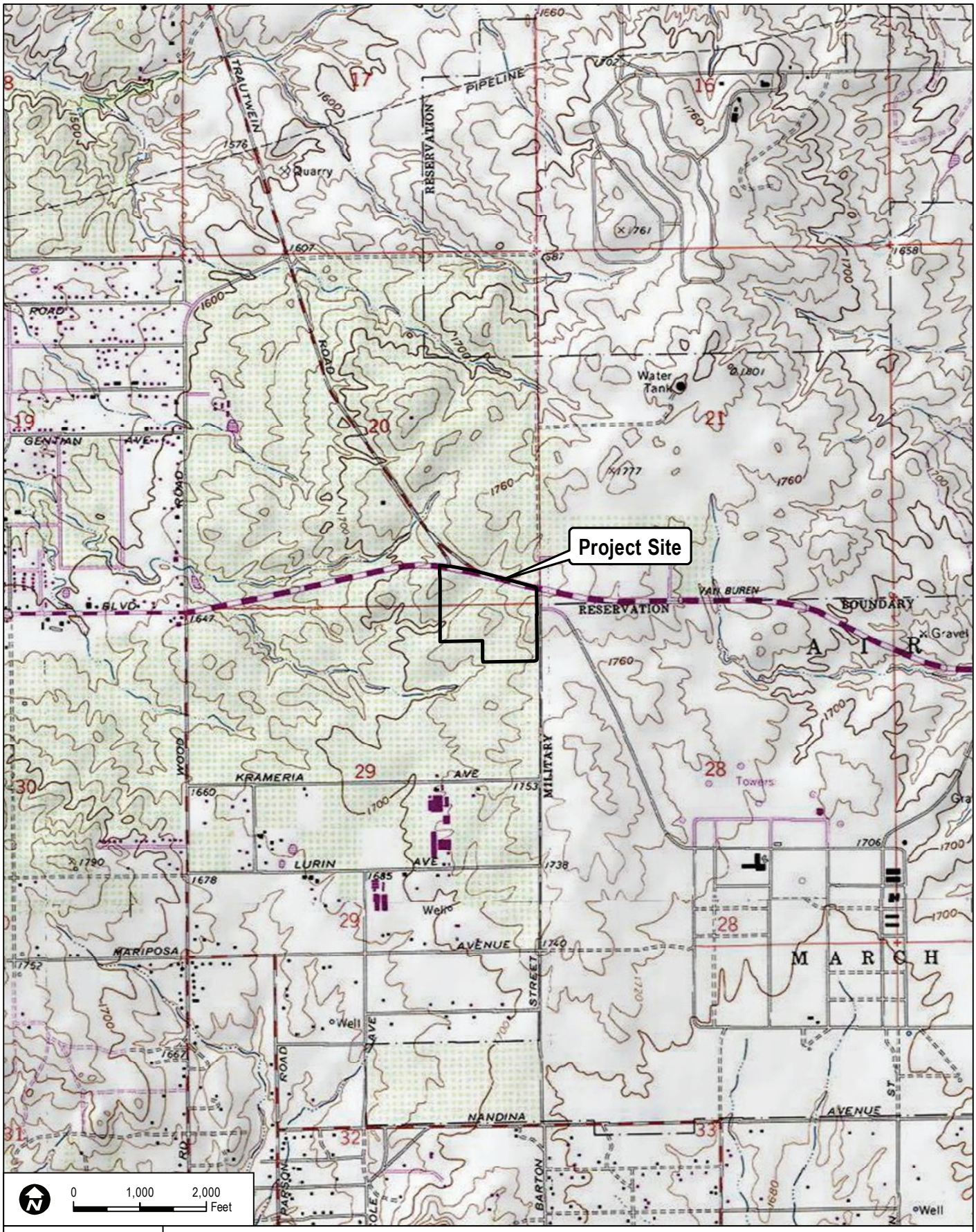

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SOURCE: USGS 7.5-Minute Series Riverside East Quadrangle.

FIGURE 1.0-2
Vicinity Map

GLESS RANCH DEIR

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1.2.4 NOP Comment Letters

The public review period for the NOP/IS began approximately on December 20, 2010, and ended on January 19, 2011. A Public Scoping Session was held on January 6, 2011, at the City of Riverside Planning Commission meeting. The agencies and property owners that commented on the NOP/IS and a brief summary of the issues raised are presented in Table 1.0-1, Summary of Comments Received in Response to the NOP**.** A few phone calls were received by Planning Staff during the comment period mainly related to traffic concerns. None of the comments received changed the issue areas that the IS determined would be discussed in the DEIR. In fact, all of the issues and concerns raised in the comments have been fully addressed and analyzed in the DEIR. Copies of the comment letters are included in Appendix A.

Table 1.0-1, Summary of Comments Received in Response to the NOP

Date	Written Comment or mentioned at the Public Scoping Meeting	Commenting Agency or Property Owner	Summary of Comment
January 18, 2011	Written	Armando G. Arroyo	The property owner commented that greenhouse gas emissions, traffic, truck idling, noise, ambient temperature, light pollution, and groundwater recharge, use of recycled water, be analyzed in the EIR.
January 18, 2011	Written	Mike and Kerrie Hudson	The property owners commented that the March JPA Master Plan, construction timing, traffic, accidents, signals, public safety (bicycle lanes and sidewalks), community safety, agricultural resources, cultural resources, schools, utilities, drainages, greenhouse gas emissions, and air quality be analyzed in the EIR.
January 18, 2011	Written	Riverside Transit Authority (RTA)	RTA commented that the proposed project will likely be a destination for RTA customers and a transit stop adjacent to the project is recommended. RTA recommends a bus turnout should be installed to prevent traffic congestion along Van Buren Boulevard.
January 18, 2011	Written	Kathy Dawson	The property owner commented on having concerns related to traffic and crimes. The property owner requested a signal light at Krameria Avenue and Barton Road and a traffic signal at the Barton Road entrance into the proposed project site.
January 14, 2011	Written	Diana Brown	The property owner commented on having concerns related to aesthetics, truck delivery bays, noise, and traffic, all of which should be analyzed in the EIR.

Table 1.0-1, Summary of Comments Received in Response to the NOP

Date	Written Comment or mentioned at the Public Scoping Meeting	Commenting Agency or Property Owner	Summary of Comment
January 13, 2011	Written	Eren and Jacki Espinosa	The property owners commented on having concerns related to traffic congestion and accidents, and which should be analyzed in the EIR.
January 13, 2011	Written	California Department of Fish and Game (CDFG)	CDFG notes the project is within the boundary of the Multiple Species Habitat Conservation Plan (MSHCP) and requests the DEIR adequately address the potential impacts on the area plan, cores, linkages, target species and habitats covered under the MSHCP. Mitigation measures to compensate for the loss of biological resources should also be included if the project site contains federally or state-listed species. A Lake and Streambed Alteration Agreement Notification is required should the site contain jurisdictional waters. CDFG requested the following be included in any focused biological report: • A complete assessment of the flora and fauna within the site and adjacent areas, identifying endangered, threatened, and locally unique species and sensitive habitats • Discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts • Analyze alternatives that avoid or otherwise minimize impacts to sensitive biological resources and evaluate areas with lower resource sensitivity. • Obtain a California Endangered Species Act (CESA) permit if the project has the potential to “take” species of plants or animals listed under CESA, during construction or over the life of the project. CDFG also noted opposition to the elimination of watercourses and/or their channelization or conversion to subsurface drains and indicated that all wetlands and watercourses must be

Table 1.0-1, Summary of Comments Received in Response to the NOP

Date	Written Comment or mentioned at the Public Scoping Meeting	Commenting Agency or Property Owner	Summary of Comment
			retained with setbacks to preserve riparian and aquatic values to on-site and off-site wildlife populations. CDFG recommended the DEIR incorporate all information regarding impacts to lakes, streams, and associated habitat; and the applicant and/or lead agency consult CDFG to discuss potential impacts and avoidance mitigation measures and facilitate the permitting process in the event a Streambed Alteration Agreement is needed.
January 12, 2011	Written	Teresa Egan	The property owner commented having concerns related to traffic, congestion, noise, and safety, which should be analyzed in the EIR.
January 11, 2011	Written	Cathryn Van Der Linden	The property owner commented having concerns related to traffic and requested locking mechanisms on the grocery carts and a traffic pattern modification to change Gless Ranch Road into a cul-de-sac with no pedestrian gate at Barton Road.
January 10, 2011	Written	Kimberly Foy with Johnson and Sedlack	The attorney requested to receive all notices regarding the proposed project.
January 10, 2011	Written	Department of Toxic Substances Control (DTSC)	DTSC has the following comments: • The DEIR will need to evaluate whether conditions within the project area may pose a threat to human health or the environment and identify databases of regulatory agencies. • The DEIR will need to identify the mechanism to initiate any required investigation and/or remediation for any contaminated site. • Any investigations, sampling, and/or remediation to be conducted under a work plan overseen by the appropriate regulatory agency, and the findings of such investigation to be summarized in the DEIR, including all closure, certification, or remediation approval reports. • Investigations for hazardous

Table 1.0-1, Summary of Comments Received in Response to the NOP

Date	Written Comment or mentioned at the Public Scoping Meeting	Commenting Agency or Property Owner	Summary of Comment
			chemicals, mercury, and asbestos-containing materials for demolition of buildings, other structures, asphalt, or concrete-paved surfaces. • Contaminants should be remediated in compliance with California environmental regulations and policies. • Soils sampling may be required if project construction requires soil excavation or filling in certain areas; soil must be properly disposed of if contaminated. • Human health and the environment of sensitive receptors should be protected during any construction or demolition activities. A health risk assessment overseen and approved by the appropriate government agency may be conducted by a qualified health risk assessor to determine potential releases of hazardous materials. • Investigation and remedial actions should be conducted under the oversight of and approval by a government agency at the site prior to construction of the project since the site was used for agriculture and contains soils and groundwater that might contain pesticides, agricultural chemical, organic waste, or other related residue. • Wastes must be managed in accordance with California Hazardous Waste Control Law and the Hazardous Waste Control Regulations if hazardous waste is generated by the proposed project. • DTSC can provide cleanup oversight.
January 9, 2011	Written	Francisco Cuevas	The property owner commented having concerns related to traffic, which should be analyzed in the EIR.
January 6, 2011	Public Scoping Meeting	Bonnie Alvarez	The property owner raised concerns regarding traffic along Van Buren Boulevard and Barton Street, and

Table 1.0-1, Summary of Comments Received in Response to the NOP

Date	Written Comment or mentioned at the Public Scoping Meeting	Commenting Agency or Property Owner	Summary of Comment
			laborers. The property owner requested that Kinnow Lane be closed off and that there be permanent "ending" cul-de-sacs.
January 6, 2011	Public Scoping Meeting	Kelline Crocker	The property owner raised concerns regarding height of block wall, trash and shopping carts left along pedestrian walkway if there was a pedestrian access along Kinnow Lane, graffiti on block walls, and vagrants.
January 6, 2011	Public Scoping Meeting	Sally Brickholder	The property owner raised concerns regarding rodents, widening of the roads and how it will impact residents, traffic, and decrease in home value.
January 6, 2011	Public Scoping Meeting	Norm Isabelle	The property owner raised concerns regarding the following: • Height and aesthetics of block wall • Requested foliage along the block wall • Height of lights • Light spillage onto adjacent properties • Wants pedestrian access from Kinnow Lane • Drive-thru businesses to be 250 feet away from neighbors • Water supply/pressure The property owner also sent in a written comment dated December 29, 2010.
January 6, 2011	Public Scoping Meeting	Katherine Vanderlinden	The property owner raised concerns regarding traffic, accessibility of neighborhood from commercial users, pass thru traffic on Barton Street, Gless Ranch Road, Santa Barbara Drive, and Cole Avenue. The property owner also requested that Gless Ranch Road at Barton Street be turned into a cul-de-sac or that a crash gate be installed.
January 4, 2011	Written	Ms. Lynch	The property owner commented on having concerns related to wildlife, traffic, accidents, and crimes, which should be analyzed in the EIR.
December 29, 2010	Written	Steven and Wendy Swift; Norm and Patti	The property owners commented that the following items be incorporated into the project:

Table 1.0-1, Summary of Comments Received in Response to the NOP

Date	Written Comment or mentioned at the Public Scoping Meeting	Commenting Agency or Property Owner	Summary of Comment
		Isabelle	• Block wall • Landscape along the block wall • No "drive-thru" restaurant speaker system within 250 feet of residential properties to the west and south of the site • Water supply system to be designed and coordinated with Western Municipal Water District (WMWD).
December 29, 2010	Written	South Coast Air Quality Management District (SCAQMD)	SCAQMD requested a copy of the DEIR and all appendices or technical documents related to air quality and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files. SCAQMD also suggested the following: • Use of the SCAQMD-approved Air Quality Handbook (1993) to assist in the preparation of the air quality analysis • Identification of any potential adverse air quality impacts that could occur from all phases of the proposed project and all air pollutant sources related to the proposed project • Quantification and comparative analysis of particulate matter (PM) 2.5 emissions in relation to the SCAQMD-developed significance threshold • Calculation of localized air quality impacts and a comparison to the localized significance thresholds • Preparation of a mobile source health risk assessment for projects generating or attracting vehicular trips, particularly in relation to heavy-duty diesel-fueled vehicles • Identification of feasible mitigation measures to minimize or eliminate significant adverse air quality impacts.
December 27, 2010	Written	Native American Heritage Commission (NAHC)	The NAHC recommends the following: • Early consultation with Native American tribes to avoid unanticipated discoveries and to learn of any sensitive cultural areas

Table 1.0-1, Summary of Comments Received in Response to the NOP

Date	Written Comment or mentioned at the Public Scoping Meeting	Commenting Agency or Property Owner	Summary of Comment
			• Native American monitor or Native American culturally knowledgeable person to be employed whenever a professional archaeologist is employed • Contact the California Historic Resources Information System of the Office of Historic Preservation • Provide provisions for accidentally discovered archaeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains • Construction or excavation to be stopped in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery until the county coroner or medical examiner can determine whether the remains are those of Native American.
December 26, 2010	Written	David Cannella	The property owner commented on having concerns related to traffic congestion, which should be analyzed in the EIR.

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2.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

2.1 Effects Found Not to Be Significant During Preparation of the Notice of Preparation (NOP)

California Environmental Quality Act (CEQA) provides that an environmental impact report (EIR) shall focus on the significant effects on the environment, discussing the effects with emphasis in proportion to their severity and probability of occurrence. Effects dismissed in an initial study (IS) as clearly insignificant and unlikely to occur need not be discussed further in the EIR unless information inconsistent with the finding in the IS is subsequently received.

Section 21100 (c) of the Public Resources Code states that an EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were, therefore, not discussed in detail in the draft EIR (DEIR) (California Public Resources Code, Section 21000 et seq.). Section 15128 of the State CEQA Guidelines adds, "Such a statement may be contained in an attached copy of an IS" (14 CCR 15000 et seq.)

The IS (Environmental Checklist) prepared and circulated with the NOP for public review on the proposed project (Appendix A) concluded that the proposed Gless Ranch would not result in significant impacts to the following areas:

- Geology and Soils – The proposed project site does not have active faults crossing the site and is not within a fault hazard zone. The proposed project site is located in excess of 10 miles from the Elsinore Fault Zone. The potential for seismically induced landsliding, soil erosion or loss of topsoil, liquefaction, and expansive soil is considered to be low. The proposed project would be designed and built in accordance with the criteria contained in the Uniform Building Code and/or California Building Code. As such, impacts are considered to be less than significant.
- Land Use/Planning – The proposed project will not divide an established community, but serve as a neighborhood center and regional retail center. The proposed project is consistent with the city's zoning designation, general plan designation, and Orangecrest specific plan designation as commercial. Therefore, impacts to land use/planning are considered to be less than significant. The proposed project's compliance with the Multiple Species Habitat Conservation Plan is analyzed in the Biological Resources Section of the DEIR.
- Mineral Resources – The proposed project lies within Mineral Resource Zone (MRZ) 4 as depicted on Figure 5.10-1 of the General Plan 2025 FPEIR, which states that there is insufficient data to assign any other MRZ designation and thus considered to be less than significant.
- Population/Housing – No housing is being proposed with this project; therefore the proposed project would not generate population growth. No impacts are expected.

- Public Services – The proposed project will be adequately served by the City's Fire Department Station 11 and City's Police Department. The proposed project for a retail commercial center would not be expected to result in an increased demand for school services, parks, and other public facilities. Therefore, impacts are considered to be less than significant.
- Recreation – The proposed project is the development of a retail commercial center to serve the existing residential community. There would not be an increase in use of the parks and recreational facilities; therefore no impacts are expected.

Therefore, as stated in the IS/NOP, these topics are not addressed further in the DEIR.

2.2 Effects Found Not to Be Significant as Part of the EIR Process

Based on the analysis provided herein, the following areas were found to not have significant impacts, with no mitigation measures needed:

- Hydrology and Water Quality
- Utilities and Service Systems
- Urban Decay.

Therefore, no mitigation measures are required.

2.3 Effects Found to Be Less Than Significant with Mitigation Measures Incorporated

Based on the analysis provided herein, the following areas were found to have potentially significant impacts with the incorporation of mitigation measures:

- Biological Resources (including the project's consistency with the MSHCP)
- Cultural Resources
- Hazards and Hazardous Materials
- Noise
- Traffic – For intersections in City limits.

2.4 Effects Found to Be Significant Even with Mitigation Measures Incorporated

Based on the analysis provided herein, the following areas were found to have potentially significant impacts even after feasible mitigation measures were incorporated:

- Aesthetics
- Agricultural Resources
- Air Quality
- Greenhouse Gas Emissions
- Traffic – For intersections out of City limits.

2.5 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

California Public Resources Code, Section 21000–21177. California Environmental Quality Act, as amended.

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3.0 PROJECT DESCRIPTION

The applicant proposes to remove the majority of the existing orange groves and associated structures on the 40-acre Gless Ranch site and proposes the construction of a commercial retail shopping center totaling no more than 420,000 square feet (proposed project). The proposed project will include a Target store, a home improvement center, and other retail pads. Potential uses include a grocery store, drive-thru restaurant, bank, and a vehicle repair/tire center. The existing fruit stand will be retained and expanded.

3.1 Project Location

The site is located approximately 6 miles from State Route 91 (SR-91) and approximately 2.5 miles from Interstate 215 (I-215). The site is bounded by Van Buren Boulevard to the north, Barton Street to the east, Gless Ranch Road to the south, and residential development to the west (Figure 3.0-1, Vicinity Map). The project site is located adjacent to single-family residential development on the north, south, and west, and vacant land owned by the March Joint Powers Authority (JPA) to the east.

Gless Ranch consists of three assessor parcels numbers (284-020-010, 266-120-002, and 266-120-034). The latitude and longitude of the approximate center of the site is 33° 53' 12.465" N and 117° 18' 58.8054" W. The Universal Transverse Mercator (UTM) coordinates for the approximate center are: UTM Easting (meters) 470748.031 and UTM Northing (meters) 3749563.729. The Gless Ranch site includes parts of Section 20 of Township 3 South, Range 4 West, and Section 29 of Township 3 South, Range 4 West, within the Riverside East 7.5-minute quadrangle, as mapped by the U.S. Geological Survey (USGS).

3.2 Background

The Gless Ranch site consists of 40 acres of land located in Southern California within the City of Riverside (City), in the northwestern portion of Riverside County (see Figure 3.0-2, Regional Map). The site consists of an irregular-shaped parcel that is currently developed as an orange grove, with a well-known fruit stand that sells citrus products. The site also supports two mobile homes used as residences for caretakers of the property and a warehouse/workshop shed that are located on the southern portion of the property. The warehouse/workshop shed is used as a packing and storage area as well as an auto shop for servicing ranch vehicles. GeoSoils reports five windmill-type fans are scattered within the project site and are possibly fueled by petroleum-related products. Six aboveground storage tanks are present in the southeastern portion of the property near the packing building, which serves to support the packing operations and maintenance of the orange grove. A mobile fuel storage tank is located in the general area of the other aboveground storage tanks. A fuel dispenser is also located in this area.

The project site has been used as a citrus grove since approximately 1964. The project site was part of a larger proposal to be annexed into the City on November 5, 2002. The approved Annexation No. 94 adopted a pre-zoning ordinance to establish a single-family residential zone and commercial zone within the annexation area. The approximately 40-acre site was subject to the commercial pre-zone as part of the annexation. The approved Annexation No. 94 changed the approximately 40-acre project site zoning from Agricultural to Commercial.

The project zoning is CR-S-2-X-SP – Commercial Retail, Height and Setback Restriction, and Orangecrest Specific Plan Zone. The Riverside General Plan 2025 (GP 2025) land-use designation is C – Commercial (City of Riverside 2007). The proposed commercial shopping center will serve not only as a neighborhood center, but as a regional retail center as well and is consistent with both the site's zoning and GP 2025 land-use designation (see Figure 3.0-3, Zoning Designations and Figure 3.0-4, General Plan Land Use Map).

Resolution 20286 dated November 5, 2002, amended the land use element of the City's General Plan and Ordinance 6636 changed the site's zoning from agriculture to commercial, both of which added the Orangecrest Specific Plan overlay to the project site (Annexation No. 94). The proposed project is therefore consistent with the land-use designation from the Orangecrest Specific Plan.

3.3 Site Description

The site consists of an irregular-shaped parcel, totaling 40 acres, subdivided into three unequal lots, to be consolidated as part of the proposed Parcel Map being considered as part of this environmental impact report (EIR). The site is located on the southwest corner of Van Buren Boulevard and Barton Street within the City. Elevations on the site range from 1,761 feet mean sea level (msl) on the northeast portion of the property to 1,714 feet msl on the southwest portion of the site. The existing site is currently developed with orange groves. The project site is bounded by single-family residential development on the north, south, and west; and vacant land primarily owned by the March JPA to the east. Additionally, the County of Riverside borders the site on the east side.

3.4 Project Characteristics

The project proposes the removal of the majority of the existing orange grove to allow development of a commercial retail center not to exceed 420,000 square feet in total size. The project includes the following applications to be acted upon by the City of Riverside Planning Commission and City Council:

- P10-0113 – Certification of this EIR;
- P10-0114 – Variance to allow parking light standards to be up to 30 feet in height where the Zoning Code limits the height of parking lot light standards to 20 feet;

- P10-0118 – Parcel Map to subdivide the 40-acre site for financing purposes;
- P10-0449 – Design Review for the overall Plot Plan and the Building Elevations for the proposed project including the Target store, home improvement center, additions and modifications to the existing Gless Ranch fruit stand building and other retail shops/pads.

The 40-acre site will be developed into a commercial retail center (Gless Ranch). The buildings for the proposed project have been arranged into three primary components: (1) The area in the northwesterly quadrant of the site, which includes the to-be expanded fruit stand, would include a thematic "village with open space and amenities for outdoor dining, public art, etc.; (2) The three "major" tenants (Target, home improvement center, and mid-size tenant such as a grocery store or specialty retail) have been situated along the rear and interior of the property lines of the site; (3) The remainder of the site is proposed to be developed with single-tenant, purpose built structures and multiple tenant "shops" buildings. The proposed project will incorporate Craftsman style architectural theme. Heavy timber details, battered columns, wood shingle or clapboard siding will be included on some of the proposed buildings to be complementary to the fruit stand structure.

The proposed project consists of removing the majority of the existing orange grove and associated structures on site. Approximately 104 citrus trees would remain on site along Gless Ranch Road. Approximately 646 new trees, including 200 dwarf citrus trees, will be planted throughout the project site. The citrus trees will be used as part of the landscape buffer between the proposed Target store, home improvement center, and residential uses, which are located along the southern and western boundaries of the site. New and different varieties of citrus trees will also be planted near the expanded fruit stand courtyard. The existing fruit stand will stay on site, be expanded and will be incorporated into the larger development plan. The following descriptions provide a summary of the proposed project components (see Figure 3.0-5, Site Plan). The overall estimated number of employees for the whole commercial center is 600-650 at full buildout.

Additionally, the project will incorporate principles of Title 24 of the California Code of Regulation. Title 24 is an Energy Efficiency Standard that was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The proposed project has been designed to be approximately 15% more efficient above the standards set forth in Title 24.

3.4.1 Target Store

The proposed Target store is approximately 138,516 square feet. The building will be located on the southeast corner of the site, bounded by Barton Street and Gless Ranch Road. The proposed project is expected to have typical operating hours for a retail center. Target's normal business hours are 8:00 a.m. to 11:00 p.m., Monday through Saturday, and 8:00 a.m. to 10:00 p.m. on Sundays (where state law allows). Target's holiday business hours are 5:00 a.m. to midnight, Monday through Saturday, and 8:00 a.m. to midnight on Sundays (where state law allows), beginning the week before Thanksgiving through

December 26. Target's after-hours maintenance and stocking hours are 11:00 p.m. to 8:00 a.m., Monday through Saturday, and 10:00 p.m. to 8:00 a.m. on Sundays (where state law allows). Target averages 150 to 200 employees per store with an average peak shift of approximately 50 employees.

3.4.2 Home Improvement Center

The proposed home improvement center is approximately 124,076 square feet and includes approximately 31,357 square feet of outdoor garden center. The proposed home improvement center's typical business hours are 6 a.m. to 9 p.m., Monday through Saturday, and 7 a.m. to 8 p.m. on Sundays. Deliveries are expected to be made 7 days a week; deliveries are typically loaded at 6:00 a.m. and leave by 7:00 a.m., continuing until about 8:00 p.m. The home improvement center's hours of operation would be consistent with the City's noise ordinance. The home improvement center averages 100 to 140 employees.

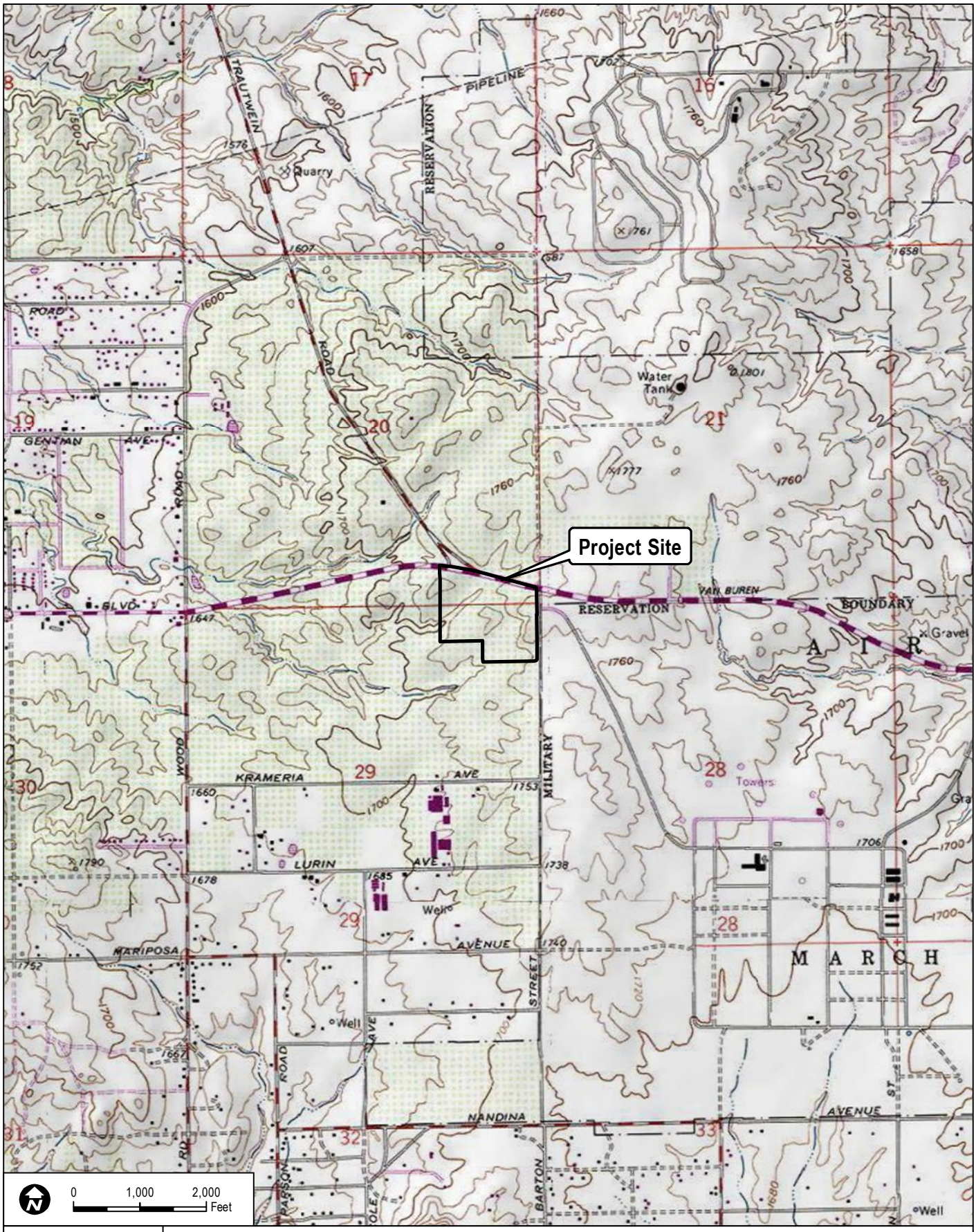
3.4.3 Retail Stores/Pads

The proposed project also includes approximately 125,608 square feet of other retail pads as permitted by 19.150.020 – Permitted Uses Table of the City of Riverside's Municipal Code. The following Table 3.0-1 provides a breakdown of the other proposed retail stores/pads.

Table 3.0-1, Proposed Retail Stores/Pads

Stores/Pads	Approximate Building Area (square feet)
Shops 1 (food)	7,500
Shops 2 (retail)	7,500
Restaurant	6,750
Fruit Stand Expansion	4,200
Pad 1	4,299
Pad 2	6,000
Pad 3	4,920
Pad 4	7,000
Pad 5	9,180
Pad 6	2,500
Bank	4,560
Retail Store	17,369
Major 3 (possible grocery store)	43,830
Total	**125,608**

Source: Site Plan by MCG Architecture, 2010



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SOURCE: USGS 7.5-Minute Series Riverside East Quadrangle.

FIGURE 3.0-1
Vicinity Map

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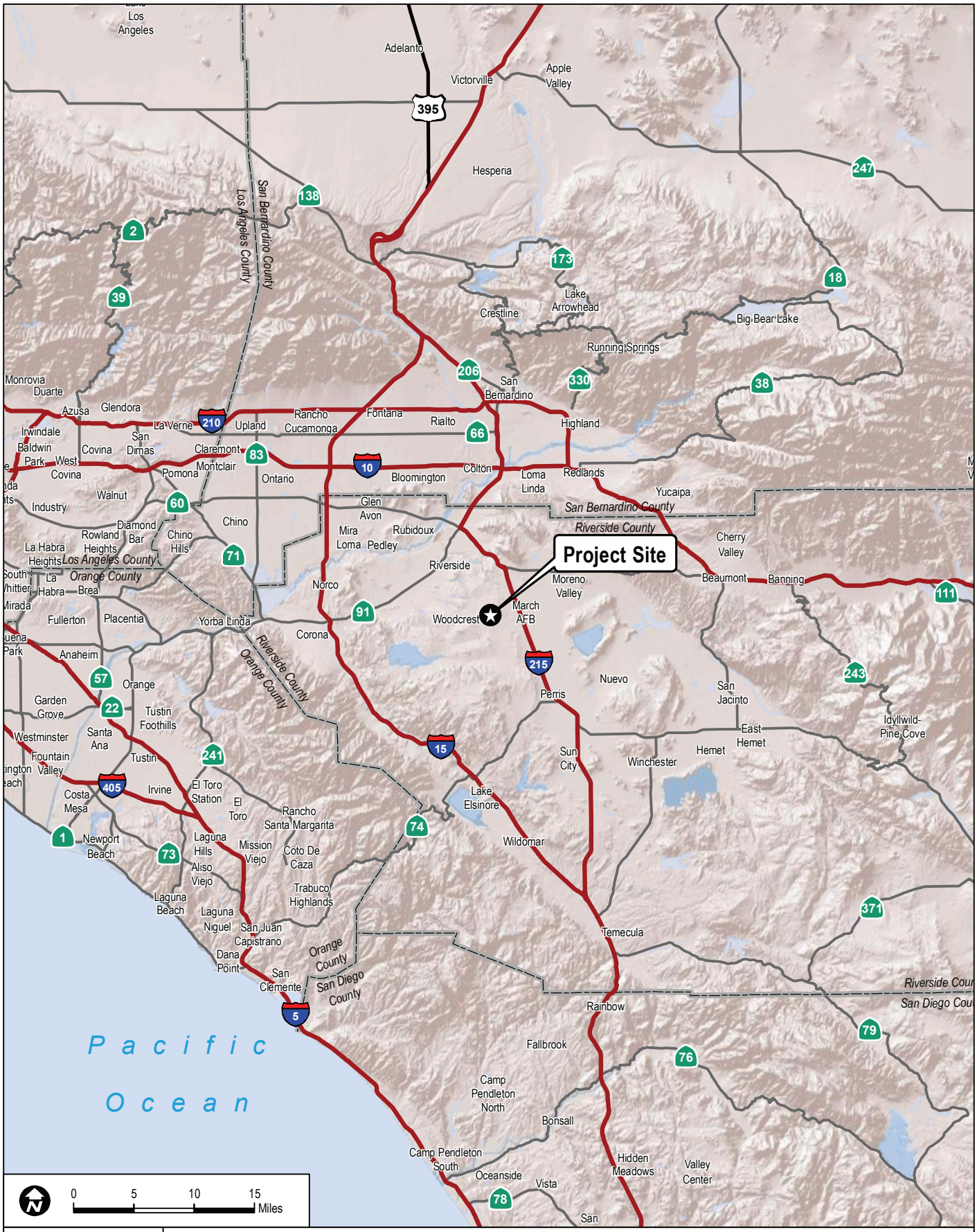

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FIGURE 3.0-2

Regional Map

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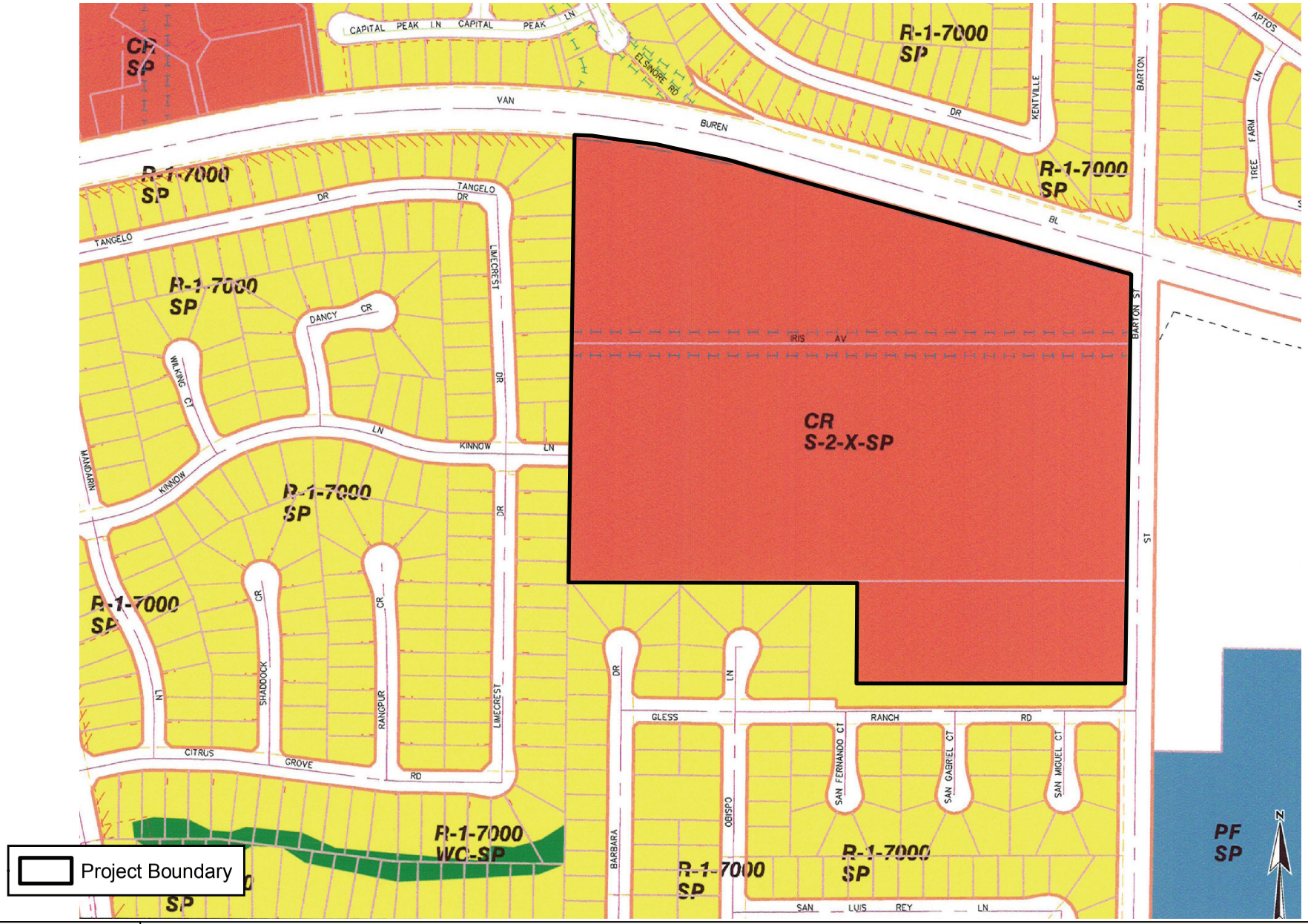

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SOURCE: City of Riverside

FIGURE 3.0-3

Zoning Designations

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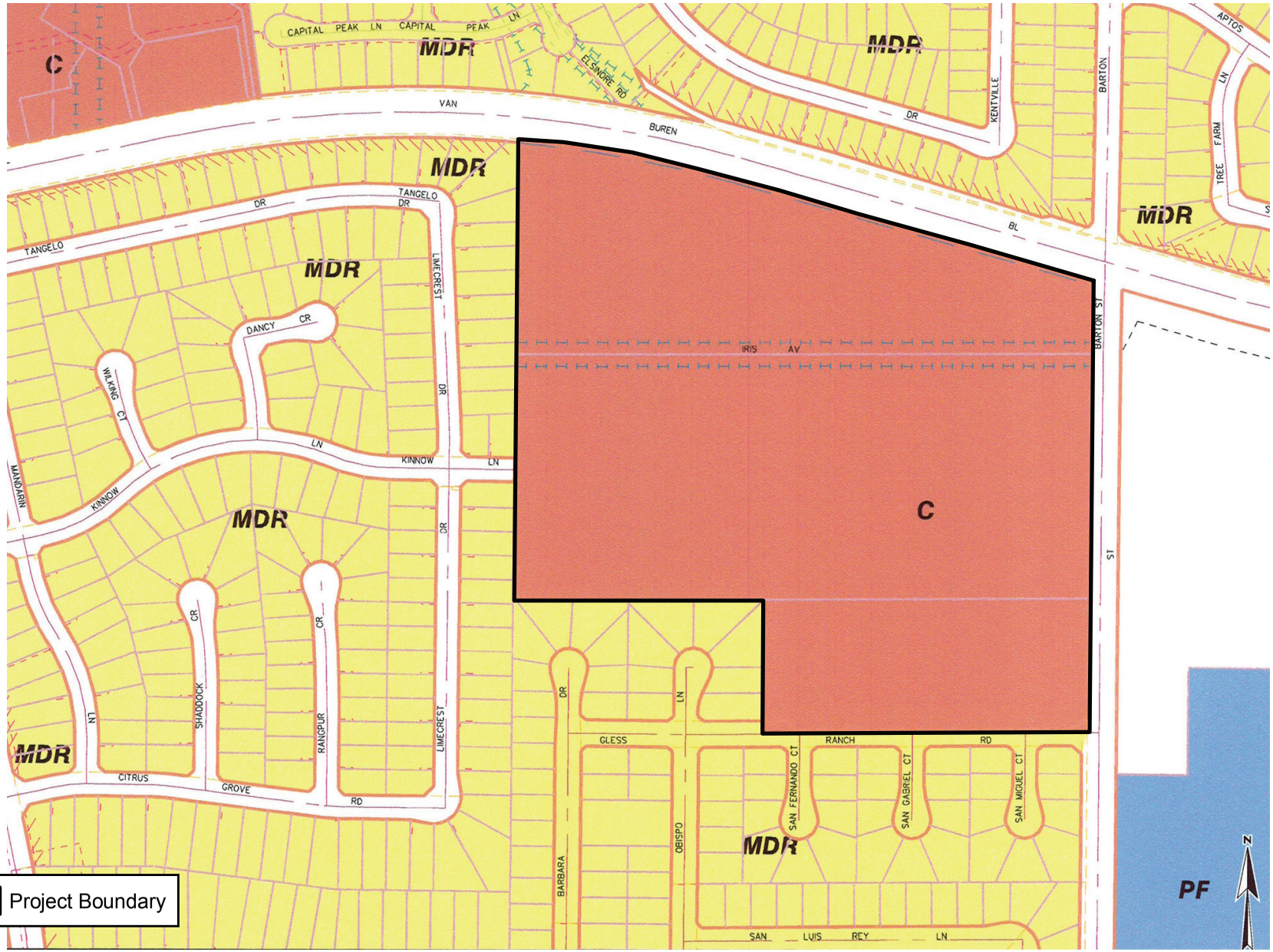

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SOURCE: City of Riverside

FIGURE 3.0-4

General Plan Land Use Map

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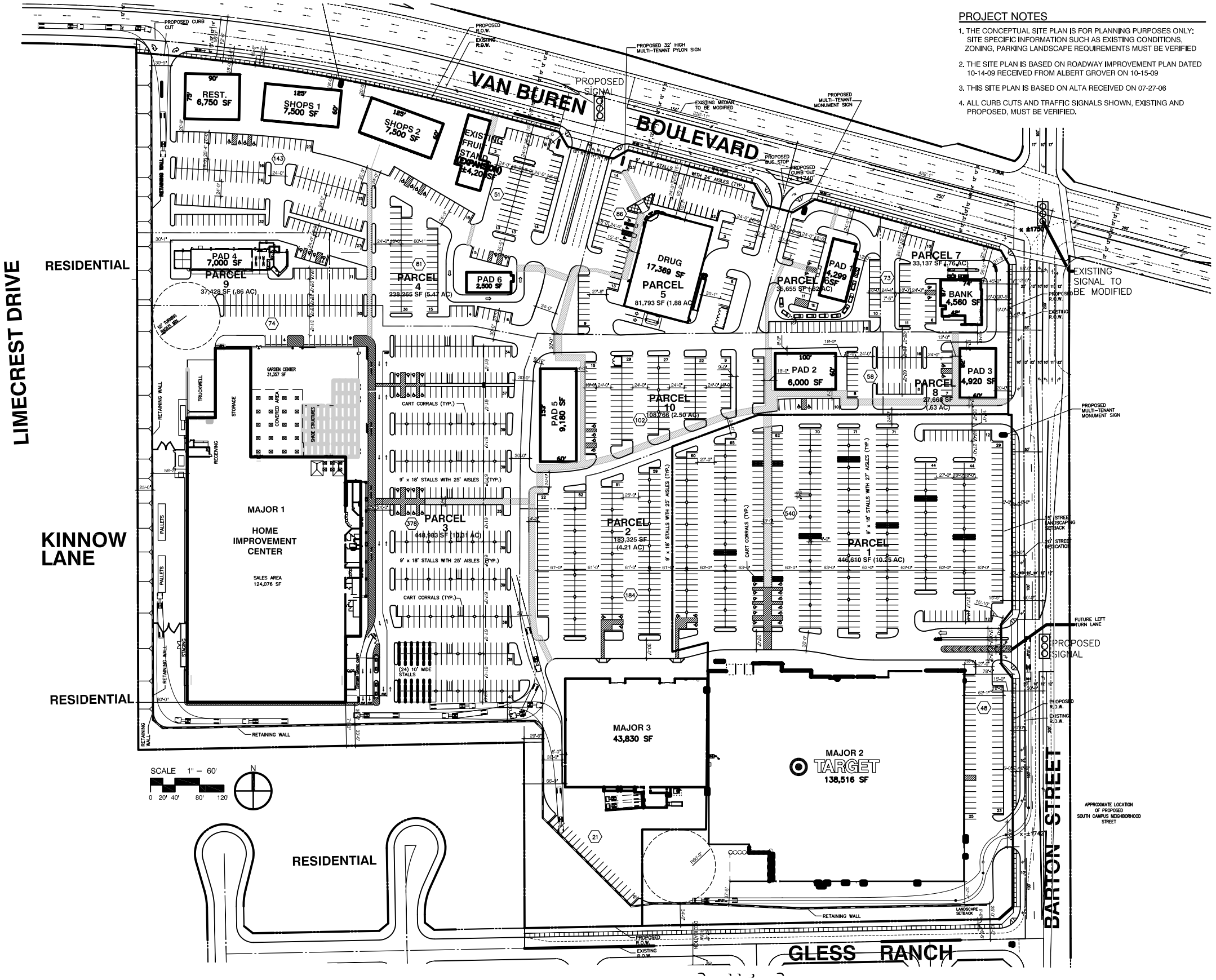

PROJECT NOTES

1. THE CONCEPTUAL SITE PLAN IS FOR PLANNING PURPOSES ONLY: SITE SPECIFIC INFORMATION SUCH AS EXISTING CONDITIONS, ZONING, PARKING LANDSCAPE REQUIREMENTS MUST BE VERIFIED
2. THE SITE PLAN IS BASED ON ROADWAY IMPROVEMENT PLAN DATED 10-14-09 RECEIVED FROM ALBERT GROVER ON 10-15-09
3. THIS SITE PLAN IS BASED ON ALTA RECEIVED ON 07-27-06
4. ALL CURB CUTS AND TRAFFIC SIGNALS SHOWN, EXISTING AND PROPOSED, MUST BE VERIFIED.

PROJECT INFORMATION

SITE AREA

MAJOR 1:	± 10.31 ACRES
MAJOR 2:(TARGET)	± 10.25 ACRES
MAJOR 3:	± 4.21 ACRES
OTHERS:	± 12.92 ACRES
TOTAL NET	± 37.69 ACRES
DEDICATION (BARTON STREET)	± 0.59 ACRES
DEDICATION (VAN BUREN BLVD)	± 0.87 ACRES
DEDICATION (GLESS RANCH)	± 0.62 ACRES
TOTAL GROSS	± 39.78 ACRES
NET SITE COVERAGE :	± 25.56% (11,132 SF/AC)
MAJOR 1 NET SITE COVERAGE:	± 27.63% (12,035 SF/AC)
MAJOR 2 NET SITE COVERAGE:	± 31.01% (13,514 SF/AC)

BUILDING AREA

MAJOR 1:			124,076 SF
OUTDOOR GARDEN CENTER			31,357 SF
MAJOR 1 TOTAL			155,433 SF
MAJOR 2:			138,516 SF
MAJOR 3:			43,830 SF
SHOPS 1	40% IS 6,000 SF	15,000 SF	7,500 SF
SHOPS 2	60% IS 9,000 SF		7,500 SF
RESTAURANT			6,750 SF
EXISTING FRUIT STAND			±4,200 SF
PAD 4			7,000 SF
PAD 6			2,500 SF
PAD 1			4,299 SF
PAD 2			6,000 SF
PAD 3			4,920 SF
PAD 5			9,180 SF
BANK			4,560 SF
DRUG			17,369 SF
TOTAL			419,557 SF

PARKING SUMMARY

USER	CITY RATIO REQUIRED	SPACES REQUIRED		SPACES PROVIDED
MAJOR 1 (BUILDING ONLY)	4 SP/1000 SF	497		-
OUTDOOR GC	1 SP/1000 SF	32		
TOTAL MAJOR 1		529		452
MAJOR 2	4 SP/1000 SF	554		588
MAJOR 3	4 SP/1000 SF	176		205
*SHOPS 1 (FOOD)	40% IS 10/1000 SF	60	96	275
*SHOPS 2 (RETAIL)	60% IS 4/1000 SF	36		
PAD 4	4 SP/1000 SF	28		
PAD 6	10 SP/1000 SF	25		
RESTAURANT	10 SP/1000 SF	68		
EX. FRUIT STAND	4 SP/1000 SF	17		
		234		
PAD 1	10 SP/1000 SF	43	228	319
PAD 2	4 SP/1000 SF	24		
PAD 3	1 SP/180 SF	28		
PAD 5	4 SP/1000 SF	37		
DRUG	4 SP/1000 SF	70		
BANK	1 SP/180 SF	26		
TOTAL		1,721		1,841

MAJOR 1 FRONT FIELD PROVIDED:	382
MAJOR 1 PARKING RATIO PROVIDED:	3.42 SP/1000 SF
MAJOR 2 FRONT FIELD PROVIDED:	543
MAJOR 2 PARKING RATIO PROVIDED:	4.30 SP/1000 SF
TOTAL PARKING RATIO PROVIDED:	4.52 SP/1000 SF

BUILDING CODE ANALYSIS

ALL BUILDINGS TYPE VB

ZONING CLASSIFICATION

JURISDICTION	CITY OF RIVERSIDE
EXISTING ZONING	C-R COMMERCIAL RETAIL
REQUIRED ZONING	C-R COMMERCIAL RETAIL

BUILDING SETBACK

FRONT & STREET SIDE	0'
SIDE & REAR	0'

LANDSCAPING SETBACK

FRONT & STREET SIDE	15'
SIDE & REAR	0'

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SOURCE: MCG 2010

FIGURE 3.0-5
Site Plan

GLESS RANCH–DEIR

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3.4.4 Parking

The parking ratio for retail sales is four spaces per 1,000 square feet; parking ratio for restaurant is ten spaces per 1,000 square feet; parking ratio for bank and medical use is one space per 180 square feet; and parking ratio for home improvement sales and service with outdoor storage/display area is one space per 1,000 square feet. The total on-site parking spaces provided for the commercial retail center is 1,841 parking spaces, where 1,721 parking spaces are required (see Figure 3.0-5, Site Plan). Of the 1,841 parking spaces, approximately 63 spaces are reserved for handicap parking.

3.4.5 Landscape and Irrigation

The proposed concept landscape plan is shown in Figure 3.0-6. The landscape design is intended to complement, enhance, and integrate the site to its surrounding environment. Approximately 104 existing citrus trees would remain on site along Gless Ranch Road. Approximately 646 new trees, including 200 dwarf citrus trees, will be planted throughout the project site. The existing citrus trees will be used as part of the landscape buffer, where feasible, between the proposed Target store, home improvement center, and residential uses. New and a variety of citrus trees will also be planted near the fruit stand courtyard.

Overall, the project proposes a total of 234,974 square feet of planting area. The planting palette includes trees, shrubs, and groundcover. The irrigation system is proposed to be designed for the use of recycled water provided by the Western Municipal Water District (WMWD).

3.4.6 Construction

The project proposes the opening and build-out year to be the end of 2012/beginning of 2013. Grading will be done in one phase, and according to the applicant, the site will export approximately 69,000 total cubic yards (cy). It is anticipated that it will take approximately 25 days to export the soils, with approximately 2,500 to 2,800 cy of soils exported per day. The hauling of the soil is expected to include 180 to 200 truck trips per day and has been considered in the project analysis included herein. The project site consists of an irregular-shaped parcel with approximate elevations ranging from 1,761 feet msl on the northeast portion of the property to 1,714 feet msl on the southwest portion of the property. Elevation of project build out will be slightly lower than existing grades. Construction for the proposed project is expected to take approximately 9 months to complete. Commencing with site preparation, construction is scheduled to begin March 2012 and will be ongoing through the end of 2012/beginning of 2013.

Construction work includes clearing the existing orange trees (chipping and hauling away) and grading; connection of water, sewer, and storm drain; installation of electrical, gas, and phone lines; site fine grading, base, and paving; installation of lighting; installation of landscape and irrigation; installation of free-standing signs; building of retail buildings; and off-site improvements.

3.4.7 Utilities/Infrastructure

"Will serve" letters have been provided by Southern California Gas Company, Verizon, Charter Communications, and WMWD.

3.4.8 Off-site Improvements

Off-site project improvements include minor improvements made to Van Buren Boulevard and Barton Street to accommodate site access driveways, curb, gutters, sidewalks, bike lanes, landscaping, and traffic signal installation.

3.5 Project Objectives

A clear statement of project objectives allows for the analysis of reasonable alternatives to the proposed project. Reasonable alternatives, both on and off site, must be analyzed per Section 15126.6 of the State CEQA Guidelines (14 CCR 15000 et seq.). The proposed project is intended to meet the following objectives:

- Provide a broad range of retail sales and service with updated, modern, and energy-efficient buildings within the nearby residential community;
- Create a development consistent with the City's land use and general plan designation that will contribute to the maintenance of an economic base that provides high-quality jobs for those who choose to both live and work in Riverside;
- Create short-term construction employment and long-term operational employment;
- Utilize a commercially zoned and designated site that is located within an urbanized area through the development of an economically productive retail project;
- Improve the local and regional economy through job generation and increased tax revenues from the proposed retail uses;
- Incorporate elements of sustainable development to promote the efficient use of energy and water;
- Provide adequate parking facilities to serve the proposed retail uses;
- Provide improved public amenities and infrastructure;
- Develop a retail center with amenities within proximity to nearby residential community in order to reduce vehicles miles traveled to like services.

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SOURCE: CITY OF RIVERSIDE 2011

FIGURE 3.0-6

Conceptual Landscape Plan

GLESS RANCH–DEIR

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3.6 Required Permits and/or Approvals

Implementation of the commercial retail center will require permits or other forms of approval from public agencies or other entities prior to construction of the proposed commercial retail center. They include but are not limited to, the following.

City of Riverside

Certification of this EIR (P10-0113), parcel map (P10-0118), design review and landscape review (P10-0449), variances (P10-0114), and other discretionary actions shall be reviewed and/or approved by planning staff, City Planning Commission, and/or City Council.

California Department of Fish and Game

A 1600 Streambed Alternation Agreement to fill in the existing drainage on site will be required.

Regional Water Quality Control Board (RWQCB)

National Pollutant Discharge Elimination System general construction permits will be required since the grading activities are larger than 1 acre.

Approval of the Stormwater Pollution Prevention Plan for any applicable requirements related to fill materials.

A report of waste discharge shall be submitted to the RWQCB to obtain either a waste discharge requirement or a waiver for any impacts to waters of the State.

South Coast Air Quality Management District (SCAQMD)

A fugitive dust control plan submitted to the SCAQMD for approval will be required prior to issuance of grading permits (SCAQMD Rule 403).

3.7 References

14 CCR 150000–15387 and Appendix A–L for Implementation of the California Environmental Quality Act, as amended.

California Energy Commission. 2011. California's Energy Efficiency Standards for Residential and nonresidential Buildings. Accessed on June 27, 2011: http://www.energy.ca.gov/title24/.

City of Riverside. 1998. Orangecrest Specific Plan (amended on October 7, 1997, and May 26, 1998).

City of Riverside. 2007. Riverside Municipal Code: Title 19 – Zoning Code. Adopted November 2007. Accessed on November 2, 2010: http://www.riversideca.gov/municode/title19.asp.

MCG Architecture. 2010. Site Plan.

USGS (U.S. Geological Survey). "Riverside, CA" [map]. 7.5-Minute Series (Topographic). Reston, Virginia: USGS.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

The purpose of this draft environmental impact report (DEIR) is to evaluate the potential environmental effects of the proposed commercial retail shopping center (proposed project). The City of Riverside (City) circulated a Notice of Preparation (NOP) beginning on December 17, 2010 with the public review period ending on January 19, 2011. The NOP was transmitted to the State Clearinghouse, responsible agencies, other affected agencies, and sent to property owners within a 1,000-foot radius from the project site to solicit issues and concerns related to the proposed project. The NOP, initial study, and comment letters are contained in Appendix A of this DEIR.

Sections 4.1 through 4.13 of the DEIR contain the potential environmental impacts analysis associated with implementation of the proposed project and focus on the following issues:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Traffic
- Urban Decay Analysis
- Utilities and Service Systems
- Energy Conservation.

Technical Studies

Technical studies in the areas of air quality/greenhouse gas emissions analysis, biological resources, cultural resources, hazards and hazardous materials (Phase I Environmental Site Assessment), urban decay analysis, noise impact analysis, and traffic impact analysis were used in this DEIR. These documents are identified in the discussion for the individual environmental issue and included as technical appendices on a CD attached to the DEIR.

Analysis Format

The DEIR assesses how the proposed project would impact these issue areas. Each environmental issue addressed in this DEIR is presented in terms of the following subsections:

- **Existing Setting:** Provides information describing the existing setting on or surrounding the project site that may be subject to change as a result of the implementation of the project. This setting described the conditions that existed when the NOP was sent to responsible agencies and the State Clearinghouse.
- **Threshold of Significance**: Provides criteria for determining the significance of project impacts for each environmental issue.
- **Project Elements that Can Reduce Impacts**: Provides a discussion of the project design elements and features with respect to each environmental issue that could reduce impacts.
- **Environmental Impacts before Mitigation**: Provides a discussion of the characteristics of the proposed project that may have an effect on the environment, analyzes the nature and extent to which the proposed project is expected to change the existing environment, and indicates whether the project impacts meet or exceed the levels of significance thresholds.
- **Mitigation Measures**: Identifies mitigation measures to reduce significant adverse impacts to the extent feasible.
- **Environmental Impacts after Mitigation Is Incorporated**: Provides a discussion of significant adverse environmental impacts that cannot be feasibly mitigated or avoided, significant adverse environmental impacts that can be feasibly mitigated or avoided, adverse environmental impacts that are not significant, and beneficial impacts.

4.1 Aesthetics

The focus of the following discussion and analysis, based on the initial study (IS), public scoping session, and Notice of Preparation public comment period, concerns the potentially adverse impacts to scenic vistas, resources associated with a state scenic highway, visual character or quality, or light and glare resulting from implementation of the proposed project.

In addition to other documents, the following references were used in the preparation of this section of the draft environmental impact report (DEIR):

- *City of Riverside General Plan 2025* (City of Riverside 2007)
- "Officially Designated State Scenic Highways and Historic Parkways: California Scenic Highway Mapping System: Riverside County." (Caltrans 2011).
- City of Riverside Municipal Code (Title 19) (2007).

4.1.1 Setting

Existing Conditions

Project Site

The project site consists of a 40-acre property located in the City of Riverside (City). The project site is currently developed with orange groves (see Figure 4.1-1, Photograph of the Existing Orange Groves), as well as a fruit stand (see Figure 4.1-2, Photograph of the Existing Fruit Stand), two mobile homes used as residences for caretakers of the property, and a warehouse/workshop shed. The warehouse/workshop shed is utilized as a packing and storage area, as well as an auto shop for farming vehicles used on-site. Five windmill-type fans are scattered throughout the project site and are reportedly fueled by petroleum-related products as reported by GeoSoils in the *Preliminary Geotechnical Evaluation and Preliminary Rock Hardness/Rippability Study (2008)*. Six aboveground storage tanks, a mobile fuel storage tank, and a fuel dispenser are present in the southeast portion of the property. Van Buren Boulevard borders the site on the north, which is a major thoroughfare through the City.

Surrounding Area

Although the project site is developed mostly with agricultural uses (orange groves) (see Figure 4.1-1), the existing visual setting of the project area is characterized by residential development to the north, south, and west, and vacant land to the east. Commercial developments are generally found along major highways and roadways throughout the City along State Route 91 (SR-91) and Interstate 215 (I-215) freeways as well as along Van Buren Boulevard. The land uses within the Orangecrest neighborhood consists primarily of residential development, with some commercial development, and a few public facilities. The Santa Ana River traverses the northern portion of the City. The area immediately surrounding the project site is

visually consistent, developed with mostly single-family residential properties. The homes are generally one to two stories and in similar architectural styles and time periods.

Scenic Resources

Although the majority of the City is urbanized, the hills and ridgelines that surround the City provide scenic vistas to residents from where they can experience long-distance views of natural terrain. Vista points can be found throughout the City, as viewed from both urban areas toward the hills and from wilderness areas toward the City. The most notable scenic vistas and resources in the City include the Santa Ana River, La Sierra/Norco Hills, Sycamore Canyon Wilderness Park, and Box Springs Mountain Regional Park. The peaks of Box Springs Mountain, Mt. Rubidoux, Arlington Mountain, Alessandro Heights, and the La Sierra/Norco Hills provide scenic views of the City and the region.

There are no unique, recognized, or valued views of natural visual resources (i.e., topographic features, trees, rock outcroppings) available from or through the project site. There are no views of cultural resources available from the project site since it is not within a 0.5-mile radius of any properties listed on the most recent list of California Points of Historic Interest, California Historical Landmarks, National Register of Historic Places, or City of Los Angeles Historic-Cultural Monuments. The existing fruit stand and other farming structures on site are not listed or eligible to be listed in the California Register of Historical Resources or the Public Resources Code (PRC) and have not been designated as historic under the City's Title 20, nor do any of the structures on site have any other state or federal historic designations. Additionally, none of the City records indicate that any of the existing structures, including the fruit stand, are over 50 years old or potentially historic.

The City's General Plan 2025 has designated several scenic and special boulevards within the City that meet local criteria for designation as scenic routes. As listed in Table 5.1-B, Scenic Parkways, and shown on Figure 5.1.1 of the General Plan 2025 Final Program EIR (FPEIR) (City of Riverside 2007a), Van Buren Boulevard is designated as a parkway. The City's General Plan considers each parkway part of a network to establish linkages among Riverside's neighborhoods, major elements of its natural environment and neighborhood parks, and schools. The General Plan provides a policy to "seek opportunities to provide enhanced bicycle and pedestrian usage along parkways through the development process" (City of Riverside 2007b). Figure 4.1-3 in this section shows the locations of the City's scenic boulevards and parkways. There are no state scenic highways in the vicinity of the project site (Caltrans 2011).

Existing Viewsheds

Viewsheds refer to the visual qualities of a geographical area defined by the horizon, topography, and other natural features that give an area its visual boundary and context, or by development that has become a prominent visual component of the area.

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SOURCE: DUDEK APRIL 2011

FIGURE 4.1-1
Photograph of the Existing Orange Grove

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SOURCE: DUDEK APRIL 2011

FIGURE 4.1-2
Photograph of the Existing Fruit Stand

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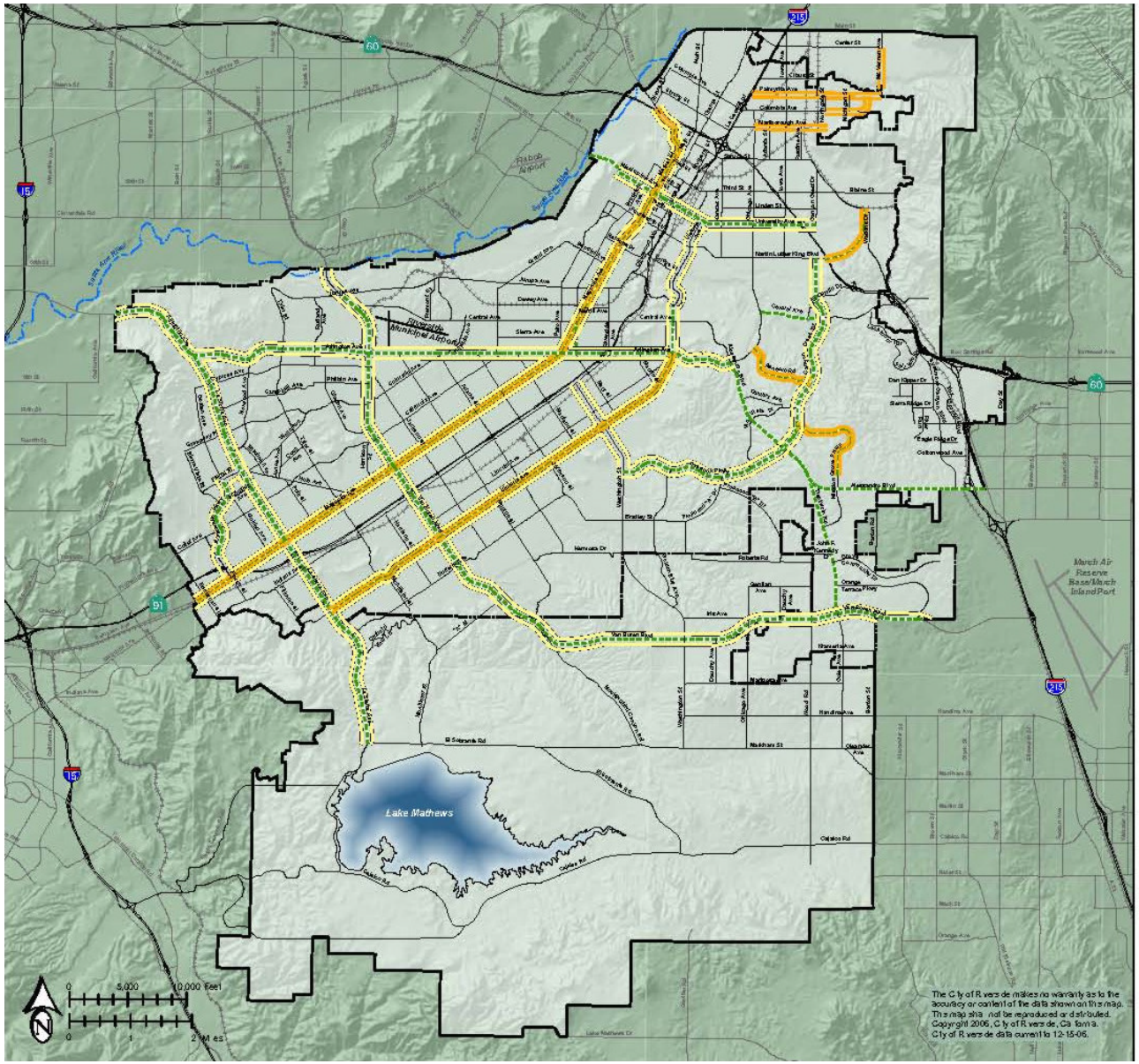

LEGEND

- SCENIC BOULEVARD
- SPECIAL BOULEVARD
- PARKWAYS
- RIVERSIDE CITY BOUNDARY
- RIVERSIDE PROPOSED SPHERE OF INFLUENCE

SOURCE: MEYER, MOHADDES ASSOCIATES INC

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SOURCE: City of Riverside GP and Supporting Document EIR November 2007

FIGURE 4.1-3

Scenic and Special Boulevards and Parkways

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Views from the Project Site

From the project site, views of the surrounding area are characterized mostly by suburban residential development. The visual setting of the project area consists mainly of Mediterranean style single family homes developed within the last 30 years. Views immediately available from the project site looking north, west, and south consist entirely of residential neighborhoods and street landscaping. Views to the east of the project site include vacant land and views of the San Jacinto Mountains.

Views of and Toward the Project Site

Views of and toward the project site consist almost entirely of orange groves, although the fruit stand is visible from Van Buren Boulevard and some of the warehouse and workshop uses are visible from Gless Ranch Road. The groves are protected by wood and wire fencing around the perimeter.

Light

The project site is located in a suburban community in the City that generally experiences moderate levels of ambient nighttime lighting common to developed areas. In the project area, ambient nighttime light is generated by street lighting, architectural and security lighting, and indoor building illumination (light emanating from the interior of structures that passes through windows). The project site is currently developed with orange groves, as well as a fruit stand, two mobile homes, and a warehouse/workshop shed, and therefore does not contribute significant amounts of nighttime lighting. However, moderate levels of spillover lighting are generated by vehicle headlights, street lights, and residential uses along the surrounding roadways.

The Mount Palmar Observatory, located south of the City of Temecula in San Diego County, has identified that the continued urbanization of southwestern Riverside County contributes to ambient lighting, or "sky glow," which reduces the nighttime usefulness of the observatory due to the emission of lighting from street lights, automobiles, residences, and businesses. The affected portion of the planning area falling within a 45-mile radius of the Mount Palomar Observatory is depicted on Figure 5.1-2 of the City of Riverside General Plan 2025 FPEIR. According to Figure 5.1-2 of the General Plan 2025 FPEIR, a majority of the project site is located within the 45-mile radius (Zone B) of the Mount Palomar Observatory and, therefore, will be required to control its nighttime lighting sources (City of Riverside 2007a).

Glare

Glare is largely a daytime phenomenon, occurring when sunlight is reflected off the surfaces of buildings, objects (e.g., vehicle windshields), or by vehicle headlights on adjacent roadways. Excessive glare not only restricts visibility but also increases the ambient heat reflectivity in a given area. The project site currently contains approximately four structures (fruit stand, two mobile homes, and workshop) that are all constructed of low-glare materials.

Related Regulations

State

The California Scenic Highway Program

The California's Scenic Highway Program was created by the State Legislature in 1963. This program's purpose is to "preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways (California Department of Transportation 2011)." The State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. The State Scenic Highway System includes a list of highways that either have already been designated as scenic highways or that are eligible for designation as scenic highways. There are no State-designated or eligible scenic highways in the project area.

Local

City of Riverside General Plan 2025

Scenic and Special Boulevards and Parkways

The City of Riverside General Plan 2025, Circulation and Community Mobility Element, designates several scenic and special boulevards within the City that meet local criteria for designation as scenic routes (see Figure 4.1-3). As discussed previously, Van Buren Boulevard is designated by the City as a scenic and special boulevard and parkway.

The Land Use and Urban Design Element of the City of Riverside General Plan 2025 contain the following policies pertaining to the City's parkways, specifically Van Buren Boulevard, that may be relevant to the proposed project (City of Riverside 2007).

Policy LU 11.1: Recognize parkways as distinctive elements of the City's circulation network.

Policy LU 11.3: Seek opportunities to provide enhanced bicycle and pedestrian usage along parkways through the development process.

Open Space and Conservation Element

The Open Space and Conservation Element of the City of Riverside General Plan 2025 contain goals, recommendations, objectives, guidelines, and standards for the management of visual resources. The following policies pertaining to the protection of scenic resources may be relevant to the proposed project (City of Riverside 2007c).

Policy OS-2.2: Limit the extent and intensity of uses and development in areas of unstable terrain, steep terrain, scenic vistas, arroyos, and other critical environmental areas.

Policy OS-2.3: Control the grading of land, pursuant to the City's Grading Code, to minimize the potential for erosion, landsliding, and other forms of land failure, as well as to limit the potential negative aesthetic impact of excessive modification of natural landforms.

Riverside Zoning Code

Title 19 of the City of Riverside Municipal Code contains the zoning code for the City, and includes regulations for site planning and development, including lighting. The related lighting design and development standards are found in Chapter 19.556, Lighting, and are as follows (City of Riverside 2007d):

A. Lighting for safety purposes shall be provided at entryways, along walkways, between buildings and within parking areas.

B. Lighting support structures shall not exceed the maximum permitted building height.

C. All on-site lighting shall provide an intensity of one foot-candle at ground level throughout the areas serving the public and used for parking.

D. Flickering or flashing lights shall not be permitted.

E. Light sources shall not be located in required buffer areas, except those required to illuminate pedestrian walkways.

F. All lights shall be directed, oriented and shielded to prevent light from shining onto adjacent properties, onto public rights-of-way and into driveway areas in a manner that would obstruct drivers' vision.

G. Light poles shall not exceed 20 feet in height, including the height of any concrete or other base material.

H. The City may require submittal of an exterior lighting plan as part of any development application or as a condition of approval of a project.

Citywide Design Guidelines and Sign Guidelines

The *Citywide Design Guidelines and Sign Guidelines* limit impacts to aesthetic resources by reducing interruptions of scenic vistas, maintaining and enhancing scenic resources and visual character, and reducing light and glare. "These Guidelines are intended to promote quality, well-designed development throughout Riverside that enhances existing neighborhoods, creates identity, and improves the overall quality of life within the City. The guidelines are intended to promote a desired level of future development in Riverside that:

- Promote a positive physical image and identify all types of development;

- Provide guidance to the development community, architects/designers and property owners;
- Promote a high quality of development that stimulates investment in and strengthening of the economic vitality of all areas of Riverside;
- Promote design in context with existing development in the surrounding neighborhood as opposed to requiring thematic architecture;
- Contributes to implementing the concepts and recommendations provided in the 2002 *Visioning Riverside program*;
- Implements the objectives, policies and tools of the General Plan;
- Supplement the contents of the Riverside Zoning Code on matters of design and aesthetics;
- Maintain and protect the value of property; and
- Maintain a high quality of life and pride of ownership without causing unnecessary public or private costs or unduly restricts private enterprise, initiative, or innovation in design (City of Riverside 2007e)

The *Citywide Design Guidelines and Sign Guidelines* provide pictorial guidance on building treatments, façade articulation, site planning, sign guidelines, and other matters in an effort to improve the overall visual quality of new development Citywide. The Guidelines prevent large windowless blank walls through building articulation, vegetation screening, and appropriate landscape areas along walls. The Guidelines also provide requirements for façade and signage treatments to prevent the use of highly reflective surfaces; large, blank, unarticulated wall surfaces; exposed, untreated precision block walls; chain-link fencing; barbed wire; and materials requiring high maintenance such as stained wood, shingles, or metal siding. The Guidelines also encourage the use of neutral paint colors, subtle lighting, and courtyard entrances where feasible. The proposed project falls within Zone B (45 mile radius) of the Mount Palomar Observatory which requires "unique nighttime lighting standards in order to allow the night sky to be viewed clearly (City of Riverside 2025 FPEIR 2007)." Projects within Zone B of the Mount Palomar Observatory have restrictions related to nighttime lighting hours, types, and techniques of lighting. The County of Riverside has adopted Ordinance 655 to regulate light pollution within a portion of the City and the City's sphere area which the proposed project lies within. The photometrics submitted to the Planning Department would be required to comply with Ordinance 655.

County of Riverside Multiple Species Habitat Conservation Plan

Section 6.1.4 of the Multiple Species Habitat Conservation Plan (MSHCP), "Urban/Wildlife Interface Guidelines," states that "Night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Shielding shall be incorporated in project designs to ensure that ambient lighting in the MSHCP Conservation Area is not

increased." The proposed project site is located within the Western Riverside County MSHCP Conservation Area.

4.1.2 Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts. Based on the IS and Appendix G, the project could have a significant impact on aesthetics if the proposed project would:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- Substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.1.3 Project Elements that can Reduce Impacts

The proposed project has been designed to be architecturally compatible with surrounding development and the aesthetic character of the area and City. The exterior design of the buildings have been designed to complement the architecture of the site's Gless Ranch fruit stand building with timber details, battered columns, and wood shingle or clapboard siding. Additionally, the proposed Target store would be designed in a Craftsman style, similar to other designs in the area.

The proposed project also includes landscaping designed to complement, enhance, and integrate the site to its surrounding environment. Approximately 104 citrus trees would remain on site along Gless Ranch Road. Approximately 646 new trees, including 200 dwarf citrus trees, will be planted throughout the project site. The citrus trees will be used as part of the landscape buffer between the proposed Target store, home improvement center, and residential uses, which are located along the southern and western boundaries of the site. New and different varieties of citrus trees will also be planted near the expanded fruit stand courtyard. The existing fruit stand will stay on site, be expanded and will be incorporated into the larger development plan.

4.1.4 Environmental Impacts before Mitigation

<u>Threshold:</u> Would the project have a substantial adverse effect on a scenic vista?

As discussed previously, the hills and ridgelines that surround the City provide scenic vistas to residents, allowing them to experience long-distance views of natural terrain. Vista points can be found throughout

the City, as viewed from both urban areas toward the hills and from wilderness areas toward the City. The most notable scenic vistas and resources in the City include the Santa Ana River, La Sierra/Norco Hills, Sycamore Canyon Wilderness Park, and Box Springs Mountain Regional Park. The peaks of Box Springs Mountain, Mt. Rubidoux, Arlington Mountain, Alessandro Heights and the La Sierra/Norco Hills provide scenic views of the City and the region.

The proposed project's height would be no more than 30 feet above grade for the Target store and home improvement store. The project's other structures would generally be shorter than these anchor buildings. The proposed height of the buildings is consistent with the CR-S-2-X-SP – Commercial Retail, Height, and Setback Restriction, and Orangecrest Specific Plan Overlay Zones in which the height limitation is 30 feet. As such, the proposed project would not block views of, through, or from the project site, nor would the structures obstruct any existing views of scenic vistas in the area. **Because the area's scenic vistas are from elevated view points, and because the structures proposed on site are no greater than one commercial story in height, scenic vistas would not be affected and impacts would be less than significant.**

<u>Threshold:</u> Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

As discussed previously, there are no state scenic highways in the vicinity of the project site (Caltrans 2011). **Therefore, the proposed project would not result in impacts related to scenic resources within a state scenic highway.**

The City's General Plan 2025 has designated several scenic and special boulevards within the City that meet local criteria for designation as scenic routes. The General Plan designates Van Buren Boulevard as a parkway that acts as a linkage among Riverside's neighborhoods, major elements of its natural environment and neighborhood parks, and schools. The General Plan provides a policy to "seek opportunities to provide enhanced bicycle and pedestrian usage along parkways through the development process" (City of Riverside 2007b). The proposed project would not adversely affect any scenic resources within this parkway, since it would not remove or otherwise damage such resources. Rather, the proposed project would include pedestrian walkways and sidewalk along Van Buren Boulevard and throughout the project site for access. A bike lane would be provided along Van Buren Boulevard and the proposed project would include bike racks on site for employees and customers to lock their bikes. Inclusion of pedestrian walkways, sidewalks, and bike lanes is consistent with Policy LU-11.3 of the City's GP 2025 by providing an alternate means of transportation and alleviating some of the traffic off Van Buren Boulevard.

Additionally, there will be approximately 750 trees on the project site (104 existing orange trees to remain, and 646 new trees planted), including existing trees and replanted trees, are proposed for the site. The proposed project would also include other types of ornamental landscaping along Van Buren

Boulevard, consistent with the types of landscaping and features that exist along the road in the vicinity and consistent with the City's GP 2025. Impacts to Van Buren Boulevard as a designated scenic boulevard/parkway would be less than significant.

Threshold: Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

The proposed project would include removal of the majority of the existing orange grove and associated structures and development of a commercial retail center with buildings not to exceed a cumulative total of 420,000 square feet. The development would include a Target store of approximately 138,516 square feet, a home improvement center of approximately 124,076 square feet, and 13 other retail locations comprising approximately 125,608 square feet of space that would house retail, bank, and restaurant uses, and an expanded fruit stand.

Height and Massing

The project site is zoned CR-S-2-X-SP – Commercial Retail, Height, and Setback Restriction, and Orangecrest Specific Plan Overlay Zones. The "S-2" in the zoning designation means that the property is within the Building Stories Overlay Zone (S), and the maximum number of permitted stories is 2. The height limitation associated with the two stories in the S-2 Overlay Zone is 30 feet. . As discussed previously, the maximum proposed height of buildings on the project site is up to 30 feet. In no case would any structure on the site exceed the height limit of 30 feet. Elevations of the proposed project in the context of the existing setting are provided in Figures 4.1-4 through 4.1-8.

The residential developments to the north, west, and south contain single-family residences that are one to two stories. Vacant land is located east of the project site. As illustrated in Figures 4.1-4 through 4.1-8, development on the project site would be compatible and complementary to the visual character of the project area. The proposed Target building and home improvement center would be the tallest buildings, not to exceed 30 feet in height, and would not result in a substantial contrast between the surrounding uses and the proposed project. **Therefore, the height of the proposed project would be compatible with the surrounding uses and the project area, and impacts with respect to height and massing are considered less than significant.**

Visual Character

Currently, the project site is visible to the immediate surrounding uses and from distant vantage points as a lot developed with orange groves. The structures associated with the groves are visible generally only from Gless Ranch Road and the residences immediately south of Gless Ranch Road.

Views of scenic resources from the project site or area would not be significantly affected by the proposed project because of the height and massing of the project, as discussed previously. The

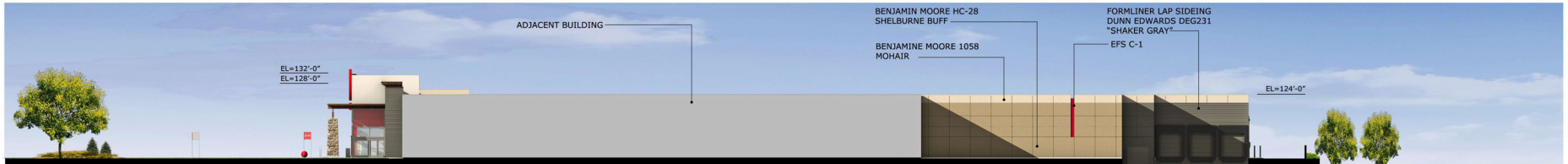
proposed project would not block views of surrounding resources such as Box Springs Mountain from the site or the surrounding area, because such views are available from limited vantage points, with dependence on weather and air quality conditions, and would not be blocked by any of the proposed structures on the site. Thus, implementation of the proposed project would not result in the loss of views of scenic resources from the project area.

The proposed project would replace a majority of the existing orange groves and associated structures with a retail center, which would include a proposed Target store of approximately 138,516-square feet, a home improvement center of approximately 124,076-square feet, and approximately 125,608 square feet of other retail pads. As discussed previously, the proposed project includes landscaping designed to complement, enhance and integrate the site to its surrounding environment. Approximately 104 citrus trees would remain on site along Gless Ranch Road. Approximately 646 new trees, including 200 dwarf citrus trees, will be planted throughout the project site. The citrus trees will be used as part of the landscape buffer between the proposed Target store, home improvement center, and residential uses, which are located along the southern and western boundaries of the site. New and different varieties of citrus trees will also be planted near the expanded fruit stand courtyard. The existing fruit stand will stay on site, be expanded and will be incorporated into the larger development plant.

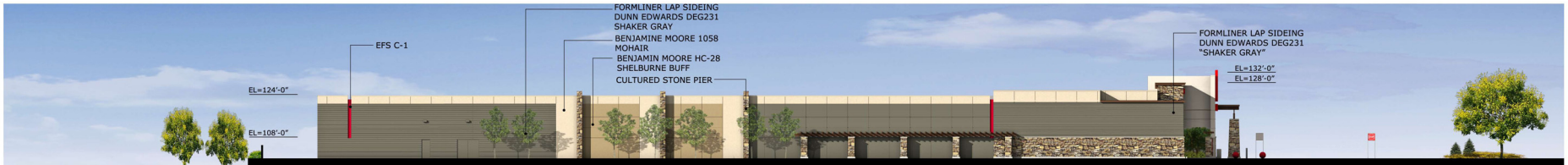
Additionally, the proposed project has been designed to be architecturally compatible with surrounding development and the aesthetic character of the area and City. The exterior design of the buildings have been designed to complement the architecture of the site's Gless Ranch fruit stand building with timber details, battered columns, and wood shingle or clapboard siding. Additionally, the proposed Target store would be designed in a Craftsman style, similar to other designs in the area and be consistent with the City's Citywide Design and Sign Guidelines.

Although the proposed development would be consistent with the commercial and land use designation on the project site, not exceed the allowable height in the S-2 Overlay Zone, would be lower than the height requirements of a R-1-7000 Single family Residential Home, and contribute to the suburban character of the surrounding area, the project would substantially change the current appearance, character, and visibility of the project site. Views of the project site would be altered from views of orange trees to views of a commercial development. Agricultural uses such as orange groves are considered visually appealing and beneficial as a type of open space or semi-natural environment. For this reason, the site can be considered more valuable visually as an orange grove rather than a suburban commercial development. Since changes to views can be subjective, this change in the visual appearance of the project site can be considered a substantial change and would degrade the existing visual character of the site and its surroundings since it would transform an agricultural lot to an urban development. **Impacts related to the change in the visual character and quality of the project site would be considered significant because some people may consider the loss of the view of the orange groves to be a substantial degradation of their views.**

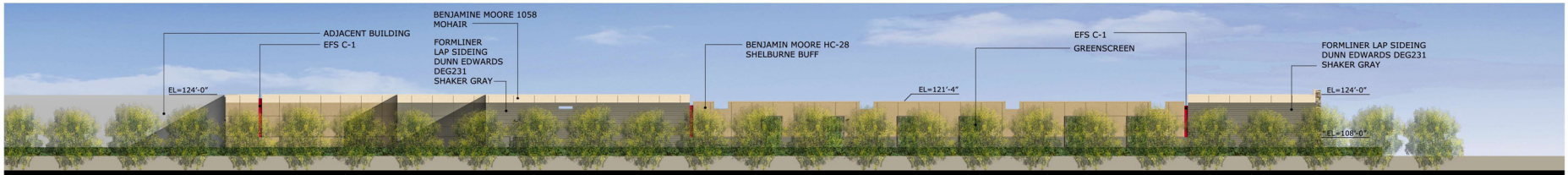
FRONT ELEVATION



RIGHT ELEVATION



LEFT ELEVATION



REAR ELEVATION

DUDEK

6765-01

2011

SOURCE: MCG 2011

FIGURE 4.1-4

Building Elevations–Target Store

GLESS RANCH–DEIR

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NORTH ELEVATION

SOUTH ELEVATION

DUDEK

6765-01

2011

SOURCE: MCG 2011

FIGURE 4.1-5

Building Elevations–Shops 1 and 2

GLESS RANCH–DEIR

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NORTH ELEVATION

WEST ELEVATION

SOUTH ELEVATION

EAST ELEVATION

DUDEK

6765-01
2011

SOURCE: MCG 2011

FIGURE 4.1-6
Building Elevations–Pad 2

GLESS RANCH–DEIR

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NORTH ELEVATION

WEST ELEVATION

SOUTH ELEVATION

EAST ELEVATION

DUDEK

6765-01
2011

SOURCE: MCG 2011

FIGURE 4.1-7
Building Elevations–Pad 5

GLESS RANCH–DEIR

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NORTH ELEVATION

WEST ELEVATION

SOUTH ELEVATION

EAST ELEVATION

DUDEK

6765-01

2011

SOURCE: MCG 2011

FIGURE 4.1-8

Building Elevations–Fruit Stand

GLESS RANCH DEIR

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<u>Threshold:</u> Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Light

The proposed project would include lighting typical of commercial developments of this size, including security lighting and illuminated walkways, building entrances and identification, parking areas, and driveways. The proposed project would likely also produce light emitted from the interiors of the proposed retail structures. Since the proposed project would change the site from an agricultural use to a commercial use, the increase in lighting could be substantial. A photometric study was conducted for the project and shows that spillover lighting would be expected to reach levels of up to 1.6 foot-candles along the Van Buren Boulevard property line, 3.0 foot-candles along the Barton Street property line, 0.1 foot-candle at the Gless Ranch Road property line, and up to 0.3 foot-candle at the property line adjacent to residential uses to the east. A foot-candle is the measure of the quantity of light that arrives on a surface. Three factors that affect illuminance are the intensity of the luminaire in the direction of the surface, the distance from the luminaire to the surface, and the angle of incidence of the arriving light. Although illuminance cannot be detected by our eyes, it is a common criterion used in specifying designs (Iris Lighting Systems 2011). A variance has been filed with the City for the lighting poles exceeding the maximum allowable height within a commercial center that would produce more illumination within the parking lot area. The applicant is proposing lighting poles up to 30 feet in height, where the code allows a maximum height of 20 feet. The variance is a discretionary action and will be part of the entitlement process.

Chapter 19.556 of the City's Municipal Code includes the following lighting design and development standards (City of Riverside 2007d):

1. Lighting for safety purposes shall be provided at entryways, along walkways, between buildings and within parking areas.
2. Lighting support structures shall not exceed the maximum permitted building height.
3. All on-site lighting shall provide an intensity of one foot-candle at ground level throughout the areas serving the public and used for parking.
4. All lights shall be directed, oriented and shielded to prevent light from shining onto adjacent properties, onto public rights-of-way and into driveway areas in a manner that would obstruct drivers' vision.
5. Light poles shall not exceed 20 feet in height, including the height of any concrete or other base material.

There will be minimal spillover with the proposed 30 foot high light poles. Specifically, the spillover from Van Buren Boulevard will reach to zero when it reaches the residential development to the north, and

the spillover on Barton Street will nearly reach zero as it reaches the vacant land to the east. There will be spillover of 0.1 at Gless Ranch Road property line and 0.3 at the western property line. However, with the implementation of Mitigation Measure AES -1 no light from the site will reach the residential uses along the western and southern project boundaries. The lighting proposed would be consistent with the Mount Palomar Observatory Zone B and Ordinance 655 regulating nighttime lighting, light pollution by providing low-pressure sodium fixtures, limit hours of use, including shielding on fixtures and implementation of AES-1 and AES-2. In addition, the proposed project would be consistent with night lighting regulations under Section 6.1.4 of the Multiple Species Habitat Conservation Plan (MSHCP) since lighting fixtures would be shielded and lighting would not impact MSHCP Conservation Areas. Although the lighting proposed by the project would change the lighting on the site compared to current conditions, the increased lighting generated by the proposed project would not adversely affect day or nighttime views in the area because the project would be required to comply with Ordinance 655 regarding Mount Palomar Observatory Zone B regulations, and incorporate measures such as controlling light spillover and shielding lights. **Additionally, with incorporation of Mitigation Measures AES-1 and AES-2 to reduce light spillage and nighttime views, the proposed project would have a less-than-significant impact with respect to light.**

Glare

Most of the existing daytime glare in the project area is generated from vehicles passing along the surrounding streets such as Van Buren Boulevard and Barton Street. The level of glare in the project area is moderate, as most buildings in the vicinity do not have reflective surfaces. As the proposed project would increase the intensity of the structures on the project site, it is possible the proposed project would increase the amount of glare-inducing reflective surfaces (i.e., windows) on the project site above the existing conditions.

The exterior portions of the proposed building would incorporate a variety of non-reflective material that would minimize the transmission of glare from building materials such as wood-siding and stucco. In addition, the proposed project would incorporate exterior landscaping, as needed, that would minimize the potential glare generated by the project from windows and glass panels. Building materials and landscaping, including orange trees, would be expected to minimize potential glare effects along Van Buren Boulevard, Barton Street, and Gless Ranch Road. **However, the potential exists for glass or other shiny building materials to cause glare impacts at nearby residential uses as the surrounding streets would continue to be the major contributor to project area daytime glare; this impact may be considered significant to surrounding property owners and therefore can be considered a significant impact. However, with the implementation of Mitigation Measure MS AES-2 below impacts associated with glare would be reduced to less than significant levels.**

4.1.5 Mitigation Measures

CEQA Guidelines Section 15126.4 requires EIRs to describe feasible measures that can minimize significant adverse impacts. The following mitigation measures have been evaluated for feasibility and are incorporated in order to reduce potentially significant impacts related to creating a new source of substantial light or glare on site.

MM AES-1: In order to avoid all light spill from the project site on adjacent residential uses, the project proponent shall be required to install shielding and use directional devices to ensure the light spill from the site is 0.0. The project proponent shall submit a photometric study confirming the light spill onto residential properties to the west and south of the site results in no light spillage from the project.

MM AES-2: All glass to be incorporated into the exterior of the building shall be either of low-reflectivity, or accompanied by a non-glare coating.

4.1.6 Environmental Impacts after Mitigation Is Incorporated

All impacts related to impacts to scenic vistas, resources associated with a state scenic highway, and light and glare are either at less-than-significant levels or can be reduced to less-than-significant levels with the proposed mitigation measures, and with compliance with all the City's zoning code and design guidelines.

Although the proposed development on the project site would contribute to the suburban character of the surrounding area, the project would substantially change the current appearance, character, and visibility of the project site. Views of the project site would be altered from views of orange trees to views of a commercial development. Therefore, impacts related to the change in the visual character and quality of the project site would be considered significant because some people may consider the loss of the view of the orange groves to be a substantial degradation of their views. Because no mitigation measures are available to reduce this impact to less than significant, this impact would be significant and unavoidable.

4.1.7 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

California Department of Transportation. 2011. "The California Scenic Highway Program." Accessed June 13, 2011. http://www.dot.ca.gov/dist3/departments/mtce/scenic.htm

Caltrans (California Department of Transportation). 2011. "Officially Designated State Scenic Highways and Historic Parkways, California Scenic Highway Mapping System." Accessed April 14, 2011. http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm.

City of Riverside. 2007a. *Final Program Environmental Impact Report – Volume 2.* Adopted November 2007. Accessed April 14, 2011. Prepared for the City of Riverside by Albert A. Webb Associates. http://www.riversideca.gov/planning/gp2025program/FPEIR_V2.asp.

City of Riverside. 2007b. *City of Riverside General Plan 2025*, "Land Use and Urban Design Element." Adopted November 2007. Accessed April 14, 2011. http://www.riversideca.gov/planning/gp2025program/general-plan.asp.

City of Riverside. 2007c. *City of Riverside General Plan 2025*, "Open Space and Conservation Element." Adopted November 2007. Accessed April 14, 2011. http://www.riversideca.gov/planning/gp2025program/general-plan.asp.

City of Riverside. 2007d. Title 19 – Zoning Code , Article VIII: Site Planning and General Development Provisions, Chapter 19.556, Lighting. Accessed April 14, 2011. http://www.riversideca.gov/municode/title19.asp.

City of Riverside. 2007e. *Riverside Citywide Design Guidelines and Sign Guidelines*. Adopted November 2007, Resolution No. 21544.

County of Riverside. 2007. *Western Riverside County Multiple Species Habitat Conservation Plan, Permittee Implementation Guidance Manual*. Section 4.6, "Urban/Wildlife Interface Guidelines." Prepared by Western Riverside County Regional Conservation Authority. August 2007.

GeoSoils Inc. 2008. *Preliminary Geotechnical Evaluation and Preliminary Rock Hardness/Rippability Study*, December 2, 2008. December 2, 2008.

Iris Lighting Systems. 2011.Cooper Lighting: How to Read Photometrics. Accessed on April 15, 2011: http://www.pilipufgrist.com/photometrics.pdf

4.2 Agricultural Resources

The focus of the following discussion and analysis, based on the initial study (IS), public scoping session, and Notice of Preparation public comment period, concerns the potentially adverse impacts to convert farmland to nonagricultural use from implementation of the proposed project. As detailed, analyzed and evaluated in the IS (Appendix A), the proposed project will not conflict with the existing zoning, Williamson Act contract, forest land, or timberland; therefore, these issues will not be discussed in the draft environmental impact report (DEIR).

In addition to other documents, the following references were used in the preparation of this section of the DEIR:

- California Department of Conservation (DOC) Land Evaluation and Site Assessment (LESA) Model
- City of Riverside General Plan 2025 (2007)
- City of Riverside Municipal Code (Title 19) (2007).

4.2.1 Setting

The discussion related to the site's current agricultural use, current zoning and general plan designation, and Farmland designation below describes the existing environmental conditions at the time the NOP was published and is therefore considered the baseline.

Agriculture represents a finite and unique resource that is an important part of the City of Riverside's (City's) history. The citrus industry was the mainstay of the City's economy starting in the late nineteenth century and continuing well into the twentieth century. The climate and soils were favorable to widespread commercial citrus crops. Historically, agriculture was the largest industry in Riverside County (County), providing employment for a significant portion of the City's population. As recently as the mid-1950s, large areas of the City remained in citrus groves. However, during the late twentieth century, there was significantly increasing pressure to convert agricultural land use to suburban use. Currently, agriculture faces continuing pressure from urbanization, foreign competition, and rising production and water costs. Numerous citriculture areas were completely converted to urban and suburban uses after the 1970s. Nearly all of the Orangecrest area was in citrus production as late as the 1970s. Today, the majority of Orangecrest area has been converted to suburban development. Currently, this project site is bordered by Van Buren Boulevard (a six-lane arterial highway) to the north with residential development, Barton Road to the east and vacant land, Gless Ranch Road and residential development to the south, and residential development to the west.

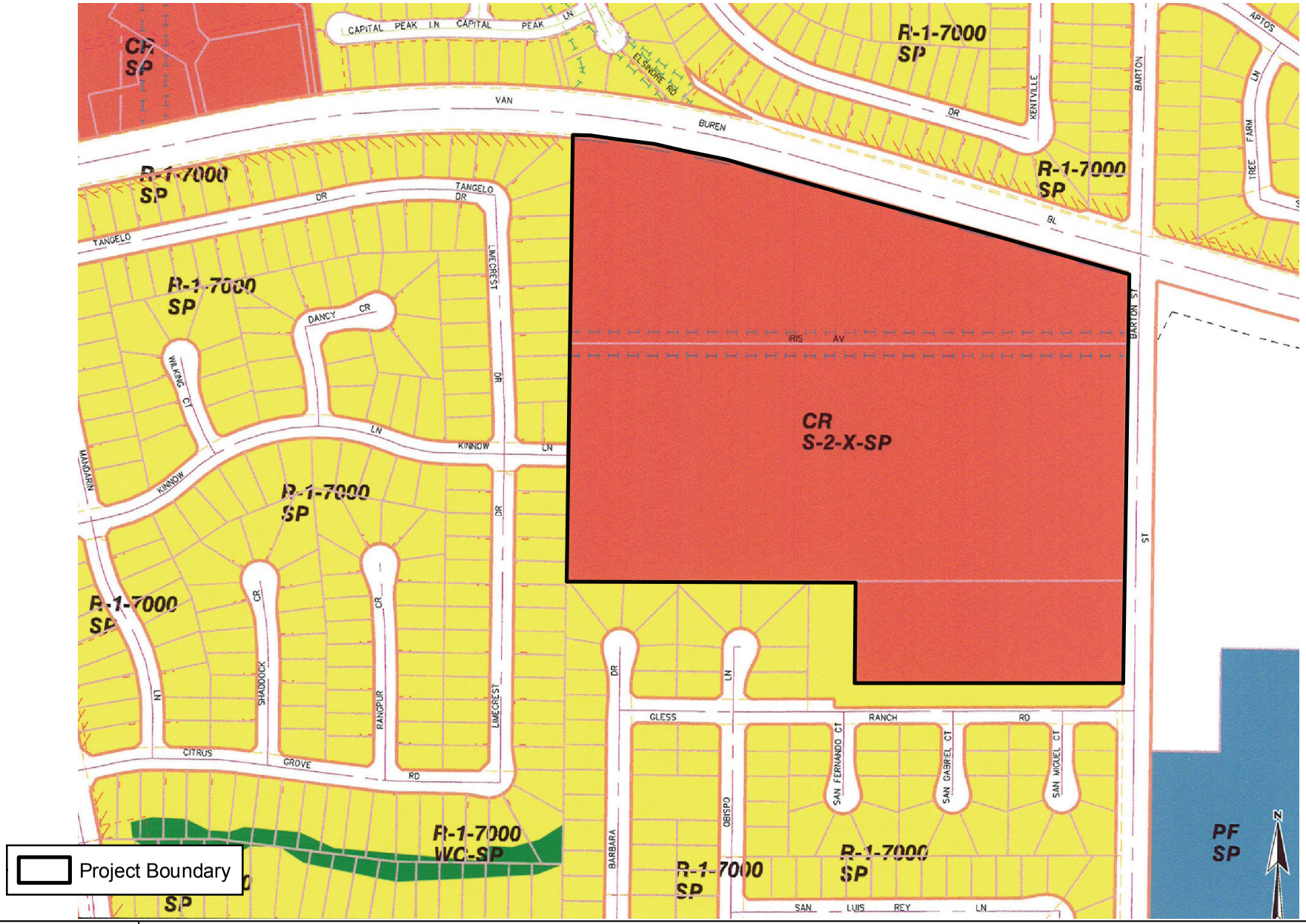
The region is experiencing rapid loss of farmland, contracted lands, and agriculture in general. In terms of dollar value, agriculture is today the largest industry in Riverside County, providing employment for a significant portion of the County's population. According to the Riverside County Agricultural Crop and

Livestock Report, for every dollar received by farmers in the County, the financial impact to the region is three times that amount. With crop valuations that have hovered around $100,000,000 over the last 10 years, it represents a tremendous economic benefit to the County. However, agriculture faces continuing pressure from urbanization, foreign competition, and rising production costs. Despite these pressures, those areas that remain in agricultural production represent a significant open space and economic resource for the County. As values of differing crops vary significantly, the loss of agricultural land is the appropriate measure of whether significant environmental impacts related to agriculture are occurring.

In 1990, the County had a total of 343,072 acres of harvested crops. In 2002, the total acres had dropped to 241,294 and by 2005 to 223,848 harvested acres. This represents a loss of 119,224 acres in 15 years (35%) with 14% of that loss (17,446 acres) occurring within the last 4 years (2002–2005). The Agricultural Commissioner's Office also reports these statistics for regions of the County, including the Riverside/Corona District, within which the project is located. For the same 2002 to 2005 period, the Riverside/Corona District went from 21,600 harvested acres to 14,340 harvested acres, a reduction of 34%. This indicates that the development pressure faced in the western end of the County, where the City is located, is more intense than in the County as a whole.

The approximately 40-acre project site has been used as a citrus grove since approximately 1964. The majority of the orange groves will be removed as a result of the proposed commercial retail center project. Approximately 90 citrus trees will be maintained, and approximately 104 citrus trees will be replanted along Gless Ranch Road. Approximately 646 new trees, including 200 dwarf citrus trees, will be planted throughout the project site. The citrus trees will be used as part of the landscape buffer between the proposed Target Store, home improvement center, and residential uses, which are located along the southern and western boundaries of the site. The citrus trees will also be planted near the fruit stand courtyard. The existing fruit stand will remain on site and will be incorporated into the commercial retail development plan as part of its effort to maintain the agricultural character. The project site is currently designated and zoned for commercial use by the City (Figure 4.2-1 and Figure 4.2-2). Additionally, the site is not subject to a Williamson Act contract. With the current zoning designation as commercial, agricultural uses would not be permitted under Chapter 19.150 – Article V – Permitted Uses Table of the City's Zoning Code (City of Riverside 2007a).

The site has been designated by the State DOC Farmland Mapping and Monitoring Program as having Unique Farmland and Farmland of Statewide Importance (DOC 2008). Approximately 9 acres of the project site are included in the Unique Farmland category, and approximately 29.24 acres of the project site are included in the Farmland of Statewide Importance category (Figure 4.2-3).



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6765-01
2011

SOURCE: City of Riverside

FIGURE 4.2-1

Zoning Designations

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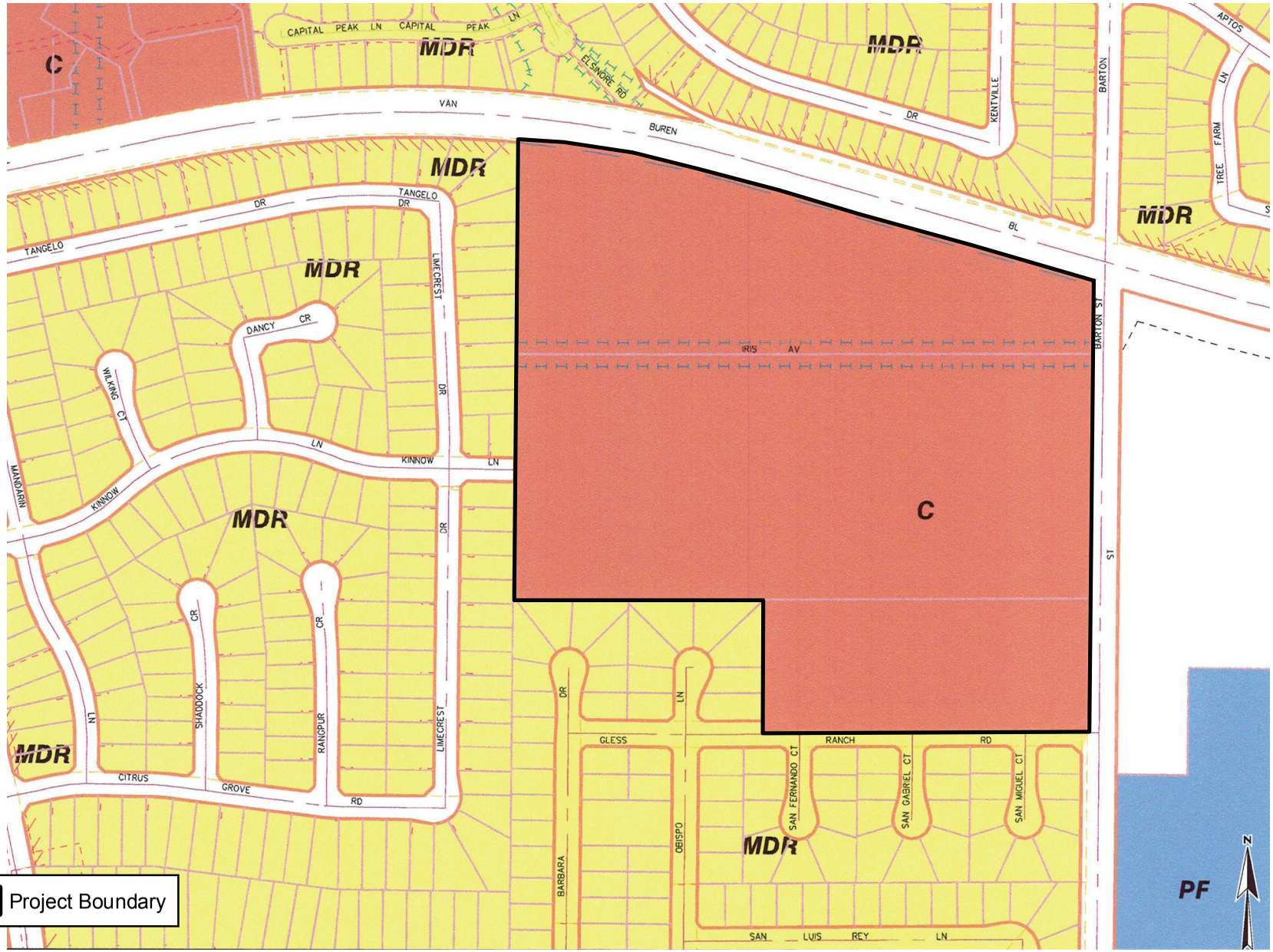

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SOURCE: City of Riverside

FIGURE 4.2-2

General Plan Land Use Map

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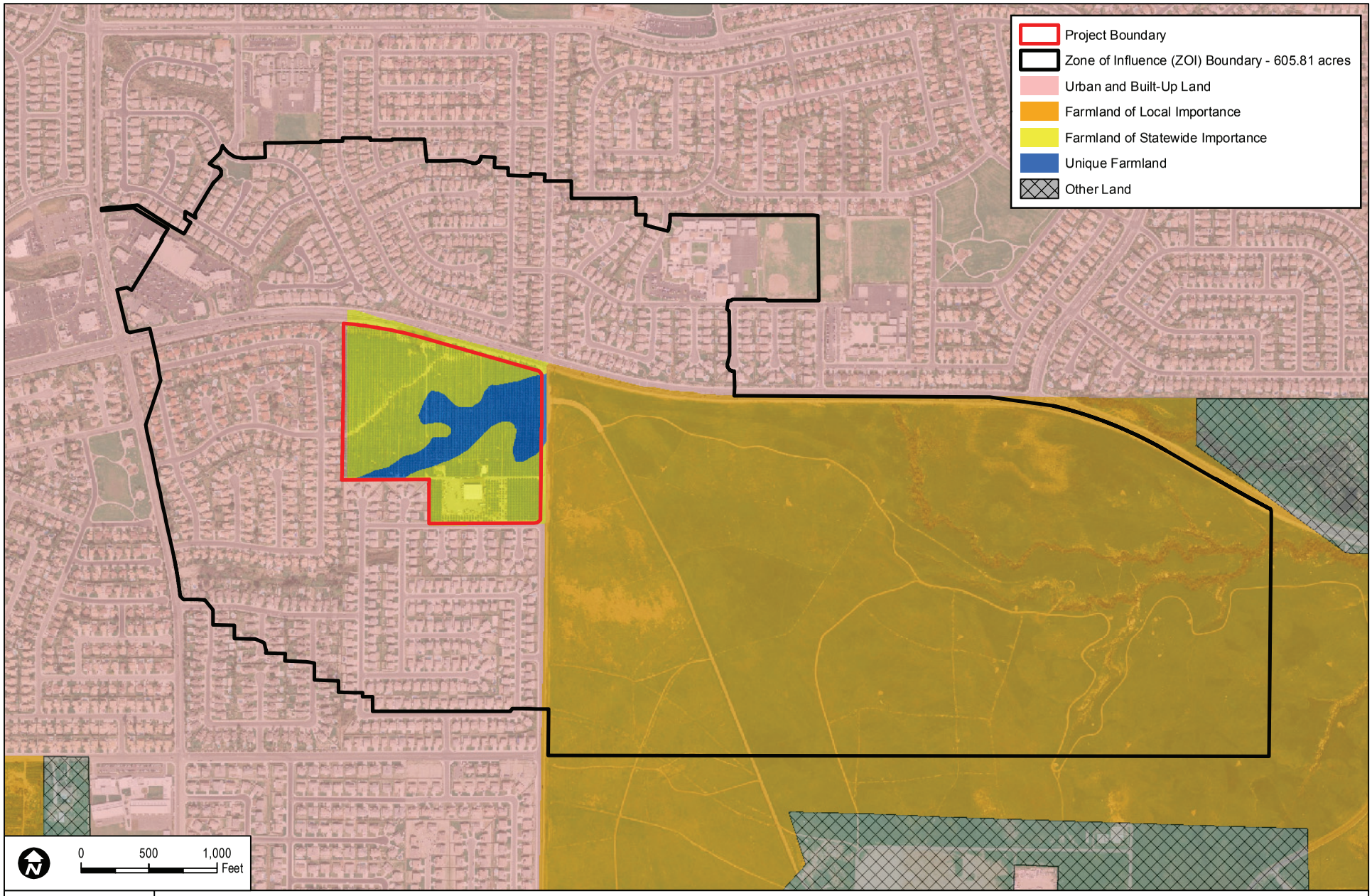

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6765-01

2011

SOURCE: State Dept. of Conservation 2008, County of Riverside 2008, DigitalGlobe 2008

FIGURE 4.2-3

Unique Farmland and Farmland of Statewide Importance

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Related Regulations

State

The DOC classifies and maps land within the state as Prime Farmland, Farmland of Statewide Importance, Unique Farmland (collectively referred to as Important Farmland), and Grazing Land to provide information regarding Important Farmland conversion to decisions makers for use in planning the present and future use of California's agricultural land resources. As stated previously, the project site has been designated by the DOC Farmland Mapping and Monitoring Program as having Unique Farmland and Farmland of Statewide Importance, which are described in further detail as follows.

Unique Farmland

Unique Farmland is land currently used for the production of specific high-value crops. Unique Farmland has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality and high yields of specific crops. Examples of such crops include oranges, olives, avocadoes, rice, grapes, and flowers.

Farmland of Statewide Importance

These lands have a good combination of physical and chemical characteristics for the production of crops. To maintain this designation, such land must have been used for the production of irrigated crops within the last 3 years.

Land Evaluation and Site Assessment Model

The LESA Model is a point-based approach for rating the relative importance of agricultural land resources based upon specific measurable features. The LESA Model evaluates measures of soil resource quality, given the project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, these factors are rated, weighted, and combined, resulting in a single numeric score. The project score becomes the basis for making a determination of a project's potential significance (LESA Model 1997).

The values and ratings used in the LESA Model for soil mapping units, land capability classifications (LCCs), and Storie Index Rating Scores were derived from the Web Soil Survey, U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) (formerly the Soil Conservation Service) (USDA 2010).

Local

City of Riverside General Plan 2025

The City's General Plan 2025 designated the project site as commercial (see Figure 4.2-2), and did not foresee the continued operation of the site for citrus agriculture (City of Riverside 2007b).

City of Riverside Urban Forestry Policy Manual

The City of Riverside's Urban Forestry Policy Manual is a guideline for the planting, pruning, preservation and removal of all trees in the city right-of-ways and recreational facilities. The Urban Forestry Policy Manual (2007c) does not apply to private property trees or agricultural crops such as orange groves on the project site. Additionally, the Urban Forestry Policy Manual focuses on the public right-of-way, which the orange trees on site are not located within, nor are the trees considered a recreational facility.

4.2.2 Thresholds of Significance

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts. Based on the IS prepared for the project, and Appendix G, a development project could have a significant impact on agricultural resources if the proposed project would:

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

4.2.3 Project Elements that Can Reduce Impacts

The proposed project will preserve approximately 90 citrus trees, replant approximately 104 citrus trees, and add approximately 200 dwarf citrus trees as part of the landscaping on site near the existing fruit stand. The citrus trees will serve as a landscape buffer and will be placed along the southerly portion of the site between the proposed Target store and the residential uses. Landscape buffer will also be placed along the western portion of the site between the home improvement center and residential uses, where feasible. The existing fruit stand will remain on site and will be expanded as part of the project. The fruit stand will retain a portion of its original structure as a means of keeping the original integrity of the building. The original structure will be expanded on the southern end. The fruit stand will be a California Ranch style building to match the proposed Craftsman theme of the commercial shopping center (Figure 4.2-4). The fruit stand will consist of wood siding, wood trellis with cobblestone posts, and landscaped with citrus trees.

NORTH ELEVATION

WEST ELEVATION

SOUTH ELEVATION

EAST ELEVATION

DUDEK

6765-01

2011

SOURCE: MCG 2011

FIGURE 4.2-4

Building Elevations–Fruit Stand

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4.2.4 Environmental Impacts before Mitigation

<u>Threshold:</u> Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

Approximately 9 acres of the project site are included in the Unique Farmland category, and approximately 29.24 acres of the project site are included in the Farmland of Statewide Importance category (Figure 4.2-3), according to the Farmland Mapping and Monitoring Program. The project proposes to develop a commercial retail center on site that would result in the site no longer being eligible for designation as Important Farmland. The LESA Model (1997) is used for rating relative quality of land resources based upon specific measurable features. The LESA method was developed by the DOC to provide California Environmental Quality Act (CEQA) lead agencies with a methodology to determine if conversion of agricultural land by a project would cause significant effects on the environment (PRC 21095).

For the Gless Ranch project, the LESA Model was conducted to determine the impacts associated with the conversion of the site from Unique Farmland and Farmland of Statewide Importance to commercial use. The LESA Model is composed of six different factors. There are two "land evaluation" factors that are based on measures of soil resource quality on the site. The remaining four "site assessment" factors provide measures of a project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, each of these factors is separately rated on a 100-point scale. The factors are then weighted relative to one another and combined, resulting in a single numeric score for a given project, with a maximum attainable score of 100 points. It is this total project score that becomes the basis for making the determination of a project's potential significance, based on a range of established scoring thresholds.

The LESA Model worksheets are provided in Appendix B of this EIR. For the project site, the land evaluation portion of the model resulted in 28.1 points and the site assessment portion resulted in 16.5 points, for a total project score of 46.1 points. The total points for the land evaluation portion of the model are based on factors that measure the soil-based qualities of land on the project site as they relate to agricultural suitability. In other words, the soil conditions on the site are good for farming; they drain well, are not too salty and offer the necessary organic material to support crops. The total points for the site assessment portion of the model are based on factors that are intended to measure social, economic, and geographic attributes that also contribute to the overall value of agricultural land. For instance, one of the important factors affecting the site assessment score for the project is that the economics of the site being used for agricultural are no longer feasible. The cost of water to irrigate the orange groves on site is very high, $471.64 per acre foot (AF), as opposed to other farming communities in the Coachella Valley where the price of water is $39.70 per AF and Bakersfield where it is $122.00

per AF. The orange grove production has lost money every year given the high costs of water. Additionally, the other reason for the low site assessment score in the LESA model relates to the lack of other agricultural properties within the project's "Zone of Influence" (see Appendix B for definition). There are no other agriculturally zoned or operating properties within miles of the project site. The surrounding existing land uses are either existing residential or planned business/commercial to the east. Further, the evidence shows that development pressure faced in the western end of the county, where City is located, is more rapid than in the County as a whole. (City of Riverside, 2007d at p. 45) Accordingly, these development patterns reflect the development pressure to convert agricultural land to urban and suburban uses. The existing orange grove production on-site is not indicative of the area, and would not constitute a viable, long-term operation for the project site.

According to the LESA Model rating, a score of 40 to 59 points is considered significant under the LESA Model only if the land evaluation and site assessment subscores are each greater than or equal to 20 points (Appendix B). Since the site assessment subscore for the project is less than 20, the overall score of 46.1 for the project is not considered significant per the LESA Model. This means that although the site has qualities that make it good for farming, there are other site factors, like the economics and the surrounding lands uses that are not in support of farming, that make the site not as valuable for farming. For example, the cost of water for the current orange grove operation has made the agricultural operation on the site not economically viable. The site conditions related to the lack of other contiguous agricultural operations, and the high cost of water, make the site assessment score in the LESA Model to come to less than 20, which under the model indicates these are important factors leading to the non-viability of the site to be used for agriculture.

It should also be noted that, more generally, the Environmental Impact Report for the City's General Plan 2025 (Riverside GP EIR), certified in 2007 (State Clearinghouse # 2004021108), evaluated the conversion to non-agricultural uses as part of a comprehensive, City-wide planning update. While the project site was not specifically analyzed as it had already been designed as Commercial Retail when it was annexed to the City in 2002, the Riverside GP EIR analysis is relevant to the discussion of the pattern of conversion of agricultural uses. Specifically, it was disclosed that the implementation of the General Plan would indirectly influence the conversion of farmland by facilitating development, increasing densities as well as the construction of roads and infrastructure in proximity to operating agricultural areas. Therefore, impacts related to the conversion of Farmland of Local Importance, as well as any other land being used for agricultural uses as non-conforming uses were considered significant. (City of Riverside, 2007e at pp. 5.2-23 to 5.2-25.)

The City included several policies within its General Plan 2025 to discourage the premature conversion of agricultural lands. In particular, the General Plan 2025 provides for the protection of agricultural uses in agriculturally designated areas such as the La Sierra Acres and Greenbelt areas. Further, the General Plan 2025's Implementation Program includes specific tools to be implemented as development occurs within the General Plan areas. Objective OS-3 of the Open Space and Conservation Element of the

General Plan 2025 is to "[p]reserve designated agricultural lands in recognition of their economic, historic, and open space benefits and their importance to the character of the City of Riverside." The General Plan 2025 also includes specific policies to further that objective. For example, Policy OS-3.7 commits the City to "[e]valuate various proactive programs for agricultural preservation such as transfer of development rights, purchase lease back, University purchase for research and purchase of development rights." The project site is not within an area protected for agricultural use. (City of Riverside, 2007e at Figure 5.2-3, 5.2-4) Rather, the site was designated as Commercial Retail when it was annexed to the City in 2002.

Additionally, the Riverside GP 2025 EIR disclosed that none of the policies require the protection of designated Farmland. (City of Riverside, 2007d at p. 42) Further, even with implementation of the above General Plan policies, direct impacts caused by redesignation and rezoning and indirect impacts associated with increased development pressures were determined to be significant and unavoidable.

The City concluded that there were no feasible mitigation that would reduce impacts to below a level of significance. The City considered both on-site and off-site mitigation, such as easements and conservation zones, for the loss of agricultural land and uses but found such mitigation to be infeasible. As discussed in the City's Statement of Overriding Consideration for the Riverside GP 2025 EIR:

> The economic viability of agricultural operations in the Riverside Sphere of Influence and southern California have declined in recent years. Increasing prices of land, higher water and labor costs, increased environmental regulations, higher property taxes, competition from other parts of the state, and growing urbanization have all worked together to put considerable pressure on farming as an economically viable use. Maintaining agricultural uses outside of the RC and RA-5 Zones is not economically viable. Agriculture needs specialized support services such as feed stores, equipment sales and maintenance, and manure removal services. Without a critical mass of customers, such agricultural support services may relocate further away, thereby increasing the costs of such services and decreasing the profitability of agricultural operations. According to the United States Department of Agriculture, National Agriculture Statistics Service, Census of Agriculture, farm production expenses in Riverside County increased from an average of $204,052 per farm in 1997 to $253,339 per farm in 2002. Total sales of agricultural goods decreased from $1,057,307 in 1997 to $1,008,273 in 2002. Over the same time period, the number of farms in Riverside County decreased from 3,864 in 1997 to 3,186 in 2002. These trends will continue as the cost of land, supplies, and services increase. Environmental factors and regulations are also causing the decline in the viability of agriculture. Stricter air quality and water quality regulations are making farming more difficult and are creating an environmental burden on urbanized areas. Declining water supply is another factor contributing to the overall decline of agricultural activity in the State. Studies suggest that

> such environmental and economic factors contribute more to the conversion of agriculture than urban development. (City of Riverside, 2007d at p. 43)

The City also considered a number of other mitigation options, including a fee program for the purchase of agricultural replacement land or a program that would establish agricultural easements could mitigate significant impacts. However, it was determined that agricultural easements on different agricultural land would not (1) avoid the loss of farmland, (2) minimize the scope of the project, (3) repair, rehabilitate or restore the affected farmland, (4) or replace the affected farmland with substitute farmland. Thus, such a program would not actually mitigate the significant impact caused by the project. (State CEQA Guidelines, § 15370.)" (City of Riverside, 2007d at p. 44). Thus, for the reasons explained above, the City concluded that adoption of the General Plan would result in significant impacts to agricultural resources for which there is no feasible mitigation available to reduce the impact to a less than significant level. (Draft PEIR, at pp. 5.2-25 to 5.2-28.)

Accordingly, based on the extensive analysis summarized above, the Riverside GP EIR appropriately disclosed the significant and unavoidable impact that would result from the City-wide conversion of agricultural lands. Additionally, although the project will convert lands that are designated as Farmland, on the basis of results of the LESA Model, the project will not result in significant impacts to the loss of Farmland. However, the proposed project will result in conversion of soils that are important to Farmland, and once developed, will be lost. Therefore, as a conservative measure, impacts are **considered significant and unavoidable. Feasibility of mitigation measures is discussed below.**

<u>Threshold:</u> Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use?

As discussed previously, the project would result in the conversion of approximately 40 acres of farmland to nonagricultural uses. However, the project would not result in conversion of nearby farmland to nonagricultural use. First, this property is adjacent to residential developments and a major arterial street on the south, west and north. The land to the east is vacant, located in the County of Riverside and zoned for business park development. Specifically, as noted above, one of the reasons for the site's low LESA score relates to the lack of other agricultural properties within the project's "Zone of Influence" as there are no other agriculturally zoned or operating properties within miles of the project site. Accordingly, there are no other agricultural uses surrounding this site that would be converted to nonagricultural uses as a result of the project site's conversion.

Additionally, the project site is not designated for agriculture in the City's General Plan; the site's current zoning is commercial, which was put in place when the site was annexed in 2002. Therefore, when the General Plan 2025 was adopted in 2007, the City did not envision the site to be used for agriculture in the future, nor did it for the Orangecrest area as a whole. The project site's development of a commercial use

in a suburban area is consistent with the City's General Plan. Nevertheless, the General Plan analysis did find significant impacts related to the City-wide loss of farmland as a result of development (City of Riverside, 2007e). As discussed in further detail above, economic viability of agricultural uses is dependent on many factors including prices of land, water, labor as well as environmental regulations and higher property taxes. The General Plan 2025 EIR found that the loss of agricultural land in the City was an unavoidable significant impact and made a Statement of Overriding Considerations for this impact. (City of Riverside, 2007d). Mitigation for this loss was explored by the City when it adopted its General Plan 2025 and determined that there were no legally viable ways to provide mitigation for the loss of farmland in the City. As discussed above, the project will convert existing agricultural lands to non-agricultural lands. To be conservative, the conversion of the site from agricultural uses to non-agricultural uses is considered significant. **Therefore, impacts would be significant and unavoidable.**

4.2.5 Mitigation Measures

CEQA Guidelines Section 15126.4 requires EIRs to describe feasible measures that can minimize significant adverse impacts. Impacts to agricultural resources are found to be significant and unavoidable. The only way to fully mitigate the loss of agricultural lands on the site would be to not build the project. However, the proposed project is consistent with the current zoning and General Plan land use designations, and so building the project is considered consistent with the vision the City has for the site. The project does include the retention of the citrus stand, and will retain citrus trees on site, in order to keep as much of the agricultural heritage on site as possible as discussed above under Section 4.2.3.

Mitigation for the loss of agricultural lands on this site was explored by the City when it adopted its General Plan 2025 and determined that there were no legally viable ways to provide mitigation for the loss of farmland in the City. As discussed above, the cost of operating the existing citrus grove on site has become economically unviable due to the high cost of water. It is well known that economic and environmental factors can preclude the long-term viability of agriculture. One potential mitigation measure would be to require the placement of an agricultural easement on another property that has similar soils and Farmland designations as the site. However, placing an agricultural easement on different land would not (1) avoid the loss of farmland, (2) minimize the scope of the project, (3) repair, rehabilitate or restore the affected farmland, (4) or replace the affected farmland with substitute farmland. Thus, such a program would not actually mitigate the significant impact caused by the project. (State CEQA Guidelines, § 15370.) Further, funding off-site agricultural preservation on another site lacks the essential nexus to the effects of the project. While preserving agricultural land in other parts of the state may bestow a benefit on other regions, no such benefit is possible for the area affected by the project. Therefore, such a program would not be legally feasible.

Since a Statement of Overriding Considerations is needed for this impact, overriding factors to this impact include: 1) that the City's General Plan already disclosed the significant and unavoidable impact that would occur as a result of City-wide development patterns, 2) the General Plan 2025 considered this site to be

commercial and not agricultural, 3), the existing citrus operation is facing higher costs of operation making it economically infeasible to keep operation and 4) the site's LESA analysis showed the project's conversion of agricultural land to be less-than-significant partially based on the lack of agricultural land in the vicinity of the project site.

4.2.6 Environmental Impacts after Mitigation Is Incorporated

No feasible mitigation measures have been identified that would reduce this impact to less than significant levels. A Statement of Overriding Considerations is needed.

4.2.7 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

City of Riverside. 2007a. City of Riverside Municipal Code: Title 19 – Zoning Code. Adopted November 2007. Accessed January 4, 2011. http://www.riversideca.gov/municode/title19.asp.

City of Riverside. 2007b. City of Riverside General Plan 2025. Adopted November 2007. Riverside, California: City of Riverside Community Development Department. Accessed January 4, 2011. http://www.riversideca.gov/planning/gp2025program/general-plan.asp.

City of Riverside. 2007c. *Urban Forestry Policy Manual.* Accessed July 26, 2011. http://www.riversideca.gov/trees/pdf/UrbanForestry-TOC.pdf.

City of Riverside. 2007d. City of Riverside Statement of Overriding Considerations. Riverside, California. Accessed June 28, 2011. http://www.riversideca.gov/planning/ gp2025program/FPEIR_V1.asp.

City of Riverside. 2007e. City of Riverside Final Environmental Impact Report. Riverside, Ca. Accessed June 28, 2011. http://www.riversideca.gov/planning/gp2025program/FPEIR_V2.asp.

DOC (California Department of Conservation). 2008. "Unique Farmland and Farmland of Statewide Importance." Farmland Mapping and Monitoring Program.

LESA Model (Land Evaluation and Site Assessment Model). 2007. Appendix B, "CA LESA Project Scoring Example." Land Resource Protection – LESA Model. December 17, 2010. http://www.consrv.ca.gov/dlrp/Pages/qh_lesa.aspx.

PRC (California Public Resources Code), Section 21095. Accessed March 2011. http://www.leginfo.ca.gov/calaw.html.

USDA (U.S. Department of Agriculture). 2007. *Custom Soil Resource Report for Western Riverside Area, California – Gless Ranch LESA.* U.S. Department of Agriculture and Natural Resources Conservation Service. December 17, 2010.

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4.3 Air Quality

The focus of the following discussion and analysis, based on the initial study, public scoping session, and Notice of Preparation public comment period concerns the potentially adverse impacts to air quality during construction and operation. In addition to other documents, the following sources were used in the preparation of this section of the Draft Environmental Impact Report:

- Dudek. 2011. Air Quality Technical Report and Greenhouse Gas Analysis for the Gless Ranch Project. October 2011 (Appendix C).

4.3.1 Setting

Existing Conditions

Climate and Topography

The project site is located within the South Coast Air Basin (SCAB), which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. Air quality in the project area is not only affected by various emission sources (mobile, industry, etc.), but it is also affected by atmospheric conditions such as wind speed, wind direction, temperature, and rainfall. The SCAB's combination of topography, low mean mixing height, abundant sunshine, and emissions from one of the largest urban areas in the United States has historically resulted in some of the worst air pollution in the nation.

Although the SCAB has a semiarid climate, air near the surface is generally moist because of the presence of a shallow marine layer. With very low average wind speeds, there is a limited capacity to disperse air contaminants horizontally. The dominant daily wind pattern is an onshore daytime breeze of 8–12 miles per hour (mph) and an offshore nighttime breeze of 3–5 mph. The typical wind flow pattern fluctuates only with occasional winter storms or strong northeasterly Santa Ana winds from the mountains and deserts northeast of the SCAB. Summer wind flow patterns represent worst-case conditions because this is the period of higher temperatures and more sunlight, which results in ozone (O_3) formation.

Riverside's climate is characterized by relatively low rainfall, with warm summers and mild winters. Average temperatures range from a high of 95°F in August to a low of 40°F in December. Annual precipitation averages about 10–11 inches, falling mostly from December through March (City-Data.com 2010).

During spring and early summer, pollution produced during any one day is typically blown out of the SCAB through mountain passes or lifted by warm, vertical currents adjacent to mountain slopes. The vertical dispersion of air pollutants in the SCAB is limited by temperature inversions in the atmosphere

close to the Earth's surface. The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino counties. In the winter, the greatest pollution problems are carbon monoxide (CO), particulate matter, and nitrogen dioxide (NO_2) because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and oxides of nitrogen (NO_x) to form photochemical smog.

Sensitive Receptors

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Reduced visibility, eye irritation, and adverse health impacts upon those persons termed "sensitive receptors" are the most serious hazards of existing air quality conditions in the area. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution, as identified by the California Air Resources Board (CARB), include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Sensitive receptors include residences, schools, playgrounds, child-care centers, athletic facilities, long-term health-care facilities, rehabilitation centers, convalescent centers, and retirement homes.

There are several schools, child-care centers, and parks located in the vicinity of the project site. Elementary schools within 1 mile of the proposed project include Rivera Elementary, Benjamin Franklin Elementary, Mark Twain Elementary, and Kennedy Elementary. Earhart Middle School and Martin Luther King High School are also within a mile of the proposed project. Four child-care centers (Precious in His Sight, Garcia Family, Royal Kingdom, and VanDeMark) and two parks (Bergamont and Orange Crest Number 2) are also located within 1 mile of the proposed Gless Ranch project. In addition, residences are located to the south and west adjacent to the project site and to the north across Van Buren Boulevard. The closest residential receptors are located directly north, west, and south of the proposed project site.

Pollutants and Effects

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Criteria air pollutants include the

following: O_3, NO_2, CO, sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns in size (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in size ($PM_{2.5}$), and lead. These pollutants as well as toxic air contaminants are discussed below.[1] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone (O_3). O_3 is a strong smelling, pale blue, reactive toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors, such as hydrocarbons and NO_x. These precursors are mainly NO_x and VOCs (also referred to as reactive organic compounds or gases). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere ozone layer (stratospheric ozone) as well as at the Earth's surface in the troposphere (ozone). O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children.

Nitrogen Dioxide (NO_2). NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. Oxides of nitrogen are formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers. NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections.

Carbon Monoxide (CO). CO is a colorless and odorless gas formed by the incomplete combustion of hydrocarbon, or fossil, fuels. It is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust

[1] The following descriptions of health effects for each of the criteria air pollutants associated with project construction and operations are based on the U.S. Environmental Protection Agency "Six Common Air Pollutants" (EPA 2010a) and the CARB "Glossary of Air Pollutant Terms" (CARB 2010a) published information.

can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide (SO_2). SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. Main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with fine particulate matter, SO_2 can injure lung tissue and reduce visibility and the level of sunlight. It can also yellow plant leaves and erode iron and steel.

Particulate Matter ($PM_{2.5}$, PM_{10}). Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Fine particulate matter, or $PM_{2.5}$, is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs. Inhalable particulate matter, or PM_{10}, is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning, industrial sources, windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates, and nitrates, can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport absorbed gases, such as chlorides or ammonium, into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups considered sensitive are smokers and people who cannot breathe well through their noses, as well as exercising athletes because many breathe through their mouths.

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, and other old coatings; ink, ceramics, and ammunition and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities have become lead-emission sources of greater concern. Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance including intelligence quotient performance, psychomotor performance, reaction time, and growth. Accordingly, children are highly susceptible to the effects of lead.

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans. A toxic substance released into the air is considered a toxic air contaminant (TAC). TACs are identified by federal and state agencies based on a review of available scientific evidence. In the state of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emission sources, location of resulting "hot spots," notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Significant sources of TACs in the environment include industrial processes, such as petroleum refining, chemical manufacturing, electric utilities, metal mining/refining, and chrome plating; commercial operations, such as gasoline stations, dry cleaners, and buildings with boilers and/or emergency generators; and transportation activities, particularly diesel-powered vehicles, including trains, buses, and trucks. CARB has determined that the 10 compounds that pose the greatest known health risk in California, based primarily on ambient air quality data, are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent

chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (CARB 2009).

Related Regulations

Federal

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The U.S. Environmental Protection Agency (EPA) is responsible for implementing most aspects of the Clean Air Act, which include National Ambient Air Quality Standards (NAAQS) for major air pollutants, hazardous air pollutant standards, approval of state attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric O_3 protection, and enforcement provisions. NAAQS are established for criteria pollutants under the Clean Air Act, which are O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation; these NAAQS may not be exceeded more than once a year, except annual standards, which may never be exceeded. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a State Implementation Plan that demonstrates how those areas will attain the standards within mandated time frames.

State

CARB, which became part of the California Environmental Protection Agency (CalEPA) in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products. CARB has established California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS, consistent with the Clean Air Act, which requires state regulations to be at least as restrictive as the federal requirements. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered in "attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The NAAQS and CAAQS are presented in Table 4.3-1, Ambient Air Quality Standards.

Table 4.3-1
Ambient Air Quality Standards

Pollutant	Average Time	California Standards[1]	National Standards[2]	
		Concentration[3]	*Primary[3,4]*	*Secondary[3,5]*
O_3	1 hour	0.09 ppm (180 μg/m^3)	—	Same as Primary Standard
	8 hours	0.070 ppm (137 μg/m^3)	0.075 ppm (147 μg/m^3)	
CO	8 hours	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	None
	1 hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
NO_2	Annual Arithmetic Mean	0.030 ppm (57 μg/m^3)	0.053 ppm (100 μg/m^3)	Same as Primary Standard
	1 hour	0.18 ppm (339 μg/m^3)	0.100 ppm (188 μg/m^3)	
SO_2	24 hours	0.04 ppm (105 μg/m^3)		—
	3 hours	—	—	0.5 ppm (1300 μg/m^3)
	1 hour	0.25 ppm (655 μg/m^3)	0.075 ppm (196 μg/m^3	—
PM_{10}	24 hours	50 μg/m^3	150 μg/m^3	Same as Primary Standard
	Annual Arithmetic Mean	20 μg/m^3	—	
$PM_{2.5}$	24 hours	No Separate State Standard	35 μg/m^3	Same as Primary Standard
	Annual Arithmetic Mean	12 μg/m^3	15.0 μg/m^3	
Lead[6]	30-day Average	1.5 μg/m^3	—	—
	Calendar Quarter	—	1.5 μg/m^3	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 μg/m^3	
Hydrogen sulfide	1-hour	0.03 ppm	—	—
Vinyl chloride	24-hour	0.01 ppm	—	—
Sulfates	24-hour	25 μg/m^3	—	—
Visibility reducing particles	8-hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%	—	—

Source: CARB 2011
ppm = parts per million by volume
μg/m^3 = micrograms per cubic meter
mg/m^3= milligrams per cubic meter

1 California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2 National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For NO_2 and SO_2, the standard is attained when the 3-year average of the 98th and 99th percentile, respectively, of the daily maximum 1-hour average at each monitor within an area does not exceed the standard (effective April 12, 2010). For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms per cubic meter (μg/m^3) is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr.
Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm (parts per million) in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

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

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

[6] CARB has identified lead and vinyl chloride as TAC with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Local

The South Coast Air Quality Management District (SCAQMD) is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the SCAB, where the proposed project is located. The SCAQMD operates monitoring stations in the SCAB, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. The SCAQMD's Air Quality Management Plans (AQMPs) include control measures and strategies to be implemented to attain state and federal ambient air quality standards in the SCAB. The SCAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment.

The SCAQMD Governing Board adopted the 2003 AQMP on August 1, 2003. The 2003 AQMP updates the attainment demonstration for the federal standards for O_3 and PM_{10}, replaces the 1997 attainment demonstration for the federal CO standard, provides a basis for a maintenance plan for CO for the future, and updates the maintenance plan for the federal NO_2 standard that the SCAB has met since 1992. On March 10, 2009, the U.S. EPA issued a final rule partially approving and partially disapproving the 2003 AQMP. On February 2, 2011, the U.S. Court of Appeals for the Ninth Circuit ruled that U.S. EPA's partial approval was arbitrary and capricious. The Court further ruled that U.S. EPA should have ordered California to submit a revised attainment plan for the South Coast Air Basin after it disapproved the 2003 AQMP and that EPA should have required transportation control measures. The SCAQMD Governing Board adopted the 2007 AQMP on June 1, 2007. The 2007 AQMP includes the same updates as the 2003 AQMP and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. As part of the 2007 AQMP, the SCAQMD requested that the EPA "bump up" the O_3 nonattainment status from severe to extreme to allow additional time for the SCAB to achieve attainment with the federal standard. The additional time would provide for implementation of state and federal measures that apply to sources over which the SCAQMD does not have control. The 2007 AQMP has been approved by CARB; however, on November 22, 2010, the U.S. EPA issued a proposed rule to approve in part and disapprove in part the portions related to attainment of the Federal $PM_{2.5}$ standard. The EPA, however, approved the redesignation of the SCAB to an extreme O_3 nonattainment area, effective as of June 4, 2010.

Emissions that would result from mobile, stationary, and area sources during construction and operation of the proposed project are subject to the rules and regulations of the SCAQMD. The SCAQMD rules applicable to the proposed project may include the following:

Rule 403 (Fugitive Dust): This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust.

Rule 431.2 (Sulfur Content of Liquid Fuels): The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of both reducing the formation of SO_x and particulates during combustion and to enable the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers, and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary source applications in the SCAQMD. The rule also affects diesel fuel supplied for mobile source applications.

Rule 1113 (Architectural Coatings): This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

Rule 1121 (Control of Nitrogen Oxides from Residential Type, Natural Gas–Fired Water Heaters): This rule prescribes NO_x emission limits for natural gas–fired water heaters with heat input rates less than 75,000 British thermal units (BTU) per hour. It applies to manufacturers, distributors, retailers, and installers of natural gas–fired water heaters.

Rule 1146.2 (Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters): This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NOx emissions from natural gas–fired water heaters, boilers, and process heaters as defined in this rule.

South Coast Air Basin Attainment Designation

An area is designated in attainment when it is in compliance with the NAAQS and/or CAAQS. These standards are set by the EPA or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. The attainment classifications for criteria pollutants are outlined in Table 4.3-2, SCAB Attainment Classification.

Table 4.3-2
SCAB Attainment Classification

Pollutant	Averaging Time	Designation/Classification
National[a]		
O_3	8 hour	Nonattainment/extreme
NO_2	Annual arithmetic mean	Attainment
CO	1 hour, 8 hour	Attainment
SO_2	24 hour, annual arithmetic mean	Unclassifiable/Attainment
PM_{10}	24 hour	Nonattainment/serious
$PM_{2.5}$	24 hour, annual arithmetic mean	Nonattainment
Lead	Calendar quarter	Attainment
State[b]		
O_3	1 hour, 8 hour	Nonattainment[1]
NO_2	1 hour, annual arithmetic mean	Nonattainment
CO	1 hour, 8 hour	Attainment
SO_2	1 hour, 24 hour	Attainment
PM_{10}	24 hour, annual arithmetic mean	Nonattainment
$PM_{2.5}$	Annual arithmetic mean	Nonattainment
Lead[3]	30 day average	Attainment[2]
Sulfates (SO_4)	24 hour	Attainment
Hydrogen sulfide (H_2S)	1 hour	Unclassified
Vinyl chloride[3]	24 hour	Unclassified
Visibility-reducing particles	8 hour (10:00 a.m.–6:00 p.m.)	Unclassified

Source: [a] EPA 2010b; [b] CARB 2010c.
[1] CARB has not issued area classification based on the new state 8-hour standard. The previous classification for the 1-hour O_3 standard was extreme.
[2] CARB adopted a nonattainment designation for lead for the Los Angeles County portion of the SCAB.
[3] CARB has identified lead and vinyl chloride as TAC with no threshold level of exposure for adverse health effects determined.

Ambient Air Quality

The SCAQMD maintains ambient air quality monitoring stations throughout the SCAB. The closest ambient air quality monitoring station to the project site is the Riverside-Magnolia station, located approximately 8 miles northwest from the project site, which measures CO and $PM_{2.5}$. For O_3, PM_{10}, NO_2, and SO_2, values from the Metropolitan Riverside County 1 monitoring station located in Rubidoux, approximately 12 miles northwest from the project site, were used in this analysis. The most recent background ambient air quality data from 2007 to 2009 are presented in Table 4.3-3, Ambient Air Quality Data. The number of days exceeding the AAQS is shown in Table 4.3-4, Frequency of Air Quality Standard Violations.

Table 4.3-3
Ambient Air Quality Data
(parts per million (ppm) unless otherwise indicated)

Pollutant	Averaging Time	2007	2008	2009	Most Stringent Ambient Air Quality Standard	Monitoring Station
O_3	8-hour	0.111	0.116	0.101	0.070	Metro RC1
	1-hour	0.131	0.146	0.116	0.09	
PM_{10}	Annual	57.0 µg/m^3	44.8 µg/m^3	41.10 µg/m^3	20 µg/m^3	Metro RC1
	24-hour	540 µg/m^3	108 µg/m^3	75 µg/m^3	50 µg/m^3	
$PM_{2.5}$	Annual	19.8 µg/m^3	16.2 µg/m^3	15.0 µg/m^3	12 µg/m^3	Riverside-Magnolia
	24-hour	68.5 µg/m^3	42.9 µg/m^3	42.1 µg/m^3	35 µg/m^3	
NO_2	Annual	0.020	0.019	0.017	0.030	Metro RC1
	1-hour	0.072	0.092	0.078	0.18	
CO	8-hour	2.2	1.9	2.0	9.0	Riverside-Magnolia
	1-hour*	3.8	2.7	2.4	20	
SO_2	Annual	0.002	0.001	0.001	0.030	Metro RC1
	24-hour	0.004	0.003	0.003	0.040	

Source: CARB Air Quality Data Statistics (CARB 2010b)
*Data were taken from EPA AirData (EPA 2010c)
Notes:
Metro RC1: (Metropolitan Riverside County 1): 5888 Mission Blvd., Rubidoux
Riverside-Magnolia: 7002 Magnolia Avenue, Riverside
µg/m3 = micrograms per cubic meter

Table 4.3-4
Frequency of Air Quality Standard Violations

Monitoring Site	Year	Number of Days Exceeding Standard					
		State 1-Hour O_3	*State 8-Hour O_3*	*National 8-Hour O_3*	*State 24-Hour PM_{10}* [a]	*National 24-Hour PM_{10}* [a]	*National 24-Hour $PM_{2.5}$* [a]
Metro RC1	2007	31	69	46	201.9 (65)	1 (1)	
	2008	54	89	64	140.4 (46)	1 (0)	
	2009	25	57	36	92.7(30)	1 (0)	
Riverside-Magnolia	2007						[b] (8)
	2008						12.4 (4)
	2009						6.0 (2)

Source: CARB 2010c.
[a] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and 3 days, respectively. Number of days exceeding the standards are mathematical estimates of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.
[b] Insufficient data available to determine the value.

As Table 4.3-3 demonstrates, air quality within the project region is in compliance with both CAAQS and NAAQS for NO_2, CO, and SO_2. Federal and state 1-hour and 8-hour O_3 standards were, however, exceeded during each of the last 3 years, as shown in Table 4.3-4. The PM_{10} levels monitored at the air monitoring stations exceeded the state annual and 24-hour standards during each of the 3 years reported, and $PM_{2.5}$ levels exceeded the state annual and the federal 24-hour standards during each of the 3 years reported.

4.3.2 Thresholds of Significance

The State of California has developed guidelines to address the significance of air quality impacts based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.), which provides guidance that a project would have a significant environmental impact if it would:

- Conflict with or obstruct the implementation of the applicable air quality plan
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O_3 precursors)
- Expose sensitive receptors to substantial pollutant concentrations
- Create objectionable odors affecting a substantial number of people.

In addition, Appendix G of the CEQA Guidelines indicates that where available, the significance criteria established by the applicable AQMD or pollution control district may be relied upon to determine if the proposed project would have a significant impact on air quality. The SCAQMD *CEQA Air Quality Handbook* (SCAQMD 1993) set forth quantitative emission significance thresholds below which a project would not have a significant impact on ambient air quality; the most recent SCAQMD significance thresholds were updated in March 2011 (SCAQMD 2011). Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 4.3-5, SCAQMD Air Quality Significance Thresholds, are exceeded.

A project would result in a substantial contribution to an existing air quality violation of the NAAQS or CAAQS for O_3 (see Table 4.3-2), which is a nonattainment pollutant, if the project's construction or operational emissions would exceed the SCAQMD VOC or NO_x thresholds shown in Table 4.3-5. These emission-based thresholds for O_3 precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O_3 impacts to occur) because O_3 itself is not emitted directly (see discussion of O_3 and its sources above), and the effects of an individual project's emissions of O_3 precursors (VOC and NO_x) on O_3 levels in ambient air cannot be determined through air quality models or other quantitative methods.

Table 4.3-5
SCAQMD Air Quality Significance Thresholds

Criteria Pollutants Mass Daily Thresholds		
Pollutant	*Construction*	*Operation*
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead [a]	3 lbs/day	3 lbs/day
Toxic Air Contaminants and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants [b]		
NO_2 1-hour average NO_2 annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.030 ppm (state) and 0.0534 ppm (federal)	
PM_{10} 24-hour average PM_{10} annual arithmetic mean	10.4 $\mu g/m^3$ (construction)[c] and 2.5 $\mu g/m^3$ (operation) 1.0 $\mu g/m^3$	
$PM_{2.5}$ 24-hour average	10.4 $\mu g/m^3$ (construction)[c] and 2.5 $\mu g/m^3$ (operation)	
SO_2 1-hour average SO_2 24-hour average	0.25 ppm (state) & 0.075 ppm (federal – 99th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 $\mu g/m^3$ (state)	
CO 1-hour average CO 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day average[a] Lead rolling 3-month average[a] Lead quarterly average[a]	1.5 $\mu g/m^3$ (state) 0.15 $\mu g/m^3$ (federal) 1.5 $\mu g/m^3$ (federal)	

Source: SCAQMD CEQA Handbook (SCAQMD 1993) Revised March 2011

[a] The phasing-out of leaded gasoline started in 1976. As gasoline no longer contains lead, the proposed project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.

[b] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

[c] Ambient air quality threshold based on SCAQMD Rule 403.

Notes: lbs/day = pounds per day; ppm = parts per million; $\mu g/m^3$ = microgram per cubic meter; ≥ = greater than or equal to

The SCAQMD *CEQA Air Quality Handbook* also sets forth additional indicators of potential air quality impacts that should be used as screening criteria indicating the need for further analysis. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation.
- Project could result in population increases within the regional statistical area that would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.
- Project would have the potential to create or be subjected to an objectionable odor over 10 dilutions to thresholds (D/T) that could impact sensitive receptors.
- Project would have hazardous materials on site and could result in an accidental release of air toxic emissions or acutely hazardous materials posing a threat to public health and safety.
- Project could emit an air toxic contaminant regulated by SCAQMD rules or that is on a federal or state air toxic list.
- Project could involve burning of hazardous, medical, or municipal waste as waste-to-energy facility.
- Project could be occupied by sensitive receptors within a quarter mile of an existing facility that emits air toxics identified in SCAQMD Rule 1401 or near CO hotspots.
- Project could emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million.

In addition to the above-listed emission-based thresholds, the SCAQMD also recommends the evaluation of localized air quality impacts to sensitive receptors in the immediate vicinity of the project as a result of construction activities. For project sites greater than 5 acres, potential impacts on local sensitive receptors are determined using an air quality dispersion model. Those impacts are then compared to the localized significance thresholds (LSTs). Riverside was identified as the representative meteorological monitoring station for the proposed project. Data from this station were used to represent the meteorological conditions in Sensitive Receptor Area (SRA) 23. The LSTs for NO_2 and CO were derived from the ambient air quality data in SRA 23 for the 3 previous years. The LSTs for NO_2 and CO represent the allowable increase in concentrations above background levels in the vicinity of a project that would not cause or contribute to an exceedance of the relevant ambient air quality standards. The threshold for PM_{10} represents compliance with Rule 403 (Fugitive Dust). The significance threshold for $PM_{2.5}$ is intended to ensure that construction emissions do not contribute substantially to existing exceedances of the $PM_{2.5}$ ambient air quality standards. For construction, the LSTs for PM_{10} and $PM_{2.5}$ are both 10.4 $\mu g/m^3$ (SCAQMD 2008). The LSTs applicable to construction of the proposed project, along with the relevant ambient air quality standards, are shown in Table 4.3-6, Localized Significance Thresholds.

Table 4.3-6
Localized Significance Thresholds

Pollutant	Averaging Period	CAAQS/NAAQS		Peak Conc. in ppm	LST Criteria[a]	
		µg/m³	*ppm*			
NO_2	1 hour	339	0.18	0.09	169	0.09
CO	1 hour	23,000	20	3.8	18,539	16.2
CO	8 hours	10,000	9.0	2.2	7,782	6.8
PM_{10}	24 hours	50	—	NA	10.4	—
$PM_{2.5}$[b]	24 hours	35	—	NA	10.4	—

Source: SCAQMD 2008.
[a] LST criteria for NO_2 and CO are the differences between CAAQS and the Peak Concentration.
[b] California has not adopted a 24-hour AAQS for $PM_{2.5}$. The 24-hour $PM_{2.5}$ AAQS shown is the national standard.

4.3.3 Project Elements that can Reduce Impacts

Target anticipates incorporating the following sustainable design features into its development. The City will require the remainder of the tenants in Gless Ranch to incorporate similar features as applicable.

Site/Building Design:

- Report Target's carbon footprint annually to the Carbon Disclosure Project.
- Use low–volatile organic compound (VOC) materials for all flooring, adhesives, sealants, paints and coatings, ceilings, and wall systems.
- Plant a minimum of 145 shade trees as close as 15 feet to the west property line and 18 feet to the south property line.

Energy Efficiency and Optimization:

- Use high-efficiency rooftop heating and air conditioning equipment.
- Use a highly reflective white roof membrane to reduce cooling load.
- Install store-based integrated energy management system controls for lighting, refrigeration, heating and cooling equipment, and exhaust fans to ensure energy management over time.
- Use two-lamp, T8 fluorescent lamps and electronic ballasts throughout the store, and motion-sensor lighting in stock rooms.
- Use reevaluated temperature settings, lighting levels, and equipment run times to identify efficiency opportunities.
- Verify energy efficiencies and identify potential improvements by instituting a "building commissioning" department.

Waste Reduction:

- Manage and recycle construction waste to divert 75% of all construction refuse.
- Use construction materials with a minimum of 10% recycled content, including 50% minimum recycled content in structural steel framing, 20% in joists and joist girders, fly ash in concrete, crushed concrete sub-base in parking lots, and recycled bituminous paving in drive surfaces.
- Utilize regional materials in construction to the extent possible.
- Use wood from Forest Stewardship Council–certified sources for all blocking, framing, and sheathing.

Water:

- Regularly assess and maintain stormwater treatment systems.
- Use low-flow fixtures, reducing water use by 30%.
- Use customized irrigation settings to avoid over watering of landscaping.
- Comply with the local water-efficient landscape requirements.

Transportation/Vehicle Trips:

- Reduce employee vehicle miles traveled (VMT) by following Target's practice of hiring, on average, more than 85% of Target's team members from the immediate area surrounding the store.
- Reduce VMT by redesigning the retail buildings to be closer together in order to encourage people to walk from one store to another within the shopping center.

In addition to the measures list above, the applicant has agreed to implement the following project features into the entire project development.

- Retain approximately 104 existing citrus trees on site along Gless Ranch Road. Plant approximately 646 new trees, including 200 dwarf citrus trees throughout the project site;
- Install special piping and use reclaimed water for landscape irrigation;
- Implement energy conservation design features that would result in exceeding the 2008 Title 24 requirements by a minimum of 15%;
- Incorporate the City's Transportation Demand Management Regulations (Chapter 19.880 of the City's Municipal Code) to provide regulations to protect the public health, safety and welfare by reducing air pollution caused by vehicle trips and vehicle miles traveled. The applicant will incorporate the following methods to its trip reduction plans to help achieve the required vehicle reduction targets:
    - Alternative work schedules/flex-time;

- Preferential parking for carpool vehicles;
- Bicycle parking and bike facilities;
- Bus stop improvements;
- Local transportation management and roadway improvements;
- Contributions to funds for regional facilities such as park-and-ride lots, multi-modal transportation centers, satellite work centers, etc.; and
- On-site amenities such as cafeterias, restaurants, automated teller machines and other services that would eliminate the need for additional trips.

4.3.4 Environmental Impacts before Mitigation

<u>Threshold:</u> Would the project conflict with or obstruct implementation of the applicable air quality plan?

The proposed project would not conflict with or obstruct implementation of the SCAQMD's 2007 AQMP as the project is consistent with the City of Riverside General Plan 2025. The project's zoning is CR-S-2-X-SP – Commercial Retail, Height and Setback Restriction, and Orangecrest Specific Plan Combining Zones. The Riverside General Plan 2025 (GP 2025) land use designation is C – Commercial (City of Riverside 2007). The proposed commercial shopping center will serve not only as a neighborhood center, but as a regional retail center as well, and it is consistent with both the site's zoning and General Plan 2025 land use designation. The project site and surrounding area is also within the *Orangecrest Specific Plan* (amended on October 7, 1997, and May 26, 1998). Resolution 20286 dated November 5, 2002 amended the land use element of the City's General Plan and Ordinance 6636 changed the site's zoning from agriculture to commercial, both of which added the Orangecrest Specific Plan overlay to the project site (Annexation No. 94). The proposed project is therefore consistent with the land use designation from the *Orangecrest Specific Plan*. Accordingly, the proposed project would result in employment and commute and customer vehicle trips that are consistent with the planned development of the project site and the growth projections anticipated in the SCAQMD's 2007 AQMP. ***As such, the project would not conflict with or obstruct implementation of the applicable air quality plan; impacts would be less than significant and no mitigation measures are necessary.***

<u>Threshold:</u> Would the project violate any air quality standard or contribute substantially to an existing or project air quality violation?

Construction Emissions

Construction of the proposed project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials. Construction emissions are

considered short-term and can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

Emissions from the construction phase of the project were estimated through the use of emission factors from the California Emissions Estimator Model (CalEEMod) Version 2011.1.1, available online (http://www.caleemod.com). For the purposes of modeling, it is assumed that construction of the proposed project would commence in mid-February 2012 and would last approximately 9 months, ending in November 2012. Construction would consist of demolition, tree removal, and mass grading to prepare the site; construction of the shop and major buildings; trenching for utility installation; grading and paving of the parking lot; and construction of associated improvements such as lighting and landscaping. Additional details of the construction schedule are included in Appendix C.

Table 4.3-7, Estimated Daily Maximum Construction Emissions, shows the estimated maximum unmitigated daily construction emissions associated with the construction of the proposed project. The maximum daily emissions could occur at different times during the project construction due to different construction activities.

Table 4.3-7
Estimated Daily Maximum Construction Emissions
(lbs/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Proposed Project	136.50	501.95	246.03	0.58	259.94	23.32
Pollutant Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**YES**	**YES**	No	No	**YES**	No

Notes: See Appendix C for detailed results.
These estimates do not reflect control of fugitive dust required by Rule 403, but they do reflect compliance with Rule 1113.

As shown, daily construction emissions would not exceed the thresholds for CO, SO_x, or $PM_{2.5}$. The project, however, would exceed daily construction emissions thresholds for VOC, NO_x and PM_{10}. ***As such, the proposed project would result in a potentially significant impact in the short-term to air quality; therefore, Mitigation Measures (MM) AQ-1 through AQ-3 will be implemented***

As a result of MM AQ-1 and AQ-3, the VOC, PM_{10} and $PM_{2.5}$ emissions will be reduced as shown in Table 4.3-8. While MM AQ-2 would reduce VOC and NO_x emissions associated with construction equipment, the reductions resulting from this measure cannot be quantified due to uncertainty about the effectiveness of the specified measures. For example, it would not be known how many pieces of equipment with older engines could be replaced by newer equipment with Tier 2 engines.

Table 4.3-8
Estimated Daily Maximum Construction Emissions
(lbs/day mitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Proposed Project	70.18	501.95	246.03	0.58	258.91	23.29
Pollutant Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	NO	**YES**	No	No	**YES**	No

Notes: See Appendix C for detailed results.
These estimates reflect control of fugitive dust by MM AQ-1 and VOCs by MM AQ-3 (the mitigated emission estimate assumes that zero-VOC-content architectural coatings would be available, at a minimum, for all interior coatings).

The VOC emissions with mitigation are expected to be reduced to less than significant as a result of MM AQ-3. Even with mitigation, however, the NO_x and PM_{10} emissions would remain significant and unavoidable.

Operational Emissions

The operational emissions from the project are the long-term impacts associated with the project operation and implementation. Operations of the project would produce VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions primarily from vehicular trips to project land uses. Specifically, the proposed project would impact air quality through vehicular traffic generated by customers of the proposed commercial retail land uses. Emissions associated with project-generated daily traffic were modeled using the shopping center land use (land use 820 (ITE 2008)) trips per 1,000 square feet gross floor area, based on the project's *Traffic Impact Analysis Report* (TIA) (LLG 2010). CalEEMod default data, including temperature, trip characteristics, variable start information, emission factors, and trip distances, were conservatively used for the model inputs. Project-related traffic was assumed to consist of a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for the year 2013, when the project would be in its first year of operation, were used to estimate emissions. The model included a reduction associated with pass-by and diverted trips, which are trips made as intermediate stops on the way from an origin to a primary trip destination. In the project area, pass-by trips are attracted from traffic passing the site on adjacent streets (i.e., Van Buren Boulevard and Barton Street), which contain direct access to the generator.

In addition to estimating mobile source emissions, CalEEMod was also used to estimate emissions from the project area sources, which include natural gas appliances and space and water heating, gasoline-powered landscape maintenance equipment, consumer products, and architectural coatings for maintenance of buildings. The estimation of proposed operational emissions is based upon typical regional shopping center land uses.

Table 4.3-9, Estimated Daily Maximum Operational Emissions, presents the maximum daily emissions associated with the operation of the proposed project. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix C.

Table 4.3-9
Estimated Daily Maximum Operational Emissions
(lbs/day unmitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source Emissions	23.60	0.26	0.22	0.00	0.02	0.02
Vehicular Source Emissions	70.40	167.99	694.91	0.95	106.37	9.64
Combined Total Emissions	**94.00**	**168.25**	**695.13**	**0.95**	**106.39**	**9.66**
Pollutant Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	No	No	No

Note: See Appendix C for detailed results.

As shown in Table 4.3-9, combined daily area and vehicular source emissions would exceed the thresholds for VOC, NO_x, and CO. Daily operational emissions would not exceed the thresholds for SO_x, PM_{10}, or $PM_{2.5}$. ***Since the proposed project would exceed SCAQMD significance thresholds for operational emissions, it would result in a significant impact in the long-term; therefore, mitigation would be required (see MM AQ-4 below).***

As a result of MM AQ-4, operational emissions will be reduced as shown in Table 4.3-10. While MM AQ-4 would reduce all pollutant emissions to some extent, the reductions resulting from this measure, with the exception of exceeding Title 24 requirements by a minimum of 15% and use of zero-VOC-content architectural coatings, cannot be quantified due to the uncertainty about effectiveness of the specified measures. For example, it would not be known how many additional employees or customers would bike to the shopping center if bicycle racks were available.

Table 4.3-10
Estimated Daily Maximum Operational Emissions
(lbs/day mitigated)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source Emissions	23.20	0.23	0.19	0.00	0.02	0.02
Vehicular Source Emissions	70.40	167.99	694.91	0.95	106.37	9.64
Combined Total Emissions	**93.60**	**168.22**	**695.10**	**0.95**	**106.39**	**9.66**
Pollutant Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	No	No	No

Notes: See Appendix C for detailed results.
These estimates reflect implementation of energy conservation design features exceeding Title 24 and zero-VOC-content architectural coatings (the mitigated emission estimate assumes that such coatings would be available, at a minimum, for all interior coatings).

As shown above, even with MM AQ-4 (exceeding Title 24 requirements by a minimum of 15% and use of zero-VOC-content architectural coatings) the VOC, NO_x, and CO emissions would remain significant and unavoidable.

<u>Threshold:</u> Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

In analyzing cumulative impacts from the proposed project, the assessment must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SCAB is designated as nonattainment for the NAAQS or CAAQS. Implementation of the project would result in short-term impacts to air quality associated with construction and long-term impacts associated with increased vehicle traffic to and from the site as well as energy use.

For the purposes of air quality modeling, it is assumed that construction of the proposed project would occur from mid-February 2012 to mid-November 2012, lasting approximately 9 months. Construction schedules for potential future projects are currently unknown; therefore, potential impacts to sensitive receptors that might be located within an area of overlap between emissions from two simultaneous projects are speculative. The CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (Title 14, California Code of Regulations, Section 15145). This analysis is nonetheless provided in an effort to provide good faith analysis and comply with CEQA's information disclosure requirements.

Air pollutant emissions associated with construction activity of future projects would be reduced through the implementation of control measures required by the SCAQMD. Cumulative PM_{10} and $PM_{2.5}$ emissions would be reduced because all future projects would be subject to SCAQMD Rule 403 (Fugitive Dust), which sets forth general and specific requirements for all construction sites in the SCAQMD. The application of architectural coatings (exterior/interior paint and other finishings) would produce VOC emissions that would exceed the SCAQMD's quantitative significance threshold. Since VOCs are precursors to O_3, construction of the proposed project along with other nearby projects would contribute to the SCAB's O_3 nonattainment designation.

Operation of the project would produce VOCs, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from project retail and commercial land uses. The projected operational emissions from vehicular emissions are above the SCAQMD significance criteria for VOCs, NO_x, and CO. (While operational CO emissions would be significant, the SCAB is in attainment with the CAAQS and NAAQS for CO). Long-term operational air quality impacts are considered significant and unmitigable, even with application of all feasible mitigation measures. The cumulative effect of the proposed project and other projects in the vicinity would incrementally contribute to the SCAB's levels of O_3 and NO_2. The location of the project

within a nonattainment area for O_3 and NO_2, when combined with other foreseeable projects within the area (see Section 6.1.3.1 of this EIR), would result in significant, unmitigable cumulative air quality impacts, even with incorporation of all feasible area source and vehicular source mitigation measures. Because feasible mitigation measures consist of many emission reduction strategies (e.g., architectural design features, encouragement of alternative transportation), most of which help reduce emissions, current technology does not allow for a complete reduction of emissions given the types of development proposed. Therefore, despite the City of Riverside's efforts to require all feasible mitigation, significant unmitigable impacts would remain.

With regard to cumulative impacts associated with nonattainment pollutants, in general, if a project is consistent with the community and general plans, it has been accounted for in the attainment demonstration contained within the State Implementation Plan and would, therefore, not cause a cumulatively significant impact on the ambient air quality. The project's zoning is CR-S-2-X-SP – Commercial Retail, Building Height and Setback Restriction, and Orangecrest Specific Plan Overlay Zones. The Riverside General Plan 2025 (GP 2025) land use designation is C – Commercial (City of Riverside 2007). The proposed commercial shopping center will serve not only as a neighborhood center, but as a regional retail center as well, and it is consistent with both the site's zoning and GP 2025 land use designation. The project site and surrounding area is also within the *Orangecrest Specific Plan* (amended on October 7, 1997, and May 26, 1998). Resolution 20286 dated November 5, 2002 amended the land use element of the City's General Plan and Ordinance 6636 changed the site's zoning from agriculture to commercial, both of which added the Orangecrest Specific Plan overlay to the project site (Annexation No. 94). The proposed project is therefore consistent with the land use designation from the *Orangecrest Specific Plan*. Accordingly, the proposed project would result in employment and commute and customer vehicle trips that are consistent with the planned development of the project site and the growth projections anticipated in the SCAQMD's 2007 AQMP.

Regardless, the proposed project would result in significant long-term operational emissions of VOCs and NO_x Emissions of O_3 precursors (VOCs and NO_x) and PM_{10} during construction would exceed thresholds as well. Vehicle trips generated by the proposed retail center would result in a significant increase of O_3 precursors during operation. Thus, the proposed project would result in a cumulatively considerable contribution to concentrations of O_3, NO_2, and PM_{10}, which are nonattainment pollutants in the SCAB due to cumulative emissions in the air basin. ***As a result, implementation of the proposed project would result in a cumulatively considerable impact to air quality.***

<u>Threshold:</u> Would the project expose sensitive receptors to substantial pollutant concentrations?

LST Analysis

As noted in Section 4.3.2, the SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors in the immediate vicinity of the project as a result of construction activities. For project sites greater than 5 acres, potential impacts on local sensitive receptors are determined using an air quality dispersion model. Those impacts are then compared to the localized significance thresholds (LSTs). Ambient NO_2, CO, PM_{10}, and $PM_{2.5}$ concentrations due to the construction of the proposed project were analyzed using the American Meteorological Society/EPA Regulatory Model (AERMOD) air quality dispersion model (Lakes Environmental 2010), Version 7.1.0. Table 4.3-11, LST Modeling Results, shows the maximum NO_2, CO, PM_{10}, and $PM_{2.5}$ concentrations associated with the proposed project at residential and other sensitive receptors. The maximally impacted residential receptors are located directly south and southwest of the proposed project site. Details of the LST analysis and dispersion modeling results are included in Appendix C.

Table 4.3-11
Results of LST Modeling of Construction Emissions

Pollutant	Averaging Period	Modeling Results		LST Criteria		Exceeds Threshold?
		µg/m³	*ppm*	*µg/m³*	*ppm*	
Residential Receptors						
NO_2	1 hour	819	0.44	169	0.09	**YES**
CO	1 hour	435	0.38	18,539	16.2	NO
CO	8 hours	151	0.13	7,782	6.8	NO
PM_{10}	24 hours	0.9	NA	10.4	—	NO
$PM_{2.5}$	24 hours	0.03	NA	10.4	—	NO
Other Sensitive Receptors[a]						
NO_2	1 hour	217	0.12	169	0.09	**YES**
CO	1 hour	190	0.17	18,539	16.2	NO
CO	8 hours	29	0.03	7,782	6.8	NO
PM_{10}	24 hours	0.15	NA	10.4	—	NO
$PM_{2.5}$	24 hours	0.01	NA	10.4	—	NO

[a] Maximum impact occurred at Garcia Family Child Care for all pollutants.
These estimates reflect control of fugitive dust required by Rule 403. See Appendix C for detailed results.

As shown in Table 4.3-11, the maximum 1-hour NO_2 modeled concentrations would exceed the threshold of significance established by SCAQMD at sensitive receptors in the vicinity of the project site. The 1- and 8-hour CO and 24-hour PM_{10} and $PM_{2.5}$ concentrations would not exceed the thresholds of significance.

The maximum NO_2 impacts would result only if (1) the amount of construction activity (e.g., number and types of equipment) assumed in this analysis actually occurred, and (2) the meteorological conditions in the data set used in the dispersion modeling analysis occurred in the vicinity of the project site on the worst-case construction day. ***As construction of the proposed project is anticipated to result in an exceedance of the NO_2 LST, the proposed project would result in significant air quality impacts during the construction phase. Mitigation Measure MM AQ-2 identified previously would also reduce the NO_2 ambient air quality impact, but it is not expected to reduce the impacts to less than significant.*** As noted previously, MM AQ-2 would reduce NO_x emissions associated with construction equipment; however, the reductions resulting from this measure cannot be quantified due to uncertainty about the effectiveness of the specified measures.

Carbon Monoxide Hotspots

Mobile source impacts occur basically on two scales of motion. Regionally, project-related travel will add to regional trip generation and increase the VMT within the local airshed and the SCAB. Locally, project traffic will be added to the City of Riverside roadway system near the project area. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and is operating on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO "hotspots" in the area immediately around points of congested traffic. Because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SCAB is steadily decreasing.

Projects contributing to adverse traffic impacts may result in the formation of such CO hotspots. To verify that the project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted. The project's TIA (LLG 2010) evaluated whether there would be a decrease in the level of service (LOS) (e.g., congestion) at the intersections affected by the project. The potential for CO hotspots was evaluated based on the results of the TIA. The California Department of Transportation (Caltrans) Institute of Transportation Studies (ITS) Transportation Project-Level Carbon Monoxide Protocol (CO Protocol) (Caltrans ITS 1998) was followed.

Adverse CO hotspot impacts may occur when sensitive receptors such as residences, schools, and hospitals are located in the vicinity of the affected intersection. General Plan Buildout forecasts for both the Village West Drive/Van Buren Boulevard and Harmon Street-Meridian Parkway/Van Buren Boulevard intersections are LOS F. Both intersections of Village West Drive and Harmon Street-Meridian Parkway at Van Buren Boulevard are located within March Air Reserve Base and are not bordered by sensitive receptors. Currently, there are no existing or planned sensitive receptors within the vicinity of these two intersections. In addition, it is not reasonably foreseeable that residential land uses or other sensitive receptors, such as schools, would be developed adjacent to either intersection.

As such, potential CO hotspot impacts to sensitive receptors are not anticipated to occur at these locations despite General Plan Buildout forecasts of LOS F.

In addition to the findings related to the project's impacts on traffic at affected intersections, the background CO levels in the area are approximately 20% of the 1- and 8-hour CAAQS and would be expected to improve further due to reductions in motor vehicle emissions. ***Based on this assessment, the proposed project would result in a less-than-significant impact to sensitive receptors with regard to potential CO hotspots resulting from its contribution to cumulative traffic-related air quality impacts; therefore, mitigation would not be required.***

Toxic Air Contaminants (TAC)

TACs are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazard to human health. The greatest potential for TAC emissions during construction would be diesel particulate emissions from heavy equipment operations and heavy-duty trucks and the associated health impacts to sensitive receptors. The nearest sensitive receptors are residences to the north, south, and west of the project site. The prevailing wind direction is from the west and northwest, and no sensitive receptors are located east of the project site. Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SCAQMD recommends an incremental cancer risk threshold of 10 in 1 million. "Incremental cancer risk" is the likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 70-year lifetime will contract cancer based on the use of standard risk-assessment methodology. The project would not require the extensive use of heavy-duty construction equipment, which is subject to a CARB Airborne Toxics Control Measure for in-use diesel construction equipment to reduce diesel particulate emissions, except during 6 weeks of grading, and it would not involve extensive use of diesel trucks. The construction period for proposed project would total up to 9 months, after which project-related TAC emissions would cease. Thus, the proposed project would not result in a long-term (i.e., 70 years) source of TAC emissions. No residual TAC emissions and corresponding cancer risk are anticipated after construction. ***As such, the exposure of project-related TAC emission impacts to sensitive receptors during construction would be less than significant.***

CARB has published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB 2005), which identifies certain types of facilities or sources that may emit substantial quantities of TACs and therefore could conflict with sensitive land uses, such as "schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities." With the possible exception of dry cleaners, the proposed project would not include these types of TAC sources on site. (New dry cleaners in the SCAQMD are prohibited from using perchloroethylene, a TAC; thus, siting of a dry cleaner within the proposed project would not result in TAC emissions). Similarly, a health risk assessment is not needed since the proposed project would not be considered a high priority project that would generate a substantial amount of TACs. ***Accordingly, the proposed project would not***

generate substantial TAC emissions that would conflict with surrounding sensitive receptors nor expose the project's inhabitants to TAC emissions from these sources.

Health Impacts of Criteria Air Pollutants

Construction of the proposed project would result in VOC, NO_x, and PM_{10} emissions that exceed the SCAQMD mass-emission thresholds; all other criteria pollutants were found to be below significance thresholds. Specific VOCs may be TACs; however, the specific VOCs associated with project construction are unknown. Some VOCs would be associated with motor vehicles and construction equipment, while others are associated with architectural coatings, the emissions of which would result in the exceedances of the SCAQMD threshold. Generally, the VOCs in architectural coatings are of relatively low toxicity.

In addition, VOCs and NO_x are precursors to O_3, for which the SCAB is designated as nonattainment with respect to the NAAQS and CAAQS. Thus, existing O_3 levels in the SCAB are at unhealthy levels during certain periods. The health effects associated with O_3 are generally associated with reduced lung function. The effect of a single project's emissions of O_3 precursor is speculative due to the lack of quantitative methods to assess this impact. ***Nonetheless, the VOC and NO_x emissions associated with project construction could contribute to regional O_3 concentrations and the associated health impacts.***

According to the LST analysis discussed above, the construction of the proposed project could contribute to exceedances of the NAAQS and CAAQS for NO_2. As described in Section 4.3.1, NO_2 health impacts are associated with respiratory irritation, which may be experienced by nearby receptors during the periods of heaviest use of off-road construction equipment (e.g., mass grading of the project site). However, these operations would be relatively short term, and application of mitigation measures (MM AQ-1) would help to mitigate this impact.

During operation of the proposed project, the emissions of VOC, NO_x, and CO would exceed the SCAQMD emission-based thresholds. The VOC and NO_x emissions, as described previously, would contribute to regional O_3 concentrations and the associated health effects. In addition to O_3, NO_x contributes to potential exceedances of the NAAQS and CAAQS for NO_2. As shown in Table 4.3-3, the existing NO_2 concentrations are well below the NAAQS and CAAQS. ***Thus, it is not expected the project's operational NO_x emissions would result in exceedances of the NO_2 standards or contribute to the associated health effects.*** CO tends to be a localized impact associated with congested intersections. The associated CO "hotspots" were discussed previously as a less-than-significant impact. ***Thus, the project's CO emissions would not contribute to the health effects associated with this pollutant.***

<u>Threshold:</u> Would the project create objectionable odors affecting a substantial number of people?

Potential sources that may emit odors during construction activities include diesel equipment and gasoline fumes and solvents from the application of paint. Odors from these sources would be localized and generally confined to the project site. The release of potential odor-causing compounds would tend to be during the work day, when many residents would not be at home. Furthermore, the SCAQMD rules restrict the VOC content (the source of odor-causing compounds) in paints. The proposed project would use typical construction techniques in compliance with SCAQMD rules. Additionally, the odors would be temporary. ***As such, proposed project construction would not cause an odor nuisance, and odor impacts would be less than significant.***

Land uses and industrial operations that typically are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. Based on identified potential tenants of the Gless Ranch project, during the operational phase of the proposed project, anticipated odors would be generated from cooking facilities (the sit-down restaurant, two fast-food restaurants, and coffee shop), tire center, and landscape/building maintenance. In general, these odors are not considered to create a significant nuisance and it is not likely that these odors would cause a significant impact to surrounding receptors. ***However, to ensure that odors would be less than significant, MM AQ-5, requiring the implementation of an Odor Abatement Plan, would be required for uses that could cause a significant odor impact.***

As specific permits are requested for potential odor-generating land uses, the City of Riverside may further evaluate odor emissions from such uses to determine if additional environmental review is warranted at that time. With implementation of MM AQ-5, project operations would result in a less-than-significant odor impact.

4.3.5 Mitigation Measures

CEQA Guidelines Section 15126.4 requires EIRs to describe feasible measures that can minimize significant adverse impacts. The following mitigation measures have been evaluated for feasibility and are incorporated in order to reduce potentially significant impacts related to air quality emissions:

MM AQ-1 In order to address emissions related to construction activities, consistent with SCAQMD Rule 403, it is required that fugitive dust generated by grading and construction activities be kept to a minimum with a goal of retaining dust on the site, by following the dust control measures listed below:

a) During clearing, grading, earthmoving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and to create a crust after each day's activities cease.

b) During construction, water truck or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas later in the morning and after work is completed for the day and whenever winds exceed 15 miles per hour.

c) Soil stockpiled for more than 2 days shall be covered, kept moist, or treated with soil binders to prevent dust generation.

d) Reduce speeds on unpaved roads to less than 15 miles per hour.

e) Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.

f) Dirt and debris spilled onto paved surfaces at the project site and on the adjacent roadways shall be swept, vacuumed, and/or washed at the end of each workday.

g) Should minor import/export of soil materials be required, all trucks hauling dirt, sand, soil, or other loose material to and from the construction site shall be tarped and maintain a minimum 2 feet of freeboard.

h) At a minimum, at each vehicle egress from the project site to a paved public road, install a pad consisting of washed gravel (minimum-size: 1 inch) maintained in a clean condition to a depth of at least 6 inches and extending at least 30 feet wide and at least 50 feet long (or as otherwise directed by SCAQMD).

i) Review and comply with any additional requirements of SCAQMD Rule 403.

MM AQ-2 The following measures shall be adhered to during project grading and construction to reduce VOC and NO_x from construction equipment:

a) Heavy-duty diesel-powered construction equipment rated at greater than 50 horsepower shall be equipped with Tier 2 or better diesel engines.

b) The engine size of construction equipment shall be the minimum size.

c) The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest number is operating at any one time.

d) Construction equipment shall be maintained in tune per the manufacturer's specifications.

e) Catalytic converters shall be installed on gasoline-powered equipment over 50 horsepower.

f) Electric equipment shall be utilized in lieu of diesel-powered equipment, where feasible.

MM AQ-3 The project developer shall use zero-VOC-content architectural coatings during project construction/application of paints and other architectural coatings to reduce ozone precursors. If zero-VOC paint cannot be utilized, developer shall avoid application of architectural coatings during the peak smog season: July, August, and September. Developer shall procure architectural coatings from a supplier in compliance with the requirements of SCAQMD's Rule 1113 (Architectural Coatings).

MM AQ-4 In order to address long-term air quality emissions associated with project operation, the following mitigation measure will reduce impacts as shown on Table 4.3-10:

- The project developer shall ensure that zero-VOC-content architectural coatings are used for building maintenance to reduce ozone precursors. If zero-VOC paint cannot be utilized, application of architectural coatings should be avoided during the peak smog season: July, August, and September. Architectural coatings shall be procured from a supplier in compliance with the requirements of SCAQMD's Rule 1113 (Architectural Coatings).
- Additionally, the project will implement energy conservation design features that would result in exceeding the 2008 Title 24 requirements by a minimum of 15%. Note that this measure applies to the project as a whole rather than to specific building.

MM AQ-5 In order to address odors from the project, any of the following uses including but not limited to fast food restaurants, bakeries, coffee-roasting facilities, automobile maintenance shops (e.g., tire centers), and laundry/dry cleaning facilities, shall implement an Odor Abatement Plan (OAP). The OAP shall include the following:

Name and telephone number of contact person(s) at the facility responsible for logging in and responding to odor complaints

Policy and procedure describing the actions to be taken when an odor complaint is received, including the training provided to the staff on how to respond

Description of potential odor sources at the facility

Description of potential methods for reducing odors, including minimizing idling of delivery and service trucks and buses, process changes, facility modifications, and/or feasible add-on air pollution control equipment

Contingency measures to curtail emissions in the event of a public nuisance complaint.

4.3.6 Environmental Impacts after Mitigation is Incorporated

Even with implementation of MM AQ-1 and MM AQ-2, project construction impacts associated with PM_{10} emissions would still exceed significance thresholds. MM AQ-2 would also result in some reductions in NO_x emissions related to construction equipment, but the emissions would remain significant. MM AQ-3, which requires use of zero-VOC coatings when available, would reduce potential VOC impacts associated with architectural coatings such that the VOC emissions during construction would be reduced to a less-than-significant level. Construction of the proposed project is anticipated to result in an exceedance of the NO_2 LST; MM AQ-2 would reduce the NO_2 ambient air quality impacts, but it is not expected to reduce the impact to less than significant. NO_x emissions associated with project construction could contribute to regional O_3 concentrations and the associated health impacts. Required mitigation measures would reduce project-generated emissions, but potential impacts would remain significant. Therefore, the project, even with mitigation measures incorporated, will still result in significant short-term impacts related to air quality emissions.

For long-term operational impacts, even with implementation of MM AQ-4, operational emissions of VOC, NO_x and CO would not be reduced by the needed 43%, 68% and 21%, respectively in order to be below the SCAQMD significance thresholds. Thus, long-term operational air quality impacts would be considered significant and unmitigable for VOC, NO_x and CO. The project would contribute to ambient regional concentrations of ozone as it would produce VOC and NO_x emissions that would exceed SCAQMD thresholds; therefore, it is assumed that the project would contribute to regional health impacts related to ozone.

Part of the long-term or operational emissions associated with the project are from natural gas emissions used for space and water heating for the project. Substantial reductions in emissions from natural gas-related area sources would be difficult, as these sources would mainly be low-emitting, natural gas–fired units. Nonetheless, optimization of energy conservation techniques in proposed building design would minimize emissions resulting from space heating demands and help reduce the overall project's significant impact of VOC, NO_x, and CO emissions which are generated from natural gas combustion. The proposed project would incorporate design strategies (discussed above under Section 4.3.3) that would reduce emissions generated by project energy use. The project would also use high-efficiency rooftop heating and air conditioning equipment. To help further mitigate for operational impacts, MM AQ-4 should be implemented.

To reduce vehicle miles traveled (VMT) by future project employees, Target and other retail stores proposed in the project would make it a goal to hire, on average, more than 85% of employees from the immediate area surrounding the store. Because the proposed Gless Ranch project's anticipated tenants include a Target store, a home improvement center, restaurants, tire center, offices, bank, and various retail stores, it would provide multiple services within the same shopping center, thus reducing VMT that would otherwise potentially result from travel to multiple shopping sites.

There are four Target stores located within 12 miles of the project site: three in the City of Riverside, located at 2755 Canyon Springs Parkway (approximately 7.5 miles northeast of the project site), 3333 Arlington Avenue (approximately 7 miles northwest of the project site), and 3520 Tyler Street (approximately 10 miles west of the project site), and one in Moreno Valley, located at 27100 Eucalyptus Avenue (approximately 12 miles northeast of the project site). The closest Target store to the south of the proposed project is located in Menifee, at 30340 Haun Road, approximately 19 miles south of the project site. In addition to residents located within the project vicinity, including the Woodcrest community, the proposed Target center would serve neighborhoods located south of the project area, including city of Perris residences that would be closer to the proposed Target than the existing Target in Menifee. Furthermore, residential development is concentrated near the proposed Gless Ranch; thus, a relatively large population would be served by the proposed Target in comparison to less dense areas in Riverside County. As such, it is reasonable to assume that the proposed retail center could potentially result in a reduction in VMT by future customers that would be traveling instead to other Target or other retail stores located farther away. The associated potential reduction in air pollutant emissions generated by vehicle sources is not considered in the quantification of estimated operational emissions for the proposed project shown in Table 4.3-10.

Extensive bus service throughout the City is provided by the Riverside Transit Agency (RTA). The proposed project includes a proposed bus stop along Van Buren Boulevard (RTA 2010). Proposed bicycle racks in the proposed project will be reviewed as part of the City's Design Review process. The City also has a Bicycle Master Plan that serves to develop a feasible plan for an interconnected on- and off-street bicycle lane network throughout the City. The proposed project includes a bike lane along Van Buren Boulevard that will tie into the existing bike route.

In summary, the project does result in exceedance of SCAQMD significance thresholds as shown in Table 4.3-12, Summary of Air Quality Impacts after Mitigation. **Although there are project design features that would be incorporated to attempt to reduce air quality impacts, and although mitigation measures have been incorporated, these impacts still remain significant and unavoidable. A Statement of Overriding Considerations will be required.**

Table 4.3-12
Summary of Air Quality Impacts after Mitigation

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Construction						
Exceeds Threshold?	No	**Yes**	No	No	**Yes**	No
Operation						
Exceeds Threshold?	**Yes**	**Yes**	**Yes**	No	No	No

4.3.7 References

Caltrans ITS (California Department of Transportation, Institute of Transportation Studies). 1998. *Transportation Project-Level Carbon Monoxide Protocol User Workbook*. June 1998.

CARB (California Air Resources Board). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April 2005. Accessed February 9, 2010. http://www.arb.ca.gov/ch/landuse.htm.

CARB. 2009. *The California Almanac of Emissions and Air Quality: 2009 Edition*. Sacramento, California: Planning and Technical Support Division.

CARB. 2010a. "Glossary of Air Pollutant Terms." October 19, 2010. Accessed December 2010. http://www.arb.ca.gov/html/gloss.htm.

CARB. 2010b. "iADAM Air Quality Data Statistics." Accessed December 2010. http://arb.ca.gov/adam.

CARB. 2010c. "Area Designations Maps / State and National." September 7, 2010. Accessed December 2010. http://www.arb.ca.gov/desig/adm/adm.htm.

CARB. 2011. "Ambient Air Quality Standards." January 26, 2011. Accessed April 2011. http://www.arb.ca.gov/research/aaqs/aaqs.htm.

City of Riverside. 1998. *Orangecrest Specific Plan*. Adopted December 3, 1985; amended October 7, 1997, and May 26, 1998. Accessed November 2, 2010. http://www.riversideca.gov/planning/pdf/SpecificPlans/orangecrest.pdf.

City of Riverside. 2007. *City of Riverside General Plan 2025*. Adopted November 2007. Riverside, California: City of Riverside Community Development Department. Accessed December 2010. http://www.riversideca.gov/planning/gp2025program/general-plan.asp.

City-Data.com. 2010. Accessed November 2010. www.city-data.com.

Dudek. 2011. Air Quality Technical Report and Greenhouse Gas Analysis for the Gless Ranch Project. October 2011.

EPA. 2010a. "Six Common Air Pollutants." July 1, 2010. Accessed December 2010. http://www.epa.gov/air/urbanair/.

EPA. 2010b. "Region 9: Air Programs, Air Quality Maps." December 9, 2010. Accessed December 23, 2010. http://www.epa.gov/region9/air/maps/maps_top.html.

EPA. 2010c. "AirData: Access to Air Pollution Data." October 5, 2007. Accessed December 2010. http://epa.gov/air/data.

ITE (Institute of Transportation Engineers). 2008. Trip Generation. 8th Edition. December 2008.

Lakes Environmental. 2010. ISC-AERMOD View Software (Version 7.1.0).

LLG (Linscott, Law & Greenspan). 2010. *Traffic Impact Analysis Report: Gless Ranch Center*. Prepared for Dudek. Costa Mesa, California: LLG. December 14, 2010.

RTA (Riverside Transit Agency). 2010. "Maps & Schedules." Updated September 2010. Accessed November 10, 2010. http://www.riversidetransit.com/bus_info/schedules.htm.

SCAQMD (South Coast Air Quality Management District). 1993. "SCAQMD Air Quality Significance Thresholds." Originally published in *CEQA Air Quality Handbook*, Table A9-11-A. Revised March 2009. Accessed December 2010. http://www.aqmd.gov/ceqa/handbook/signthres.pdf.

SCAQMD. 2008. *Final Localized Significance Threshold Methodology*. June 2003; revised July 2008.

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4.4 Biological Resources

The focus of the following discussion and analysis, based on the initial study (IS), public scoping session, and Notice of Preparation public comment period, concerns the potentially adverse impacts to wildlife movement, riparian habitat, wetlands, and local policies; as well as potentially adverse impacts related to endangered or threatened species, or special-status species, resulting from implementation of the proposed project. Additionally, the project's potential impact on the relationship of the project to an adopted or approved local, regional, or state conservation plan will be discussed.

In addition to other documents, the following sources were used in the preparation of this section of the Draft Environmental Impact Report:

- Dudek. 2011. *Biological Resources Technical Report and Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis for Gless Ranch*. Revised March 2011 (Appendix D).
- County of Riverside. 2003. *Western Riverside County Multiple Species Habitat Conservation Plan*. Adopted September 23, 2003. Accessed December 20, 2010. http://www.tlma.co.riverside.ca.us/mshcp/.

4.4.1 Setting

The discussion related to the site's current agricultural use and operation, unvegetated, ephemeral drainage, plant and wildlife species below describes the existing environmental conditions at the time the NOP was published and is therefore considered the baseline.

Existing Conditions

The project site is bordered by Van Buren Boulevard to the north, Barton Road to the east, and Gless Ranch Road to the south. March Air Reserve Base is located to the east, approximately 3 miles from the center of the project site. Van Buren Boulevard is a six-lane arterial roadway and residential development exists on the north side of Van Buren. Residential development also borders the project site to the south, across Gless Ranch Road and to the west. The property to the east of the site is undeveloped and designated for Business Park development per the March Business Center Specific Plan. The project site itself is currently used to grow oranges (Figure 4.4-1, Aerial Map). There are approximately 36 acres of orange groves on site. The remaining approximately 4 acres consist of developed/disturbed lands. The developed/disturbed lands include two mobile homes used as residences for caretakers of the property; a building used for farming activities, located in the southern portion of the site, and a fruit stand, located on the northerly portion of the project site. The majority of the orange groves and structures will be removed/demolished with implementation of the proposed project with the exception of the fruit stand, which will remain on site and will be expanded and incorporated into the larger development plan. The topography of the site is flat with a drainage crossing the

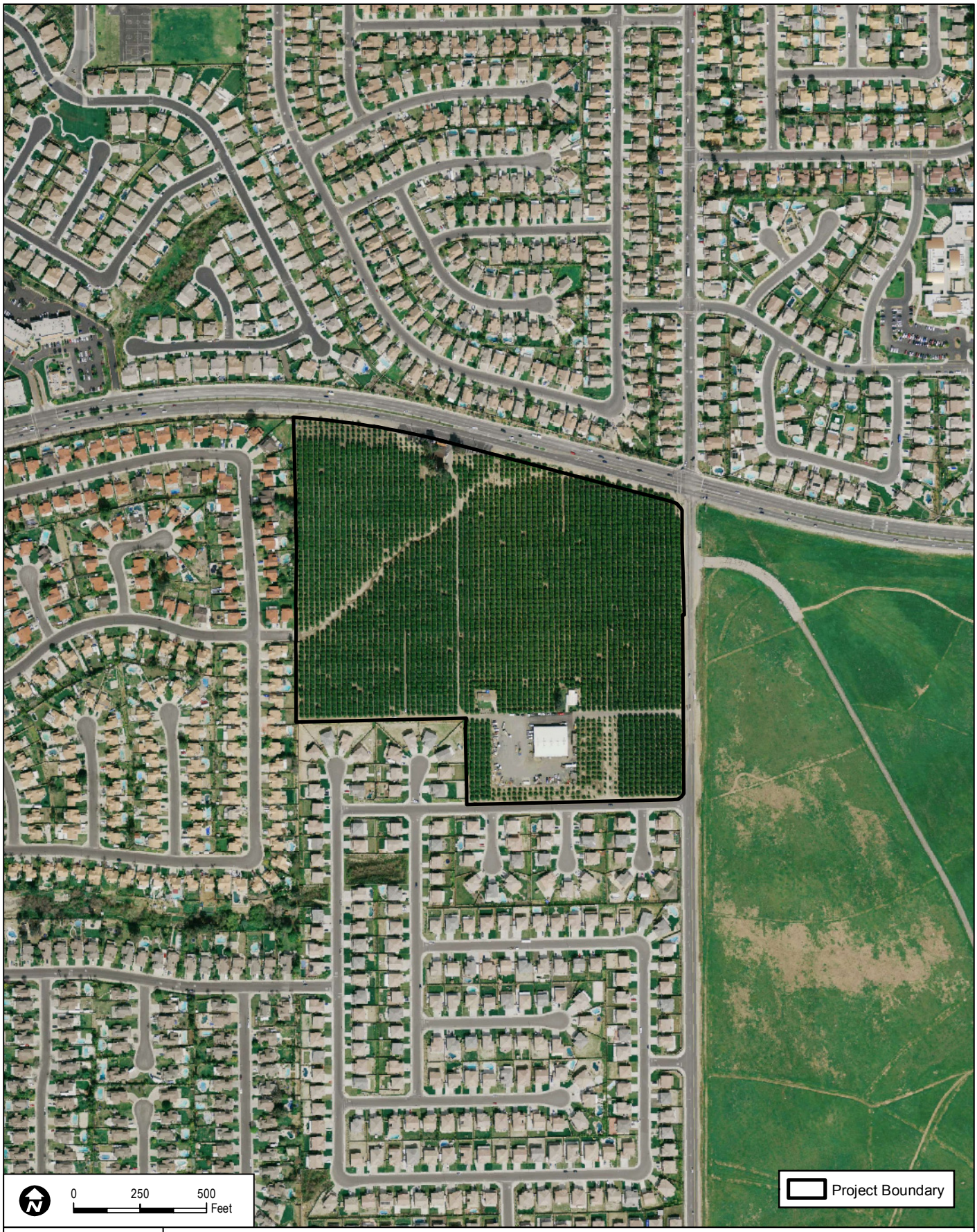
northwest portion of the site. On-site elevations range from approximately 1,720 feet to 1,760 feet above mean sea level (msl). The soils on the project site consist of Fallbrook fine sandy loam and Fallbrook sandy loam.

There is one unvegetated, ephemeral drainage on site. Although the drainage on site appears to have originated from a natural drainage channel that was present prior to use of the property for agriculture (USDA 1971), a natural stream channel is no longer present. This drainage appears to receive runoff from Van Buren Boulevard as well as the existing residential development north of Van Buren Boulevard. The drainage empties into a concrete stormwater inlet box located off site along the western boundary of the project at Kinnow Lane.

As an area consisting only of orange groves and associated developed lands, the project site has limited habitat diversity. Consequently, both plant and wildlife species diversity (i.e., overall species richness) in the project site are also limited. Besides orange trees, six other non-native plant species were observed on site, including eucalyptus trees, annual bluegrass (*Poa annua*), common barnyard grass (*Echinochloa crus-galli*), Mexican sprangletop (*Leptochloa uninervia*), common sow thistle (*Sonchus oleraceus*), and salt-cedar (*Tamarix spp*).

Bird species observed during the survey effort included house finch (*Carpodacus mexicanus*), bushtit (*Psaltriparus minimus*), yellow-rumped warbler (*Dendroica coronata*), lesser goldfinch (*Spinus psaltria*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), common raven (*Corvus corax*), and red-tailed hawk (*Buteo jamaicensis*), which are commonly observed bird species in developed and agricultural areas.

The western fence lizard (*Sceloporus occidentalis*), common raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*) were directly observed on the project site during the surveys. Other common reptiles and mammals that have the potential to occur on site include gopher snake (*Pituophis melanoleucus*), side-blotched lizard (*Uta stansburiana*), coyote (*Canis latrans*), Virginia opossum (*Didelphis virginiana*), and small rodents such as mice. No amphibians or invertebrate species were detected on site.



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SOURCE: DigitalGlobe 2008

FIGURE 4.4-1
Aerial Map

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2011

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Related Regulations

Federal

Federal Endangered Species Act

The Federal Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) and subsequent amendments, provide for the conservation of endangered and threatened species and the habitats on which they depend. A federally endangered species is one facing extinction throughout all or a significant portion of its geographical range. A federally threatened species is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range. The presence of any federally threatened or endangered species on a site generally imposes severe constraints on development; particularly if development would result in a "take" of the species or its habitat. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct. Harm in this sense can include any disturbance to habitats used by the species during any portion of its life history. The proposed project will avoid known occurrences of listed plants and habitat for listed wildlife species or otherwise mitigate potential impacts to these species.

Clean Water Act

The U.S. Environmental Protection Agency (EPA) regulates water quality under the Clean Water Act (CWA) (also known as the Federal Water Pollution Control Act). Enacted in 1972 and significantly amended in subsequent years, the CWA is designed to restore and maintain the chemical, physical, and biological integrity of waters in the United States. The CWA provides the legal framework for several water quality regulations, including National Pollutant Discharge Elimination System (NPDES) Permits, effluent limitations, water quality standards, pretreatment standards, anti-degradation policy, non-point source discharge regulation, and wetlands protection.

The CWA requires NPDES permits for the discharge of pollutants to waters of the United States from any point source. In 1987, the CWA was amended to require that the EPA establish regulations for permitting of municipal and industrial stormwater discharges under the NPDES permit program. The EPA published final regulations regarding stormwater discharges on November 16, 1990. The regulations require that municipal separate storm sewer system (MS4) discharges to surface waters be regulated by an NPDES permit. Surface runoff from the project site is permitted under the municipal NPDES permit issued to the County of Riverside.

The EPA has delegated the responsibility for administration of portions of the CWA to state and regional agencies. The CWA requires the states to adopt water quality standards for receiving water bodies and to have those standards approved by the EPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing, etc.), along with water quality criteria necessary to support those uses. Water quality criteria are prescribed

concentrations or levels of constituents, such as lead, suspended sediment, and fecal coliform bacteria, or they are narrative statements that represent the quality of water supporting a particular use.

Migratory Bird Treaty Act

According to the Migratory Bird Treaty Act (MBTA) administered by the U.S. Fish and Wildlife Service (USFWS), the removal of active nests, eggs, or nestlings is unlawful. A violation of the MBTA may occur on, but is not limited to, projects that involve clearing or grubbing of migratory bird nest habitat during the nesting season, and demolition or reconstruction where bird nests are present. This time period is especially important due to the heightened presence of eggs or young that are essential to the survival of the species. Consequently, prior to initiating a project that includes potential bird habitat removal, it is generally recommended that a nesting bird survey be done if that habitat removal is proposed to be completed during the nesting season.

State

California Endangered Species Act (CESA)

California (Fish and Game Code 2050 et seq.) establishes that it is the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. CESA requires state lead agencies to consult with the California Department of Fish and Game (CDFG) during the California Environmental Quality Act (CEQA) process to avoid jeopardy to threatened or endangered species. CESA prohibits any person from taking or attempting to take a species listed as endangered or threatened (Fish and Game Code, Section 2080). Section 2080 of the Fish and Game Code provides the permitting structure for CESA. The "take" of a state-listed endangered or threatened species or candidate species will require incidental take permits as authorized by CDFG.

The proposed project, however, is not expected to require such authorizations since it is not expected to result in "take" of a listed species. The proposed project will avoid known occurrences of listed plants and habitat for listed wildlife species or otherwise mitigate potential impacts to these species.

Porter-Cologne Water Quality Control Act

A waste discharge requirement (WDR) is necessary when a project is regulated by the Regional Water Quality Control Board (RWQCB) as a "waters of the State" in accordance with the Porter-Cologne Act. The RWQCB needs to evaluate the impact to the quality of waters. Specifically, "quality of waters" refers to chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water that affect its use. The project's ephemeral feature is approximately 1,300 linear feet; therefore the project will not qualify for a General WDR (which is limited to impacts less than 400

linear feet). Instead, a report of waste discharge must be submitted to the RWQCB to obtain either a waste discharge requirement (WDR) or a waiver for any impacts to waters of the State.

The application process generally includes an application form, supplemental information like a biological resources report, project site plans and any other reports or information about the project's impacts to waters of the state. As a result of the WDR, the RWQCB may have some water quality requirements that would be required to be implemented. Obtaining the WDR or waiver is required prior to impacts within the waters of the State.

Streambed Alteration Agreements

California Department of Fish and Game (CDFG) is responsible for protecting, conserving and managing wildlife, fish and plant resources in the State of California. Under the Fish and Game Code, Section 1602, an entity is required to notify CDFG of any activity that may modify a river, stream or lake. Portions of the on-site drainage have traditional streambed indicators such as a defined bed and bank, and as mentioned previously, may be associated with what was once a natural drainage channel. The drainage on site is, therefore, to be considered under the jurisdiction of the CDFG pursuant to Section 1602 of the California Fish and Game Code. A Streambed Alteration Agreement will be required of the project. The project will be required to receive a Streambed Alteration Agreement, pursuant to state law. The Agreement with CDFG will most likely require mitigation in the form of onsite, offsite or in lieu fee mitigation, or combination of all. Mitigation Measure BIO-2 (MM BIO-2) will require the implementation of mitigation required by the Agreement.

Local

Western Riverside County Multispecies Habitat Conservation Plan (MSHCP)

The Western Riverside County MSHCP is a comprehensive, multijurisdictional habitat conservation plan (HCP) focusing on conservation of species and their associated habitats in Western Riverside County. This plan is one of several large, multijurisdictional habitat-planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region. The MSHCP will allow Riverside County and its cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal endangered species acts.

The MSHCP serves as an HCP pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), as well as a Natural Communities Conservation Plan (NCCP) under the NCCP Act of 2001 (Fish and Game Code, Section 2800 et seq.). The MSHCP allows the participating jurisdictions to authorize "take" of plant and wildlife species identified within the plan area. The USFWS and CDFG have authority to regulate the take of threatened, endangered, and rare species. Under the MSHCP, the wildlife agencies have granted "take authorization" for otherwise lawful actions, such as

public and private development that may incidentally take or harm individual species or their habitat outside of the MSHCP conservation area, in exchange for the assembly and management of a coordinated MSHCP conservation area.

The MSHCP is a "criteria-based plan" and does not rely on a hardline preserve map. Instead, within the MSHCP Plan Area, the MSHCP reserve will be assembled over time from a smaller subset of the Plan Area referred to as the Criteria Area. The Criteria Area consists of Criteria Cells (Cells) or Cell Groupings, and flexible guidelines (Criteria) for the assembly of conservation within the Cells or Cell Groupings. Cells and Cell Groupings also may be included within larger units known as Cores, Linkages, or Non-Contiguous Habitat Blocks.

City of Riverside Urban Forestry Policy Manual

The City of Riverside's Urban Forestry Policy Manual is a guideline for the planting, pruning, preservation and removal of all trees in the city right-of-ways and recreational facilities. The Urban Forestry Policy Manual (2007) does not relate to private property trees or orange groves on the project site since the site is not within a right-of-way or considered a recreational facility.

4.4.2 Thresholds of Significance

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts. Based on the IS and Appendix G, the project could have a significant impact on biological resources if the proposed project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- 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.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

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

4.4.3 Project Elements that Can Reduce Impacts

There are no project design features or elements that will reduce impacts to biological resources.

4.4.4 Environmental Impacts before Mitigation

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

The project site consists of orange groves with associated structures that support the farming activities. Table 4.4-1 of the Biological Resources Technical Report includes a list of the special-status wildlife whose geographic ranges fall within the general project vicinity and species covered under the Western Riverside MSHCP.

Special-Status Wildlife Species

Based on Table 4.4-1, the following special-status wildlife species have very low to low potential to occur on the project site: western spadefoot (*Spea hammondii*), Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), coastal western whiptail (*Pidoscelis tigris*), northern red-diamond rattlesnake (*Crotalus exsul ruber*), coast (San Diego) horned lizard (*Phrynosoma coronatum*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), two-striped garter snake (*Thamnophis hammondii*), Cooper's hawk (*Accipiter cooperii*), great blue heron (*Ardea herodias*), burrowing owl *(Athene cunicularia*), ferruginous hawk (*Buteo regalis*), California horned lark (*Eremophila alpestris actia*), merlin (*Falco columbarius*), loggerhead shrike (*Lanius ludovicianus*), downy woodpecker (*Picoides pubescens*), pallid bat (*Antrozous pallidus*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), Dulzura kangaroo rat (*Dipodomys simulans*), Stephens' kangaroo rat (*Dipodomys stephensi*), western mastiff bat (*Eumops perotis*), western yellow bat (*Lasiurus xanthinus*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), bobcat (*Lynx rufus*), long-tailed weasel (*Mustela frenata*), San Diego desert woodrat (*Neotoma lepida*), Los Angeles pocket mouse (*Perognathus longimembris*), and mountain lion (*Puma concolor*). Coyote has a moderate potential to occur on site. However, no suitable habitat is available on the project site given the lack of suitable native vegetation, human activity associated with agricultural activities, and developed surroundings.

Table 4.4-2 of the Biological Resources Technical Report, includes a list of the special-status plants known to occur in the project vicinity based on the California Natural Diversity Database and California Native Plant Society databases, as well as species covered under the Western Riverside MSHCP.

Table 4.4-1
Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
Amphibians				
Anaxyrus (Bufo) californicus	Arroyo toad	FE/CSC/MSHCP	Stream channels for breeding (typically 3rd order); adjacent stream terraces and uplands for foraging and wintering	Does not occur on project site. No suitable stream channels or adjacent stream terraces on site.
Lithobates pipiens	Northern leopard frog (native populations only)	FS/CSC	In or near quiet, permanent and semi-permanent water in many habitats from sea level to 7,000 feet.	Does not occur on project site. No suitable habitat on site. No quiet, permanent, or semi-permanent waters.
Rana muscosa	Mountain yellow-legged frog	FE, FS, CNF/ CSC/MSHCP	Meadow streams, isolated pools, lake borders, rocky stream courses within ponderosa pine, montane hardwood-conifer and montane riparian habitat types	Does not occur on project site. No suitable ponderosa pine, montane hardwood-conifer, or montane riparian habitat on site; site is outside species' range.
Rana aurora draytoni	California red-legged frog	FT, CNF/CSC/ MSHCP	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	Does not occur on project site. No suitable vegetation within drainage or upland of the drainage to support this species and species is not recorded in the vicinity.
Spea hammondii	Western spadefoot	BLM/CSC/MSHCP	Most common in grasslands, coastal sage scrub near rain pools or vernal pools; riparian habitats	Low potential to occur. No suitable grassland, coastal sage scrub, or riparian vegetation within or immediately adjacent to the project site. Vernal pools or other standing water also absent from the site.

Table 4.4-1
Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
Taricha torosa torosa	Coast Range newt (Monterey Co. south only)	None/CSC/ MSHCP	Coastal drainages from Mendocino Co. to San Diego Co. Lives in terrestrial habitats and will migrate over 1 kilometer to breed in ponds, reservoirs and slow moving streams.	Does not occur on project site. No suitable habitat on site.
Reptiles				
Actinemys [=Clemmys] marmorata pallida	Southwestern pond turtle	FS, BLM, CNF/ CSC/MSHCP	Slow-moving permanent or intermittent streams, ponds, small lakes, reservoirs with emergent basking sites; adjacent uplands used during winter	Does not occur on project site. Streams, pond, and lakes with emergent basking sites and accessible adjacent uplands are absent from the project site.
Aspidoscelis hyperythra beldingi	Belding's orange-throated whiptail	None/CSC/ MSHCP	Coastal sage scrub, chaparral, grassland, juniper, and oak woodland	Low potential to occur. No suitable scrub, chaparral, grassland, juniper, or oak woodland vegetation on site. This species has been recorded within open space approximately 1,500 feet away from the site.
Aspidoscelis tigris stejnegeri	Coastal western whiptail	None/SAL	Coastal sage scrub, chaparral	Low potential to occur. No suitable scrub or chaparral vegetation on site.
Charina trivirgata	Rosy boa	FS, BLM/SAL/ MSHCP	Rocky chaparral, coastal sage scrub, oak woodlands, desert, and semi-desert scrub	Does not occur on project site. No suitable scrub, chaparral, or oak woodland vegetation on site.
Coleonyx variegatus abbotti	San Diego banded gecko	None/SAL/ MSHCP	Cismontane chaparral, coastal sage scrub, desert scrub; granite outcrops	Does not occur on project site. No suitable scrub or chaparral vegetation on site. Granite outcrops are absent from the site.

Table 4.4-1
Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
Crotalus ruber ruber	Northern red-diamond rattlesnake	None/CSC/ MSHCP	Variety of shrub habitats where there is heavy brush, large rocks, or boulders	Low potential to occur. No heavy brush vegetation on site. The site also does not support large rocks or boulders. May occur on very rare occasion if an individual comes over from grassland to the east of the site.
Lampropeltis zonata (San Bernardino population)	San Bernardino mountain kingsnake	FS/CSC/MSHCP	Valley-foothill hardwood, hardwood-conifer, chaparral, coniferous forest, wet meadow	Does not occur on project site. No suitable forest, chaparral, or meadow vegetation on site.
Lampropeltis zonata (San Diego population)	San Diego mountain kingsnake	FS/CSC/MSHCP	Valley-foothill hardwood, hardwood-conifer, chaparral, coniferous forest, wet meadow	Does not occur on project site. No suitable forest, chaparral, or meadow vegetation on site.
Phrynosoma coronatum (blainvillei population)	Coast (San Diego) horned lizard	FS, CNF/CSC/ MSHCP	Coastal sage scrub, annual grassland, chaparral, oak and riparian woodland, coniferous forest	Low potential to occur. No suitable scrub, grassland, chaparral, oak, riparian, or coniferous forest vegetation on site. Species not recorded in the project vicinity. Annual grassland occurs in the vicinity of the site and individual may very rarely wander onto site search for food.
Salvadora hexalepis virgultea	Coast patch-nosed snake	None/CSC	Chaparral, washes, sandy flats, rocky areas	Low potential to occur. Lack of suitable habitat and the disturbed nature of the site would likely not support this species.

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Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
Sceloporus graciosus vanderburgianus	Southern sagebrush lizard	None/None/ MSHCP	Montane chaparral, hardwood and conifer forest, juniper, coastal sage scrub	Does not occur on project site. No suitable vegetation on site and species not recorded in the project vicinity.
Sceloporus orcuttii orcuttii	Granite spiny lizard	None/None/ MSHCP	Granite rock outcrops within forest, woodland, chaparral and coastal sage scrub habitats	Does not occur on project site. No suitable granite rock outcrops within forest, woodland, chaparral or coastal sage scrub habitats.
Thamnophis hammondii	Two-striped garter snake	BLM, FS/CSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Low potential to occur. Species not recorded in the project vicinity. On-site drainage is intermittent. No suitable streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools on site.
Xantusia henshawi henshawi	Granite night lizard	SBNF/None/ MSHCP	Rock outcrops in desert, chaparral and woodland habitats	Does not occur on project site. No suitable rock outcrops or suitable vegetation. Species not recorded in the project vicinity.
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL/MSHCP	Riparian and oak woodlands, montane canyons	Low potential to nest on site. No suitable riparian or oak vegetation occurs on site and the project site is not within a montane canyon. However there is potential to nest in an orange tree.

Table 4.4-1
Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
Accipiter gentilis (nesting)	Northern goshawk	BLM, CDF, FS/ CSC/MSHCP	Within and in the vicinity of coniferous forest. Uses old nests, and maintains alternate sites.	Does not nest on site. No coniferous forest within or in the vicinity of the project site. Species also not recorded in the vicinity.
Accipiter striatus (nesting)	Sharp-shinned hawk	SBNF/WL/MSHCP	Nests in coniferous forests, ponderosa pine, black oak, riparian deciduous, mixed conifer, Jeffrey pine; winters in lowland woodlands and other habitats	Does not nest on site. No suitable forest or woodland vegetation on site. Species not recorded in the project vicinity.
Agelaius tricolor (nesting colony)	Tricolored blackbird	BCC, BLM, USBC/CSC/ Aud/MSHCP	Nests near fresh water, emergent wetland with cattails or tules; forages in grasslands, woodland, agriculture	Does not nest on project site. No fresh water source with emergent wetlands with cattails or tules occurs on site. Very low potential to foraging on site. Some potential forage in grasslands east of site.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL/MSHCP	Grass-covered hillsides, coastal sage scrub, chaparral with boulders and outcrops	Does not occur on project site. No suitable grass-covered hillsides, scrub or chaparral vegetation on site. Boulders and outcrops also absent.
Ammodramus savannarum	Grasshopper sparrow	SMC/CSC/ MSHCP	Open grassland and prairie, especially native grassland with a mix of grasses and forbs	Does not occur on project site. Project site does not contain open grassland or prairie vegetation. May nest in open grassland to the east of project site.

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Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
Amphispiza belli belli	Bell's sage sparrow	BCC, SMC/WL/ MSHCP	Coastal sage scrub and dry chaparral along coastal lowlands and inland valleys	Does not occur on project site. No suitable scrub or chaparral vegetation on site.
Aquila chrysaetos (nesting and wintering)	Golden eagle	BCC, BLM, SBNF/CDF, WL, P/MSHCP	Open country, especially hilly and mountainous regions; grassland, coastal sage scrub, chaparral, oak savannas, open coniferous forest	Not expected nest or forage on project site. No suitable nesting or foraging habitat. Vegetation and the site are characterized by flat topography.
Ardea herodias	Great blue heron	None/CDF/MSHCP	Variety of habitats, but primarily wetlands; lakes, rivers, marshes, mudflats, estuaries, saltmarsh, riparian habitats	Low potential to occur. No wetlands; lakes, rivers, marshes, mudflats, estuaries, saltmarsh, or riparian habitats occur on site. May rarely forage on site.
Asio otus (nesting)	Long-eared owl	None/CSC	Riparian, live oak thickets, other dense stands of trees, edges of coniferous forest	Does not nest on project site. Dense vegetation occurs on-site, however the site is an orange grove that is regularly farmed with high human disturbance.
Athene cunicularia (burrow sites)	Burrowing owl	BCC, BLM/CSC/ MSHCP	Grassland, lowland scrub, agriculture, coastal dunes, and other artificial open areas	Low potential to occur. Dense orange trees occur on-site. A burrowing owl habitat assessment determined that no suitable habitat is present on site.
Botaurus lentiginosus	American bittern	SMC, SBNF/ None/MSHCP	Emergent habitat of freshwater marsh and vegetation borders of ponds and lakes	Does not occur on project site. Suitable freshwater marsh and other vegetation absent from the project

Table 4.4-1
Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
				site. Species not recorded in the vicinity.
Buteo regalis (wintering)	Ferruginous hawk	BLM, BCC, SMC, SBNF/WL/Aud, MSHCP	Open, dry country, grasslands, open fields, agriculture	Very low potential to winter and forage on site due to lack of suitable foraging habitat. Adjacent open grasslands to the east may provide foraging habitat for wintering individuals, but none have been recorded in the vicinity.
Buteo swainsoni (nesting)	Swainson's hawk	BCC, FS, USBC/ ST/Aud, MSHCP	Open grassland, shrublands, croplands	No potential to nest on site and very low potential to forage on site during migration due to lack of suitable foraging habitat. Adjacent open grasslands to the east may provide foraging habitat for migrating individuals.
Campylorhynchus brunneicapillus sandiegensis	Coastal (San Diego) cactus wren	BCC, FS/CSC/ MSHCP	Southern cactus scrub, maritime succulent scrub, cactus thickets in coastal sage scrub	Does not occur on project site. No suitable cactus scrub on site or in the immediate vicinity.
Cathartes aura (breeding)	Turkey vulture	None/None/ MSHCP	Rangeland, agriculture, grassland; uses cliffs and large trees for roosting, nesting and resting	Does not nest on site. No cliffs or large trees available on site for nesting. May occasionally forage in project vicinity.
Coccyzus americanus occidentalis (nesting)	Western yellow-billed cuckoo	FC, BCC, FS, SMC/SE/MSHCP	Dense, wide riparian woodlands and forest with well-developed understories	Does not occur on project site. No suitable riparian vegetation on site.

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Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
Charadrius montanus (wintering)	Mountain plover	BLM, BCC, SMC, USBC/CSC/Aud, MSHCP	Nests in open, shortgrass prairies or grasslands; winters in shortgrass plains, plowed fields, open sagebrush, and sandy deserts	Not expected to winter on site. Adjacent open fields to the east may support this species, but species is not recorded in the project vicinity.
Circus cyaneus (nesting)	Northern harrier	SBNF/CSC/ MSHCP	Open wetlands (nesting), pasture, old fields, dry uplands, grasslands, rangelands, coastal sage scrub	Does not nest on project site. Adjacent grasslands may support foraging, but species has not been recorded in the project vicinity.
Cypseloides niger (nesting)	Black swift	BCC, USBC, SBNF/CSC/Aud/ MSHCP	Nests in moist crevices or caves on sea cliffs or near waterfalls in deep canyons; forages over many habitats	Does not occur on project site. No suitable crevices, cliffs or canyons on site. Species not recorded in the project vicinity.
Dendroica petechia brewsteri (nesting)	Yellow warbler	None/CSC/ MSHCP	Nests in lowland and foothill riparian woodlands dominated by cottonwoods, alders and willows; winters in a variety of habitats	Does not occur on project site. No suitable riparian vegetation on site.
Elanus leucurus (nesting)	White-tailed kite	MNBMC/P/ MSHCP	Open grasslands, savanna-like habitats, agriculture, wetlands, oak woodlands, riparian	Does not nest on project site. Adjacent grasslands may support foraging by this species.
Empidonax traillii extimus (nesting)	Southwestern willow flycatcher	FE, USBC/SE/ Aud/MSHCP	Riparian woodlands along streams and rivers with mature, dense stands of willows or alders; may nest in thickets dominated by tamarisk	Does not occur on project site. No suitable riparian vegetation.

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Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
Eremophila alpestris actia	California horned lark	None/WL/MSHCP	Open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, fallow grain fields	Low potential to occur on project site. Adjacent grassland and fields may support nesting and foraging by this species.
Falco columbarius (wintering)	Merlin	SBNF/WL/MSHCP	Nests in open country, open coniferous forest, prairie; winters in open woodlands, grasslands, cultivated fields, marshes, estuaries and sea coasts	Low potential to occur due to lack of suitable habitat. Adjacent field may support this species, but species is not recorded in the project vicinity.
Falco mexicanus (nesting)	Prairie falcon	BCC, SBNF/WL/ MSHCP	Grassland, savannas, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Does not occur on project site. No suitable cliffs or bluffs for nesting occur on site. May forage in adjacent grasslands.
Falco peregrinus anatum (nesting)	American peregrine falcon	BCC, (FD), FS, CNF/SE, P, CDF/ MSHCP	Nests on cliffs, buildings, bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	Does not occur on project site There are no cliffs or bridges on-site. There are buildings on-site, but species is not recorded in the project vicinity.
Haliaeetus leucocephalus (nesting and wintering)	Bald eagle	FD/SE, P, CDF/ MSHCP	Seacoasts, rivers, swamps, large lakes; winters at large bodies of water in lowlands and mountains	Does not occur on project site. Site does not contain a large water body.
Icteria virens (nesting)	Yellow-breasted chat	None/CSC/ MSHCP	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Does not occur on project site. No suitable riparian vegetation on site.

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Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
Lanius ludovicianus (nesting)	Loggerhead shrike	BCC, SBNF/CSC/ MSHCP	Open ground, including grassland, coastal sage scrub, broken chaparral, agriculture, riparian, open woodland	Low potential to occur on site due to lack of suitable nesting and foraging habitat. Adjacent areas provide grassland areas and open field suitable for foraging for this species.
Melanerpes lewis (nesting)	Lewis's woodpecker	BCC, SBNF/None/ Aud, MSHCP	Open oak savannahs, broken deciduous and coniferous habitats	Does not occur on project site. No suitable forest habitat on site or in the area. Species not recorded in the project vicinity.
Nycticorax nycticorax (rookery)	Black-crowned night heron	BLM/ None/ MSHCP	Marshes, ponds, reservoirs, estuaries; nests in dense-foliaged trees and dense fresh or brackish emergent wetlands	Does not occur on project site. No suitable dense-foliaged trees or wetlands on site. Species not recorded in the project vicinity.
Oporornis tolmiei	MacGillivray's warbler	SBNF/None/ MSHCP	Valley foothill riparian, Douglas-fir, redwood, montane riparian and desert riparian habitats; observed in weedy brush, streamside thickets, and desert wash scrub	Does not occur on project site. No suitable riparian vegetation on site. Species not recorded in the project vicinity.
Oreortyx pictus	Mountain quail	SBNF/None/ MSHCP	Dense montane chaparral and brushy areas within coniferous forest, pinyon-juniper-yucca associations; uses shrubs, brush stands and trees on steep slopes for cover	Does not occur on project site. Project site outside species' range.
Pandion haliaetus (nesting)	Osprey	SBNF/WL, CDF/ MSHCP	Large waters (lakes, reservoirs, rivers) supporting	Does not occur on project site. No large water bodies

Table 4.4-1
Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
			fish; usually near forest habitats, but widely observed along the coast	occur on site or in the project vicinity. Species not recorded in the project vicinity.
Phalacrocorax auritus (rookery site)	Double-crested cormorant	None/WL/MSHCP	Lakes, rivers, reservoirs, estuaries, ocean; nests in tall trees, rock ledges on cliffs, rugged slopes	Does not occur on project site. No large water bodies on the inland site. Species not recorded in the project vicinity.
Picoides pubescens	Downy woodpecker	None/ None/ MSHCP	Nests in deciduous (often willow) woodlands, oak woodlands, orchards, suburban plantings and occasionally conifers	Low potential to nest on site. May occasionally occur in orange grove, but regular activities would preclude nesting.
Plegadis chihi (rookery site)	White-faced ibis	SMC, SBNF/WL/ MSHCP	Nests in marsh; winter foraging in shallow lacustrine waters, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields and estuaries	Does not occur on project site. No suitable marsh vegetation on site. Species not recorded in the project vicinity.
Polioptila californica californica	Coastal California gnatcatcher	FT, USBC/CSC/ Aud, MSHCP	Coastal sage scrub, coastal sage scrub-chaparral mix, coastal sage scrub-grassland ecotone, riparian in late summer	Does not occur on project site. No suitable scrub habitat on or immediately adjacent to the site. Riparian vegetation is also absent.
Progne subis (nesting)	Purple martin	SBNF/ CSC/ MSHCP	Nests in tall sycamores, pines, oak woodlands, coniferous forest; forages over riparian, forest and woodland	Does not occur on project site. No suitable woodland or forest vegetation on site. Species not recorded in the project vicinity.
Sphyrapicus thyroideus	Williamson's sapsucker	SBNF/None/ MSHCP	Nests in montane spruce-fir, Douglas-fir, lodgepole pine, ponderosa pine, mixed	Does not occur on project site. No suitable coniferous forests on site. Species not

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Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
			deciduous-coniferous forest; inhabits broader variety of conifers during non-breeding season	recorded in the project vicinity.
Strix occidentalis occidentalis	California spotted owl	BCC, BLM, FS, CNF, USBC/CSC/ Aud, MSHCP	Forests and woodlands dominated by hardwoods, oak and oak-conifer woodlands, and conifers at high elevations	Does not occur on project site. No suitable forests or woodlands. Site too low in elevation and outside species' range.
Tachycineta bicolor	Tree swallow	SBNF/None/ MSHCP	Nests in cavity-containing trees or snags near or in water; riparian forest and woodland, lodgepole pine belt; forages over water	Does not occur on project site. No cavity-containing trees or snags on site; riparian vegetation is absent. Species not recorded in the project vicinity
Vermivora ruficapilla	Nashville warbler	None/None/ MSHCP	Breeds in variety of montane habitats, including chaparral, riparian, deciduous woodland, and coniferous woodland; occurs in a variety of habitats for migrant movements, including brush and scrub habitats, desert scrub, and wooded habitats	Does not occur on project site. No suitable vegetation. Species not recorded in the project vicinity.
Vireo bellii pusillus (nesting)	Least Bell's vireo	FE, BCC, USBC/ SE/Aud/MSHCP	Nests in southern willow scrub with dense cover within 1–2 meters of the ground; habitat includes willows, cottonwoods, baccharis, wild blackberry, or mesquite on desert areas	Does not occur on project site. No suitable riparian vegetation on site.

Table 4.4-1
Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
Wilsonia pusilla	Wilson's warbler	SBNF/None/ MSHCP	Nests in montane meadows and low, dense willow thickets; in migration occurs in chaparral, woodlands and forests with shrubs	Does not occur on project site. No suitable vegetation for nesting or migration. Species not recorded in project vicinity.
Mammals				
Antrozous pallidus	Pallid bat	BLM, FS/CSC/ WBWG	Rocky outcrops, cliffs, and crevices with access to open habitats for foraging	Low potential to occur. No suitable rocky outcrops, cliffs or crevices on site. Open areas adjacent to the site may support foraging habitat this species.
Canis latrans	Coyote	None/None/ MSHCP	Many areas except very highly urbanized areas	Moderate potential to occur on the project site. High human activity and adjacency to developed land may preclude this species from regularly using the site, but it may occasionally forage on site or use temporary refuge.
Chaetodipus fallax fallax	Northwestern San Diego pocket mouse	None/CSC/ MSHCP	Coastal sage scrub, grassland, sage scrub-grassland ecotones, sparse chaparral; rocky substrates, loams, and sandy loams	Very low potential to occur on the project site. No suitable scrub, grassland or chaparral vegetation on site. Could utilize adjacent grasslands.
Dipodomys merriami collinus	Earthquake Merriam's (Aguanga) kangaroo rat	None/None/ MSHCP	Riversidean alluvial fan sage scrub, flood plains, sandy and sandy loam soils	Does not occur on project site. Site is outside subspecies' range which includes Temecula Creek and Wilson Creek.

Table 4.4-1
Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
Dipodomys merriami parvus	San Bernardino Merriam's' kangaroo rat	FE/CSC/MSHCP	Riversidean alluvial fan sage scrub, flood plains, sandy and sandy loam soils	Does not occur on project site. Site lacks suitable habitat and species' extant distribution in Riverside County is narrow and is restricted to parts of the San Jacinto River and Bautista Creek east of the project site.
Dipodomys simulans	Dulzura kangaroo rat	None/None/ MSHCP	Coastal sage scrub, chaparral, grassland at elevation < 4,500 feet	Very low potential to occur on project site. No suitable scrub, chaparral, or grassland vegetation on site. Could occur grasslands east of site and known to occur in shrublands in the project Vicinity.
Dipodomys stephensi	Stephens' kangaroo rat	FE/ST/MSHCP	Open habitat, grassland, sparse coastal sage scrub, sandy loam, and loamy soils with low clay content; gentle slopes (< 30%)	Very low potential to occur on project site due to lack of suitable grassland and open scrub habitat. High potential to occur in grasslands east of the project site.
Eumops perotis californicus	Western mastiff bat	BLM/CSC/WBWG	Roosts in small colonies in cracks and small holes, seeming to prefer man-made structures	Low potential to occur. Limited roosting opportunities on site; however, there are man-made structures on site that if left undisturbed could provide roosting sites.
Glaucomys sabrinus californicus	San Bernardino flying squirrel	FS/CSC/MSHCP	Restricted to the San Jacinto Mountains in the MSHCP Plan Area	Does not occur on project site. Outside of known geographic range of species.

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Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
Lasiurus xanthinus	Western yellow bat	None/CSC/WBWG	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland	Very low potential to occur. No suitable vegetation on site.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/CSC/MSHCP	Arid habitats with open ground; grasslands, coastal sage scrub, agriculture, disturbed areas, rangelands	Low potential to occur on project site. However, grasslands to east of project site may support this species and it may occasionally occur on site. Agricultural activities likely preclude regular use of the site.
Lynx rufus	Bobcat	None/None/ MSHCP	Large expanses of relatively undisturbed brushy and rocky habitats near springs or other perennial water sources	Very low potential to occur on project site. No suitable brushy or rocky habitats, or perennial water sources, on site and regular agricultural activities preclude regular use of the site. May very rarely wander onto the site.
Mustela frenata	Long-tailed weasel	None/None/ MSHCP	Virtually all types of habitat, including agricultural and disturbed areas, wherever there is sufficient prey	Low potential to occur on the project site. Although versatile in terms of habitat use, high human activity and fencing and lack of prey may preclude this species from using the site on a regular basis. May rarely come onto the site if it occurs in grasslands to the east.

Table 4.4-1
Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
Myotis yumanensis	Yuma myotis	BLM/SAL	Closely tied to open water which is used for foraging; open forests and woodlands are optimal habitat	Not expected to occur on the project site. No roosting habitat and no open water on site. Open forests and woodlands are absent from the project site or vicinity.
Neotoma lepida intermedia	San Diego desert woodrat	None/CSC/MSHCP	Coastal sage scrub, chaparral, pinyon-juniper woodland with rock outcrops, cactus thickets, dense undergrowth	Very low potential to occur on project site. No suitable scrub, chaparral, or woodland vegetation. Rock outcrops, cactus thickets, and dense undergrowth also absent from the site. No middens observed.
Nyctinomops femorosaccus	Pocketed free-tailed bat	None/CSC/WBWG	Rocky desert areas with high cliffs or rock outcrops	Not expected to occur on project site. The site is not rocky nor does it contain high cliffs or rock outcrops.
Nyctinomops macrotis	Big free-tailed bat	None/CSC/WBWG	Rugged, rocky canyons	Not expected to occur on project site. No rugged, rocky canyons on site or in the immediate project vicinity.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	FS/CSC/MSHCP	Grassland, coastal sage scrub, disturbed habitats; fine, sandy soils	Low potential to occur. No grassland, coastal sage scrub, or disturbed habitats on site. Drainage on site probably is too disturbed to support this species. Could occur in adjacent grasslands.
Puma concolor	Mountain lion	None/None/ MSHCP	Large expanses of relatively undisturbed brushy and rocky	Very low potential to occur on project site. The site is

Table 4.4-1
Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
			habitats where its main prey—the mule deer—also occurs	immediately adjacent to largely developed areas. Site does not support undisturbed brushy or rocky habitats. High human activity and fencing may also preclude this species.
Fish				
Catostomus santaanae	Santa Ana sucker	FT, FS/CSC/ MSHCP	Small, shallow, cool, clear streams less than 7 meters in width and a few centimeters to more than 1 meter in depth; substrates are generally coarse gravel, rubble and boulder	Does not occur on project site. No suitable aquatic habitat on site.
Gila orcutti	Arroyo chub	FS/CSC/MSHCP	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths > 40 centimeters; substrates of sand or mud	Does not occur on project site. No suitable aquatic habitat on site.
Rhinichthys osculus ssp. 3	Santa Ana speckled dace	FS/CSC	Permanent streams with cool, flowing rocky-bottomed washes, shallow cobble and gravel riffles	Does not occur on project site. No suitable aquatic habitat on site.
Invertebrates				
Branchinecta lynchi	Vernal pool fairy shrimp	FT/None/MSHCP	Vernal pools; cool-water pools with low to moderate dissolved solids	Does not occur on project site. No vernal pools on site.
Branchinecta sandiegonensis	San Diego fairy shrimp	FE/None	Small, shallow vernal pools, occasionally ditches and road ruts	Does not occur on project site. No vernal pools on site.
Euphydryas editha quino	Quino checkerspot butterfly	FE, CNF/None/ MSHCP	Sparsely vegetated hilltops, ridgelines, occasionally rocky	Does not occur on project site. No hilltops ridgelines or

Table 4.4-1
Potential for Special-Status Wildlife to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	Status Federal/ State/MSHCP[1]	Primary Habitat Associations	Status on Site or Potential to Occur
			outcrops; host plant *Plantago erecta* and nectar plants must be present	rocky outcrops or naturally vegetated areas on site. Species not recorded in the project vicinity.
Linderiella santarosae	Santa Rosa Plateau fairy shrimp	None/None/ MSHCP	Cool-water vernal pools formed on Southern Basalt Flows	Does not occur on project site. No vernal pools on site.
Streptocephalus woottoni	Riverside fairy shrimp	FE/None/MSHCP	Deep, long-lived vernal pools, vernal pool-like seasonal ponds, stock ponds; warm water pools that have low to moderate dissolved solids	Does not occur on Project site. No vernal pools on site.
Rhaphiomidas terminatus abdominalis	Delhi sands flower-loving fly	FE/None/MSHCP	Associated with Delhi sands formation; sparsely vegetated habitat (< 50%) supporting *Eriogonum fasciculatum*, *Croton californicus*, *Heterotheca grandiflora*	Does not occur on project site. Outside species range and no suitable Delhi soils on site.

Source: Biological Resource Technical Report and MSHCP Consistency Analysis, Dudek, 2011

[1] **Federal Designations:**

- BCC USFWS: Birds of Conservation Concern
- BLM BLM Sensitive Species
- FD Federally Delisted
- FE Federally listed Endangered
- FS FS Region 5 Sensitive Species
- FT Federally listed as Threatened
- MNBMC USFWS Migratory Nongame Birds of Management Concern
- USBC U.S. Bird Conservation Watch List
- SMC USFWS Region 1 Species of Management Concern

State Designations:

- CDF California Department of Forestry and Fire Protection Sensitive
- CSC California Special Concern Species
- P CDFG Protected and Fully Protected Species
- SAL CDFG Special Animals List (July 2009)
- SE State-listed as Endangered
- ST State-listed as Threatened
- WL CDFG Watch List Species

Other Designations:

- Aud Audubon Society Watch list
- MSHCP County of Riverside MSHCP Covered Species
- WBWG Western Bat Working Group Species

Table 4.4-2
Potential for Special-Status Plants to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	CNPS List	Status Federal/State/ MSHCP [1]	Primary Habitat Associations/Life Form/Blooming Period/ Elevation Range	Status on Site or Potential to Occur
Abronia villosa var. *aurita*	Chaparral sand-verbena	1B.1	None/None	Chaparral, Coastal scrub, Desert dunes/sandy/ annual herb/January–September/260–5,250 feet	Not expected. No suitable vegetation on site.
Allium marvinii	Yucaipa onion	1B.1	None/None/ MSHCP	Chaparral(clay, openings)/perennial bulbiferous herb/April–May/2,490–3,490 feet	Not expected. No suitable vegetation or soils on site. Site is outside of known elevation range for this species.
Allium munzii	Munz's onion	1B.1	FE/ST/MSHCP	Chaparral, Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland/mesic, clay/perennial bulbiferous herb/ March–May/970–3,510 feet	Not expected. No suitable vegetation or clay soils on site.
Ambrosia pumila	Dwarf burr ambrosia (or San Diego Ambrosia)	1B.1	FE/None/ MSHCP	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/often in disturbed areas, sometimes alkaline/ perennial rhizomatous herb/ April–October/65–1,360 feet	Not expected. No suitable vegetation on site. Site is outside of known elevation range for this species.
Arabis johnstonii	Johnston's rock cress	1B.2	None/None/ MSHCP	Chaparral, Lower montane coniferous forest/often on eroded clay/perennial herb/ February–June/4,430–7,050 feet	Not expected. No suitable vegetation or soils on site. Site is outside of known elevation range for this species.
Arctostaphylos rainbowensis	Rainbow manzanita	1B.1	None/None/ MSHCP	Chaparral/ perennial evergreen shrub/ December–Mar/740–2,200 feet	Not expected. No suitable vegetation on site. Shrub would have been observed during surveys if present.
Arenaria paludicola	Marsh sandwort	1B.1	FE/SE	Marshes and swamps (freshwater or brackish)/sandy, openings/ stoloniferous herb/ May–August/ < 560 feet	Not expected. No suitable marshes or swamps on site. Site is outside of the known elevation range for this species.

Table 4.4-2
Potential for Special-Status Plants to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	CNPS List	Status Federal/State/ MSHCP [1]	Primary Habitat Associations/Life Form/Blooming Period/ Elevation Range	Status on Site or Potential to Occur
Astragalus brauntonii	Braunton's milk-vetch	1B.1	FE/None	Chaparral, Coastal scrub, Valley and foothill grassland/recent burns or disturbed areas, usually sandstone with carbonate layers/ perennial herb/January–August/13–2,100 feet	Not expected. No suitable vegetation on site.
Astragalus pachypus var. *jaegeri*	Jaeger's bush milk-vetch	1B.1	None/None/ MSHCP	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/sandy or rocky/ perennial shrub/December–June/1,200–3,000 feet	Not expected. No suitable vegetation on site. Shrub would have been observed during surveys if present.
Atriplex coronata var. *notatior*	San Jacinto Valley crownscale	1B.1	FE/None/ MSHCP	Playas, Valley and foothill grassland (mesic), Vernal pools/alkaline/annual herb/April–August/ 460–1,640 feet	Not expected. No suitable vegetation or vernal pools on site. Not recorded within the project vicinity.
Atriplex coulteri	Coulter's saltbush	1B.2	None/None	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay/ perennial herb/March–October/10–1,500 feet.	Not expected. No suitable vegetation on site. Site is outside of known elevation range for this species.
Atriplex parishii	Parish's brittlescale	1B.1	None/None/ MSHCP	Chenopod scrub, Playas, Vernal pools/alkaline/ annual herb/June–October/82–6,230 feet	Not expected. No suitable vegetation or vernal pools on site. Not recorded within the project vicinity.
Atriplex serenana var. *davidsonii*	Davidson's saltscale	1B.2	None/None/ MSHCP	Coastal bluff scrub, Coastal scrub/alkaline/ annual herb/April–October/33–660 feet	Not expected. No suitable scrub vegetation on site. Site is outside of known elevation range for this species.
Baccharis malibuensis	Malibu baccharis	1B.1	None/None	Coastal sage scrub, chaparral, cismontane woodlands; generally in Conejo volcanic substrates in Santa Monica Mountains and Simi Hills/shrub/August	Not expected. No suitable vegetation or Conejo volcanic substrates on site and shrub would have been detected during surveys if present. Outside of known geographic range of species.

Table 4.4-2
Potential for Special-Status Plants to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	CNPS List	Status Federal/State/ MSHCP [1]	Primary Habitat Associations/Life Form/Blooming Period/ Elevation Range	Status on Site or Potential to Occur
Berberis nevinii	Nevin's barberry	1B.1	FE/SE/MSHCP	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub/sandy or gravelly/ perennial evergreen shrub/ March–June/900–2,710 feet	Not expected. No suitable vegetation. Shrub would have been observed during surveys if present.
Brodiaea filifolia	Thread-leaved brodiaea	1B.1	FT/SE/MSHCP	Chaparral(openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools/often clay/ perennial bulbiferous herb/ March–June/82–4,000 feet	Not expected. No suitable vegetation or clay soils on site. Vernal pools are absent from the site.
Brodiaea orcuttii	Orcutt's brodiaea	1B.1	None/None/ MSHCP	Closed-cone coniferous forest, Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland, Vernal pools/mesic, clay, sometimes serpentinite/ perennial bulbiferous herb/May–July/98–5,550 feet	Not expected. No suitable vegetation or clay soils on site. Vernal pools are absent from the site.
California macrophylla	Round-leaved filaree	1B.1	None/None	Cismontane woodland, Valley and foothill grassland/clay/annual herb/March–May/49–3,940 feet	Not expected. No suitable vegetation or clay soils on site.
Callitropsis forbesii	Tecate cypress	1B.1	None/None	Closed-cone coniferous forest, Chaparral/clay, gabbroic or metavolcanic/ perennial evergreen tree/840–4,920 feet	Not expected. No suitable vegetation or soils on site and conspicuous tree would have been detected during surveys if present.
Calochortus palmeri var. *munzii*	San Jacinto mariposa lily	1B.2	None/None/ MSHCP	Chaparral, Lower montane coniferous forest, Meadows and seeps/perennial bulbiferous herb/ June–July/3,940–7,220 feet	Not expected. No suitable vegetation on site. Site is outside of known elevation range for this species.

Table 4.4-2
Potential for Special-Status Plants to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	CNPS List	Status Federal/State/ MSHCP [1]	Primary Habitat Associations/Life Form/Blooming Period/ Elevation Range	Status on Site or Potential to Occur
Calochortus plummerae	Plummer's mariposa lily	1B.2	None/None/ MSHCP	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland/ granitic, rocky/ perennial bulbiferous herb/May–July/ 330–5,580 feet	Not expected. No suitable vegetation or granitic, rocky soils on site.
Calochortus weedii var. *intermedius*	Intermediate mariposa lily	1B.2	None/None/ MSHCP	Chaparral, Coastal scrub, Valley and foothill grassland/rocky, calcareous/ perennial bulbiferous herb/May–July/340–2,810 feet	Not expected. No suitable vegetation on site.
Caulanthus simulans	Payson's jewel-flower	4.2	None/None/ MSHCP	Chaparral, Coastal scrub/sandy, granitic/ annual herb/(February) March–May (June)/300–7,220 feet	Not expected. No suitable vegetation on site.
Ceanothus ophiochilus	Vail Lake ceanothus	1B.1	FT/SE/MSHCP	Chaparral(gabbroic or pyroxenite-rich outcrops)/ perennial evergreen shrub/ February–March/ 1,900–3,490 feet	Not expected. No suitable chaparral habitat on site. Site is outside of known elevation range for this species.
Centromadia pungens ssp. *laevis*	Smooth tarplant	1B.1	None/None/ MSHCP	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland/alkaline/annual herb/April–September/0–1,570 feet	Not expected. No suitable vegetation on site. Site is outside of known elevation range for this species. Species is recorded approximately 1.5 miles northeast of the site.
Chorizanthe leptotheca	Peninsular spineflower	4.2	None/None/ MSHCP	Chaparral, Coastal scrub, Lower montane coniferous forest/alluvial fan, granitic/annual herb/May–August/980–6,230 feet	Not expected. No suitable vegetation or alluvial fans on site.
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	1B.1	FC/SE	Coastal scrub, valley and foothill grassland; sandy/ annual herb/April–June/492–4,002 feet	Not expected. No suitable vegetation on site.

Table 4.4-2
Potential for Special-Status Plants to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	CNPS List	Status Federal/State/ MSHCP [1]	Primary Habitat Associations/Life Form/Blooming Period/ Elevation Range	Status on Site or Potential to Occur
Chorizanthe parryi var. *parryi*	Parry's spineflower	1B.1	None/None/ MSHCP	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/sandy or rocky, openings/annual herb/April–June/ 900–4,000 feet	Not expected. No suitable vegetation on site.
Chorizanthe polygonoides var. *longispina*	Long-spined spineflower	1B.2	None/None/ MSHCP	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools/often clay/ annual herb/April–July/98–5,020 feet	Not expected. No suitable vegetation or clay soils on site. Vernal pools are absent.
Chorizanthe polygonoides var. *longispina*	Long-spined spineflower	1B.2	None/None/ MSHCP	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools/often clay/ annual herb/April–July/98–5,020 feet	Not expected. No suitable vegetation or clay soils on site. Vernal pools are absent from the site.
Chorizanthe procumbens	Prostrate spineflower	None	None/None/ MSHCP	Coastal scrub, chaparral, grasslands/ sandy/ herb/ <2,625 feet	Not expected. No suitable vegetation on site. Not known within the project vicinity.
Chorizanthe xanti var. *leucotheca*	White-bracted spineflower	1B.2	None/None	Mojavean desert scrub, Pinyon and juniper woodland/sandy or gravelly/annual herb/April–June/980–3,940 feet	Not expected. No suitable vegetation on site.
Cladium californicum	California sawgrass	2.2	None/None	Meadows and seeps, Marshes and swamps (Alkaline or Freshwater)/perennial rhizomatous herb/June–September/200–1,970 feet	Not expected. No suitable vegetation on site.
Convolvulus simulans	Small-flowered morning-glory	4.2	None/None/ MSHCP	Chaparral(openings), Coastal scrub, Valley and foothill grassland/clay, serpentinite seeps/annual herb/March–July/98–2,300 feet	Not expected. No suitable vegetation or clay soils on site.

Table 4.4-2
Potential for Special-Status Plants to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	CNPS List	Status Federal/State/ MSHCP [1]	Primary Habitat Associations/Life Form/Blooming Period/ Elevation Range	Status on Site or Potential to Occur
Cordylanthus maritimus ssp. *maritimus*	Salt marsh bird's-beak	1B.2	FE/SE	Coastal dunes, coastal saltwater marshes and swamps/annual herb; hemiparisitic/May–October/ < 100 feet	Not expected. No suitable vegetation on site and site is outside of known elevation range for this species.
Deinandra mohavensis	Mojave tarplant	1B.3	None/SE/ MSHCP	Chaparral, Coastal scrub, Riparian scrub/mesic/ annual herb/July–October (January)/2,100–5,250 feet	Not expected. No suitable vegetation on site. Site is outside of known elevation range for this species.
Dodecahema leptoceras	Slender-horned spineflower	1B.1	FE/SE/MSHCP	Chaparral, Cismontane woodland, Coastal scrub(alluvial fan)/ sandy/ annual herb/April–June/ 660–2,490 feet	Not expected. No suitable vegetation on site. Alluvial fans absent from the site.
Dudleya multicaulis	Many-stemmed dudleya	1B.2	None/None/ MSHCP	Chaparral, Coastal scrub, Valley and foothill grassland/often clay/perennial herb/April–July/ 50–2,590 feet	Not expected. No suitable vegetation or clay soils on site.
Dudleya viscida	Sticky dudleya	1B.2	None/None/ MSHCP	Coastal bluff scrub, Chaparral, Cismontane woodland, Coastal scrub/rocky/perennial herb/ May–June/33–1,800 feet	Not expected. No suitable vegetation on site.
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	1B.1	FE/SE/MSHCP	Chaparral, Coastal scrub(alluvial fan)/sandy or gravelly/perennial herb/May–September/300–2,000 feet	Not expected. No suitable vegetation on site.
Eryngium aristulatum var. *parishii*	San Diego button-celery	1B.1	FE/SE/MSHCP	Coastal scrub, Valley and foothill grassland, Vernal pools/mesic/annual/ perennial herb/April–June/66–2,030 feet	Not expected. No suitable vegetation on site. Vernal pools absent from the site.
Galium angustifolium ssp. *jacinticum*	San Jacinto Mountains bedstraw	1B.3	None/None/ MSHCP	Lower montane coniferous forest/perennial herb/ June–August/4,430–6,890 feet	Not expected. No suitable vegetation on site. Site is outside of known elevation range for this species.
Galium californicum ssp. *primum*	Alvin Meadow bedstraw	1B.2	None/None/ MSHCP	Chaparral, Lower montane coniferous forest/granitic, sandy/perennial herb/May–July/ 4,430–5,580 feet	Not expected. No suitable vegetation on site. Site is outside of known elevation range for this species.

Table 4.4-2
Potential for Special-Status Plants to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	CNPS List	Status Federal/State/ MSHCP [1]	Primary Habitat Associations/Life Form/Blooming Period/ Elevation Range	Status on Site or Potential to Occur
Harpagonella palmeri	Palmer's grapplinghook	4.2	None/None/ MSHCP	Chaparral, Coastal scrub, Valley and foothill grassland/clay/annual herb/March–May/65–3,130 feet	Not expected. No suitable vegetation or clay soils on site.
Hordeum intercedens	Vernal barley	3.2	None/None/ MSHCP	Coastal dunes, Coastal scrub, Valley and foothill grassland(saline flats and depressions), Vernal pools/annual herb/March–June/15–3,280 feet	Not expected. No suitable vegetation on site. Vernal pools absent from the site.
Horkelia cuneata ssp. *puberula*	Mesa horkelia	1B.1	None/None	Chaparral(maritime), Cismontane woodland, Coastal scrub/sandy or gravelly/perennial herb/ February–July (September)/230–2,660 feet	Not expected. No suitable vegetation on site.
Heuchera hirsutissima	Shaggy-haired alumroot	1B.3	None/None/ MSHCP	Subalpine coniferous forest, Upper montane coniferous forest/rocky, granitic/perennial rhizomatous herb/ (May) June–July/4,990–11,480 feet	Not expected. No suitable vegetation on site. Site is outside of known elevation range for this species.
Holocarpha virgata ssp. *elongata*	Graceful tarplant	4.2	None/None/ MSHCP	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/annual herb/May–November/200–3,610 feet	Not expected. No suitable vegetation on site. Not known within project vicinity.
Hordeum intercedens	Vernal barley	3.2	None/None/ MSHCP	Coastal dunes, Coastal scrub, Valley and foothill grassland(saline flats and depressions), Vernal pools/annual herb/ March–June/16–3,280 feet	Not expected. No suitable vegetation on site. Vernal pools absent from the site.
Hulsea vestita ssp. *callicarpha*	Beautiful hulsea	4.2	None/None/ MSHCP	Chaparral, Lower montane coniferous forest/rocky or gravelly, granitic/ perennial herb/ May–October/3,000–10,010 feet	Not expected. No suitable vegetation on site. Site is outside of known elevation range for this species.

Table 4.4-2
Potential for Special-Status Plants to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	CNPS List	Status Federal/State/ MSHCP [1]	Primary Habitat Associations/Life Form/Blooming Period/ Elevation Range	Status on Site or Potential to Occur
Juglans californica	Southern California black walnut	4.2	None/None/ MSHCP	Chaparral, Cismontane woodland, Coastal scrub/alluvial/perennial deciduous tree/March–August/160–2,950 feet	Not expected. No suitable vegetation on site. Not known within the project vicinity.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	1B.1	None/None/ MSHCP	Marshes and swamps(coastal salt), Playas, Vernal pools/annual herb/February–June/ < 4,000 feet	Not expected. No suitable vegetation on site. Vernal pools are absent from the site.
Lepechinia cardiophylla	Heart-leaved pitcher sage	1B.2	None/None/ MSHCP	Closed-cone conifer forest, chaparral, cismontane woodland/shrub/April–July/1,700–4,500 feet.	Not expected. No suitable vegetation on site. Shrub would have been observed during surveys.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	1B.2	None/None	Chaparral, Coastal scrub/annual herb/January–July/ 0–2,900 feet	Not expected. No suitable vegetation on site.
Lilium humboldtii ssp. *ocellatum*	Ocellated Humboldt lily	4.2	None/None/ MSHCP	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland/openings/perennial bulbiferous herb/ March–July (August)/98–5,910 feet	Not expected. No suitable vegetation on site.
Lilium parryi	Lemon lily	1B.2	None/None/ MSHCP	Lower montane coniferous forest, Meadows and seeps, Riparian forest, Upper montane coniferous forest/mesic/perennial bulbiferous herb/ July–August/4,000–9,010 feet	Not expected. No suitable vegetation on site. Site is outside of known elevation range for this species.
Limnanthes gracilis ssp. *parishii*	Parish's meadowfoam	1B.2	None/SE/ MSHCP	Lower montane coniferous forest, Meadows and seeps, Vernal pools/vernally mesic annual herb/ April–June/1,970–6,560 feet	Not expected. No suitable vegetation on site. Vernal pools absent from the site. Site is outside of known elevation range for this species.

Table 4.4-2
Potential for Special-Status Plants to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	CNPS List	Status Federal/State/ MSHCP [1]	Primary Habitat Associations/Life Form/Blooming Period/ Elevation Range	Status on Site or Potential to Occur
Lycium parishii	Parish's desert-thorn	2.3	None/None	Coastal scrub, Sonoran desert scrub/perennial shrub/March–April/1,000–3,280 feet	Not expected. No suitable vegetation on site. Shrub would have been observed during surveys.
Microseris douglasii ssp. *platycarpha*	Small-flowered microseris	4.2	None/None/ MSHCP	Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools/clay/annual herb/ March–May/49–3,510 feet	Not expected. No suitable vegetation on site. Vernal pools absent from the site.
Mimulus clevelandii	Cleveland's bush monkeyflower	4.2	None/None/ MSHCP	Chaparral, Cismontane woodland, Lower montane coniferous forest/ gabbroic, often in disturbed areas, openings, rocky/perennial rhizomatous herb/April–July/2,670–6,560 feet	Not expected. Site is outside of known elevation range for this species.
Mimulus diffusus	Palomar monkeyflower	4.3	None/None/ MSHCP	Chaparral, Lower montane coniferous forest/sandy or gravelly/annual herb/April–June/ 4,000–6,000 feet	Not expected. No suitable vegetation on site. Site is outside of known elevation range for this species.
Monardella macrantha ssp. *hallii*	Hall's monardella	1B.3	None None/ MSHCP	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland/ perennial rhizomatous herb/June–August/ 2,400–7,200 feet	Not expected. No suitable vegetation on site. Site is outside of known elevation range for this species.
Monardella pringlei	Pringle's monardella	1A	None/None	Coastal scrub(sandy)/annual herb/May–June/ 980–1,310 feet	Not expected. No suitable vegetation on site and the site is outside the known elevation range of this species.
Muhlenbergia californica	California muhly	4.3	None/None/ MSHCP	Chaparral, Coastal scrub, Lower montane coniferous forest, Meadows and seeps/mesic, seeps and stream banks/perennial rhizomatous herb/June–September/330–6,560 feet	Not expected. No suitable vegetation on site.

Table 4.4-2
Potential for Special-Status Plants to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	CNPS List	Status Federal/State/ MSHCP [1]	Primary Habitat Associations/Life Form/Blooming Period/ Elevation Range	Status on Site or Potential to Occur
Myosurus minimus ssp. *apus*	Little mousetail	3.1	None/None/ MSHCP	Valley and foothill grassland, Vernal pools(alkaline)/annual herb/March–June/66–2,100 feet	Not expected. No suitable vegetation on site. Vernal pools absent from the site.
Nama stenocarpum	Mud nama	2.2	None/None/ MSHCP	Marshes and swamps(lake margins, riverbanks)/ annual/perennial herb/January–July/16–1,640 feet	Not expected. No suitable vegetation on site. Site is outside the known elevation range of this species.
Navarretia fossalis	Moran's navarretia	1B.1	FT/None/ MSHCP	Chenopod scrub, Marshes and swamps(assorted shallow freshwater), Playas, Vernal pools/ annual herb/Apr-Jun/98–4,270 feet	Not expected. No suitable vegetation on site. Vernal pools absent from the site.
Navarretia prostrata	Prostrate vernal pool navarretia	1B.1	None/None/ MSHCP	Coastal scrub, Meadows and seeps, Valley and foothill grassland(alkaline), Vernal pools/mesic/ annual herb/April–July/50–2,300 feet	Not expected. No suitable vegetation on site. Vernal pools absent from the site.
Nolina cismontana	Peninsular nolina	1B.2	None/None	Chaparral, Coastal scrub/sandstone or gabbro/ perennial evergreen shrub/ May–July/460–4,180 feet	Not expected. No suitable vegetation on site and shrub would have been observed during surveys if present.
Orcuttia californica	California Orcutt grass	1B.1	FE/SE MSHCP	Vernal pools/ annual herb/April–August/49–2,170 feet	Not expected. No vernal pools on site.
Penstemon californicus	California beardtongue	1B.2	None/None/ MSHCP	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland/sandy/perennial herb/May–June (August)/3,840–7,550 feet	Not expected. No suitable vegetation on site and the site is outside the known elevation range of this species.
Pentachaeta aurea ssp. *allenii*	Allen's golden-rayed pentachaeta	1B.1	None/None	Coastal scrub, valley and foothill grassland/ annual herb/March–June/250–1,700 feet.	Not expected. No suitable vegetation on site. Site is outside the known elevation range of this species.

Table 4.4-2
Potential for Special-Status Plants to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	CNPS List	Status Federal/State/ MSHCP [1]	Primary Habitat Associations/Life Form/Blooming Period/ Elevation Range	Status on Site or Potential to Occur
Phacelia stellaris	Brand's star phacelia	1B.1	FC/None/ MSHCP	Coastal dunes, Coastal scrub/ annual herb/ March–June/3–1,312 feet	Not expected. No suitable vegetation on site. Site is outside the known elevation range of this species.
Phacelia suaveolens ssp. *keckii*	Santiago Peak phacelia	1B.3	None/None	Closed-cone coniferous forest, Chaparral/ annual herb/May–June/1,790–5,250 feet	Not expected. No suitable vegetation on site and the site is outside the known elevation range of this species.
Polygala cornuta var. *fishiae*	Fish's milkwort	4.3	None/None/ MSHCP	Chaparral, Cismontane woodland, Riparian woodland/perennial deciduous shrub/May–August/330–3,280 feet	Not expected. No suitable vegetation on site. Shrub would have been observed during surveys if present.
Potentilla rimicola	Cliff cinquefoil	2.3	None/None/ MSHCP	Subalpine coniferous forest, Upper montane coniferous forest/granitic, rocky perennial herb/ July–September/7,870–9,190 feet	Not expected. No suitable vegetation. Site is outside the known elevation range for this species.
Pseudognaphalium leucocephalum	White rabbit-tobacco	2.2	None/None	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/sandy, gravelly/perennial herb/(July)August–November (December)/0–6,890 feet	Not expected. No suitable vegetation on site.
Quercus engelmannii	Engelmann oak	4.2	None/None/ MSHCP	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland/ perennial deciduous tree March–June/160–4,270 feet	Not expected. No suitable vegetation on site. Tree would have been observed during surveys if present.
Romneya coulteri	Coulter's matilija poppy	4.2	None/None/ MSHCP	Chaparral, Coastal scrub/often in burns/ perennial rhizomatous herb/March–July/65–3,940 feet	Not expected. No suitable vegetation on site. Conspicuous perennial would have been observed during surveys if present.

Table 4.4-2
Potential for Special-Status Plants to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	CNPS List	Status Federal/State/ MSHCP [1]	Primary Habitat Associations/Life Form/Blooming Period/ Elevation Range	Status on Site or Potential to Occur
Satureja chandleri	San Miguel savory	1B.2	None/None/ MSHCP	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland, Valley and foothill grassland/rocky, gabbroic or metavolcanic/ perennial shrub/March–July/390–3,530 feet	Not expected. No suitable vegetation on site. Site is outside the known elevation range of this species.
Senecio aphanactis	Chaparral ragwort	2.2	None/None	Chaparral, Cismontane woodland, Coastal scrub/sometimes alkaline annual herb/January–April/49–2,620 feet	Not expected. No suitable vegetation on site.
Sibaropsis hammittii	Hammitt's clay-cress	1B.2	None/None/ MSHCP	Chaparral(openings), Valley and foothill grassland/clay/annual herb/March–April/2,360–3,490 feet	Not expected. No suitable vegetation or clay soils on site. Site is outside the known elevation range of this species.
Sidotheca [=*Oxytheca*] *caryophylloides*	Chickweed oxytheca	4.3	None/None/ MSHCP	Lower montane coniferous forest(sandy)/ annual herb/July–September/3,650–8,530 feet	Not expected. No suitable vegetation on site. Site is outside the known elevation range of this species.
Sidalcea neomexicana	Salt spring checkerbloom	2.2	None/None	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas/alkaline, mesic/perennial herb/March–June/49–5,020 feet	Not expected. No suitable vegetation on site.
Symphyotrichum defoliatum	San Bernardino aster	1B.2	None/None	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Valley and foothill grassland(vernally mesic)/near ditches, streams, springs/perennial rhizomatous herb/July–November/ < 6,690 feet	Not expected. No suitable vegetation on site.

Table 4.4-2
Potential for Special-Status Plants to Occur on the Gless Ranch Project Site

Scientific Name	Common Name	CNPS List	Status Federal/State/ MSHCP [1]	Primary Habitat Associations/Life Form/Blooming Period/ Elevation Range	Status on Site or Potential to Occur
Trichocoronis wrightii var. *wrightii*	Wright's trichocoronis	2.1	None None/ MSHCP	Meadows and seeps, Marshes and swamps, Riparian forest, Vernal pools/alkaline/annual herb/May–September/16–1,430 feet	Not expected. No suitable vegetation on site. Vernal pools absent from site.

Source: Biological Resource Technical Report and MSHCP Consistency Analysis, Dudek, 2011

[1] **Federal Designations:**

BCC USFWS: Birds of Conservation Concern
BLM BLM Sensitive Species
FD Federally Delisted
FE Federally listed Endangered
FS FS Region 5 Sensitive Species
FT Federally listed as Threatened
MNBMC USFWS Migratory Nongame Birds of Management Concern
USBC U.S. Bird Conservation Watch List
SMC USFWS Region 1 Species of Management Concern

State Designations:

CDF California Department of Forestry and Fire Protection Sensitive
CSC California Special Concern Species
P CDFG Protected and Fully Protected Species
SAL CDFG Special Animals List
SE State-listed as Endangered
ST State-listed as Threatened
WL CDFG Watch List Species

Other Designations:

Aud Audubon Society Watch list
MSHCP County of Riverside MSHCP Covered Species
WBWG Western Bat Working Group Species

Special-status species are discussed as follows.

The orange groves and potentially other natural vegetation on site provide potential nesting habitat for non-special-status birds. Direct impacts to active bird nests, including nest sites, eggs, nestlings, and fledglings is prohibited by the federal MBTA and California Fish and Game Code, Section 3503. The proposed project would be required to have a pre-clearing nesting survey prior to any clearing of any orange groves as described in Mitigation Measure BIO-1 (MM BIO-1). Therefore, development of the site is not expected to significantly affect any special-status wildlife species.

Special-Status Plant Species

Based on Table 4.4-2, no special-status plant species are expected to occur within the project site given the highly disturbed nature of the site, including agricultural activities associated with the orange grove, lack of native vegetation, and soil compaction. Therefore, development of the site is not expected to significantly affect any special-status plant species.

As stated above, implementation of the proposed project would not result in direct impacts to any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS. Further, with the incorporation of MM BIO-1, any potential impacts to nesting birds would be reduced to less-than-significant levels by requiring pre-clearing nesting bird surveys. **Therefore, impacts are considered less than significant with mitigation incorporated.**

<u>Threshold:</u> Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The project site is fully disturbed due to the site's current use as an agricultural operation. There is no riparian habitat nor any sensitive natural community located on site. Riparian habitats are specifically defined by the MSHCP under Section 6.1.2. The MSHCP defines riparian/riverine areas as "lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year." In addition, riverine areas (i.e., streams) include areas that "do not contain riparian vegetation, but that have water flow for all or a portion of the year, and contain biological functions and values that contribute to downstream habitat values for covered species inside the MSHCP Conservation Area." There are no riparian resources pursuant to Section 6.1.2 of the MSHCP on the site. The project site supports one unvegetated ephemeral (i.e., seasonal) drainage that traverses the northwest portion of the site. The drainage crosses the site in a southwesterly direction and empties into a concrete stormwater inlet box located off site along the western boundary of the project site at Kinnow Lane. According to the Biological Resources Technical Report (Appendix D), the unvegetated ephemeral drainage does not contain biological functions and

values that contribute to downstream habitat values, nor does it lead to, or connect to, other downstream drainages that support covered species inside the MSHCP Conservation Area. Therefore, the drainage on site is not considered a riverine resource pursuant to the MSHCP.

Since the 0.04 acre of unvegetated ephemeral drainage on site is fed by stormwater runoff from the north and ultimately discharges back into the stormwater system off site, the drainage does not provide a significant connection to drainages that would be considered jurisdictional by the U.S. Army Corps of Engineers (ACOE). However, portions of the on-site drainage have traditional streambed indicators such as a bed and bank, and are considered a stream under the jurisdiction of the CDFG, pursuant to Section 1602 of the California Fish and Game Code. In addition, the drainage on site is subject to regulation by RWQCB as a "waters of the State" in accordance with the Porter-Cologne Act, since it conveys water.

Significant direct impacts to the unvegetated ephemeral drainage under the jurisdiction of CDFG would be addressed by compliance with the 1602 Streambed Alteration Agreement discussed above. The proposed project would be required to incorporate mitigation options in the form of onsite, offsite, in lieu fee mitigation, or a combination of all from the Streambed Alteration Agreement, as described in Mitigation Measure BIO-2 (MM BIO-2). A report of waste discharge must also be submitted to the RWQCB to obtain either a waste discharge requirement (WDR) or a waiver for any impacts to water of the State and would also be addressed by compliance with state law.

Therefore, since there are no riparian habitats nor sensitive natural communities being affected by the project, and since the project will have to comply with state law and receive permits which require mitigation which is outlined in MM BIO-2 and/or compensation for the loss of the unvegetated ephemeral drainage on site, **impacts are considered less than significant with mitigation incorporated.**

<u>Threshold:</u> Would the project 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?

There are no wetlands on site. As discussed previously, there is one unvegetated ephemeral drainage (0.04 acre) located on the project site. The drainage traverses the site in a southwesterly direction and empties into a concrete stormwater inlet box located off site along the western boundary of the project site at Kinnow Lane. According to the Biological Resources Technical Report, the unvegetated ephemeral drainage is not considered waters or wetlands under the jurisdiction of the ACOE.

Since the ephemeral drainage is not considered waters or wetlands under the jurisdiction of the ACOE and RWQCB, pursuant to the Clean Water Act (CWA), the project will not affect federally protected

wetlands as defined by Section 404 of the CWA; impacts are considered **less than significant and no mitigation is required**.

<u>Threshold:</u> Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Although the project site is currently developed with orange groves and surrounded by existing residential development to the north, south, and west, the site could function as a habitat linkage to the vacant land to the east of the project site. According to the Biological Resources Technical Report and MSHCP Consistency Analysis, some wildlife using the annual grassland on the east (e.g., coyotes) may come onto the project site to forage. However, due to the ongoing agricultural activities, the use of the site by this species is expected to be very limited, and the site is not considered to be an important resource for this species. Additionally, the site is not located within an identified wildlife corridor or linkage area (i.e. not in the Criteria Area) within the MSHCP which means it is not an area that was envisioned to be preserved for biological resources. Based on this, development of the site would not interfere with the movement of species; **therefore, impacts are considered less than significant and no mitigation is required.**

<u>Threshold:</u> Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

There are no general plan policies related to protection of biological resources, nor is there a city tree preservation policy that would affect the project. Therefore, the proposed project is not subject to any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The City of Riverside does have an Urban Forestry Policy Manual (2007), which is a guideline used for the planting, pruning, preservation and removal of all trees in the city right-of-way and recreational facilities. Since the site is privately owned, and the orange trees not within city right-of way, or a recreational facility, the Urban Forestry Policy Manual does not apply. Therefore since there are no policies to which the project is subject to, the project will **have less than significant impacts and no mitigation measures are required**.

<u>Threshold:</u> Would the project conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan?

As stated previously, the MSHCP is an HCP and NCCP of which the City of Riverside is a permittee (i.e., signatory). Although the project site is located within the MSHCP Plan Area, it is not located in the Criteria Area. Since the site is not located in the Criteria Area, there are no conservation requirements of the property. The project site is, however, still subject to be reviewed for consistency with Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pool), Section 6.1.3

(Protection of Narrow Endemic Plan Species), Section 6.3.2 (Additional Survey Needs and Procedures), and Section 6.1.4 (Guidelines Pertaining to the Urban/Wildlands Interface) of the MSHCP. A discussion of the proposed project's consistency with these MSHCP sections follows.

Consistency with MSHCP Section 6.1.2

Section 6.1.2 of the MSHCP addresses preservation of riparian, riverine, vernal pools, and fairy shrimp habitats. According to the MSHCP Consistency Analysis (Appendix D), the project site does not support riverine/riparian habitat. Riparian habitats are specifically defined by the MSHCP under Section 6.1.2. The MSHCP defines riparian/riverine areas as "lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year." In addition, riverine areas (i.e., streams) include areas that "do not contain riparian vegetation, but that have water flow for all or a portion of the year, and contain biological functions and values that contribute to downstream habitat values for covered species inside the MSHCP Conservation Area." There are no riparian resources pursuant to Section 6.1.2 of the MSHCP on the site. The project site supports one unvegetated ephemeral (i.e., seasonal) drainage that traverses the northwest portion of the site. The drainage crosses the site in a southwesterly direction and empties into a concrete stormwater inlet box located off site along the western boundary of the project site at Kinnow Lane. According to the Biological Resources Technical Report (Appendix D), the unvegetated ephemeral drainage does not contain biological functions and values that contribute to downstream habitat values, nor does it lead to or connect to other downstream drainages that support covered species inside the MSHCP Conservation Area. Therefore the drainage on site is not considered a riparian or riverine area pursuant to the MSHCP.

Given that the soils on site include Fallbrook fine sandy loam, Fallbrook rocky sandy loam, and Fallbrook sandy loam (Figure 4.4-2), which are too pervious to support ponding that would support suitable habitat for vernal pools or fairy shrimp, the project demonstrates compliance with Section 6.1.2 of the MSHCP.

Consistency with MSHCP Section 6.1.3

Section 6.1.3 sets forth survey requirements for certain narrow endemic plants. The project site is not located within the Narrow Endemic Plant Species Survey Area (NEPSSA) and therefore would not conflict with Section 6.1.3.

Consistency with MSHCP Section 6.3.2

Section 6.3.2 sets forth the survey requirements for various plant and animal surveys. The project site is not located within a Criteria Area Species Survey Area. However, the project is located in an Additional Survey Area for burrowing owl. A habitat assessment for burrowing owls was conducted by Dudek on November 16, 2010. During the habitat assessment process, the project site was walked to determine the presence of burrowing owl habitat; however, no suitable burrowing owl habitat was found on site.

Since no suitable burrow habitat was found on site, no focused surveys were warranted. The project demonstrates consistency with Section 6.3.2 of the MSHCP.

Consistency with MSHCP Section 6.1.4

Section 6.1.4 of the MSHCP addresses the need for certain projects to incorporate measures to address urban/wildland interfaces in or near the MSHCP Conservation Area. The project site is located more than 3 miles north of the nearest Criteria Cell and is not located within or next to any MSHCP Conservation Areas that would require the need for implementation of Urban/Wildland Interface Guidelines. The project would not conflict with Section 6.1.4 of the MSHCP.

Based on the MSHCP Consistency Analysis, the project will not conflict with the goals and policy of the MSHCP. **Impacts are considered less than significant, and no mitigation measures are required.**

4.4.5 Mitigation Measures

CEQA Guidelines Section 15126.4 requires environmental impact reports (EIRs) to describe feasible measures that can minimize significant adverse impacts. The following mitigation measures have been evaluated for feasibility and are incorporated in order to reduce potentially significant impacts related to nesting birds and the ephemeral drainage on site.

MM BIO-1: To mitigate potential impacts related to Migratory Bird Treaty Act (MBTA), prior to any clearing of the orange groves or any natural vegetation on site that occurs during the nesting bird season (approximately February 1 through August 31), a pre-clearing nesting bird survey should be conducted within 72 hours of the start of clearing activities. This survey should extend to any areas within 300 feet of the project boundary that support potential raptor nesting habitat (i.e., large trees or similar artificial structures such as utility poles or towers). This survey is necessary to determine if there are any active nests within the project site and in the immediate vicinity of the site. If active raptor nests are located, then work should not occur within 300 feet of these nests while the nest are active and young are still dependent on the nests, as determined by a qualified biologist. The survey results shall be submitted to the planning department for review, which will occur prior to grading permit issuance.

MM BIO-2: To mitigate potential impacts related to the unvegetated ephemeral drainage under the jurisdiction of CDFG, the developer shall implement the mitigation required by CDFG. Mitigation options include on site, off site, in lieu fee mitigation, or a combination of all in order to comply with the 1602 Streambed Alteration Agreement.

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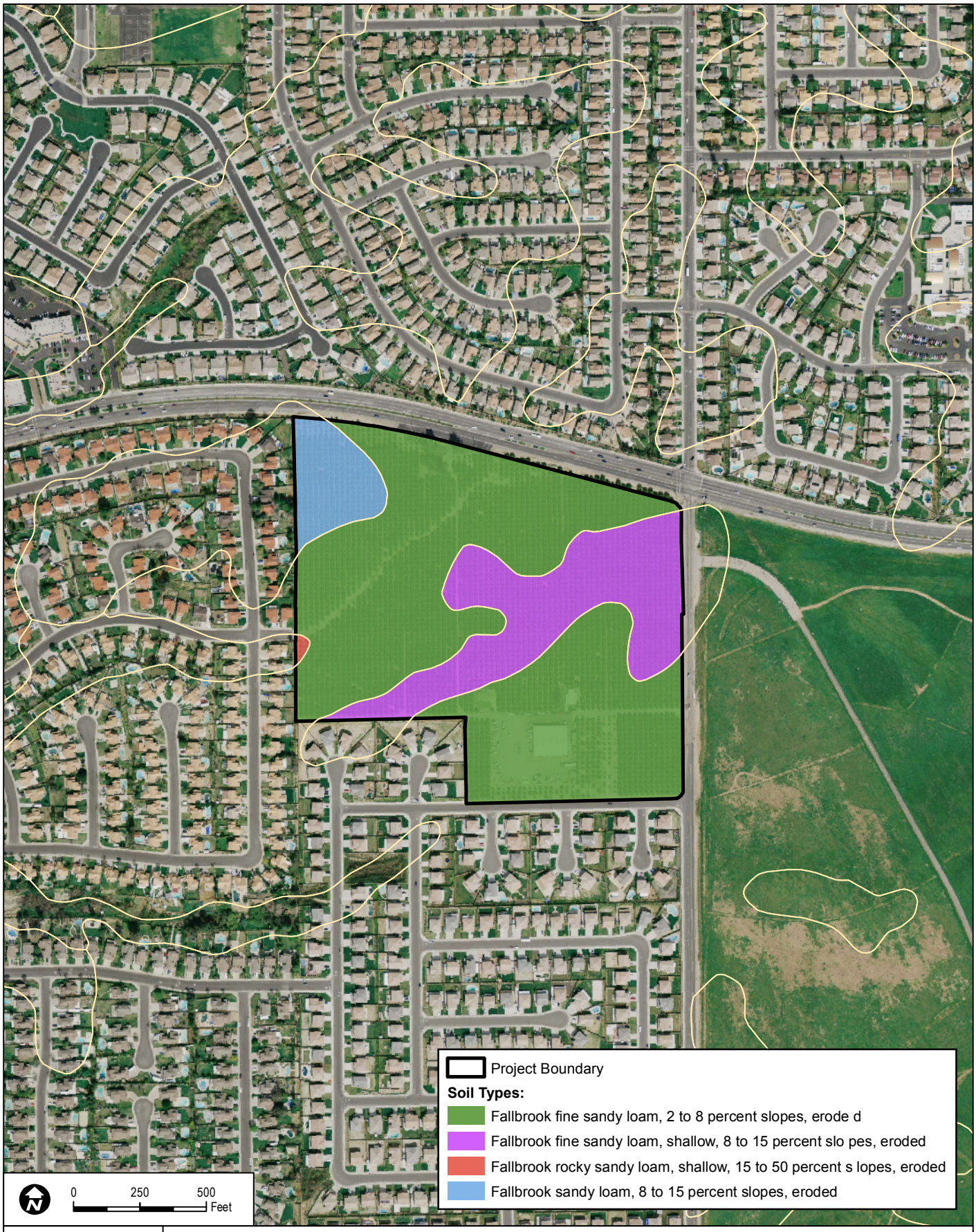

DUDEK

6765-01
2011

SOURCE: County of Riverside 2010, DigitalGlobe 2008

FIGURE 4.4-2
Soils

GLESS RANCH DEIR

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4.4.6 Environmental Impacts after Mitigation is Incorporated

Impacts to biological resources can be mitigated to less-than-significant levels by incorporating mitigation measures as described in the EIR. No significant adverse impacts would remain after mitigation.

4.4.7 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

16 U.S.C. 1531–1544. Endangered Species Act of 1973, as amended.

California Fish and Game Code, Section 2050–2115.5. California Endangered Species Act.

City of Riverside. 2007. *Urban Forestry Policy Manual*. Accessed January 4, 2011. http://www.riversideca.gov/trees/pdf/UrbanForestry-TOC.pdf.

County of Riverside. 2003. Western Riverside County Multiple Species Habitat Conservation Plan. Adopted September 23, 2003. Accessed December 20, 2010. http://www.tlma.co.riverside.ca.us/mshcp/.

Dudek. 2011. Appendix D. *Biological Resources Technical Report and Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis for Gless Ranch*. Revised March 2011.

March Air Reserve Base. 2005. *Citizen's Brochure for the 452d Air Mobility Wing, Air Installation Compatible Use Zone Study, March Air Reserve Base California*. August 2005. Accessed May 16, 2011. http://www.march.afrc.af.mil/shared/media/document/AFD-060809-061.pdf

USDA (U.S. Department of Agriculture). 1971. *Soil Survey of the Western Riverside Area, California*. U.S. Department of Agriculture, Washington, D.C.

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4.5 Cultural Resources

The focus of the following discussion and analysis, based on the initial study (IS), public scoping session, and Notice of Preparation public comment period, is related to the project's potential impacts to the existing fruit stand, orange groves, and archaeological resources. The following references were used in the preparation of this section of the draft environmental impact report (DEIR):

- Dudek, *Phase I Archaeological Assessment*, March 2011 (Appendix E).
- GeoSoils, Phase I Environmental Site Assessment, October 27, 2008
- Title 20 of the Riverside Municipal Code (City of Riverside 2010).
- City of Riverside General Plan 2025 (City of Riverside 2007).

4.5.1 Setting

The proposed Gless Ranch commercial retail-center development project lies in the northern San Jacinto Plain. Historically, four Native American groups occupied this area: the Gabrielino, the Serrano, the Luiseño, and the Cahuilla. The site is closest to the territories of the Luiseño and the Cahuilla. It is believed that the Cahuilla left the Riverside and Redlands areas sometime in the 1870s, returning only to seek work. The Native American groups, with the exception of some Cahuilla, probably left the area around 1877 due to the lack of water (Dudek 2011) (Appendix E).

As stated in the Phase I Archaeological Assessment, historic use of the proposed Gless Ranch project site is first mentioned in the 1775–1776 diaries of the early Spanish explorers; by 1819, several ranchos using Native American laborers and vaqueros were established in the areas of Redlands and Riverside (Dudek 2011) (Appendix E). The proposed project site was most likely used for ranching during the early 19th century. Beginning in the late 19th century, a shift from ranching to growing citrus fruit characterized the City of Riverside's (City's) economy. The site was reportedly undeveloped until 1964 when it was converted into an orange grove.

Around 1895, Riverside evolved into the richest per capita city in the United States due to the fortunes of the citrus industry. The introduction of the railroad further expanded Riverside's growth and the citrus market potential. Riversiders created efficient citrus packing concepts and machinery, refrigerated rail shipments of citrus fruits, used scientific growing and mechanized packing methods, and used pest management techniques. Soon after the turn of the century, the City could boast that it had founded the most successful agricultural cooperative in the world, the California Fruit Growers Exchange, known by its trademark, Sunkist. The Citrus Experiment Station, a world-class research institution, also was established, all in Downtown Riverside.

Historic use of the proposed Gless Ranch project site is first mentioned in the 1775 – 1776 diaries of the early Spanish explorers (Bolton 1931). By 1819, several ranchos using Native American laborers and vaqueros were established in the areas of Redlands and Riverside (Goodman 1993). The proposed project site was most likely used for ranching during the early 19th century. Beginning in the late 19th century, a shift in ranching to growing citrus fruit characterized the City's economy. As recently as the mid-1950s, large areas of the City remained in citrus groves. However, during the late twentieth century, there was significantly increasing pressure to convert agricultural land use to suburban use.

Currently, agriculture faces continuing pressure from urbanization, foreign competition, and rising production and water costs. Numerous citriculture areas were completely converted to urban and suburban uses after the 1970s. Nearly all of the Orangecrest area was in citrus production as late as the 1970s. Today, the majority of Orangecrest area has been converted to suburban development. The 40-acre project site has been used as a citrus grove since approximately 1964, which continues to operate today. Sometime after 1980, the existing citrus stand on the site was constructed. The project site was annexed to the City on November 5, 2002 (Annexation No. 94) and was designated as Commercial Retail when it was annexed to the City. As such, the City did not envision the site to be used for agriculture in the future, nor did it for the Orangecrest area as a whole.

The project site is located in the medium sensitivity of archaeological resources and low paleontological sensitivity area. A Phase I pedestrian survey was performed by Dudek on November 19, 2010, to identify and evaluate any cultural resources within the proposed project area. During the survey, no cultural material that may be associated with prehistoric occupation, such as chipped stone or ground stone tools, or historic activity, such as trash pits or building foundations, were observed within the proposed project area.

Related Regulations

State

California Health and Safety Code (Sections 7050.5, 7051, and 7054)

The California Health and Safety Code Sections 7050.5, 7051, and 7054 collectively address the illegal interference with human burial remains, as well as the disposition of Native American burials in archaeological sites. The Code protects such remains from disturbance, vandalism, or inadvertent destruction; it establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and it prescribes the treatment of the remains prior to, during, and after evaluation, and reburial procedures. The project will be required to comply with these sections of the Code.

Public Resources Code (Section 5097.98)

Public Resources Code (PRC) Section 5097.98 addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the Native American Heritage Commission (NAHC) to resolve disputes regarding the disposition of such remains. It has been incorporated into Section 15064.5(e) of the State California Environmental Quality Act (CEQA) guidelines. The project will be required to comply with PRC 5097.98 should any unknown human remains are discovered during site disturbance.

California Register of Historical Resources

A resource is considered by the City to be "historically significant" if the resource meets any of the criteria for designations listed on the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4852)

a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

b. Is associated with the lives of persons important in our past;

c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

d. Has yielded, or may be likely to yield, information important in prehistory or history.

The proposed project would not meet any of the criteria outlined in the California Register of Historical Resources.

SB 18

The Local and Tribal Intergovernmental Consultation process, commonly known as Senate Bill (SB) 18 was signed into law in September of 2004 and took effect on March 1, 2005. Senate Bill 18 established responsibilities for local governments to contact, provide notice to, refer plans to, and consult with California Native American Tribes. The purpose of this consultation process is to protect the identity of the cultural place and to develop appropriate and dignified treatment of the cultural place in any subsequent project. The consultation is required whenever a General Plan, Specific Plan, or Open Space Designation is proposed for adoption or to be amended. As part of the application process, California Native American Tribes must be given the opportunity to consult with the applicant of the proposed project and with the City for the purpose of preserving, mitigating impacts to, and identifying cultural places located on project land within the City of Riverside's jurisdiction. The proposed project does not

include a General Plan Amendment, Specific Plan Amendment or include an Open Space Designation; therefore SB 18 does not apply to the project.

Local

Title 20

The City of Riverside has developed a historic preservation program, which is among the most active in the State of California. Riverside's commitment to historic preservation began in 1969 with the adoption of a preservation ordinance, Title 20 of the Municipal Code, and the creation of the Cultural Heritage Board. Since that time the program has grown to include an ongoing process to survey, record and designate historic resources, an award-winning historic resources inventory database, historic district design guidelines, educational programs, and a historic preservation plan. The State Office of Historic Preservation has designated Riverside as a Certified Local Government. This distinction ensures that the City's preservation program meets all State and Federal standards.

Title 20 of the Riverside Municipal Code is the primary body of local historic preservation laws. The purpose of Title 20 is to promote the public health, safety, and general welfare by providing for the identification, protection, enhancement, perpetuation and use of improvements, buildings, structures, signs, objects, features, sites, places, areas, districts, neighborhoods, streets, works of art, natural features, and significant permanent landscaping having special historical, archaeological, cultural, architectural, community, aesthetic, or artistic value in the City. Title 20 of the Riverside Municipal Code established procedures for preserving, protecting, and designating significant cultural resources should the resource be considered a historic/cultural resource (City of Riverside 2010).

In accordance with Title 20, a Certificate of Appropriateness is required to alter, demolish or relocate properties that are designated or determined eligible for designation as a City Cultural Resource. A Certificate of Appropriateness is also required for new construction within historic districts and neighborhood conservation areas.

City of Riverside General Plan 2025

In 1990, the City initiated a study that was heritage based. The study framed the City's citrus history and the role it played in forming the "California Dream" as defined by historians Carey McWilliams and Kevin Starr. The report emphasized the importance of identifying the remaining significant citrus-heritage-related resources in the City. In 1994, the City's General Plan was adopted and included Historic Preservation goals and policies that addressed conserving the urban historic citrus-based cultural landscape, preserving the historic and architecturally significant structures and neighborhoods, and supporting and enhancing its arts and cultural institutions. In 2007, with the GP 2025, the City adopted a new general plan, however, still maintaining a Historic Preservation Element. The following

policies are from the City's General Plan 2025 Historic Preservation Element from the 2025 City General Plan (City of Riverside 2007) that relates to the proposed project:

Policy HP-1.1: The City shall promote the preservation of cultural resources to ensure that citizens of Riverside have the opportunity to understand and appreciate the City's unique heritage.

Policy HP-1.3: The City shall protect sites of archaeological and paleontological significance and ensure compliance with all applicable State and federal cultural resources protection and management laws in its planning and project review process.

Policy HP-2.3: The City shall provide information to citizens and the building community about what to do upon the discovery of archaeological resources and burial sites, as well as, the treatment, preservation, and repatriation of such resources.

Policy HP-5.1: The City shall use its design and plot plan review processes to encourage new construction to be compatible in scale and character with cultural resources and historic districts.

4.5.2 Thresholds of Significance

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts. Based on the IS prepared for the project and Appendix G, a development project could have a significant impact on cultural resources if the proposed project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature
- Disturb any human remains, including those interred outside of formal cemeteries.

4.5.3 Project Elements that Can Reduce Impacts

Based on City records, none of the existing structures on the proposed project site are over 50 years old. The proposed project will retain the existing fruit stand and expand it as part of the larger development plan. The proposed project will also include citrus heritage elements by incorporating the existing windmill and tractors, and creating a signage that incorporates the site's citrus use as part of the design features within the commercial shopping center.

4.5.4 Environmental Impacts before Mitigation

Threshold: Would the project cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

There are no structures on site that have been designated as historic under the City's Title 20 and CEQA, nor do any of the structures on site have any other state or federal historic designations or are eligible to be designated historic under Title 20 of the City's Municipal Code or CEQA. Based on aerial photo review and information provided by the current property owner, the orange groves have operated on site since 1964. Sometime after 1980, the existing fruit stand began operating on the site. The existing fruit stand and other farming structures on site are not listed or eligible to be listed in the California Register of Historical Resources or the PRC. Additionally, none of the City records indicate that any of the existing structures, including the fruit stand are over 50 years old, or potentially historic. The project proposes to integrate the Gless Ranch citrus history into the larger commercial development by retaining the existing fruit stand and expanding it, as well as incorporating the various historic elements that were used in the agricultural production including, but not limited to, the windmills and tractors into the project design. In addition, approximately 104 existing citrus trees will remain along Gless Ranch Road, and approximately 646 trees, which includes 200 dwarf citrus trees, will be added to the site. The citrus trees will be used as part of the landscape buffer between the proposed Target Store, home improvement center, and residential uses. The citrus trees will also be planted near the fruit stand courtyard. Based on the previous analysis, since none of the structures on site are over 50 years old, and although the citrus groves and fruit stand are associated with the local citrus history of Riverside, retaining these features and incorporating them into the proposed project reduces any potential impacts to less than significant and no mitigation is required.

Threshold: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Dudek prepared a Phase I Archaeological Assessment for the proposed project (Appendix E). An archaeological site records and literature search of the California Historical Resources Information System (CHRIS) at the Eastern Information Center (EIC) was conducted to identify all recorded investigations and archaeological sites within 0.5 mile of the proposed project area. Based on the results of the records search, EIC records indicate that 12 cultural resources have been recorded and 13 prior cultural resources studies have been undertaken within 0.5 mile of the proposed project site. No resources have been recorded within the project site. As stated in the Phase I Archaeological Assessment, two of the previous studies covered the entire 40-acre proposed project site and another study assessed the undeveloped area immediately east of the proposed Gless Ranch project site, and did not record any resources adjacent to the proposed project area (Dudek 2011) (Appendix E). Therefore, since there are no known or previously recorded archaeological resources within the project boundaries, the proposed project would not likely cause a substantial adverse change in the

significance of an archaeological resource pursuant to § 15064.5. **Impacts are considered less than significant.** However, in the unlikely event that unknown archaeological resources are uncovered during site disturbance, the project will implement Mitigation Measure CUL-1. Additionally, the project is required to comply with state law related to findings of remains and Native American artifacts. Incorporation of Mitigation Measure CUL-1 as well as following state law would ensure impacts remain less than significant.

Threshold: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Soils on site reportedly include colluvium/topsoil over Cretaceous-age granitic bedrock. According to the Riverside County General Plan, the project site is located in a low paleontological sensitivity area (Figure 4.5-1). Areas with low paleontological sensitivity encompass lands for which previous field surveys and documentation demonstrated a low potential for containing significant paleontological resources. Based on this information, implementation of the proposed project is not expected to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. **Impacts are considered less than significant**. However, in the unlikely event that paleontological resources are uncovered during site disturbance, the project will implement Mitigation Measure CUL-2. Incorporation of Mitigation Measure CUL-2 would ensure impacts remain less than significant.

Threshold: Would the project disturb any human remains, including those interred outside of formal cemeteries?

A search of the NAHC's Sacred Lands File was conducted in order to determine the location of any sacred and/or burial sites within the proposed project area (see Appendix E, Phase I Archaeological Assessment). The search did not indicate the presence of Native American sacred heritage resources within the proposed project area. Letters were sent on Friday, December 10, 2010, to Native American contacts identified by the NAHC who might have knowledge of previously undocumented cultural resources within the proposed project area. Three replies have been received as of this writing: (1) Soboba Band of Luiseño Indians, (2) Pala Band of Mission Indians, and (3) Gabrielino Tongva Nation. Two responses, from the Pala Band of Mission Indians and the Gabrielino Tongva Nation, indicated no comment or concerns with the project. The Soboba Band of Luiseño Indians expressed interest in the project site as highly sensitive to the people of Soboba and requested that they be consulted about the project, that project information be transferred to them, that they act as tribal consultant, that they be present as monitors during site disturbance, and that they be consulted if any artifacts are found. Based on the results of the Phase I Cultural Resources Assessment, the site has been surveyed twice before, and extensive survey efforts were conducted in the site area. Results of these past and current surveys indicate that recorded sites have not been identified on the project site or in proximity to the project site. Therefore, it is highly unlikely that unknown cultural resources will be found during site disturbance. However, in the event that Native American human remains are inadvertently discovered during construction activities,

there could be potentially significant impacts to Native American resources, and implementation of Mitigation Measure CUL-1 would reduce potential impacts to **less than significant**. Additionally, the project will be required under state law (PRC 5097.58) as well as a condition by the City, to stop work and follow state law if human remains are found on site during site disturbance.

4.5.5 Mitigation Measures

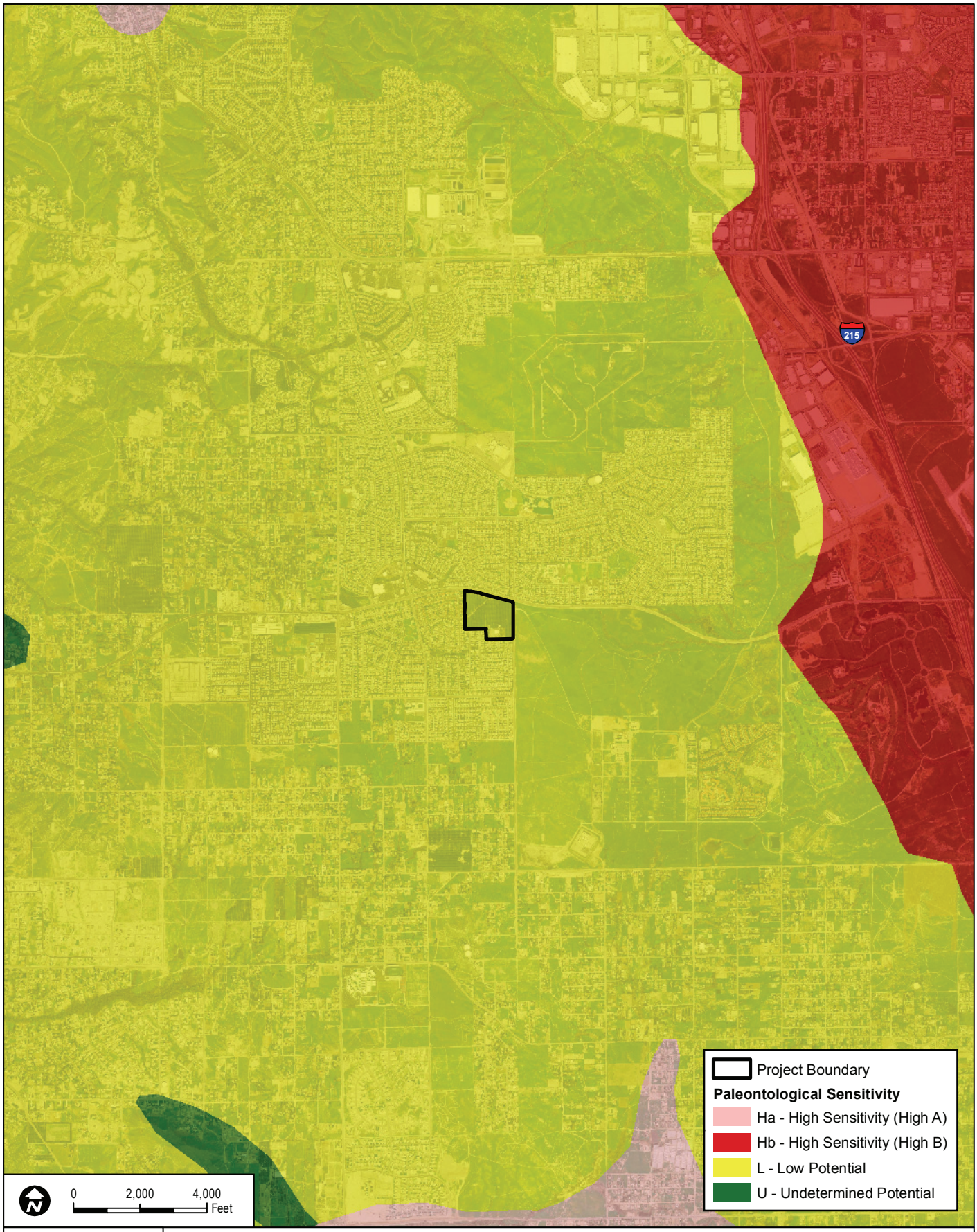
The following is recommended in the unlikely event that potentially significant cultural remains are encountered during construction, consistent with guidance provided in CEQA Guidelines Section 15064.5:

MM CUL-1: In the unlikely event that potential historical or unique archaeological resources are encountered during construction, grading should be temporarily redirected and/or suspended. The find shall be immediately evaluated by a qualified archaeologist. If the find is determined to be a historical or unique archaeological resource, work may continue on other parts of the site while historical or unique archaeological resource mitigation takes place. Mitigation should occur consistent with CEQA Guidelines Section 15126.4. In particular, impacts to historic resources of an archeological nature should be avoided, where feasible. Should avoidance not be feasible, mitigation of impacts shall be accomplished through a data-recovery program or other mitigation pursuant to CEQA Guidelines Section 15126.4(b)(3).

MM CUL-2: In the unlikely event that paleontological resources such as vertebrate, plant, or invertebrate fossils are discovered during construction or site disturbance, work shall stop and the City of Riverside Planning Department shall be contacted so that a qualified paleontologist can be consulted to determine the extent or quality of the find and make recommendations for further action, if necessary.

4.5.6 Environmental Impacts after Mitigation is Incorporated

Impacts to cultural resources can be mitigated to less-than-significant levels by incorporating mitigation measures as described in the EIR. No significant adverse impacts would remain after mitigation.



DUDEK

6765-01
2011

SOURCE: County of Riverside 2011, Digital Globe 2008.

FIGURE 4.5-1
Paleontological Sensitivity Area

GLESS RANCH DEIR

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4.5.7 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

Bolton, Herbert Eugene. 1931. *Font's Complete Diary: A Chronicle of the Founding of San Francisco*. University of California Press, Berkeley.

City of Riverside. 2007. City of Riverside General Plan 2025. Adopted November 2007. Riverside, CA: City of Riverside Community Development Department. Accessed January 5, 2011. http://www.riversideca.gov/planning/gp2025program/general-plan.asp.

City of Riverside. 2010. Riverside Municipal Code: Title 20 – Cultural Resources. Adopted December 2010. Accessed January 5, 2011: http://www.riversideca.gov/municode/pdf/20/title-20.pdf.

County of Riverside. 2003. Riverside County Integrated Project General Plan Final Program Environmental Impact Report.

Dudek. 2011. Appendix E. Phase I Archaeological Assessment. Prepared for the City of Riverside, California: Dudek. March 2011.

Goodman, John David. 1993. *Spring Rancheria: Archaeological Investigations of a Transient Cahuilla Village in Early Riverside, California*. Unpublished Master's thesis, University of California, Riverside.

Office of Historic Preservation. 2011. California Register. Accessed on August 23, 2011: http://www.parks.ca.gov/?page_id=21238PRC (California Public Resources Code). Section 5097.9-5097.991. Chapter 1.75. Native American Historical, Cultural, and Sacred Sites. Accessed March 21, 2011. http://www.leginfo.ca.gov/cgi-bin/displaycode?section=prc&group=05001-06000&file=5097.9-5097.991.

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4.6 Greenhouse Gases

The focus of the following discussion and analysis, based on the initial study, public scoping session, and Notice of Preparation public comment period concerns the potentially adverse impacts related to greenhouse gas emissions during project construction and operation. In addition to other documents, the following sources were used in the preparation of this section of the Draft Environmental Impact Report:

- Dudek. 2011. Air Quality Technical Report and Greenhouse Gas Analysis for the Gless Ranch Project. October 2011 (Appendix C).

4.6.1 Setting

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind, lasting for an extended period (decades or longer) (EPA 2010a). Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs). The greenhouse effect traps heat in the troposphere through a threefold process: short-wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb this long-wave radiation and emit this long-wave radiation into space and toward the Earth. This "trapping" of the long-wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

Principal GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), and water vapor (H_2O). Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted to the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil-fuel combustion, whereas CH_4 results mostly from off-gassing associated with agricultural practices and landfills. Man-made GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFC), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3), which are associated with certain industrial products and processes (CAT 2006).

The effect each GHG has on climate change is measured as a combination of the volume or mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP). The GWP varies between GHGs; for example, the GWP of CH_4 is 21, and the GWP of N_2O is 310. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO_2. Thus, GHG gas emissions are typically measured in terms of pounds or tons of "CO_2 equivalent" (CO_2E).[1]

[1] The CO_2 equivalent for a gas is derived by multiplying the mass of the gas by the associated GWP, such that metric tons CO_2E = (metric tons of a GHG) x (GWP of the GHG). For example, the GWP for CH4 is 21. This means that emissions of 1 metric ton of methane is equivalent to emissions of 21 metric tons of CO_2.

According to CARB, some of the potential impacts in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high O_3 days, more large forest fires, and more drought years (CARB 2006). Several recent studies have attempted to explore the possible negative consequences that climate change, left unchecked, could have in California. These reports acknowledge that climate scientists' understanding of the complex global climate system, and the interplay of the various internal and external factors that affect climate change, remains too limited to yield scientifically valid conclusions on such a localized scale. Substantial work has been done at the international and national level to evaluate climatic impacts, but far less information is available on regional and local impacts.

Related Regulations

Regulation of GHGs in the United States and California is relatively recent, beginning mid-decade. In the absence of major federal efforts, California's former governor, Arnold Schwarzenegger, and the legislature took initiatives to establish goals for reductions of GHG emissions in California and to prescribe a regulatory approach to ensuring that the goals would be met. While not as comprehensive, the federal government, primarily through actions of the EPA, has also begun to regulate GHG emissions. Key federal and state regulatory efforts that could apply to development under the Gless Ranch project and the users of such development are provided below. An expanded discussion of regulatory efforts and summary of additional key federal and state regulatory efforts are included in Appendix C.

Federal

Massachusetts v. EPA. On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497, the Supreme Court found that GHGs are air pollutants covered by the Clean Air Act. The court held that the EPA Administrator must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA Administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the Administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- The Administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the endangerment finding.
- The Administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the cause or contribute finding.

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act of 2007. Signed on December 19, 2007, the act includes the following measures to aid in the reduction of national GHG emissions: (1) increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard; (2) set a target of 35.5 miles per gallon (mpg) for the combined fleet of cars and light trucks by model year 2016 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks; and (3) prescribe or revise standards affecting regional efficiency, energy conservation, energy efficiency labeling for consumer electronic products, and efficiencies for residential boiler and heating/cooling products/home appliances.

EPA and NHTSA Joint Final Rule for Vehicle Standards. On April 1, 2010, the EPA and the Department of Transportation's NHTSA announced a joint final rule to establish a national program consisting of new standards for light-duty vehicles model years 2012 through 2016. The joint rule is intended to reduce GHG emissions and improve fuel economy. The EPA finalized the first-ever national GHG emissions standards under the Clean Air Act, and NHTSA finalized Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act (EPA 2010b). This final rule follows the EPA and Department of Transportation's joint proposal on September 15, 2009, and is the result of the President Obama's May 2009 announcement of a national program to reduce GHGs and improve fuel economy (EPA 2010c). This final rule became effective on July 6, 2010 (EPA and NHTSA 2010).

The EPA's GHG standards require new passenger cars, light-duty trucks, and medium-duty passenger vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile in model year 2016, equivalent to 35.5 mpg if the automotive industry were to meet this CO_2 level all through fuel economy improvements. The CAFE standards for passenger cars and light trucks will be phased in between 2012 and 2016, with the final standards equivalent to 37.8 mpg for passenger cars and 28.8 mpg for light trucks, resulting in an estimated combined average of 34.1 mpg. Together, these standards will cut GHG emissions by an estimated 960 million metric tons (MMT) and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program. The rules will simultaneously reduce GHG emissions, improve energy security, increase fuel savings, and provide clarity and predictability for manufacturers (EPA 2010c).

State

Assembly Bill 1493. In a response to the transportation sector accounting for more than half of California's CO_2 emissions, Assembly Bill (AB) 1493 (Pavley) was enacted on July 22, 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal

transportation in the state. The bill required that CARB set the GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22% in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30%. Before these regulations may go into effect, the EPA must grant California a waiver under the federal Clean Air Act, which ordinarily preempts state regulation of motor vehicle emission standards. The waiver was granted by Lisa Jackson, the EPA Administrator, on June 30, 2009. On March 29, 2010, the CARB Executive Officer approved revisions to the motor vehicle GHG standards to harmonize the state program with the national program for 2012 to 2016 model years (see "EPA and NHTSA Joint Final Rule for Vehicle Standards" above). The revised regulations became effective on April 1, 2010.

AB 32. In furtherance of the goals established in Executive Order S-3-05, the legislature enacted AB 32 (Núñez and Pavley), the California Global Warming Solutions Act of 2006, which former governor Schwarzenegger signed on September 27, 2006. The GHG emissions limit is equivalent to the 1990 levels, which are to be achieved by 2020.

CARB has been assigned to carry out and develop the programs and requirements necessary to achieve the goals of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions. This program will be used to monitor and enforce compliance with the established standards. CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 allows CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any adopted rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

The first action under AB 32 resulted in the adoption of a report listing early action GHG emission reduction measures on June 21, 2007. The early actions include three specific GHG control rules. On October 25, 2007, CARB approved an additional six early action GHG reduction measures under AB 32. The original three adopted early action regulations meeting the narrow legal definition of "discrete early action GHG reduction measures" consist of the following:

1. A low-carbon fuel standard to reduce the "carbon intensity" of California fuels
2. Reduction of refrigerant losses from motor vehicle air conditioning system maintenance to restrict the sale of "do-it-yourself" automotive refrigerants
3. Increased methane capture from landfills to require broader use of state-of-the-art methane capture technologies.

The additional six early action regulations, which were also considered "discrete early action GHG reduction measures," consist of the following:

1. Reduction of aerodynamic drag, and thereby fuel consumption, from existing trucks and trailers through retrofit technology
2. Reduction of auxiliary engine emissions of docked ships by requiring port electrification
3. Reduction of PFCs from the semiconductor industry
4. Reduction of propellants in consumer products (e.g., aerosols, tire inflators, and dust removal products)
5. Requirement that all tune-up, smog check, and oil change mechanics ensure proper tire inflation as part of overall service in order to maintain fuel efficiency
6. Restriction on the use of SF6 from non-electricity sectors if viable alternatives are available.

As required under AB 32, on December 6, 2007, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was set at 427 MMT CO_2E (CARB 2007). In addition to the 1990 emissions inventory, CARB also adopted regulations requiring mandatory reporting of GHGs for large facilities that account for 94% of GHG emissions from industrial and commercial stationary sources in California. About 800 separate sources that fall under the new reporting rules and include electricity generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and other industrial sources that emit CO_2 in excess of specified thresholds.

On December 11, 2008, CARB approved the Climate Change Scoping Plan (Scoping Plan) to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and CAT early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. Additional development of these measures and adoption of the appropriate regulations will occur over the next 2 years, becoming effective by January 1, 2012.

The key elements of the Scoping Plan (CARB 2008) include the following:

- Expanding and strengthening existing energy-efficiency programs as well as building and appliance standards
- Achieving a statewide renewables energy mix of 33%
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions

- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard
- Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In 2009, a coalition of environmental groups brought a challenge to the Scoping Plan alleging that it violated AB 32 and that the environmental review document (called a "Functional Equivalent Document" [FED]) violated CEQA by failing to appropriately analyze alternatives to the proposed cap-and-trade program. On May 20, 2011, the San Francisco Superior Court entered a final judgment in favor of the coalition and ordered that CARB take no further action with respect to cap and trade rulemaking until it complies with CEQA by properly analyzing alternatives in its FED to cap-and-trade. CARB appealed the decision on May 23, 2011. The Appellate Court stayed the Superior Court's injunction on June 3, 2011. The Supreme Court decided on September 28, 2011 not to reinstate the Superior Court's injunction. The portions of the scoping plan that do not relate to cap and trade remain valid under the Court's judgment.

Executive Order S-1-07. Issued on January 18, 2007, Executive Order S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2-equivalent gram per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources such as algae, wood, and agricultural waste. In addition, the Low Carbon Fuel Standard would drive the availability of plug-in hybrid, battery electric, and fuel-cell power motor vehicles. The Low Carbon Fuel Standard is anticipated to replace 20% of the fuel used in motor vehicles with alternative fuels by 2020.

SB 97. In August 2007, the legislature enacted SB 97 (Dutton), which directs the Governor's Office of Planning and Research (OPR) to develop guidelines under CEQA for the mitigation of GHG emissions. OPR was to develop proposed guidelines by July 1, 2009, and the Natural Resources Agency was directed to adopt guidelines by January 1, 2010. On June 19, 2008, OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents (OPR 2008). The advisory indicated that a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities, should be identified and estimated. The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures that are necessary to reduce GHG emissions to a less-than-significant level.

On April 13, 2009, OPR submitted to the Natural Resources Agency its proposed amendments to the CEQA Guidelines relating to GHG emissions. On July 3, 2009, the Natural Resources Agency commenced the Administrative Procedure Act rulemaking process for certifying and adopting the proposed amendments, starting the public comment period. The Natural Resources Agency adopted CEQA Guidelines amendments on December 30, 2009, and transmitted them to the Office of Administrative Law on December 31, 2009. On February 16, 2010, the Office of Administrative law completed its review and filed the amendments with the Secretary of State. The amendments became effective on March 18, 2010.

SB 375. Signed by former governor Schwarzenegger on September 30, 2008, SB 375 (Steinberg) addresses GHG emissions associated with the transportation section through regional transportation and sustainability plans. By September 30, 2010, CARB was required to assign regional GHG reduction targets for emissions from automobiles and light trucks within each region of California that has a metropolitan planning organization. The targets are set for years 2020 and 2035. Regional metropolitan planning organizations will be responsible for preparing a Sustainable Communities Strategy within the Regional Transportation Plan. The goal of the Sustainable Communities Strategy is to establish a development plan for the region, which, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. SB 375 provides incentives for streamlining CEQA requirements by substantially reducing the requirements for "transit priority projects." On September 23, 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations (MPOs). The targets for the Southern California Association of Governments are an 8% reduction in emissions per capita by 2020 and a 13% reduction by 2035. Achieving these goals through adoption of a Sustainable Communities Strategy will be the responsibility of the MPOs.

SB X1 2. On April 12, 2011, Governor Jerry Brown signed SB X1 2 in the First Extraordinary Session, which would expand the RPS by establishing a goal of 20% of the total electricity sold to retail customers in California per year, by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current and that meets other specified requirements with respect to its location. In addition to the retail sellers covered by SB 107, SB X1 2 adds local publicly owned electric utilities to the RPS. By January 1, 2012, the CPUC is required to establish the quantity of electricity products from eligible renewable energy resources to be procured by retail sellers in order to achieve targets of 20% by December 31, 2013; 25% by December 31, 2016; and 33% by December 31, 2020. The statute also requires that the governing boards for local publicly owned electric utilities establish the same targets, and the governing boards would be responsible for ensuring compliance with these targets. The CPUC will be responsible for enforcement of the RPS for retail sellers, while the CEC and CARB will enforce the requirements for local publicly owned electric utilities.

California Code of Regulations, Title 24. Title 24 of the California Code of Regulations, known as the California Building Standards Code, is a compilation of various standards applying to the construction and operation of residential and nonresidential buildings in California. Title 24 is comprised of 12 Parts. Part 6 of Title 24 is the Energy Efficiency Standards for Residential and Nonresidential Buildings, or Energy Code. The Energy Code was established in 1978 by California Energy Resources Conservation and Development Commission in response to a legislative mandate to reduce California's energy consumption, and it has been updated periodically to incorporate additional energy-saving technologies and methods. Most recently, the California Energy Code was updated in 2008. The 2008 standards apply to all buildings for which a permit was submitted after January 1, 2010.

In July 2008, the California Building Standards Commission adopted statewide green building standards. The California Green Building Standards Code (Part 11, Title 24), also known as CalGreen, was adopted as part of the California Building Standards Code. Part 11 establishes voluntary standards on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. Some of these standards have become mandatory in the 2010 edition of Part 11.

4.6.2 Thresholds of Significance

OPR Guidance

OPR's Technical Advisory titled *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review* states that "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008, p.4). Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008, p.6).

Cumulative Nature of Climate Change

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs . There are currently no established thresholds for assessing whether the GHG emissions of a project in the South Coast Air Basin (SCAB), such as the proposed Gless Ranch project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change.

While the proposed project would result in emissions of GHGs during construction and operation, no guidance exists to indicate what level of GHG emissions would be considered substantial enough to result in a significant adverse impact on global climate. However, it is generally believed that an individual project is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory as scientific uncertainty regarding the significance a project's individual and cumulative effects on global climate change remains.

Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008). This approach is consistent with that recommended by the California Natural Resource Agency, which noted in its Public Notice for the proposed CEQA amendments that the evidence before it indicates that in most cases, the impact of GHG emissions should be considered in the context of a cumulative impact, rather than a project-level impact (CNRA 2009b). Similarly, the Final Statement of Reasons for Regulatory Action on the CEQA Amendments confirm that an EIR or other environmental documents must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (CNRA 2009c). Accordingly, further discussion of the project's GHG emissions and their impact on global climate are addressed below.

CEQA Amendments

The California Natural Resources Agency adopted amendments to the CEQA Guidelines on December 30, 2009, which became effective on March 18, 2010 (CEQA Amendments). The CEQA Amendments with respect to GHG emissions state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Amendments note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (CRNA 2009a). Section 15064.4(b) provides that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment:

- The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- 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 GHG emissions (CNRA 2009a).

In addition, Section 15064.7(c) of the CEQA Amendments specifies that "[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt

such thresholds is supported by substantial evidence" (CRNA 2009a). Similarly, the revisions to Appendix G, *Environmental Checklist Form*, which is often used as a basis for lead agencies' selection of significance thresholds, do not prescribe specific thresholds. Rather, the amended CEQA guidelines establish two new CEQA thresholds related to GHGs and these will therefore be used to discuss significance of project impacts:

- Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Accordingly, the CEQA Amendments do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Amendments emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009a).

Status of Proposed SCAQMD Thresholds

The SCAQMD has not adopted recommended numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects. The SCAQMD has adopted interim significance thresholds for GHG emissions applicable to stationary source/industrial projects for which SCAQMD is lead agency, such as SCAQMD rules, rule amendments, and plans (SCAQMD 2008). The SCAQMD has continued to consider adoption of significance thresholds for commercial and residential projects. In its latest iteration, staff proposed the following screening thresholds to find a project's climate change impacts to be less than significant: 3,500 MT CO_2E per year for residential-only projects, 1,400 MT CO_2E per year for commercial-only projects, and 3,000 MT CO_2E per year for mixed-use projects (SCAQMD 2010). Additionally, SCAQMD staff proposed two sets of efficiency targets for the years 2020 and 2035:

- 2020 – 4.8 MT CO_2E per year per service population for project-level analysis and 6.6 MT CO_2E per year per service population for plan-level analysis;[2]
- 2035 – 3.0 MT CO_2E per year per service population for project-level analysis and 4.1. MT CO_2E per year per service population for plan-level analysis (SCAQMD 2010),

However, these proposed residential thresholds have not been adopted and the future schedule and specifics of any SCAQMD GHG thresholds are uncertain as recent meetings have been cancelled without any indication of future plans for consideration of the proposed thresholds.

4.6.2.5 Consistency with AB 32 as Benchmark

Significance threshold guidance released by SCAQMD, San Joaquin Valley Air Pollution Control District (SJVAPCD) and BAAQMD all rely, in part, on compliance with the goals of AB 32.[3] Section 15064.7 of the CEQA Amendments states that "[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significant previously adopted or recommended by other public agencies or recommended by experts." Consistent with the guidance provided by these air districts, this EIR partially relies on compliance with AB 32 as the significance threshold. Section 15064(h)(3) of the CEQA Amendments authorizes lead agencies to conclude that a project's incremental contribution to a cumulative effect is not cumulatively considerable:

> [I]f the project will comply with the requirements in a previously approved plan or mitigation program ... that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency.

As noted earlier, AB 32 is a legal mandate requiring that statewide GHG emissions by 2020 be reduced to 1990 levels by 2020. In adopting AB 32, the legislature determined the necessary GHG reductions for the state to make in order to sufficiently offset its contribution to the cumulative climate change problem. A project consistent with AB 32, therefore, is entitled to a finding of no significant cumulative climate change impacts pursuant to Section 15064(h)(3).

To understand what percentage reduction in emissions would be required to achieve AB 32's goals, CARB first determined that the 1990 baseline GHG emission level is 427 (MMT) CO_2E. CARB then estimated the statewide emissions that would be generated in the 2020 assuming (see Appendix F of CARB 2008). CARB's prediction for 2020 emissions is 596 MMT CO_2E, assuming "business as usual." The 2020 business-as-usual forecast does not take any credit for reductions from GHG measures included in the Scoping Plan, including those enacted before AB 32. Accordingly, AB 32's mandated decrease in GHG emissions from 596 to 427 MMT CO_2E is equivalent to a 28.5% emissions reduction. Thus, this AB 32 mandate would require a 28.5% reduction in emissions relative to the 2020 business-as-usual scenario by 2020.

AB 32 will result in emissions reductions in a variety of ways, including increasing energy efficiency and introducing more renewable energy sources. However, a reduction of 28.5% from a 2020 business-as-

[3] Specifically, one of SCAQMD's prior draft significance thresholds recommended determining a project's significance based on whether a project can demonstrate a targeted reduction compared to a business-as-usual scenario, consistent with AB 32's emission-reduction mandates. The SJVAPCD allows a less-than-significant finding if a project implements best performance standards or reduces project emissions by at least 29% below business as usual consistent with the AB 32's required emission reductions. BAAQMD's thresholds were derived to gauge compliance with AB 32.

usual scenario would satisfy AB 32's goals. Pursuant to Section 15064(h)(3), a project consistent with AB 32's goal, which would require a 28.5% emission reduction from business as usual, should be considered to have a less-than-significant cumulative climate change impacts.[4]

4.6.3 Project Elements that can Reduce Impacts

The following sustainable features will be incorporated into the Target store's project design as a means to reduce impacts related to greenhouse gas emissions. The City will condition and review project plans to ensure these measures are incorporated.

Site/Building Design:

- Report Target's carbon footprint annually to the Carbon Disclosure Project.
- Use low–volatile organic compound (VOC) materials for all flooring, adhesives, sealants, paints and coatings, ceilings, and wall systems.
- Plant a minimum of 145 shade trees as close as 15 feet to the west property line and 18 feet to the south property line.

Energy Efficiency and Optimization:

- Use high-efficiency rooftop heating and air conditioning equipment.
- Use a highly reflective white roof membrane to reduce cooling load.
- Install store-based integrated energy management system controls for lighting, refrigeration, heating and cooling equipment, and exhaust fans to ensure energy management over time.
- Use two-lamp, T8 fluorescent lamps and electronic ballasts throughout the store, and motion-sensor lighting in stock rooms.
- Use reevaluated temperature settings, lighting levels, and equipment run times to identify efficiency opportunities.

[4] This threshold was chosen in spite of the fact that the Scoping Plan attributes only 8% of the 2020 predicted emissions inventory to the commercial and residential sector, and allocates only relatively minimal emission reduction obligates to the land use sector (CARB 2008). The only measure particularly aimed at the land use sector—regional transportation-related GHG targets—sets a 5 MMT CO_2E goal, which represents less than 3% of the 169 MMT CO_2E necessary reductions under AB 32 (CARB 2008). By using a significance threshold of 28.5% as specified in AB 32, the project is accordingly assuming a disproportionately high percentage of GHG reductions in relation to the GHG reduction targets assigned by CARB to the land use sector. Additionally, another interpretation of the Scoping Plan is that meeting AB 32's goals would necessitate a 15% reduction from 2008 GHG levels (CARB 2008). For the purpose of being conservative in conducting the environmental analysis, the 28.5% below 2020 business-as-usual scenario has been selected.

- Verify energy efficiencies and identify potential improvements by instituting a "building commissioning" department.

Waste Reduction:

- Manage and recycle construction waste to divert 75% of all construction refuse.
- Use construction materials with a minimum of 10% recycled content, including 50% minimum recycled content in structural steel framing, 20% in joists and joist girders, fly ash in concrete, crushed concrete sub-base in parking lots, and recycled bituminous paving in drive surfaces.
- Utilize regional materials in construction to the extent possible.
- Use wood from Forest Stewardship Council–certified sources for all blocking, framing, and sheathing.

Water:

- Regularly assess and maintain stormwater treatment systems.
- Use low-flow fixtures, reducing water use by 30%.
- Use customized irrigation settings to avoid over watering of landscaping.
- Comply with the local water-efficient landscape requirements.

Transportation/Vehicle Trips:

- Reduce employee vehicle miles traveled (VMT) by following Target's practice of hiring, on average, more than 85% of Target's team members from the immediate area surrounding the store.
- Reduce VMT by redesigning the retail buildings to be closer together in order to encourage people to walk from one store to another within the shopping center.

In addition to the measures list above, the applicant has agreed to implement the following project features into the entire project development:

- Retain approximately 104 existing citrus trees on site along Gless Ranch Road. Plant approximately 646 new trees, including 200 dwarf citrus trees throughout the project site;
- Install special piping and use reclaimed water for landscape irrigation;
- Implement energy conservation design features that would result in the project exceeding the 2008 Title 24 requirements by a minimum of 15%;
- Incorporate the City's Transportation Demand Management Regulations (Chapter 19.880 of the City's Municipal Code) to provide regulations to protect the public health, safety and welfare by reducing air pollution caused by vehicle trips and vehicle miles traveled. The applicant will

incorporate a combination of the following methods to its trip reduction plans to help achieve the required vehicle reduction targets:

- Alternative work schedules/flex-time;
- Preferential parking for carpool vehicles;
- Bicycle parking and bike facilities;
- Bus stop improvements;
- Local transportation management and roadway improvements;
- Contributions to funds for regional facilities such as park-and-ride lots, multi-modal transportation centers, satellite work centers, etc.; and
- On-site amenities such as cafeterias, restaurants, automated teller machines and other services that would eliminate the need for additional trips.

4.6.4 Environmental Impacts before Mitigation

<u>Threshold:</u> Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Emissions

Construction of the proposed project would result in GHG emissions, which are primarily associated with use of off-road construction equipment and on-road construction and worker vehicles. The CalEEMod model, Version 2011.1.1, available online (www.caleemod.com), was used to calculate the annual CO_2 emissions based on the construction scenario described in Section 4.3, Air Quality. On-site sources include off-road equipment; off-site sources include hauling and vendor trucks and worker vehicles. Table 4.6-1, Estimated Annual Construction Greenhouse Gas Emissions, presents construction emissions for the proposed project in the year 2012 from on-site and off-site emission sources.

Table 4.6-1
Estimated Annual Construction Greenhouse Gas Emissions

	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
On-Site	1,002	0.12	0.00	1,005
Off-Site	581	0.01	0.00	581
Total	**1,583**	**0.14**	**0.00**	**1,586**

Notes: See Appendix C for complete results.
MT CO_2 – metric tons carbon dioxide
MT CH_4 – metric tons methane
MT N_2O – metric tons nitrogen dioxide
MT CO_2E – metric tons carbon dioxide equivalent

As shown in Table 4.6-1, the estimated total GHG emissions during construction would be 1,586 MT CO_2E in the year 2012. Additional details regarding these calculations are found in Appendix C.

Carbon sequestration is the uptake and storage of atmospheric carbon; trees and plants, for example, absorb carbon dioxide, release the oxygen and store the carbon. GHG calculations also include the one-time loss of sequestered carbon resulting from conversion of existing vegetation types (i.e., orange trees) to developed uses. For this project, it is assumed that the existing orange trees provide natural carbon sequestration. Calculation of the one-time loss of sequestered carbon in CalEEMod is the product of the converted acreage value and the CO_2 content value for each land use type (vegetation community). The model used an initial vegetation coverage area of 40 acres and assumed 1.04 acres of existing orange and other trees will be retained and incorporated into the project design. A custom value for the CO_2 content of citrus trees was calculated and incorporated into the CalEEMod(see Appendix C). The loss of sequestered carbon due to removal of the citrus trees is shown in Table 4.6-2.

The project applicant will plant 646 new trees around the perimeter and throughout the project site. CalEEMod estimates the carbon sequestration associated with planting new trees. The new carbon sequestration is shown in Table 4.6-2.

Table 4.6-2
Carbon Sequestration

	MT CO_2
Loss of Sequestered Carbon	1,556
New Carbon Sequestration	457

Note: See Appendix C for complete results.

Operational Impacts

Operation of the proposed project would result in GHG emissions from the following sources: 1) energy use (natural gas and generation of electricity consumed by the project); 2) mobile sources/vehicular traffic generated by customers of the Gless Ranch, project employees, and delivery trucks; 3) solid waste generation; and 4) generation of electricity associated with water supply and treatment as well as wastewater treatment;. Annual GHG emissions from these sources were estimated using CalEEMod. Annual electricity emissions were estimated using the emission factors for Riverside Public Utilities, which would provide electricity for the project. Project sustainable design features listed in Section 4.6.3 above would reduce GHG emissions associated with energy use; although the majority of these measures cannot be quantified by CalEEMod due to the lack of sufficient design information at the present time, the project would exceed California Code of Regulations Title 24 energy efficiency standards by 15%. In addition, the project would utilize reclaimed water for 100% of outdoor water use. Exceeding Title 24 by 15% for the entire project and use of reclaimed water on the project site are project features that were included in CalEEMod and emission reductions associated with both of these

measures are reflected in the operational emission estimates provided in Table 4.6-3, below. It is assumed that the first year of project operation would be 2013.

The estimated operational GHG emissions from electricity usage, motor vehicles, solid waste generation, water consumption, and wastewater treatment associated with the proposed project are shown in Table 4.6-3, Estimated Operational Greenhouse Gas Emissions.

Table 4.6-3
Estimated Operational Greenhouse Gas Emissions
at Project Buildout (2013)

	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
Energy (Natural Gas and Electricity)	3,846	0.08	0.03	3,857
Mobile Sources	15,025	0.71	0.00	15,039
Solid Waste	90	5.29	0.00	201
Water Supply and Wastewater	151	0.00	0.02	156
Total	**19,133**	**6.08**	**0.05**	**19,253**

Note: See Appendix C for complete results.

As shown in Table 4.6-3, estimated annual project-generated GHG emissions at full buildout in 2013, incorporating two project features which reduce emissions (exceeding Title 24 by 15% over the entire project and use of reclaimed water for landscape irrigation), would be approximately 19,253 MT CO_2E per year as a result of project operations.

Analysis of Factors and Features That Will Reduce the Project's GHG Emissions

Vehicles traveling to and from the project site would be the primary source of project-generated GHG emissions. To reduce VMT by future project employees, Target and other retail stores would make it a goal to hire, on average, more than 85% of employees from the immediate area surrounding the center. Because the proposed Gless Ranch project's anticipated tenants include a Target store, a home improvement center, restaurants, tire center, offices, bank, and various retail stores, it would provide multiple services within the same shopping center, thus reducing VMT that would otherwise potentially result from travel to multiple shopping sites.

It should be noted that many do not consider traffic associated with new commercial or retail and existing residences to be "new" trips. This traffic already exists from the existing residences, and the construction of new commercial or retail uses does not increase traffic; rather, it displaces the trips from another area. Similarly, one component of SB 375 recognizes that the current traffic models inaccurately assume that every trip associated with a development project is new. SB 375 requires the California Transportation Commission to develop guidelines for traffic models so that they more accurately account for emissions (Gov't. Code § 14522.1). With the goal of better recognizing trip "transfers," as opposed to trip "creation," the new traffic model must, for example, address relationships

between a project and complementary land uses. Accordingly, while the current traffic models assume that all trips associated with the project are new, in fact, many of these trips will merely be transferred from other areas.

Moreover, the implementation of the project may reduce vehicle miles traveled. There are four Target stores located within 12 miles of the project site: three in the City of Riverside, located at 2755 Canyon Springs Parkway (approximately 7.5 miles northeast of the project site), 3333 Arlington Avenue (approximately 7 miles northwest of the project site), and 3520 Tyler Street (approximately 10 miles west of the project site), and one in Moreno Valley, located at 27100 Eucalyptus Avenue (approximately 12 miles northeast of the project site). The closest Target store to the south of the proposed project is located in Menifee, at 30340 Haun Road, approximately 19 miles south of the project site. In addition to residents located within the project vicinity, including the Woodcrest and Orangecrest communities, the proposed Target center would serve neighborhoods located south of the project area, including city of Perris residences that would be closer to the proposed Target than the existing Target in Menifee. Furthermore, residential development is concentrated near the proposed Gless Ranch; thus, a relatively large population would be served by the proposed Target in comparison to less dense areas in Riverside County. As such, it is reasonable to assume that the proposed retail center could potentially result in a reduction in VMT by future customers that would otherwise be traveling to other Target or other retail stores located farther away.

Extensive bus service throughout the City is provided by the Riverside Transit Agency (RTA). The proposed project includes a proposed bus stop along Van Buren Boulevard (RTA 2010). Proposed bicycle racks in the proposed project will be reviewed as part of the City's Design Review process. The City also has a Bicycle Master Plan that serves to develop a feasible plan for an interconnected on- and off-street bicycle lane network throughout the City. The proposed project includes a bike lane along Van Buren Boulevard that will tie into the existing bike route. In addition, the project will comply with the City's Transportation Demand Management Regulations as described in Section 4.6.3 above.

The proposed project would also incorporate design strategies that would reduce GHG emissions generated by project energy use (natural gas and electricity) as stated in Section 4.6.3 above. For instance, the project will incorporate design strategies that would reduce energy use by exceeding the California Code of Regulations Title 24 energy efficiency standards by 15%. The corresponding GHG emission reductions are reflected in the estimated emissions in Table 4.6-3.

To reduce water demand, the proposed project would use low-flow fixtures, reducing water use by 30%. In addition, the project would comply with the local water-efficient landscape requirements and use customized irrigation settings to avoid over watering of landscaping. As stated above, the project would utilize reclaimed water for 100% of outdoor water use. These sustainable design features would reduce water demand and associated energy consumption.

Operational Impacts Compared to Existing Conditions

As shown in Tables 4.6-1 and 4.6-3, the proposed project would contribute to the overall production of GHG emissions during construction and operation, as well as the loss of sequestered carbon by removal of the citrus trees as shown in Table 4.6-2. Accordingly, the proposed project would result in an increase in GHG emissions relative to existing conditions. The existing condition of the operating orange grove does result in substantial GHG emissions related to vehicle trips from customers using the citrus stand, vehicle trips related to the trucks hauling oranges after harvest as well as maintenance and worker trips. For the purpose of this analysis, the existing GHG emissions were conservatively assumed to be zero.***Operational Impacts Compared to Business as Usual***

In addition to the comparison to existing conditions, the following discussion compares the project's operational GHG emissions under two scenarios: (1) business as usual and (2) as proposed along with implementation of selected statewide GHG reduction measures. Both scenarios evaluate the emissions in 2020, rather than at full buildout, because that is the target year for the state to achieve 1990 emission levels, which is a goal of AB 32. Furthermore, several of the statewide measures that are assumed to reduce the project's GHG emissions would not be fully implemented until 2020. For example, in the project buildout year of 2013, the Low Carbon Fuel Standard will have resulted in little reduction in motor vehicle emissions.

The estimated GHG emissions under the business-as-usual scenario associated with motor vehicles, area sources, electrical generation, water supply and wastewater, and solid waste corresponding to the project's operations in 2020 are shown below in Table 4.6-4. This scenario assumes that the following conditions and are consistent with the definition of business as usual in the Scoping Plan:

- No implementation of AB 1493 ("Pavley") motor vehicle standards for automobiles and light-duty trucks, although fuel efficiency would reflect the fleet average efficiency as assumed by CalEEMod
- No implementation of the Low Carbon Fuel Standard for motor vehicle fuels
- Potable water would be used for the project's landscape irrigation demand
- Project design would comply with the 2005 Title 24 standards
- Riverside Public Utilities would provide electricity of which 13% is obtained from renewable energy sources as occurred in 2006 (Riverside Public Utilities 2006).

Table 4.6-4 also shows the estimated GHG emissions for the proposed project scenario in 2020. Under this scenario, the following GHG measures would occur:

- The motor vehicle fleet would include newer vehicles reflecting implementation of Pavley motor vehicle standards for automobiles and light-duty trucks as calculated by CalEEMod

- Motor vehicles would use fuels meeting the Low Carbon Fuel Standard for motor vehicle fuels that would reduce the "carbon intensity" by 10% relative to current fuels as calculated by CalEEMod
- Reclaimed water would be used for the project's landscape irrigation demand with an associated reduction in use of electricity for water supplied to the project site
- Project design measures would be implemented that achieve 15% beyond the 2008 Title 24 standards that would reduce electricity and natural gas usage.
- Riverside Public Utilities would provide electricity of which 33% is obtained from renewable energy sources in compliance with SB X1 2, resulting in a 23% reduction in CO_2 emissions relative to the level assumed in the business as usual scenario.

Additional detail regarding these calculations can be found in Appendix C. The estimated GHG emissions would be 20,548 MT CO_2E per year under the business-as-usual scenario, and 15,998 MT CO_2E per year with the project features and statewide GHG reduction measures. As indicated in Table 4.6-4, implementation of the GHG reduction measures would reduce GHG emissions by 22.1% relative to business as usual.

Table 4.6-4
Estimated Project GHG Emissions Compared to Business as Usual in 2020

Source	GHG Emissions Business As Usual (MT CO_2E)	GHG Emissions with GHG Reduction Measures (MT CO_2E)	Percent Reduction
Energy (Natural Gas and Electricity)	4,080	2,984	26.9%
Mobile Sources	16,085	12,692	21.1%
Solid Waste	201	201	0.0%
Water Supply and Wastewater	181	121	33.3%
Total	**20,548***	**15,998****	**22.1%****

Notes: See Appendix C for complete results.
*Total differs due to rounding.
**As discussed above, project design features listed in Section 4.6.3 will reduce the project's GHG emissions. However, the majority of these measures cannot be quantified by CalEEMod at this time. For example, while Target's design features include several waste reduction practices, it is not possible to quantify the corresponding reduction in GHG emissions at this time. Accordingly, the calculations above only take GHG reduction credit for the project's exceedance of Title 24 by 15% and use of reclaimed water.

As discussed, the proposed project would incorporate project design features that would conserve energy and potable water. As well, several statewide GHG reduction measures would reduce GHG emissions associated with motor vehicles and electrical generation over time. The benefits of these measures are compared to the GHG emissions that would be generated under a business-as-usual scenario. As shown in Table 4.6-4, the proposed project along with implementation of the statewide

measures would result in a 22.1% reduction compared to business-as-usual, but it would not achieve a 28.5% reduction to meet the goal of AB 32. Because the vehicle related emissions are such a large proportion of the total emissions, it is not possible to achieve the 28.5% reduction below BAU.

Conclusion

As stated previously, the proposed project's contribution to global GHG emissions and the resultant effect on global climate should be evaluated on a cumulative basis. Under CEQA, a project would have a significant cumulative impact caused by the combined impact of past, present, and probable future projects if its incremental impact represents a "cumulatively considerable" contribution to such cumulative impacts (CEQA Guidelines Section 15064(h)). The proposed project would generate GHG emissions that contribute to potential cumulative impacts of GHG emissions on climate change.

There are several reasons why the project's contribution to climate change could be considered not cumulatively considerable, including the following:

1) there are no established or adopted numeric thresholds for greenhouse gases in the SCAQMD;

2) the project has incorporated into its design numerous measures that will reduce GHG emissions during construction and operation (many of which could not be quantified at this time); 3) scientific uncertainty remains regarding the significance on a global scale of a project's individual and cumulative effects on climate change; and

4) the VMT from the project will be less than what has been quantified herein since (i) it is reasonable to assume local residents surrounding the site will either walk, ride bicycles, or take public transportation to the site and (ii) customers will take shorter vehicle trips to visit the Target or other uses included in the Project compared to existing trips, which is consistent with the concept that trips will actually be transferred, rather than created, by the project.

Nevertheless, vehicles traveling to and from the project site would be the primary source of project-generated GHG emissions. Because the vehicle related emissions are such a large proportion of the total emissions, it is not possible to achieve the 28.5% reduction below BAU. While the project has incorporated various measures to reduce vehicle trips including local hiring policies, public transportation and other alternative mode of transportation improvements, and the incorporation of TDM measures, the emissions from vehicle exhaust are controlled by the state and federal governments and are outside the control of the project applicant and the City. Similarly, the City has no jurisdiction to control the climate change impacts of projects outside its boundaries. So long as levels of GHG emissions in the atmosphere are generally at levels that create adverse impacts (i.e., climate change), the emissions of a particular project, even if not significant in terms of thresholds, may nonetheless contribute to an adverse, unavoidable impact because other projects do not meet such standards and because other actors (e.g., state and federal government actors) may not take action to reduce

emissions from mobile sources. The degree to which a project's contribution to a cumulative impact is considered "cumulatively considerable" is necessarily relative in terms of the size and impacts of a project or development. While no numerical thresholds for GHG emissions have been established by OPR, CARB, or SCAQMD, it is possible that if a significance threshold were adopted (e.g., the low numerical threshold proposed by SCAQMD), the project's vehicle-related emissions would exceed the threshold due to the scale or the proposed project, and in comparison to the existing conditions.

Given the size of the project, the project's anticipated emissions in comparison to the existing conditions as well as the business as usual scenario, the current status of climate change science and regulations and the City's inability to address mobile source emissions, to be conservative, the City has determined that the project will have a cumulatively considerable contribution and hence a cumulatively significant impact in terms of climate change.

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

The City of Riverside has not adopted a GHG reduction plan, as specified in California Code of Regulations, Title 14, Section 15183.5(b), that would apply to the GHG emissions associated with the proposed project. At this time, no mandatory GHG regulations or finalized agency guidelines would apply to implementation of this project, and no conflict with a local applicable plan would occur.

On the statewide level, the plan related to GHG emission reductions that the project can address is the CARB's Scoping Plan (CARB 2008), which established the state's framework for meeting the goals of AB 32. Many of the Scoping Plan measures that have been or will be adopted will reduce GHG emissions from all development projects and their users in California. For example, adoption of the Low Carbon Fuel Standard and more stringent energy conservation standards would apply to all motor vehicle users and owners of homes and commercial properties, including those of the proposed project. Given that the GHG reduction goal of AB 32 (i.e., reduction of emissions to 1990 levels by 2020) would require a statewide reduction of 28.5% from "business as usual" (i.e., the emissions that would occur in the absence of any regulation of GHG emissions), a large portion of a specific project's GHG emission reductions will result from statewide measures as discussed previously. Nonetheless, each development project should incorporate additional measures intended to achieve the goals of AB 32.

In an effort to follow the goals of AB 32, the proposed project would incorporate several design features that reduce indirect emissions of GHGs by conserving energy and water that would otherwise be consumed by the proposed project, and it would reduce the length of vehicle trips by virtue of its location. By locating commercial retail uses and taking advantage of customers and job opportunities within proximity to the existing residential development surrounding the site, motor vehicle trips and lengths and their associated GHG emissions would be reduced relative to a project farther from the

complementary residential land uses. Additionally, there are on-site retail uses, such as restaurants, a bank, and other services, which would potentially reduce off-site trips by the tenants' employees and customers. Specifically, it would be expected that neighbors of the project could either walk, ride bicycles, or take shorter vehicle trips than taking longer trips to similar uses farther away.

Sustainability features that will be incorporated into the project include, exceeding Title 24 standards by 15%, and the use of reclaimed water for irrigation. These measures would help reduce natural gas and electrical usage and conserve water, all of which would reduce the proposed project's direct and indirect GHG emissions. Implementation of these design features would likely result in reductions in the GHG emissions from natural gas and electrical usage as demonstrated in Table 4.6-4. However, the emission reductions due to most design features (e.g., an energy management system and high-efficiency lighting) cannot be quantified because the description of these features at this time does not provide sufficient detail to compute the actual reductions in natural gas and electrical usage in CalEEMod.

As stated previously, the Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32. The Scoping Plan recommendations serve as statewide strategies to reduce the state's existing GHG emissions and proposed project's contributions. Although a framework for the adoption of specific regulations and measures, the Scoping Plan is the current state's plan to reduce GHG emissions. Table 4.6-5, Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies, highlights measures that have or will be developed under the Scoping Plan and that would be applicable to the proposed project or its users. The proposed project's consistency with the applicable Scoping Plan measures is assessed in Table 4.6-5.

Table 4.6-5
Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Pavley Motor Vehicle Standards (AB 1493)	T-1	The project's employees and customers would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Limit High GWP Use in Consumer Products	H-4	The project's employees and customers would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Motor Vehicle Air Conditioning Systems – Reduction from Non-Professional Servicing	H-1	The project's employees and customers would be prohibited from performing air conditioning repairs and required to use professional servicing.
Tire Pressure Program	T-4	Motor vehicles driven by the project's employees and customers and employees would maintain proper tire pressure when their vehicles are serviced.
Low Carbon Fuel Standard	T-2	Motor vehicles driven by project's employees and customers and employees would use compliant fuels in the future.

Table 4.6-5
Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Water Use Efficiency	W-1	The project includes measures to minimize water use and maximize efficiency.
Green Buildings	GB-1	The project will be required to be constructed in compliance with state or local green building standards in effect at the time of building construction.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	Motor vehicles driven by the project's employees and customers would comply with the leak test requirements during smog checks.
Renewable Portfolios Standard (33% by 2020)	E-3	The electricity used by businesses in the proposed project will benefit from reduced GHG emissions resulting from increased use of renewable energy sources.
Energy Efficiency Measures (Electricity)	E-1	The project will comply with energy efficiency standards for electrical appliances and other devices at the time of building construction.
Energy Efficiency (Natural Gas)	CR-1	The project will comply with energy efficiency standards for natural gas appliances and other devices at the time of building construction.
Greening New Residential and Commercial Construction	GB-1	The project's buildings would meet green building standards that are in effect at the time of design and construction.
Greening Existing Homes and Commercial Buildings	GB-1	The proposed project's buildings would meet retrofit standards when they become effective.

Source: CARB 2010.

In addition to the strategies being developed under the Scoping Plan, the Attorney General and others have recommended mitigation measures that can be applied to a project to reduce its GHG contribution. The Attorney General's list (Office of the California Attorney General 2010) includes many of project design features. The applicable mitigation measures recommended by the Attorney General and the respective project design features are shown in Table 4.6-6, Project Consistency with the Attorney General's Mitigation Measures. As shown in Table 4.6-6, the project design features would accomplish many of the measures recommended by the Attorney General.

Table 4.6-6
Project Consistency with the Attorney General's Suggested Mitigation Measures

Suggested Mitigation Measures	Project Consistency
Energy Efficiency	
Incorporate green building practices and design elements.	The project will use construction materials with a minimum of 10% recycled content, including 50% minimum in structure steel framing, 20% in joists and joist girders, fly ash in concrete, crushed concrete sub-base in parking lots, and recycled bituminous paving in drive surfaces. The project will use wood from Forest Stewardship Council–certified sources. The project will utilize regional materials in construction to the extent possible.

Table 4.6-6
Project Consistency with the Attorney General's Suggested Mitigation Measures

Suggested Mitigation Measures	Project Consistency
Meet recognized green building and energy efficiency benchmarks.	The proposed project would exceed California Code of Regulations Title 24 energy efficiency standards by 15%.
Install energy-efficient lighting (e.g., light emitting diodes (LEDs)), heating and cooling systems, appliances, equipment, and control systems.	The project will use high-efficiency rooftop heating and air conditioning equipment.
Install light colored "cool" roofs and cool pavements.	The project will use highly-reflective white roof membrane.
Install efficient lighting, (including LEDs) for traffic, street and other outdoor lighting.	LED or other high efficiency lighting be used in outdoor areas (e.g., signage, parking lots)
Transportation	
Incorporate bicycle lanes, routes, and facilities into street systems, new subdivisions, and large developments.	The project includes a bike lane along Van Buren Boulevard that will tie into the existing bike route.
Water Conservation and Efficiency	
Incorporate water-reducing features into building and landscape design.	The project will use low-flow fixtures to reduce water use by 30%.
Create water-efficient landscapes.	The project will comply with local water-efficient landscape requirements.
Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls and use water-efficient irrigation methods.	The project will use customized irrigation settings to avoid overwatering of landscape.
Design buildings to be water-efficient. Install water-efficient fixtures and appliances.	The project will use low-flow fixtures to reduce water use by 30%.
Solid Waste Measures	
Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).	The project will manage and recycle construction waste to divert 75% of all construction refuse.
Land Use Measures	
Ensure consistency with "smart growth" principles—mixed-use, infill, and higher density projects that provide alternatives to individual vehicle travel and promote the efficient delivery of services and goods.	The project will be located near surrounding residential uses and reduce VMT compared to existing shopping centers.

Source: Office of the California Attorney General 2010.

In August 2010, the California Air Pollution Control Officers Association (CAPCOA) published *Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures* (CAPCOA 2010). This document provides an extensive list of potential GHG mitigation measures and methods by which the GHG emission reductions can be quantified; however, many of them would be only implementable by the users of the proposed project and not enforceable by the City or the applicant. Furthermore, many of the CAPCOA measures apply to residential land uses, and are therefore not applicable for this project. The applicable CAPCOA mitigation measures and the respective project design features are shown in Table 4.6-7, Project Consistency with CAPCOA Mitigation Measures. Again, the proposed project would implement many of the measures listed in the CAPCOA document.

Table 4.6-7
Project Consistency with CAPCOA Mitigation Measures

Mitigation Measures			Project Consistency
Category	*Measure Number*	*Strategy*	
Energy			
Building Energy Use	BE-1	Buildings Exceed Title 24 Building Envelope Energy Efficiency Standards	The proposed project would exceed Title 24 energy efficiency standards by 15%.
	BE-2	Install Programmable Thermostat Timers	The project tenants will install integrated energy management systems.
	BE-3	Obtain Third-Party Heating, Ventilation, and Air Conditioning (HVAC) Commissioning and Verification of Energy Savings	The project will verify energy efficiencies and identify potential improvements by instituting a building commissioning department.
Lighting	LE-1	Install Higher Efficacy Public Street and Area Lighting	LED or other high efficiency lighting be used in outdoor areas (e.g., signage, parking lots)
Transportation			
Land Use / Location	LUT-2	Increase Location Efficiency	The project will be located near surrounding residential uses and reduce VMT compared to existing shopping centers.
	LUT-8	Locate Project near Bike Path/Bike Lane	The project includes a bike lane along Van Buren Boulevard that will tie into the existing bike route.
Water			
Water Use	WUW-1	Install Low-Flow Water Fixtures	The project will use low-flow fixtures to reduce water use by 30%.
	WUW-3	Design Water-Efficient Landscapes	The project will comply with local water-efficient landscape requirements.
	WUW-4	Use Water-Efficient Landscape Irrigation Systems	The project will use customized irrigation settings to avoid overwatering of landscape.
Solid Waste			
Solid Waste	SW-2	Recycle Demolished Construction Material	The project will manage and recycle construction waste to divert 75% of all construction refuse.
Miscellaneous			
Miscellaneous	MISC-3	Use Local and Sustainable Building Materials	The project will use construction materials with a minimum of 10% recycled content, including 50% minimum in structure steel framing, 20% in joists and joist girders, fly ash in concrete, crushed concrete sub-base in parking lots, and recycled bituminous paving in drive surfaces. The project will use wood from Forest Stewardship Council–certified sources. The project will utilize regional materials in construction to the extent possible.

Source: CAPCOA 2010.

Based on the analysis in Tables 4.6-5, 4.6-6, and 4.6-7, the proposed project would be consistent with the strategies and measures in the Scoping Plan, as well as mitigation measures suggested by the Attorney General and CAPCOA. In light of the project's consistency with the Scoping Plan and other suggested measures through its design features, it is concluded that the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

4.6.5 Mitigation Measures

Mitigation measures presented in Section 4.3, Air Quality of this EIR, specifically MM AQ-2 and AQ-4, which would not only reduce criteria air pollutant emissions, but these measures would also reduce GHG emissions associated with construction equipment and vehicles and operational vehicle use. These measures are repeated here.

MM GHG-1: The following measures shall be adhered to during project grading and construction to reduce VOC and NO_x from construction equipment:

a) Heavy-duty diesel-powered construction equipment rated at greater than 50 horsepower shall be equipped with Tier 2 or better diesel engines.

b) The engine size of construction equipment shall be the minimum size.

c) The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest number is operating at any one time.

d) Construction equipment shall be maintained in tune per the manufacturer's specifications.

e) Catalytic converters shall be installed on gasoline-powered equipment over 50 horsepower.

f) Electric equipment shall be utilized in lieu of diesel-powered equipment, where feasible.

MM GHG-2: In order to address long-term air quality emissions associated with project operation, the applicant shall incorporate the following energy conservation measures into project building plans:

- The project will implement energy conservation design features that would result in exceeding the 2008 Title 24 requirements by a minimum of 15%. Note that this measure applies to the project as a whole rather than to each specific building.

Other than the measures listed above which can be implemented and enforced by the City, there are no other enforceable measures that can address the impacts from motor vehicles, which are the primary sources of greenhouse gas emissions. No additional mitigation measures are recommended.

4.6.6 Environmental Impacts after Mitigation is Incorporated

Along with the discussion of GHG reduction measures discussed in this section, the analyses contained in other sections of this EIR (e.g., air quality, traffic) further demonstrate the substantial GHG reductions that will be implemented by the Project. While applicable to the project's criteria pollutant emissions, Mitigation Measure GHG-1 (AQ-2) would result in a reduction in construction GHG emissions, although the specific reductions cannot be quantified as the effectiveness of these measures is unknown; for example, the use of newer (Tier 2 or newer) off-road equipment may have a slight benefit in terms of fuel economy but the extent to which newer equipment would be used or the extent of the fuel economy improvement compared to that of older equipment is unknown. The effectiveness of Mitigation Measure GHG-2 has been included in the analysis of the proposed project emissions.

As discussed above, the City has considered the following factors in evaluating the project's contribution to climate change: (1) there are no established or adopted numeric thresholds for greenhouse gases in the SCAQMD; (2) the project has incorporated into its design numerous measures that will reduce GHG emissions during construction and operation (many of which could not be quantified at this time); (3) scientific uncertainty remains regarding the significance on a global scale of a project's individual and cumulative effects on climate change; (4) the VMT from the project will be less than what has been quantified herein since (i) it is reasonable to assume local residents surrounding the site will either walk, ride bicycles, or take public transportation to the site and (ii) customers will take shorter vehicle trips to visit the Target or other uses included in the Project compared to existing trips, which is consistent with the concept that trips will actually be transferred, rather than created, by the project.

Nevertheless, vehicles traveling to and from the project site would be the primary source of project-generated GHG emissions. Because the vehicle related emissions are such a large proportion of the total emissions, it is not possible to achieve the 28.5% reduction below BAU. While the project has incorporated various measures to reduce vehicle trips, the emissions from vehicle exhaust are controlled by the state and federal governments and are outside the control of the project and the City. Similarly, the City has no jurisdiction to control the climate change impacts of projects outside its boundaries. So long as levels of GHG emissions in the atmosphere are generally at levels that create adverse impacts (i.e., climate change), the emissions of a particular project, even if not significant in terms of thresholds, may nonetheless contribute to an adverse, unavoidable impact because other projects do not meet such standards and because other actors (e.g., state and federal government actors) may not take action to reduce emissions from mobile sources. The degree to which a project's contribution to a cumulative impact is considered "cumulatively considerable" is necessarily relative in terms of the size and impacts of a project or development. While no numerical thresholds for GHG

emissions have been established by OPR, CARB, or SCAQMD, it is possible that if a significance threshold were adopted (e.g., the low numerical threshold proposed by SCAQMD), the project's vehicle-related emissions would exceed the threshold due to the scale or the proposed project, and in comparison to the existing conditions. **Given the size of the project, the project's anticipated emissions in comparison to the existing conditions as well as the business as usual scenario, the current status of climate change science and regulations and the City's inability to address mobile source emissions, to be conservative, the City has determined that the project will have a cumulatively considerable contribution and hence a cumulatively significant impact in terms of climate change.**

4.6.7 References

California Natural Resources Agency (CNRA). 2009a. Adopted Text of the CEQA Amendments. December 2009. Accessed July 12, 2011. http://www.ceres.ca.gov/ceqa/docs/Adopted_and_Transmitted_Text_of_SB97_CEQA_Guidelines_Amendments.pdf.

CNRA. 2009b. Notice of Public Hearings and Notice of Proposed Amendment of Regulations Implementing the California Environmental Quality Act. Sacramento, CA: CNRA. http://www.ceres.ca.gov/ceqa/docs/Notice_of_Proposed_Action.pdf.

CNRA. 2009c. Final Statement of Reasons for Regulatory Action. December 2009. Accessed October 6, 2011. http://ceres.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf.

CAPCOA (California Air Pollution Control Officers Association). 2008. *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*. January 2008.

CAPCOA. 2010. *Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures*. August 2010. Accessed December 28, 2010. http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

CARB (California Air Resources Board). 2006. *Public Workshop to Discuss Establishing the 1990 Emissions Level and the California 2020 Limit and Developing Regulations to Require Reporting of Greenhouse Gas Emissions*. PowerPoint Slides. Sacramento, California: CARB. December 1, 2006.

CARB. 2007. *California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit*. November 16, 2007. Accessed December 2010. http://www.arb.ca.gov/cc/inventory/1990level/1990level.htm.

CARB. 2008. *Climate Change Plan: A Framework for Change*. December 2008. Accessed September 2011. http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf.

CARB. 2010. *Scoping Plan Measures Implementation Timeline*. October 28, 2010. Accessed December 28, 2010. http://www.arb.ca.gov/cc/scopingplan/sp_measures_implementation_timeline.pdf.

CAT (California Climate Action Team). 2006. *Climate Action Team Report to the Governor and Legislature*. Sacramento, California: California Environmental Protection Agency, California Climate Action Team. March 2006.

Dudek. 2011. *Air Quality Technical Report and Greenhouse Gas Analysis for the Gless Ranch Project*. October 2011.

EPA and NHTSA (U.S. Environmental Protection Agency and National Highway Traffic Safety Administration). 2010. "Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards." Final Rule. EPA–HQ–OAR–2009–0472. NHTSA-2009-0059. Accessed December 2010. http://www.epa.gov/oms/climate/regulations.htm#finalR.

EPA. 2010a. "Glossary of Climate Change Terms." September 8, 2009. Accessed December 2010. http://www.epa.gov/climatechange/glossary.html#Climate_change.

EPA. 2010b. "EPA and NHTSA Finalize Historic National Program to Reduce Greenhouse Gases and Improve Fuel Economy for Cars and Trucks." Regulatory Announcement EPA-420-F-10-014. Office of Transportation and Air Quality. April 2010. Accessed April 22, 2010. http://www.epa.gov/oms/climate/regulations/420f10014.pdf.

EPA. 2010c. Final Rulemaking: Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards. Regulations and Standards – Vehicles and Engines. Accessed April 22, 2010. http://www.epa.gov/otaq/climate/regulations.htm.

OPR (California Governor's Office of Planning and Research). 2008. *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review*. Technical Advisory. Sacramento, California: OPR. June 19, 2008. Accessed February 3, 2009. http://opr.ca.gov/download.php?dl=ceqa/pdfs/june08-ceqa.pdf.

RTA (Riverside Transit Agency). 2010. "Maps & Schedules." Updated September 2010. Accessed November 10, 2010. http://www.riversidetransit.com/bus_info/schedules.htm.

Office of the California Attorney General. 2010. Addressing Climate Change at the Project Level. January 6, 2010.

Riverside Public Utilities. 2006. *Financial Statements 2005–2006*. Annual electric utility statistics report. Accessed September 2011. http://www.riversideca.gov/utilities/pdf/elec/Electric-Financials-2005-06.pdf.

South Coast Air Quality Management District (SCAQMD). 2008. *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans*. December 5, 2008. Accessed October 2011. http://www.aqmd.gov/hb/2008/December/081231a.htm.

SCAQMD. 2010. Greenhouse Gas CEQA Significance Thresholds Working Group. *September 28, 2010 Presentation.*

4.7 Hazards and Hazardous Materials

The focus of the following discussion and analysis, based on the initial study (IS), public scoping session, and Notice of Preparation public comment period, concerns the potentially adverse impacts to the project site being located on a hazardous materials list that could create a hazard to the public or the environment from implementation of the proposed project.

In addition to other documents, the following references were used in the preparation of this section of the draft environmental impact report (DEIR):

- GeoSoils Inc. Preliminary Geotechnical Evaluation and Preliminary Rock Hardness/Rippability Study, December 2, 2008 (see Appendix F).
- GeoSoils Inc. Limited "Phase II" Environmental Site Characterization, October 12, 2007 (see Appendix G).
- City of Riverside. *General Plan Environmental Impact Report (GPEIR) 2025*. Section 5.7 - Hazards and Hazardous Materials. 2007.

4.7.1 Setting

Existing Conditions

The approximately 40-acre project site has been utilized as an orange grove since approximately 1964. The project site supports not only the groves, but also includes a warehouse/workshop building that is used as a packing and storage area as well as an auto shop for servicing ranch vehicles and two mobile homes used as residences for caretakers of the property. Although GeoSoils reports five windmill-type fans are scattered within the project site and are possibly fueled by petroleum-related products, according to the applicant, the windmills are inoperable. There are six aboveground storage tanks (ASTs) also present in the southeast portion of the property near the packing facility. GeoSoils reports four of the tanks contain petroleum products, and the remaining two contain pesticides; all tanks are placed on concrete foundations. Surficial soil staining was observed near the eastern fuel tanks, and petroleum odors were also noted during the Preliminary Geotechnical Evaluation and Preliminary Rock Hardness/Rippability Study and Limited Phase II Environmental Site Characterization conducted by GeoSoils. GeoSoils reports there is also a mobile fuel storage tank located in the general area of the other fuel storage tanks. A fuel dispenser is located in this area, and other containers holding pesticides are located on the project site.

Based on the historic use of the site as agricultural, pesticides and herbicides have most likely been used on the property. GeoSoils reports that it is unlikely that chemical residues from pesticides could be found within the near-surface soils, given that most legal pesticides/herbicides degrade naturally. However, GeoSoils reports pesticides used 20 years ago may be persistent; therefore, there could be

persistent chemicals used on site that are detectable on surface soils. Groundwater levels are reported to be 30 to 75 feet below ground surface and flow in a southwesterly direction.

Related Regulations

Federal

Several federal agencies regulate hazardous materials. These include the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), and the Department of Transportation (DOT). Applicable federal regulations are contained primarily in Titles 10, 29, 40, and 49 of the Code of Federal Regulations (CFR). In particular, Title 49 of the CFR governs the manufacture of packaging and transport containers, packing and repacking, labeling, and the marking of hazardous material transport. Some of the major federal laws and issue areas include the following statutes:

- Resource Conservation and Recovery Act (RCRA) – hazardous waste management
- Hazardous and Solid Waste Amendments Act (HSWA) – hazardous waste management
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – cleanup of contamination
- Superfund Amendments and Reauthorization Act (SARA) – cleanup of contamination
- Emergency Planning and Community Right-to-Know (SARA Title III) – business inventories and emergency response planning
- Hazardous Substances Act – (Codified at 15 U.S.C. §§1261−1278) requires that certain hazardous household products ("hazardous substances") bear cautionary labeling to alert consumers to the potential hazards that those products present and to inform them of the measures they need to protect themselves from those hazards.

The EPA is the primary federal agency responsible for the implementation and enforcement of hazardous materials regulations. In most cases, enforcement of environmental laws and regulations established at the federal level is delegated to state and local environmental regulatory agencies.

State

Primary state agencies with jurisdiction over hazardous chemical materials management are the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB). Other state agencies involved in hazardous materials management are the Department of Industrial Relations (State Occupational Safety and Health Administration (OSHA) implementation), Office of Emergency Services (OES–California Accidental Release Prevention Implementation), California Department of Fish and Game (CDFG), Air Resources Board (ARB), California Department of

Transportation (Caltrans), State Office of Environmental Health Hazard Assessment (OEHHA–Proposition 65 implementation), and the California Integrated Waste Management Board (CIWMB).

The enforcement agencies for hazardous materials transportation regulations are the California Highway Patrol (CHP) and Caltrans. Hazardous materials and waste transporters are responsible for complying with all applicable packaging, labeling, and shipping regulations. South Coast Air Quality Management District (SCAQMD) Rules and Regulations pertain to asbestos abatement (including rule 1403), Construction Safety Orders 1529 (pertaining to asbestos), and 1532.1 (pertaining to lead) from Title 8 of the California Code of Regulations (CCR). Hazardous chemical and biohazardous materials management laws in California include the following statutes:

- Hazardous Materials Management Act – requires that businesses handling or storing certain amounts of hazardous materials prepare a Hazardous Materials Business Plan, which includes an inventory of hazardous materials stored on site (above specified quantities), an emergency response plan, and an employee training program.
- Hazardous Waste Control Act – (California Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100, et seq.) authorizes the DTSC and local certified unified program agencies to regulate facilities that generate or treat hazardous waste.
- Safe Drinking Water and Toxic Enforcement Act of 1986 – (Proposition 65) requires the governor to publish and update, at least annually, a list of chemicals known to the state to cause cancer, birth defects, or other reproductive harm, and to inform citizens about exposures to such chemicals.
- Hazardous Waste Management Planning and Facility Siting – also known as the Tanner Act (Assembly Bill (AB) 2948, 1986), requires counties to prepare, for California DTSC approval, hazardous waste management plans, and prescribes specific public participation activities, which must be carried out during the local land use permit process for siting new or expanding off-site commercial treatment, storage, and disposal facilities.
- Hazardous Materials Storage and Emergency Response – (AB 2185) requires the immediate reporting to local fire departments and OES of any release or threatened release of a hazardous material, regardless of the amount handled by the business.
- California Medical Waste Management Act – (California Health and Safety Code, Sections 117600–118360) establishes procedures for the proper handling, storage, treatment, and transportation of medical waste.
- Land Disposal Restrictions – (CCR, Chapter 18, Title 22) set up by Congress in 1984 for the EPA; ensures that toxic constituents present in hazardous waste are properly treated before hazardous waste is land disposed.

State regulations and agencies pertaining to hazardous materials management and worker safety are described as follows.

California Environmental Protection Agency

The California Environmental Protection Agency (Cal/EPA) has broad jurisdiction over hazardous materials management in the state. Within Cal/EPA, DTSC has primary regulatory responsibility for hazardous waste management and cleanup. Enforcement of regulations has been delegated to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of the Hazardous Waste Control Law.

Along with the DTSC, the RWQCB is responsible for implementing regulations pertaining to management of soil and groundwater investigation and cleanup. RWQCB regulations are contained in Title 27 of the CCR. Additional state regulations applicable to hazardous materials are contained in Title 22 of the CCR. Title 26 of the CCR is a compilation of those sections or titles of the CCR that are applicable to hazardous materials.

Investigation and Cleanup of Contaminated Sites

The oversight of hazardous materials release sites often involves several different agencies that may have overlapping authority and jurisdiction. The DTSC and RWQCB are the two primary state agencies responsible for issues pertaining to hazardous materials release sites. Air quality issues related to remediation and construction at contaminated sites are also subject to federal and state laws and regulations that are administered at the local level.

Investigation and remediation activities that would involve potential disturbance or release of hazardous materials must comply with applicable federal, state, and local hazardous materials laws and regulations. DTSC has developed standards for the investigation of sites where hazardous materials contamination has been identified or could exist based on current or past uses. The standards identify approaches to determine if a release of hazardous wastes/substances exists at a site and delineates the general extent of contamination; estimates the potential threat to public health and/or the environment from the release and provides an indicator of relative risk; determines if an expedited response action is required to reduce an existing or potential threat; completes preliminary project scoping activities to determine data gaps; and identifies possible remedial action strategies to form the basis for development of a site strategy.

Government Code Section 65962.5

Pursuant to Government Code 65962.5, environmental regulatory database lists were reviewed to identify and locate properties with known hazardous substance contamination within the proposed project area (California Government Code, Section 65960 et seq.). Four state agencies are required to provide lists of facilities that have contributed, harbor, or are responsible for environmental

contamination within their jurisdiction. The four state agencies that are required to provide these lists to the Secretary for Environmental Protection include the DTSC, the State Department for Health Services (DHS), the State Water Resources Control Board (SWRCB), and the CIWMB. The Secretary for Environmental Protection then takes each of the four respective agency lists and forms one list, referred to as the Hazardous Waste and Substances Site List – Site Cleanup (Cortese List), which is made available to every city and/or county in California (DTSC 2007).

The DTSC maintains lists of: hazardous waste facilities subject to corrective action pursuant to the Section 25187.5 of the Health and Safety Code, land designated as hazardous waste property or border zone property pursuant to Article 11 of Chapter 6.5 of Division 20 of the Health and Safety Code, information received by DTSC pursuant to Section 25242 of the Health and Safety Code on hazardous waste disposal on public land, sites listed pursuant to Section 25356 of the Health and Safety Code, and sites on the Abandoned Site Assessment Program.

The DHS maintains lists of all public drinking water wells that contain detectable levels of organic contaminants and wells that are subject to special water analysis. The SWRCB maintains lists of unauthorized release reports for underground storage tanks (USTs) pursuant to Section 25295 of the Health and Safety Code, solid waste disposal facilities from which there are a migration of hazardous waste, and all cease-and-desist orders issued after January 1, 1986, concerning hazardous waste discharges. The CIWMB maintains lists of solid waste disposal facilities from which there is a known migration of hazardous waste. The Hazardous Waste and Substances List has been reviewed to identify hazardous sites that may affect the proposed project. A search of available environmental records was conducted by Track Info Services LLC for documented hazardous material sites, in accordance to American Society for Testing and Materials (ASTM) Standard of Practice E 1527-05 (Appendix F, Preliminary Geotechnical Evaluation and Preliminary Rock Hardness/Rippability Study 2008a). The records search was conducted for the project area, and within one mile of the project boundary (see Figure 4.7-1, Government Records Database Search – One-Mile Radius Map). The databases that were searched by Track Info Services are included, with descriptions, in **Table 4.7, Databases Searched**.

Table 4.7, Databases Searched

Federal and State ASTM Standard	Brief Database Description and/or Type of Data Stored in Database
NPL	National Priority List (NPL) The National Priorities List is a list of the worst hazardous waste sites that have been identified by Superfund. Sites are only put on the list after they have been scored using the Hazard Ranking System (HRS) and have been subjected to public

Table 4.7, Databases Searched

Federal and State ASTM Standard	Brief Database Description and/or Type of Data Stored in Database
	comment. Any site on the NPL is eligible for cleanup using Superfund Trust money. A Superfund site is any land in the United States that has been contaminated by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment.
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on NPL, as well as sites that are in the screening and assessment phase for possible inclusion on the NPL.
NFRAP	No Further Remedial Action Plan (NFRAP) CERCLIS Archived Sites Database of archived, designated CERCLA sites for which, to the best of EPA's knowledge, assessment has been completed and has determined no further steps will be taken to list this site on the NPL. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.
RCRA TSD	Resource Conservation and Recovery Information System (RCRA) Treatment, Storage, and Disposal Facilities (TSD) Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to

Table 4.7, Databases Searched

Federal and State ASTM Standard	Brief Database Description and/or Type of Data Stored in Database
	provide information about their activities to state environmental agencies. These agencies, in turn, pass on the information to regional and national EPA offices. This regulation is governed by RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984. Facilities that treat, store, dispose of, or incinerate hazardous waste.
RCRA COR	Resource Conservation and Recovery Information System Sites Database of hazardous waste information contained in RCRAInfo, a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn, pass on the information to regional and national EPA offices. This regulation is governed by RCRA, as amended by the HSWA of 1984. RCRAInfo facilities that have reported violations are subject to corrective actions.
RCRA GEN	RCRAInfo System Generators Database of hazardous waste information contained in the RCRAInfo, a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn, pass on the information to regional and national EPA offices. This regulation is governed by RCRA, as amended by the HSWA of 1984. Facilities that generate or transport hazardous waste or meet other RCRA requirements. LGN – Large Quantity Generators SGN – Small Quantity Generators

Table 4.7, Databases Searched

Federal and State ASTM Standard	Brief Database Description and/or Type of Data Stored in Database
	VGN – Conditionally Exempt Generator. Included are RCRA Administrative Action Tracking System (RAATS) and Compliance Monitoring and Enforcement List (CMEL) facilities.
ERNS	Emergency Response Notification System (ERNS) Database of incidents reported to the National Response Center – These incidents include chemical spills, accidents involving chemicals (such as fires or explosions), oil spills, transportation accidents that involve oil or chemicals, releases of radioactive materials, sightings of oil sheens on bodies of water, terrorist incidents involving chemicals, incidents where illegally dumped chemicals have been found, and drills intended to prepare responders to handle these kinds of incidents. Data since January 2001 have been received from the National Response System database since the EPA no longer maintains this data.
STATE/TRIBAL SITES	SMBRPD / CAL SITES The California DTSC has developed an electronic database system with information about sites that are known to be contaminated with hazardous substances as well as information about uncharacterized properties where further studies may reveal problems. The Site Mitigation and Brownfields Reuse Program Database (SMBRPD), also known as CalSites, is used primarily by DTSC's staff as an informational tool to evaluate and track activities at properties that may have been affected by the release of hazardous substances. The SMBRPD displays information in six categories. The categories are: 1. CalSites Properties (CS) 2. School Property Evaluation Program Properties (SCH) 3. Voluntary Cleanup Program Properties (VCP)

Table 4.7, Databases Searched

Federal and State ASTM Standard	Brief Database Description and/or Type of Data Stored in Database
	4. Unconfirmed Properties Needing Further Evaluation (RFE) Please Note: First Search Reports list the above sites as DB Type (STATE). 5. Unconfirmed Properties Referred to Another Local or State Agency (REF) 6. Properties where a No Further Action Determination has been made (NFA) CORTESE LIST - Pursuant to Government Code Section 65962.5, the Hazardous Waste and Substances Sites List has been compiled by Cal/EPA, Hazardous Materials Data Management Program. The Cal/EPA DTSC compiles information from subsets of the following databases to make up the Cortese list (DTSC 2007): 1. The DTSC; contaminated or potentially contaminated hazardous waste sites listed in the CalSites database (formerly known as ASPIS) are included. 2. The California SWRCB; listing of Leaking USTs are included (LTANK) 3. The CIWMB; Sanitary Landfills that have evidence of groundwater contamination or known migration of hazardous materials (formerly WB-LF, now AB3750).
STATE SPILLS 90	SLIC REGIONS 1 – 9 The California RWQCB maintains a report of sites that have records of spills, leaks, investigation, and cleanups.
STATE/TRIBAL SWL	SWIS SOLID WASTE INFORMATION SYSTEM The CIWMB maintains a database of solid waste facilities, operations, and disposal sites throughout the state of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites. WMUDS – The SWRCB maintained the Waste

Table 4.7, Databases Searched

Federal and State ASTM Standard	Brief Database Description and/or Type of Data Stored in Database
	Management Unit Database System (WMUDS). It is no longer updated. It tracked management units for several regulatory programs related to waste management and its potential impact on groundwater. Two of these programs (SWAT & TPCA) are no longer ongoing regulatory programs as described below. Chapter 15 (SC15) is still an ongoing regulatory program, and information is updated periodically but not to the WMUDS database. The WMUDS System contains information from the following agency databases: Facility, Waste Management Unit (WMU), Waste Discharger System (WDS), SWAT, Chapter 15, TPCA, RCRA, Inspections, Violations, and Enforcements.
STATE/TRIBAL UST/AST	Aboveground Storage Tanks (ASTs) Listing The Aboveground Petroleum Storage Act became State Law effective January 1, 1990. In general, the law requires owners or operators of ASTs with petroleum products to file a storage statement and pay a fee by July 1, 1990, and every 2 years thereafter; take specific action to prevent spills; and in certain instances, implement a groundwater monitoring program. This law does not apply to that portion of a tank facility associated with the production of oil and regulated by the State Division of Oil and Gas of the Department of Conservation. State Registered USTs – Until 1994 the SWRCB maintained a database of registered USTs statewide referred to as the SWEEPS System. The SWEEPS UST information was integrated with the Cal/EPA's Facility Index System database (FIDS), which is a master index of information from numerous California agency environmental databases. It was last updated in 1994. Track Info Services included the UST information from the FIDS database in its First Search reports for historical purposes to help its clients identify where tanks may possibly have existed. Indian Lands UST List – This is a listing of USTs currently on Indian Lands under federal jurisdiction.

Table 4.7, Databases Searched

Federal and State ASTM Standard	Brief Database Description and/or Type of Data Stored in Database
	California Indian Land USTS are administered by U.S. EPA, Region 9.
STATE/TRIBAL LEAKING UST	LUSTIS – The SWRCB maintains a database of sites with confirmed or unconfirmed leaking USTs. Information for this database is collected from the state regional boards quarterly and integrated with this database.

Source: Appendix D of Phase I Environmental Site Assessment, Environmental First Search Report (see Appendix H to this DEIR)

The DTSC also tracks school sites, which appear on some of its lists. Sites identified within one mile of the proposed project were evaluated for their potential to be encountered and/or unearthed during construction of Gless Ranch. Four mapped risk sites and four unmapped risk sites were identified within the database search area as shown on Figure 4.7-1. Track Info Services LLC's full report listing all of the identified sites is included as Appendix H to this DEIR.

Based on the Phase I Environmental Site Assessment prepared for the project site, GeoSoils reported four mapped risk sites which include March Air Force Base, Earhart Middle School, Benjamin Franklin Elementary School, and Elementary School No. 32. Based on their location, distance and cross or down groundwater gradient, depth to groundwater, and/or their status, GeoSoils determined that three of the four risk sites do not present a significant potential to environmentally affect the subject property. The March Air Force Base has a low potential to environmentally affect the groundwater and soil beneath the subject property. The four unmapped risk sites are located greater than one mile from the project site. Based on the location of the unmapped risk sites being greater than one mile from the project site, GeoSoils determined that these unmapped risk sites do not present a significant potential to environmentally affect the project site (GeoSoils 2008b).

A number of federal, state, and local laws have been enacted to regulate the management of hazardous materials. Implementation of these laws and management of hazardous materials are regulated independently of the California Environmental Quality Act (CEQA) process through programs administered by various agencies at the federal, state, and local levels. An overview of the key hazardous materials laws and regulations that could apply to the proposed project is provided below.

Local

The City of Riverside General Plan 2025 Final Program Environmental Impact Report (FPEIR) identifies hazardous waste sites as shown on Figure 4.7-2. There are seven CERCLIS sites in the City of Riverside (City); of the seven CERCLIS sites, one is on the National Priority List. The project site is not identified as a hazardous waste site (see Figure 4.7-2).

4.7.2 Thresholds of Significance

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts. Based on the IS and Appendix G, the project could have a significant impact on hazards and hazardous materials if the proposed project would:

- Be located on a site that 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.

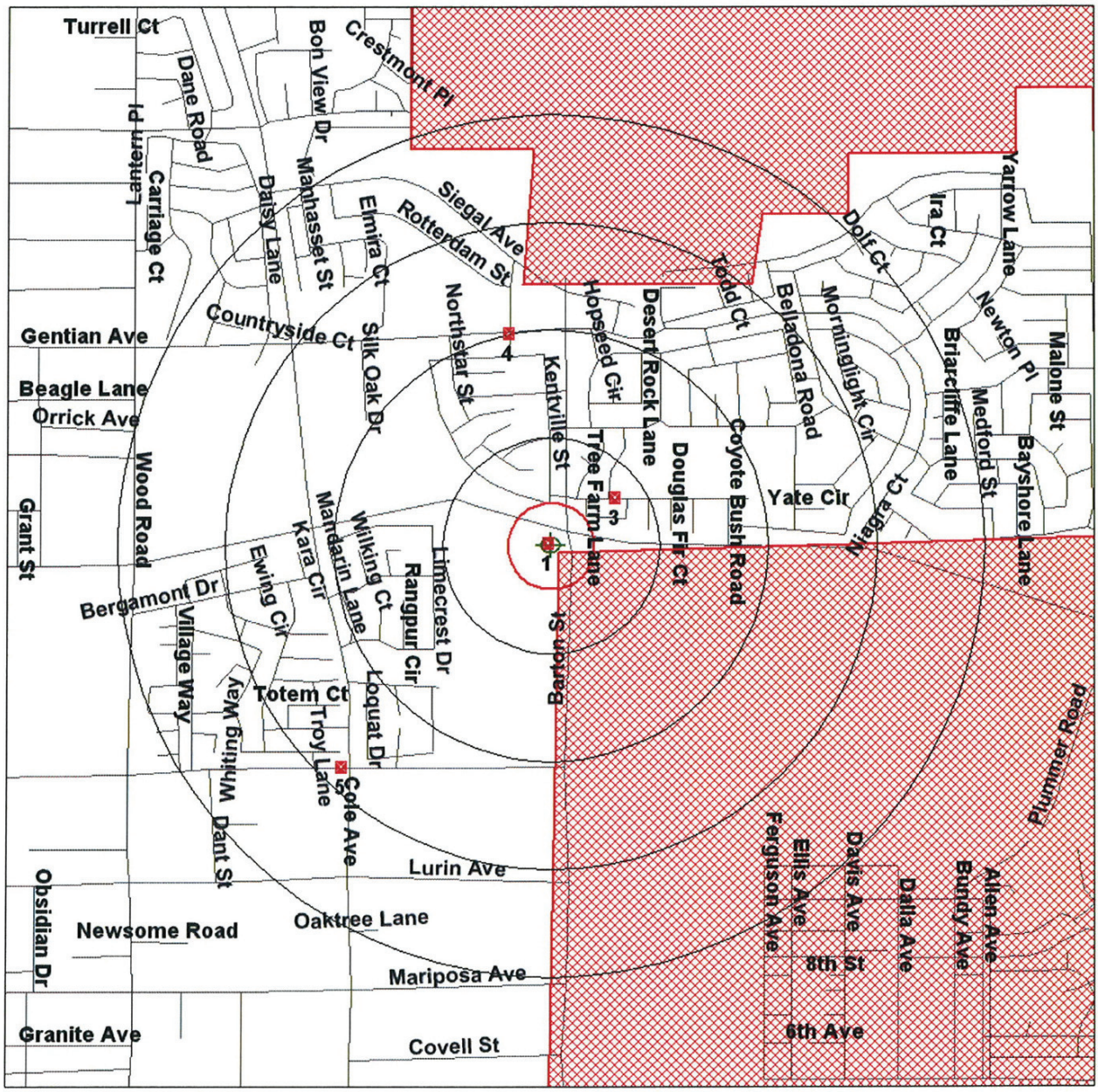
4.7.3 Project Elements that Can Reduce Impacts

The proposed project is a commercial center that will not utilize existing sources of groundwater for drinking water. Although some of the commercial uses in the proposed project may include selling or using small quantities of products that may be considered hazardous materials or wastes, the proposed uses on site will not use quantities of hazardous waste or substances that would pose a risk to the public. Additionally, any tenant that uses or transports hazardous materials or wastes is regulated by existing federal, state, and local laws and will be required to comply with such laws. There are no specific project elements that would reduce impacts related to compliance with Government Code Section 65962.5 (California Government Code, Section 65960 et seq.).

4.7.4 Environmental Impacts before Mitigation

<u>Threshold:</u> Be located on a site that 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?

Pursuant to Government Code 65962.5, environmental regulatory database lists were reviewed to identify and locate properties with known hazardous substance contamination within the proposed project area (California Government Code, Section 65960 et seq.). Four state agencies are required to provide lists of facilities that have contributed, harbor, or are responsible for environmental contamination within their jurisdiction.



Source: U.S. Census TIGER Files

Target Site (Latitude: 33.887644 Longitude: -117.314662) .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Railroads .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

DUDEK

6765-01
2011

SOURCE: Environmental FirstSeach 2011

FIGURE 4.7-1

Government Records Database Search - One-Mile Radius Map

GLESS RANCH DEIR

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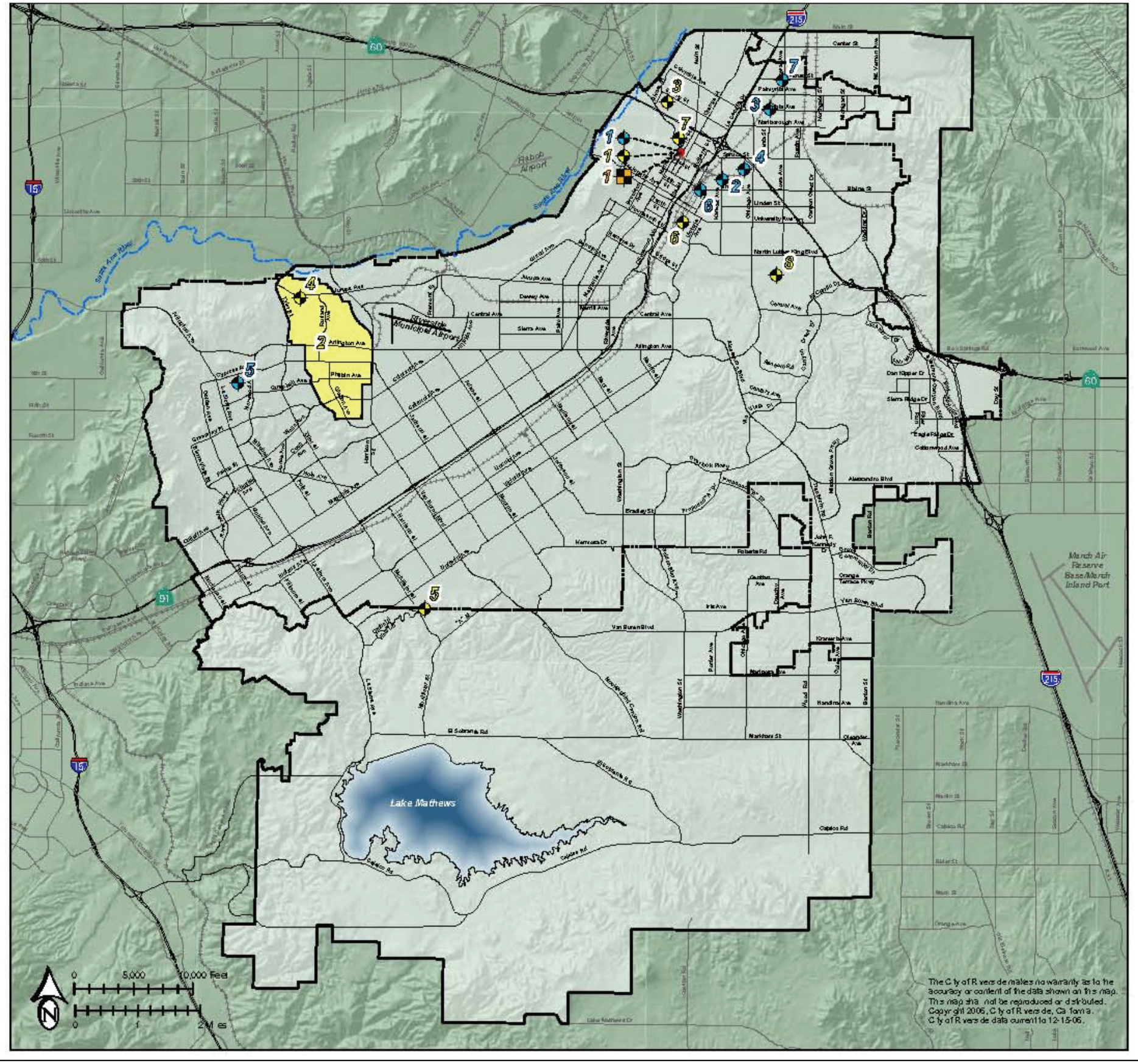

LEGEND

CERCLIS (Table 5.7-A of the EIR)

INVENTORY SITES - May 2007

1. ALARK HARD CHROME
2. ALCAN INC.
3. ALUMAX MILL PRODUCTS INC.
4. ICI PAINTS DEVOE COATINGS COMPANY
5. MITCHELL AVE DRUG LAB
6. RIVERSIDE FERTILIZER WORKS
7. RIVERSIDE FOUNDRY

TRI (Table 5.7-B of the EIR)

FOR A LIST OF THE TOXIC RELEASE INVENTORY (TRI) AS OF MARCH 2007 SEE TABLE 5.7-B OF THE EIR OR VISIT THE U.S. E.P.A. TOXIC RELEASE INVENTORY PROGRAM WEBSITE

DTSCEnviroStor (Table 5.7-C of the EIR)

ACTIVITY & LAND USE RESTRICTED SITES - MAY 2007

1. *ALARK HARD CHROME*
2. *CAMP ANZA*
3. *PATRICIA BEATTY ELEMENTARY SCHOOL*
4. *RIVERSIDE AGRICULTURAL PARK*
5. *SIERRA CREEK ESTATE*
6. *SO CAL GAS*
7. *SYNDER TRUST PROPERTY*
8. *UNIVERSITY OF CALIFORNIA RIVERSIDE*

SUPERFUND SITES

1. *ALARK HARD CHROME*

RIVERSIDE CITY BOUNDARY

RIVERSIDE PROPOSED SPHERE OF INFLUENCE

SOURCE: US EPA SUPERFUND (CERCLIS), MAY 2007, TOXIC RELEASE INVENTORY PROGRAM, MARCH 2007; CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL ENVIROSTOR DATABASE, MAY 2007, URL - http://www.envirostor.dtsc.ca.gov/public

DUDEK

6765-01

2011

SOURCE: City of Riverside

FIGURE 4.7-2

Hazardous Waste Sites

GLESS RANCH DEIR

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On the basis of the database records search conducted during the Phase I Environmental Site Assessment in 2008, other than appearing on the AST list for the operation of the six ASTs on site, the project site does not appear on any other regulatory list regulating hazardous materials or substances or releases pursuant to Government Code Section 65962.5. The results of Phase I Environmental Site Assessment show that March Air Force Base (AFB), located east of the project site, is listed on the National Priorities List; however, given its distance and gradient from the site, and the fact that cleanup on March AFB property may have been completed, GeoSoils concluded that the risk of the site being impacted from March AFB is low. Additionally, the project site will not utilize the groundwater beneath the site for drinking water, and given its depth (30 to 75 feet below ground surface), the likelihood that the project will encounter the groundwater beneath the site is very low. Therefore, based on the results of the Phase I Environmental Site Assessment, the project site is not on a list prepared pursuant to Government Code Section 65962.5, and since the top 6 inches of soil on site will be removed as a result of Mitigation Measure HAZ-1, **any potential hazards related to the past agricultural use on site will be reduced to less than significant levels.** Additionally, mitigation measures (Mitigation Measure HAZ-2 and Mitigation Measure HAZ-3) shall be incorporated to ensure any potentially-impacted soils are removed from the site adequately.

As a precaution given the site's historic agricultural use, and the existence of several above ground fuel tanks, a Limited Phase II Environmental Site Characterization was prepared by GeoSoils, Incorporated (GeoSoils) in 2007 to determine whether there was any contamination to soils on site from the existing agricultural operations (see Appendix G). Given the past use of the site and the fact that there are six permitted ASTs containing petroleum products and pesticides, GeoSoils collected surficial soil samples at depths ranging from 6 inches to 1 foot in the areas associated with the ASTs, near the agricultural operations where pesticides were used and randomly across the site. Samples were collected, stored, and transported to a California Department of Health Services certified laboratory. Some of the samples were tested for chlorinated pesticides and others were tested for total recoverable petroleum hydrocarbons. Only one of the samples tested for chlorinated pesticides tested positive for dichlorodiphenyldichloroethylene (DDE), at a concentration of 0.017 milligram/kilogram (mg/kg). The published threshold for DDE is 1.0 mg/kg where above this level is considered hazardous; therefore, the site concentration of DDE is well below this threshold. One of the soil samples tested indicated the petroleum encountered was in the very high carbon range (i.e., heavy oil range product versus diesel or gasoline) for total petroleum hydrocarbons. According to GeoSoils, petroleum in the heavy oil range products are not considered hazardous materials. GeoSoils concludes that the overall potential for significant on-site hazardous petroleum and pesticide contamination appears to be low, but may not be entirely precluded. Given the limited soil impaction that was identified by GeoSoils testing, surficial soils should be removed. **GeoSoils recommends removal; therefore, Mitigation Measure HAZ-1 will be required. Given this information, the project will have less than significant impacts related to being located on a known hazardous materials site.**

4.7.5 Mitigation Measures

CEQA Guidelines Section 15126.4 requires EIRs to describe feasible measures that can minimize significant adverse impacts. The following mitigation measures have been evaluated for feasibility and are incorporated to reduce potentially significant impacts related to the site being located on a list of hazardous materials site pursuant to Government Code Section 65962.5 that would create a significant hazard to the public or the environment.

MM HAZ-1: The City shall ensure, through conditions on the grading permit, that the upper 6 inches of soil located in the area of soil staining shall be removed, as directed by an on-site environmental specialist, and transported, under manifest to an approved soil recycling company, in accordance with currently accepted standards of practice and law.

MM HAZ-2: Earthwork removals within the project site that take place during grading activities shall be monitored by an experienced environmental consultant in the event unusual subsurface conditions are encountered and/or to provide recommendations in the event signs of chemical residues are detected. Chains of custody shall be provided by the project applicant to the City for verification.

MM HAZ-3: All use of hazardous materials and disposal of hazardous wastes during project grading to remove any potentially contaminated soils shall be required to comply with state Title 22 and federal Title 40 requirements. The transport and off-site disposal of any hazardous waste found within the site during the associated site preparation work shall also be required to comply with these hazardous waste management protocols. Chains of custody shall be provided by the project applicant to the City for verification.

4.7.6 Environmental Impacts after Mitigation Is Incorporated

Impacts to hazards and hazardous materials can be mitigated to less-than-significant levels by incorporating mitigation measures as described in the EIR. No significant adverse impacts would remain after mitigation.

4.7.7 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

California Government Code, Section 65960–65964. Accessed March 24, 2011. http://leginfo.public.ca.gov/cgi-bin/displaycode?section=gov&group=65001-66000&file=65960-65964

DTSC (California Department of Substance Control). 2007. DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List). Accessed on March 24, 2011: http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm

GeoSoils Inc. 2007. Appendix G. *Limited "Phase II" Environmental Site Characterization*, October 12, 2007

GeoSoils Inc. 2008a. Appendix F. *Preliminary Geotechnical Evaluation and Preliminary Rock Hardness/Rippability Study*, December 2, 2008. December 2, 2008.

GeoSoils Inc. 2008b. *Phase I Environmental Site Assessment*. October 27, 2008.

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4.8 Hydrology/Water Quality

The focus of the following discussion and analysis, based on the initial study (IS), public scoping session, and Notice of Preparation (NOP) public comment period, concerns the potentially adverse impacts to water quality, ground water supplies, drainage patterns, runoff, and stormwater drainage systems resulting from implementation of the proposed project. Thresholds, including the proposed project placing housing within a 100-year flood hazard area, placing structures within a 100-year flood hazard which would impede or redirect flows, exposing people or structures to a significant risk of loss, injury, or death involving flooding, and causing inundation by seiche tsunami, or mudflow were found to be less than significant or had no impacts in the IS/NOP for the project (Appendix A) and will not be addressed further in this draft environmental impact report (DEIR). In addition to other documents, the following sources were used in the preparation of this section of the DEIR:

- DRC Engineering Inc. 2011. *Water Quality Management Plan*. Approved August 2, 2011.

4.8.1 Setting

Existing Conditions

The site is located in the City of Riverside (City), at the southwest corner of Van Buren Boulevard and Barton Street, and is bounded by residential neighborhoods to the west and south, Van Buren Boulevard to the north, and Barton Street to the east, followed by vacant land. The general topography of the site slopes from the northeast to the southwest. The site accepts runoff from the off-site tributaries to the north via culverts located underneath Van Buren Boulevard, which combines with the on-site runoff and drains through an open channel across the site to an existing City storm drain system located at the western edge of the site.

Surface Hydrology

The site is located within the Santa Ana Region (Region 8) of the California Regional Water Quality Control Board (RWQCB), located within the RWQCB Middle Santa Ana River Watershed Management Area and in the Santa Ana Hydrologic Unit.

The Santa Ana River flows from the San Bernardino Mountains to the Pacific Ocean for over 100 miles. The Santa Ana River is the "receiving water" for over 2,700 square miles covering portions of San Bernardino, Riverside and Orange Counties. Reach 3 of the Santa Ana River, which is the receiving water for the majority of the City's Planning Area, is listed as an impaired water body for pathogens on the 2006 CWA Section 303(d) List of Water Quality Limited Segments Being Addressed by USEPA Approved TMDLS.

A number of arroyos that are tributary to the Santa Ana River traverse the City's Planning Area; portions are in their natural state, portions are disturbed by human activities, and portions are piped under the urbanized areas of the City before they reach the Santa Ana River. The major arroyos include: Springbrook Wash, Tequesquite Arroyo, Alessandro Arroyo, Prenda Arroyo, Woodcrest Arroyo, and Mockingbird Canyon. These are the major arroyos as defined and protected in the City's Grading Code, Title 17.

Santa Ana River

The City is located in the Santa Ana River Region, which is within the Riverside County Drainage Area Management Plan (DAMP). DAMP addresses the requirements of the municipal separate storm sewer system (MS4) permits issued to the Riverside County Co-Permittees by the Santa Ana RWQCB. These are the third MS4 permits issued by each Regional Board and area referred to as the Third-Term MS4 Permits. The City is a permittee under the Third-Term MS4 Permits. Under these permits, the City is required to enforce and comply with stormwater discharge requirements.

Flooding

Flooding in the City would mainly result from intense storms. Portions of the City fall within the 100-year flood zone; however the project site is not within a 100-year flood zone or dam inundation area as shown in Figure 5.8-2 of the GP 2025 FPEIR.

Due to the City's distance from the ocean, there is no foreseeable risk of tsunami (tidal wave) inundation. Seiches are oscillations in enclosed bodies of water caused by seismic waves. Existing development is subject to hazards from seiches in reservoirs such as Lake Mathews and Lake Evans and other small water bodies. Mudflows associated with erosion may also occur in portions of the community. The project site is not located near Lake Matthews or Lake Evans; not located in a coastal area, which are subject to tsunamis; and not located near the Santa Ana River, Lake Hills, Norco Hills, or Box Springs Mountain area and arroyos that are subject to significant mudflows.

Groundwater Resources

Water resources throughout Riverside County are sustained by significant groundwater basins, which are used as reservoirs to store water during wet years and to supply stored water in dry years. Groundwater conditions in these basins are influenced by natural hydrologic conditions such as percolation of precipitation, groundwater seepage and ephemeral stream flow from the six arroyos that traverse the City.

Local groundwater basins are recharged from natural runoff, treated wastewater, and imported water. Runoff from local rainfall is the main source of recharge for the smaller basins. As stated in the City's General Plan 2025 FPEIR Hydrology section, in 2005, the City met 97% of its water needs from

underground resources, while receiving only 3 percent from the Western Municipal Water District. The annual production by all extractors of the groundwater basins that support the City is roughly 260,932 acre-feet per year. As stated in WMWD Updated Integrated Regional Water Management Plan Report, in 2008, the City met 98.4% of its water demand from groundwater pumped from wells in the Bunker Hill in San Bernardino and the Riverside Basins, while receiving only 1.6% as imported water from WMWD (Kennedy/Jenks Consultants 2008). Since 2009, Riverside Public Utilities (RPU) has been able to meet 100% of its water need through local groundwater resources. RPU no longer receives water from WMWD. The City does have an agreement with WMWD that they will supply water in emergency situations (City of Riverside Public Utilities July 2011).

Nitrogen and Total Dissolved Solids

Although not a regulation, the Santa Ana Watershed Project Authority (SAWPA) is managing a study supported by the Nitrogen/Total Dissolved Solids (TDS) Task Force, which is a consortium of water supply and wastewater management agencies in the region. The task force is studying nitrogen and TDS management issues in the watershed, including water quality objectives and regulatory approaches to recharge and wastewater reclamation. Sampling and computer modeling for the Santa Ana River Basin by the RWQCB indicate that levels of TDS/minerals and nitrogen (mainly in the form of nitrate) in the Santa Ana River exceeded water quality objectives or would do so in the future without suitable management. Should any regulations or standards in the future be developed from this study, the City would be required to comply. The Santa Ana River is the focus of a separate planning effort.

Related Regulations

Federal

Clean Water Act

The U.S. Environmental Protection Agency (EPA) regulates water quality under the Clean Water Act (CWA) (also known as the Federal Water Pollution Control Act). Enacted in 1972 and significantly amended in subsequent years, the CWA is designed to restore and maintain the chemical, physical, and biological integrity of waters in the United States. The CWA provides the legal framework for several water quality regulations, including National Pollutant Discharge Elimination System (NPDES) Permits, effluent limitations, water quality standards, pretreatment standards, anti-degradation policy, non-point source discharge regulation, and wetlands protection.

The CWA requires NPDES permits for the discharge of pollutants to waters of the United States from any point source. In 1987, the CWA was amended to require that the EPA establish regulations for permitting of municipal and industrial stormwater discharges under the NPDES permit program. The EPA published final regulations regarding stormwater discharges on November 16, 1990. The regulations require that municipal separate storm sewer system (MS4) discharges to surface waters be regulated by

an NPDES permit. Surface runoff from the project site is permitted under the municipal NPDES permit, which the City of Riverside is a Co-Permittee.

The EPA has delegated the responsibility for administration of portions of the CWA to state and regional agencies. The CWA requires the states to adopt water quality standards for receiving water bodies and to have those standards approved by the EPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing, etc.), along with water quality criteria necessary to support those uses. Water quality criteria are prescribed concentrations or levels of constituents, such as lead, suspended sediment, and fecal coliform bacteria, or they are narrative statements that represent the quality of water supporting a particular use.

National and State Safe Drinking Water Acts

The Federal Safe Drinking Water Act was established in 1974 and sets drinking water standards throughout the country; it is administered by EPA. The drinking water standards established in the act, as set forth in the Code of Federal Regulations (CFR), are referred to as the National Primary Drinking Water Regulations (Primary Standards, Title 40, CFR, Part 141), and the National Secondary Drinking Water Regulations (Secondary Standards, 40 CFR, Part 143). California passed its own Safe Drinking Water Act in 1986 authorizing the state's Department of Health Services to protect the public from contaminants in drinking water by establishing maximum contaminants levels, as set forth in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 15, that are at least as stringent as those developed by the EPA, as required by the Federal Safe Drinking Water Act.

State

California Toxics Rule

Because of gaps in California's regulations, the EPA promulgated the California Toxics Rule (40 CFR 131.38), which established numeric water quality criteria for certain toxic substances in California surface waters. The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for water bodies that are designated by the Santa Ana Regional Water Quality Control Board (RWQCB) as having beneficial uses protective of aquatic life or human health. The California Toxics Rule criteria are applicable to the receiving waters from the project site.

California Porter-Cologne Act

The Porter-Cologne Water Quality Control Act established the principal California legal and regulatory framework for water quality control. The Porter-Cologne Water Quality Control Act is embodied in the California Water Code. The California Water Code authorizes the State Water Resources Control Board (SWRCB) to implement the provisions of the federal CWA.

The State of California is divided into nine regions governed by RWQCBs. The RWQCBs implement and enforce provisions of the California Water Code and the CWA under the oversight of the State Water Quality Control Board (SWQCB). The City is located within the purview of the Santa Ana RWQCB (Region 8), and must comply with applicable elements of the region's Basin Plan, as well as the Porter-Cologne Water Quality Control Act.

Each RWQCB must formulate and adopt a water quality control plan for its region. The Santa Ana RWQCB has adopted and periodically amends a water quality control plan titled Water Quality Control Plan for the Santa Ana River Basin. The Santa Ana RWQCB Basin Plan must conform to the policies set forth in the Porter-Cologne Act as established by the SWQCB in its state water policy. The Porter-Cologne Act also provides the RWQCBs with authority to include within its basin plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

General Construction Permit

Pursuant to CWA Section 402(p), which requires regulations for permitting of certain stormwater discharges, the SWRCB has issued statewide general NPDES Permit and Waste Discharge Requirements for stormwater discharges from construction sites (NPDES No. CAS000002), California Water Resources Control Board Resolution No. 2009-0009-DWQ, Modification of Water Quality Order 99-08-DWQ SWRCB NPDES General Permit for Stormwater Discharges Associated with Construction Activity (adopted by the SWRCB on September 2, 2009).

Under this Construction General Permit, discharges of stormwater from construction sites of one or more acres are required to obtain individual NPDES permits for stormwater discharges or be covered under the General Permit for Discharges of Storm Water Associated with Construction Activity. Effective July 1, 2010, the updated General Construction Permit requires several additional items in order to be eligible for coverage under the General Construction Permit. The permit requires a risk-based permitting approach, dependent upon the likely level of risk imparted by a project. The permit also contains several compliance items, including:

- Additional mandatory Best Management Practices (BMPs) to reduce erosion and sedimentation, which may include incorporation of vegetated swales, setbacks and buffers, rooftop and impervious surface disconnection, bioretention cells, rain gardens, rain cisterns, implementation of pollution/sediment/spill control plans, training, and other structural and non-structural actions;
- Sampling and monitoring for non-visible pollutants;
- Soil characteristics monitoring and reporting at the project site;
- Effluent monitoring and annual compliance reports;
- Monitor receiving waters and conduct bioassessments;

- Development and adherence to a Rain Event Action Plan that must be designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event;
- Requirements for Post-Construction Storm Water Performance Standards;
- Technology-Based Numeric Action Levels for pH and turbidity;
- Technology-Based Numeric Effluent Limitations for pH and turbidity (when applicable);
- Mandatory training/certification requirements under a specific curriculum. Under the permit, monitoring, reporting, and training requirements for management of stormwater pollutants are also required.

Coverage under the Construction General Permit is accomplished by completing and filing a Notice of Intent with the SWRCB. Each applicant under the Construction General Permit must ensure that a Stormwater Pollution Prevention Plan (SWPPP) is prepared prior to grading and implemented during construction. The primary objective of the SWPPP is to identify, construct, implement, and maintain best management practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the site during construction. The general permit requires the control of pollutants to meet Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology (BAT/BCT) standards.[1] Compliance with the requirements of the Construction General Permit is used as one method to evaluate project construction–related impacts on surface water quality.

The project site is located in the Santa Ana River Region, which is within the Riverside County Drainage Area Management Plan (DAMP). DAMP addresses the requirements of the municipal separate storm sewer system (MS4) permits issued to the Riverside County Co-Permittees by the Santa Ana RWQCB. These are the third MS4 permits issued by each Regional Board and area referred to as the Third-Term MS4 Permits. The City is a permittee under the Third-Term MS4 Permits. Under these permits, the City

[1] BAT/BCT are Clean Water Act, technology-based standards that are applicable to construction site stormwater discharges. Federal law specifies factors relating to the assessment of BAT, including age of the equipment and facilities involved; the process employed; the engineering aspects of the application of various types of control techniques; process changes; the cost of achieving effluent reduction; non-water quality environmental impacts (including energy requirements); and other factors as the administrator of the EPA deems appropriate. Factors relating to the assessment of BCT include reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived; comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources; the age of the equipment and facilities involved; the process changes; non-water quality environmental impact (including energy requirements); and other factors as the administrator deems appropriate. The administrator has not issued regulations specifying BAT or BCT for construction site discharges.

is required to enforce and comply with stormwater discharge requirements outlined in Order No. R8-2002-0011 (NPDES No. CAS 618033).

Local

The Riverside Municipal Code contains several provisions regulating the discharge of stormwater and changes in hydrology. For example, Title 17 of the code governs grading activities in the City. The Grading Code's purpose, in part, is to "protect life, limb, property, the public welfare and the physical environment by regulating grading on private property." Most grading exceeding one acre requires a permit from the City. To obtain a permit, applicants must supply a grading plan, and if applicable, they must demonstrate compliance with the General Construction Permit described previously.

In addition, Title 14, Public Utilities, Chapter 14.12, regulates discharges into the City's sewer and storm drain systems, and implements the City's requirements under the MS4 permit. Among other things, the chapter prohibits discharges to the City's sewer and storm drain systems that contain pollutants or that would impair the operation of those systems. The City requires that the pollutants of concern be treated by a California Stormwater Quality Association (CASQA)-approved treatment BMP with medium to high removal rates. Finally, that chapter gives the City enforcement authority to declare violations, apply penalties, and impose stop-work orders, monitoring requirements, and other enforcement mechanisms. Although not a regulation, the Santa Ana Watershed Project Authority (SAWPA) is managing a study supported by the Nitrogen/TDS Task Force, which is a consortium of water supply and wastewater management agencies in the region. The task force is studying nitrogen and total dissolved solids (TDS) management issues in the watershed, including water quality objectives and regulatory approaches to recharge and wastewater reclamation. Sampling and computer modeling for the Santa Ana River Basin by the RWQCB indicate that levels of TDS/minerals and nitrogen (mainly in the form of nitrate) in the Santa Ana River exceeded water quality objectives or would do so in the future without suitable management. Should any regulations or standards in the future be developed from this study, the City would be required to comply. The Santa Ana River is the focus of a separate planning effort.

<u>City of Riverside General Plan 2025</u>

The Hydrology and Water Quality section of the City's General Plan 2025 (2007)includes the following selected policies that will be applied to the proposed project:

Policy OS-10.2: Coordinate plans, regulations, and programs with those of other public and private entities, which affect the consumption and quality of water resources within Riverside.

Policy OS-10.4: Develop a recommended native, low-water use, and drought-tolerant plant species list to be included in the landscape standards for private development.

Policy OS-10.5: Establish standards for the use of reclaimed water for landscaping.

Policy OS-10.6: Continue to enforce RWQCB regulations regarding urban runoff.

Policy OS-10.7: Work with the RWQCB in the establishment and enforcement of urban runoff water quality standards.

Policy OS-10.9: Evaluate development projects for compliance with NPDES requirements, and require new development to landscape a percentage of the site to filter pollutant loads in stormwater runoff and provide groundwater percolation zones.

Policy PF-4.3: Continue to routinely monitor and evaluate the effectiveness of the storm drain system and make adjustments as needed.

Policy PF-3.4: Continue to investigate and carry out cost-effective methods for reducing stormwater flows into the wastewater system and the Santa Ana River.

4.8.2 Thresholds of Significance

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts. Appendix G suggests that a development project could have a significant impact on hydrology and water quality if the proposed project would:

- Violate any water quality standards or waste discharge requirements
- 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 preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff
- Otherwise substantially degrade water quality.

4.8.3 Project Elements that Can Reduce Impacts

The proposed project would include grated inlets and curb opening catch basins that would collect surface runoff and direct it to on-site treatment facilities. Those treatment facilities include five proposed detention basins including media filters that will be located at the bottom of each basin. According to the WQMP dated April 27, 2011, prior to entering the treatment/detention basins, stormwater will be pre-treated for sediment and trash by proprietary treatment devices, which will be determined with the final design to be reviewed and approved by the City. The five detention basins are shown on Figure 4.8-1, labeled as "Pond" A1, A2, A3, B1, and B2. On-site treatment facilities would remove any pollutants of concern, and detain runoff to reduce runoff rates, prior to combining with the off-site flows from north of the project site. The proposed project has also been developed so that during project operation, runoff would be diverted to these detention basins, detained, and discharged at existing flow rates, so that runoff rates would not exceed the rate that exists at the project site under existing (undeveloped) conditions. Each underground detention pond is controlled by a multistaged orifice and weir plate.

The proposed project will incorporate reclaimed water for irrigation. Non-potable ("purple pipe") pipelines will be installed as part of the project to offset the use of potable water for non-consumption uses.

The proposed project would also include site design BMPs such as maximizing permeable area, incorporating landscaping, and minimizing impervious surfaces. These BMPs are listed below.

4.8.4 Environmental Impacts before Mitigation

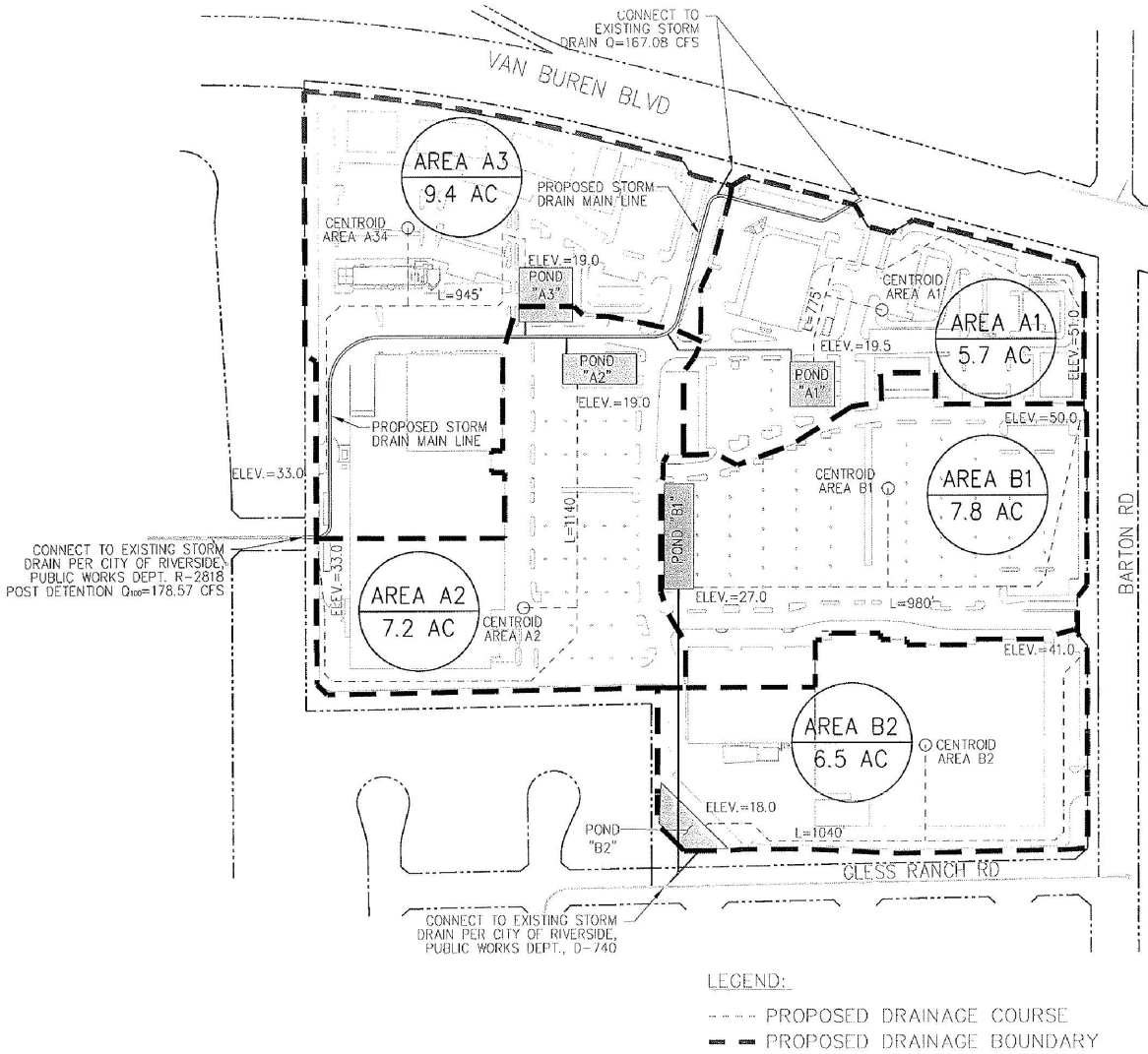
<u>Threshold:</u> Violate any water quality standards or waste discharge requirements?

All on-site stormwater would be treated for pollutants of concern before entering the City storm drain. Water quality standards affecting the project are stormwater related, since the project is not an industrial facility that would be generating significant amounts of wastewater effluent. Generally, the pollutants of concern from a commercial project site are pathogens. An increase in pollutant levels in the runoff conveyed to the City storm drain system would violate water quality standards and the waste discharge requirements of the City's municipal stormwater sewer system permit. The proposed project includes on-site grated inlets and curb-opening catch basins to catch runoff, which would then be directed to on-site treatment facilities (detention basins) to remove any pollutants of concern. Prior to entering the detention basins, proprietary treatment devices would pretreat runoff for sediment and trash, and media filters located at the bottom of each detention basin would filter for bacteria. The City requires that the pollutants of concern be treated by a CASQA-approved treatment BMP with medium to high removal rates. The on-site detention devices will retain the required treatment volume (Vpm) prior to discharge into the public system in conformance with the CASQA BMP design.

In addition to these treatment control BMPs, the proposed project includes site design and source control BMPs to ensure that water quality on the project site would not be degraded as a result of project construction or operation. These BMPs are discussed in the Water Quality Management Plan (WQMP) prepared for the project. The site design BMPs proposed for the project are as follows:

- Maximize the permeable area
- Incorporate landscaped buffer areas between sidewalks and streets
- Utilize drought-tolerant trees and large shrubs, where feasible
- Where soils conditions are suitable, use perforated pipe or gravel filtration pits for low flow infiltration
- Construct on-site ponding areas or retention facilities to increase opportunities for infiltration consistent with vector control objectives
- Construct walkways, trails, patios, overflow parking lots, alleys, driveways, low-traffic streets and other low-traffic areas with open-jointed paving materials or permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.
- Construct streets, sidewalks, and parking lot aisles to the minimum widths necessary, provided that the public safety and a walkable environment for pedestrians are not compromised
- Minimize the use of impervious surfaces, such as decorative concrete, in the landscape design
- Commercial sites must be designed to contain and infiltrate roof runoff, or direct roof runoff to vegetative swales or buffer areas, where feasible
- Where landscaping is proposed, drain impervious sidewalks, walkways, trails, and patios into adjacent landscaping
- Increase the use of vegetated drainage swales in lieu of underground piping or imperviously lined swales
- Where landscaping is proposed in parking areas, incorporate landscape areas into the drainage design
- Low flow infiltration

The proposed project would also implement nonstructural BMPs such as education for property owners, occupants, and tenants and signage where applicable. Treatment-control BMPs include use of media filters; media filters would be located at the bottom of the proposed detention basins and would be designed to remove pollutants in accordance with CASQA. Since the City's Public Works Department will condition the project to implement the structural and non-structural BMPs outlined in the project's WQMP, potential impacts associated with violations of water quality standards or waste discharge requirements would be less than significant, and no mitigation measures are required.



LEGEND:

- - - - PROPOSED DRAINAGE COURSE

— — PROPOSED DRAINAGE BOUNDARY

PRE-DETENTION DISCHARGE

SUB-AREA	AREA (AC)	Q_2 (CFS)	Q_{10} (CFS)	Q_{100} (CFS)
A1	5.7	0.71	1.83	3.34
A2	7.2	0.90	2.32	4.21
A3	9.4	1.17	3.02	5.50
TOTAL	22.3	2.78	7.17	13.05

SUB-AREA	AREA (AC)	Q_2 (CFS)	Q_{10} (CFS)	Q_{100} (CFS)
B1	7.8	0.98	2.51	4.56
B2	6.5	0.81	2.09	3.80
TOTAL	14.3	1.79	4.60	8.36

POST DETENTION DISCHARGE

SUB-AREA	AREA (AC)	Q_2 (CFS)	Q_{10} (CFS)	Q_{100} (CFS)
A1	5.7	0.16	0.88	2.85
A2	7.2	0.14	1.06	4.12
A3	9.4	0.29	1.35	4.52
TOTAL	22.3	0.59	3.29	11.49

SUB-AREA	AREA (AC)	Q_2 (CFS)	Q_{10} (CFS)	Q_{100} (CFS)
B1	7.8	0.25	1.26	2.81
B2	6.5	0.38	0.71	3.62
TOTAL	14.3	0.63	1.96	6.13

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SOURCE: DRC Engineering Inc.

FIGURE 4.8-1

Detention Basins

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<u>Threshold:</u> 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 preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

The proposed project does not include the use of on-site groundwater for its potable or irrigation water sources. Local groundwater will not be used for supply to the project. The project site will use recycled water for irrigation purposes and potable sources will come from WMWD, which will not use local groundwater supplies at the project site (see Utilities and Service Systems section 4.12 for further discussion of WMWD supplies). With implementation of the proposed project, the project site would be covered with impermeable surfaces that would reduce the amount of percolation and recharge of groundwater. The site will have approximately 30 acres of impervious surface (pavement and rooftop), which is approximately 80% to 85% of the site. All paved areas will be used for parking spaces, drive aisles, loading areas, and common areas for patrons of the completed project. All parking spaces are proposed to be head-in stalls measuring approximately 9 feet wide by 18 feet long. Landscaping and open pervious areas will make up the remaining 15% to 20% of the site, and will consist of citrus trees, decorative landscape areas, planter areas within the parking fields, and an aboveground vegetated detention basin.

As part of the project's drainage system, five detention basins would be constructed. The detention basins would allow collected runoff to percolate into the ground and recharge groundwater basins. Roughly the same amount of water that would have percolated on the site under the current condition will do so in the developed condition, it will just percolate in a more specific location (i.e. the detention basins). Pursuant to the WQMP requirements, the developed site must not discharge more than what has been discharging historically from the site, therefore, percolation will still occur in the developed site. Additionally, the project incorporates the use of non-potable water sources for irrigation, which reduces the need for potable water sources and utilizes a water source that does not deplete surface or groundwater resources for irrigation uses. Therefore, the project would not result in substantial depletion of 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. **Therefore, impacts to groundwater would be less than significant, and no mitigation measures are required.**

<u>Threshold:</u> Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site?

The drainage pattern of the site is currently in a northeast to southwest direction. The project site does support one natural, ephemeral drainage that currently provides conveyance of stormwater flows entering the site from the north (from off-site residential development) and flows off site and discharges

to the existing stormdrain system. In the undeveloped condition, the site either perchlorates its water, sheet flows onto neighboring streets or flows into the natural drainage where it eventually leaves the site. In the developed condition, the site will drain to the existing stormwater system to the west in Kinnow Lane or to the south in Gless Ranch Road.

The site will have approximately 30 acres of impervious surface (pavement and rooftop), which is approximately 80% to 85% of the site. All paved areas will be used for parking spaces, drive aisles, loading areas, and common areas for patrons of the completed project. All parking spaces are proposed to be head-in stalls measuring approximately 9 feet wide by 18 feet long. Landscaping and open pervious areas will make up the remaining 15% to 20% of the site, and will consist of citrus trees, decorative landscape areas, planter areas within the parking fields, and an aboveground vegetated detention basin.

Surface runoff from rainfall events will be collected on site via grated inlets and curb-opening catch basins and then be directed to on-site treatment facilities to remove any pollutants of concern, and then detained to reduced runoff rates, prior to combining with the previously mentioned off-site flows from the north. The combined flow will then discharge into the existing City storm drain facilities at the western edge of the project. The use of the existing system will ensure that erosion does not occur downstream of the project site.

As shown on Table 4.8 below, runoff rates for the proposed project were calculated based on the proposed drainage and discharge systems and compared to existing runoff rates.

Table 4.8
Existing and Proposed Project Stormwater Calculations

Storm Year	Area A (cfs)	Area B (cfs)	Total Site (cfs)
Existing Conditions			
2	17.89	9.05	26.94
10	41.31	20.99	62.30
100	72.59	36.96	109.55
Proposed Project			
2	0.00	0.00	0.00
10	6.76	4.64	11.42
100	45.56	17.37	62.93

Source: DRC Engineering, WQMP Appendix C of the Preliminary Project Hydrology Report, revised April 27, 2011

cfs: cubic feet per second

A comparison of the values on Table 4.8 shows that stormwater runoff rates at the project site would be less under the developed condition. Runoff from the project site would continue to drain to the two existing City storm drain systems via existing flow paths and drainage facilities. In addition, because the

proposed project would include detention and treatment systems, runoff would be reduced, could be held during peak flow times on the site, and would be treated before being discharged. The speed of water leaving the site will be reduced under the developed condition. Additionally, compliance with the NPDES Program – i.e. preparation of a Storm Water Pollution Prevention Plan (SWPPP) and Water Quality Management Plan (WQMP) – ensures that erosion does not occur either on or off site.

Consequently, development of the project would not cause an increase in flows from the site during the projected 100-year storm events, which in turn would cause substantial erosion either on or off-site. **Impacts related to drainage patterns of the site or area would be less than significant, and no mitigation measures are required.**

Threshold: 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 that would result in flooding on or off site?

As discussed previously, the on-site detention and treatment systems would capture all site runoff and then discharge such runoff to existing City storm drain systems via existing flow paths and drainage facilities. Runoff would be treated prior to entering the detention basins for sediment and trash by proprietary treatment devices, and by media filters at the bottom of the detention basins prior to runoff being released. In addition, because the proposed project would include detention and treatment systems, runoff would be reduced and could be held during peak flow times on the site. Consequently, development of the project would not cause on- or off-site flooding during the projected 50- or 100-year developed storm event, or result in a permanent adverse change to the movement of surface water, and the capacity of the existing storm drain system would not be impacted. **Impacts related to drainage patterns of the site or potential flooding would be less than significant, and no mitigation measures are required.**

Threshold: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

The proposed project includes infrastructure that would collect surface runoff from rainfall events on site via grated inlets and curb-opening catch basins and then directed the runoff to on-site treatment facilities. Stormwater would be pretreated for sediment and trash by proprietary treatment devices, and then enter detention basins where flows can be detained to regulate flow rates into the City storm drain system. Media filters at the bottom of the detention basins would also remove pollutants of concern prior to runoff being released for percolation or direction to the City storm drain system. Runoff would then be discharged into the existing City storm drain facilities at the western edge of the project.

The hydrology report prepared for the proposed project shows that the increase in permeable surfaces on the site would not result in an increase of runoff because of the planned infrastructure described previously. As shown in Table 4.8, the proposed project would not result in an increased flow rate compared to existing conditions. Consequently, development of the proposed project would not exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. **Therefore, impacts related to the existing and planned stormwater drainage systems would be less than significant. Additionally, impacts related to pollution of runoff would be less than significant. No mitigation measures are necessary.**

Threshold: Otherwise substantially degrade water quality?

Construction Impacts

During construction, the site would be excavated and graded, and in some cases, soil may be stockpiled aboveground. Site preparation and grading could result in exposure of soils to erosion potential, which could result in sedimentation impacts to surrounding runoff systems. Since the project would disturb more than one acre of soil, and as identified in the previous Section 4.3.5, the applicant must file a Notice of Intent with the RWQCB and obtain a General Construction Activity Stormwater Permit, pursuant to the NPDES regulations established under the Clean Water Act. This permit requires preparation and implementation of an SWPPP, which is intended to prevent degradation of surface and ground waters during the grading and construction process.

Operational Impacts

Post-construction runoff would contain pollutants associated with development of a large retail center and its associated facilities (i.e., parking lot). An increase in surface runoff and introduction of urban uses could increase pollution levels in the surrounding City storm drain systems. Primary pollutants of concern include heavy metals from the parking lots, organic compounds such as petroleum from vehicles, and trash and debris. Other pollutants may include sediment, nutrients, biodegradable organic material, food-borne bacteria and viruses, and pesticides.

An increase in pollutant levels in the runoff conveyed to the City's storm drain system would violate water quality standards and the waste discharge requirements of the City's municipal stormwater sewer system permit. However, as described previously, the proposed project includes on-site grated inlets and curb-opening catch basins to catch runoff, which would then be directed to on-site treatment facilities to remove any pollutants of concern. The runoff could be detained to reduced runoff rates, prior to combining with the previously mentioned off-site flows in the City's storm drain system. In addition, the proposed project includes site design and treatment control BMPs to ensure that water quality on the project site would not be degraded as a result of project construction or operation. These BMPs are discussed in the WQMP prepared for the project. The site design BMPs proposed for the project are as follows:

- Maximize the permeable area
- Incorporate landscaped buffer areas between sidewalks and streets
- Maximize canopy interception and water conservation by preserving existing mature trees and shrubs, and planting additional drought-tolerant trees and large shrubs
- Where soils conditions are suitable, use perforated pipe or gravel filtration pits for low flow infiltration
- Construct on-site ponding areas or retention facilities to increase opportunities for infiltration consistent with vector control objectives
- Construct walkways, trails, patios, overflow parking lots, alleys, driveways, low-traffic streets and other low-traffic areas with open-jointed paving materials or permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.
- Construct streets, sidewalks, and parking lot aisles to the minimum widths necessary, provided that the public safety and a walkable environment for pedestrians are not compromised
- Minimize the use of impervious surfaces, such as decorative concrete, in the landscape design
- Residential and commercial sites must be designed to contain and infiltrate roof runoff, or direct roof runoff to vegetative swales or buffer areas, where feasible
- Where landscaping is proposed, drain impervious sidewalks, walkways, trails, and patios into adjacent landscaping
- Increase the use of vegetated drainage swales in lieu of underground piping or imperviously lined swales
- Where landscaping is proposed in parking areas, incorporate landscape areas into the drainage design.

The proposed project would also implement treatment and non-structural BMPs. Treatment control BMPs include use of media filters; media filters would be located at the bottom of the proposed detention basins and would be designed to remove pollutants in accordance with CASQA. Non-structural BMPs include measures such as education for property owners, occupants, and tenants, and signage where applicable.

For the reasons discussed, impacts related to water quality would be less than significant, and no mitigation measures are necessary.

4.8.5 Mitigation Measures

Because impacts to hydrology and water quality were found to be less than significant, as discussed previously, no mitigation measures are necessary.

4.8.6 Environmental Impacts after Mitigation Is Incorporated

Since there would not be significant impacts needing mitigation, residual impacts would be less than significant.

4.8.7 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

California Regional Water Quality Control Board Santa Ana Region. 2002. *Third-Term Santa Ana Region MS4* Permit. October 25, 2002. Accessed on May 19, 2011: http://www.floodcontrol.co.riverside.ca.us/downloads/NPDES/App%20B%20Third-term%20Santa%20Ana%20Region%20MS4%20Permit.pdf.

City of Riverside. 2007. *City of Riverside General Plan 2025*. Adopted November 2007. Riverside, California: City of Riverside Community Development Department.

City of Riverside Public Utilities. 2011. *Final 2010 Urban Water Management Plan.* Accessed on September 28, 2011: http://www.riversideca.gov/utilities/pdf/2011/RPU's%20FINAL%202010%20UWMP%20-%20July%202011.pdf

DRC Engineering Inc. 2011. *Water Quality Management Plan*. Approved August 2, 2011.

Kennedy/Jenks Consultants. May 2008. Western Municipal Water District – Updated Integrated Regional Water Management Plan Report. Accessed on September 28, 2011: http://www.wmwd.com/DocumentView.aspx?DID=349

State Water Resources Control Board. 2009. *National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2009-0009-DWQ*. Adopted September 2, 2009. Accessed on May 19, 2011: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2009/wqo/wqo2009_0009_dwq.pdf.

4.9 Noise

This section presents a discussion of noise that would be affected by the proposed project. Thresholds, including the proposed project being located within an airport land use plan, within 2 miles of a public airport or public use airport, or within the vicinity of a private airstrip such that the proposed project would expose people residing or working in the project area to excessive noise levels were found to be less than significant or had no impacts in the initial study (IS)/Notice of Preparation (NOP) for the project (Appendix A) and will not be addressed further in this draft environmental impact report (DEIR). As reported in the IS, the focus of this section will be on whether the project will expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; expose persons to or generate excessive groundborne noise levels; create a permanent increase in ambient noise levels in the project vicinity above levels existing without the project; and cause temporary or periodic increases in ambient noise levels in the project vicinity above levels existing without the project.

4.9.1 Setting

Existing Conditions

The City of Riverside (City) is subject to typical urban noises, such as noise generated by traffic, heavy machinery, and day-to-day outdoor activities. Noise around the project site is the cumulative effect of noise from transportation activities and stationary sources. *Transportation noise* refers to noise from automobile use, trucking, airport operations, and rail operations. *Non-transportation noise* typically refers to noise from stationary sources such as commercial establishments, machinery, air-conditioning systems, compressors, and landscape maintenance equipment. Regardless of the type of noise, the noise levels are highest near the source and decrease with distance.

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perceptibility is subjective, and the physical response to sound complicates the analysis to its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness." Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in decibels (dB). The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate this human, frequency-dependent response, the A-weighting filter system is used to adjust measured sound levels and is expressed as dBA.

Noise consists of pitch, loudness, and duration; therefore, it is difficult to describe noise with a single unit of measure. Federal and state agencies have established noise and land use compatibility guidelines that use averaging approaches to noise measurement. Two measurement scales commonly used in California are the Community Noise Equivalent Level (CNEL) and the day-night level (Ldn). To account for increased human sensitivity at night, the CNEL level includes a 5 dB penalty on noise during the 7:00

p.m. to 10:00 p.m. time period and a 10 dB penalty on noise during the 10:00 p.m. to 7:00 a.m. time period. The Ldn level includes only the 10 dB weighting for late-night noise. These values are nearly identical for all but unusual noise sources.

Noise is particularly problematic when noise-sensitive land uses are affected. Noise-sensitive land uses are defined as uses where one would typically find activities that are interrupted by noise such as residential uses, schools, hospitals, churches, performing arts facilities, and hotels and motels. The City deems residential uses particularly noise sensitive because families and individuals expect to use time in the home for quiet rest. Table 4.9-1 represents some typical noise levels found in the existing environment. Noise sensitive uses immediately surrounding the project site are residential uses.

Table 4.9-1, Typical Sound Levels in the Environment and Industry

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
—	110	Rock Band
Jet flyover at 300 meters (1,000 feet)	100	—
Gas lawn mower at 1 meter (3 feet)	90	—
Diesel truck at 15 meters (50 feet), at 80 kilometers/hour (50 miles per hour)	80	Food blender at 1 meter (3 feet) Garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime gas lawn mower at 30 meters (100 feet)	70	Vacuum cleaner at 3 meters (10 feet)
Commercial area Heavy traffic at 90 meters (300 feet)	60	Normal speech at 1 meter (3 feet)
Quiet urban daytime	50	Large business office Dishwasher next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural night time	20	Bedroom at night, concert hall (background)
—	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 1998

Currently, the site generates noise associated with the operating orange grove as well as from the traffic associated with the existing fruit stand. However, mostly, the site is not considered a noise generator in its current condition. The site is primarily subject to traffic noise impacts associated with Van Buren Boulevard and Barton Street. Gless Ranch Road also generates noise along the southern border of the site. The existing traffic volume ranges up to approximately 31,333 average daily traffic (ADT) along Van

Buren Boulevard and 8,525 ADT along Barton Street (LLG 2010). Gless Ranch Road is a residential road with a traffic volume of 788 ADT.

Ambient Noise Measurements

Noise measurements were conducted at, and adjacent to, the site on November 3, 2010, between the hours of 11:30 a.m. to 1:30 p.m., to determine the existing noise levels surrounding the site. The noise measurements were made using a Larson-Davis Laboratories Model 700 (S.N. 2132) integrating sound level meter equipped with 0.5-inch pre-polarized condenser microphone with pre-amplifier. The sound level meter meets the current American National Standards Institute (ANSI) standard for a Type 1 precision sound level meter. The sound level meter was calibrated before and after the measurements, and the measurements were conducted with the microphone positioned approximately 5 feet aboveground.

Three noise measurement locations were selected at, or adjacent to, the project site and are depicted as Sites 1 through 3 on Figure 4.9-1. Site 1 was at the north side of the site adjacent to Van Buren Boulevard. Site 2 was along the east side of the site adjacent to Barton Street. Site 3 was at the south side of the site adjacent to Gless Ranch Road. The measured average noise levels and measurement locations are depicted in Table 4.9-2. As shown in the third column of Table 4.9-2, the measured average noise levels were 69 dB at Site 1, 65 dB at Site 2, and 56 dB at Site 3. The primary noise source at Sites 1 and 2 was the traffic along the adjacent roads. The noise at Site 3 resulted from background traffic and intermittent traffic along Gless Ranch Road. The CNEL at the measurement locations is depicted in the fourth column in Table 4.9-2 based on the existing ADT traffic volumes.

Table 4.9-2
Measured Noise Levels

Site	Description	L_{eq}[1] (dB)	CNEL[2] (dB)
1	Along south side of Van Buren Boulevard, approximately 60 feet from the center line	69	74
2	Along west side of Barton Street, approximately 40 feet from the center line	65	70
3	Along north side of Gless Ranch Road approximately 25 feet from center line	56	60

Notes: [1] Equivalent Continuous Sound Level (Time-Average Sound Level)
[2] CNEL calculated based on ADT

Human Response to Changes in Noise Levels

Under controlled conditions in an acoustics laboratory, the trained, healthy human ear is able to discern changes in sound levels of 1 dB when exposed to steady, single-frequency signals in the mid-frequency range. Outside such controlled conditions, the trained ear can detect changes of 2 dB in normal

environmental noise. It is widely accepted that the average healthy ear, however, can barely perceive noise level changes of 3 dB. A change of 5 dB is readily perceptible, and a change of 10 dB is perceived as twice or half as loud. As discussed previously, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a road) would result in a barely perceptible change in sound level.

Sound Propagation

Sound propagation (i.e., the passage of sound from a noise source to a receiver) is influenced by several factors. These factors include geometric spreading, ground absorption, and atmospheric effects, as well as shielding by natural and/or man-made features.

Sound levels are attenuated at a rate of approximately 6 dB per doubling of distance from an outdoor point source due to the geometric spreading of the sound waves. Additional sound attenuation can result from man-made features such as intervening walls and buildings, as well as natural features such as hills and dense woods. Atmospheric conditions such as humidity, temperature, and wind gradients can temporarily either increase or decrease sound levels. In general, the greater the distance the receiver is from the source, the greater the potential for variation in sound levels due to atmospheric effects.

Related Regulations

Federal

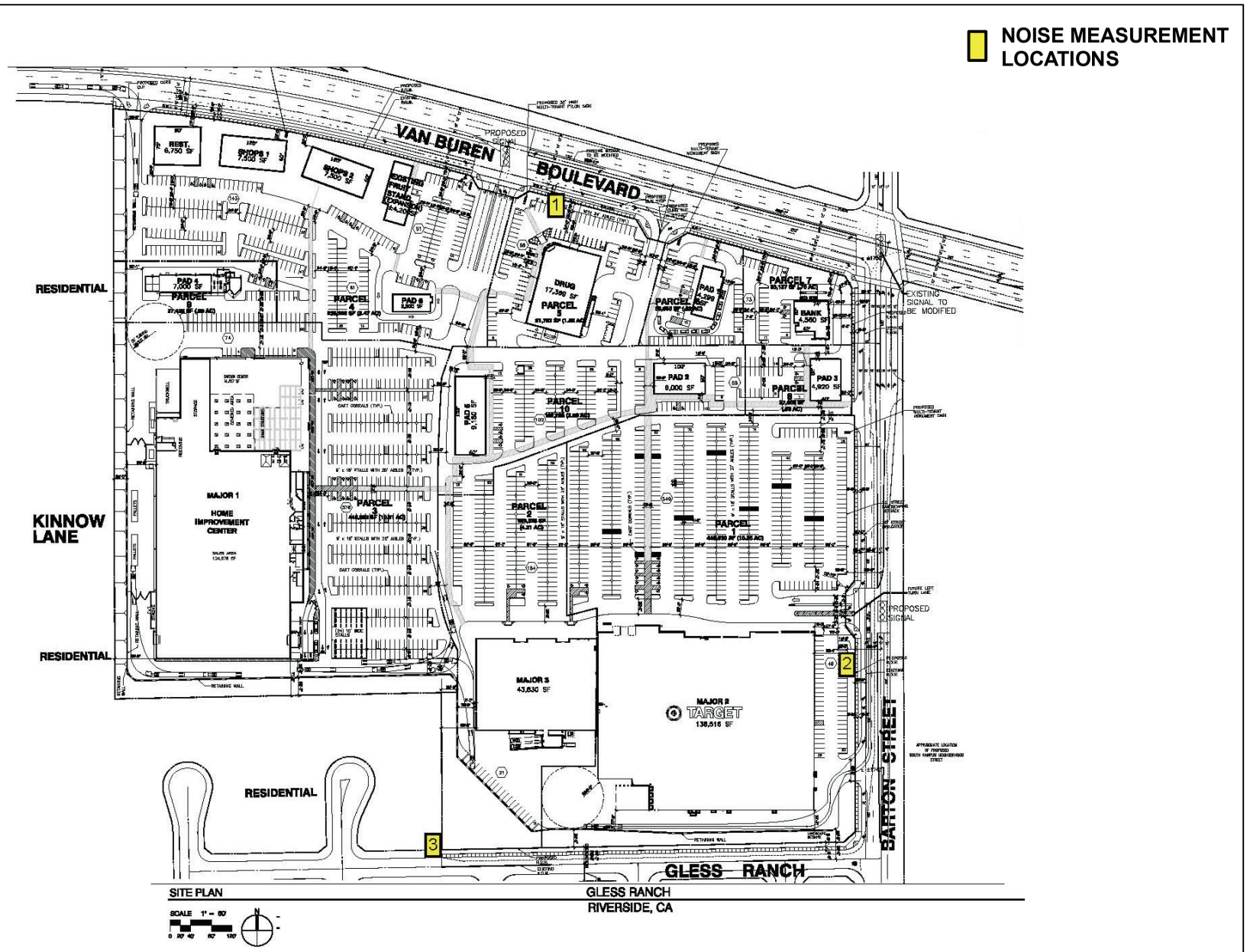
There are no applicable federal regulations.

State

Government Code Section 65302 (g)

California Government Code Section 65302(g) requires the preparation of a Noise Element, which shall identify and appraise the noise problems in the community. The Noise Element shall recognize the guidelines adopted by the Office of Noise Control in the State Department of Health Services and shall quantify to the extent practicable, current and projected noise levels for the following sources:

- Highways and Freeways
- Primary Arterials and major local streets
- Passenger and freight on-line railroad operations and ground rapid transit systems
- Aviation and airport related operations
- Local industrial plants
- Other ground stationary noise sources contributing to community noise environment.



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SOURCE: MCG Architecture 2010

FIGURE 4.9-1

Noise Measurement Locations

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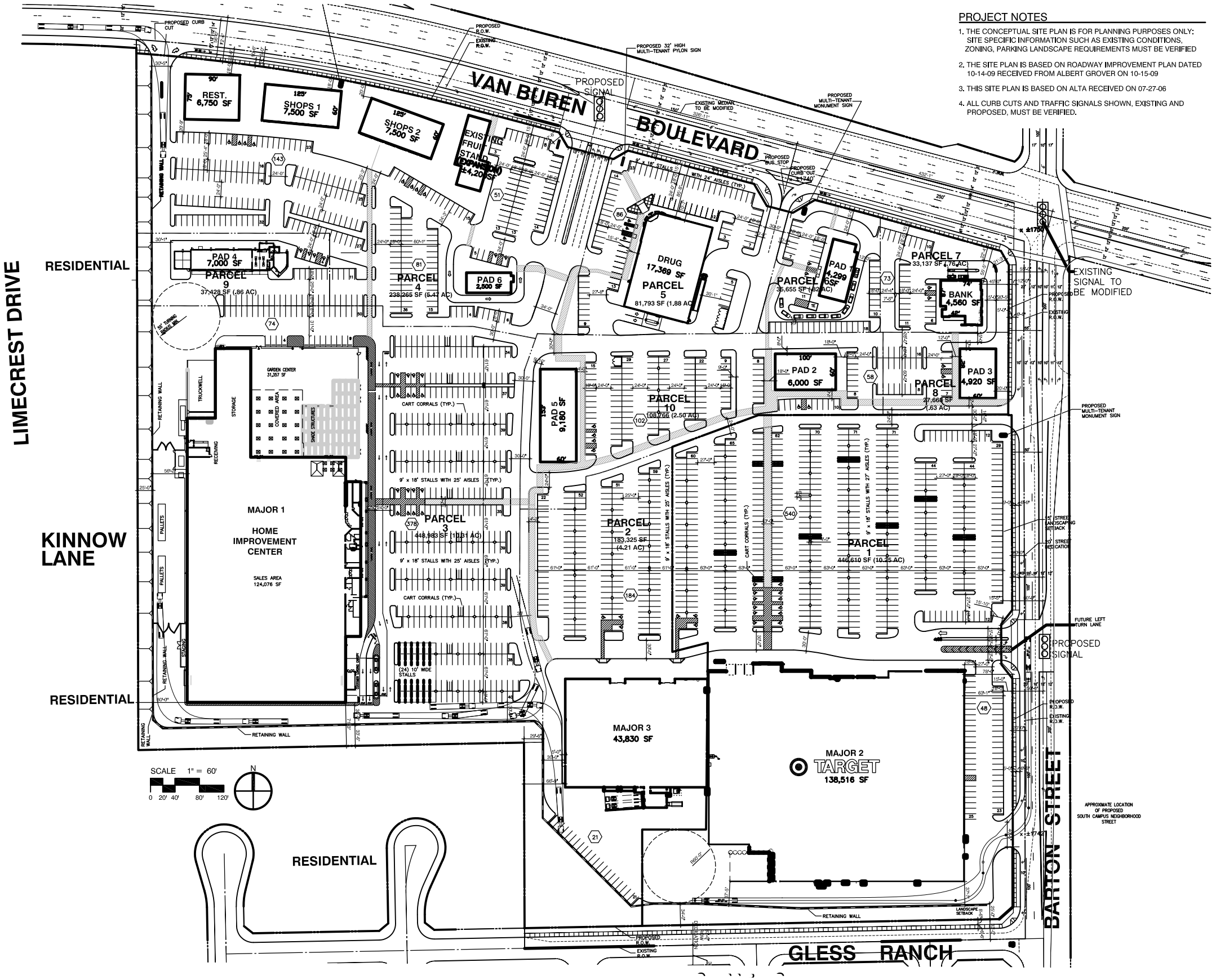

PROJECT NOTES

1. THE CONCEPTUAL SITE PLAN IS FOR PLANNING PURPOSES ONLY: SITE SPECIFIC INFORMATION SUCH AS EXISTING CONDITIONS, ZONING, PARKING LANDSCAPE REQUIREMENTS MUST BE VERIFIED
2. THE SITE PLAN IS BASED ON ROADWAY IMPROVEMENT PLAN DATED 10-14-09 RECEIVED FROM ALBERT GROVER ON 10-15-09
3. THIS SITE PLAN IS BASED ON ALTA RECEIVED ON 07-27-06
4. ALL CURB CUTS AND TRAFFIC SIGNALS SHOWN, EXISTING AND PROPOSED, MUST BE VERIFIED.

PROJECT INFORMATION

SITE AREA

MAJOR 1:	± 10.31 ACRES
MAJOR 2:(TARGET)	± 10.25 ACRES
MAJOR 3:	± 4.21 ACRES
OTHERS:	± 12.92 ACRES
TOTAL NET	± 37.69 ACRES
DEDICATION (BARTON STREET)	± 0.59 ACRES
DEDICATION (VAN BUREN BLVD)	± 0.87 ACRES
DEDICATION (GLESS RANCH)	± 0.62 ACRES
TOTAL GROSS	± 39.78 ACRES
NET SITE COVERAGE :	± 25.56% (11,132 SF/AC)
MAJOR 1 NET SITE COVERAGE:	± 27.63% (12,035 SF/AC)
MAJOR 2 NET SITE COVERAGE:	± 31.01% (13,514 SF/AC)

BUILDING AREA

MAJOR 1:			124,076 SF
OUTDOOR GARDEN CENTER			31,357 SF
MAJOR 1 TOTAL			155,433 SF
MAJOR 2:			138,516 SF
MAJOR 3:			43,830 SF
SHOPS 1	40% IS 6,000 SF	15,000 SF	7,500 SF
SHOPS 2	60% IS 9,000 SF		7,500 SF
RESTAURANT			6,750 SF
EXISTING FRUIT STAND			±4,200 SF
PAD 4			7,000 SF
PAD 6			2,500 SF
PAD 1			4,299 SF
PAD 2			6,000 SF
PAD 3			4,920 SF
PAD 5			9,180 SF
BANK			4,560 SF
DRUG			17,369 SF
TOTAL			419,557 SF

PARKING SUMMARY

USER	CITY RATIO REQUIRED	SPACES REQUIRED		SPACES PROVIDED
MAJOR 1 (BUILDING ONLY)	4 SP/1000 SF	497		-
OUTDOOR GC	1 SP/1000 SF	32		
TOTAL MAJOR 1		529		452
MAJOR 2	4 SP/1000 SF	554		588
MAJOR 3	4 SP/1000 SF	176		205
*SHOPS 1 (FOOD)	40% IS 10/1000 SF	60	96	275
*SHOPS 2 (RETAIL)	60% IS 4/1000 SF	36		
PAD 4	4 SP/1000 SF	28		
PAD 6	10 SP/1000 SF	25		
RESTAURANT	10 SP/1000 SF	68		
EX. FRUIT STAND	4 SP/1000 SF	17		
		234		
PAD 1	10 SP/1000 SF	43	228	319
PAD 2	4 SP/1000 SF	24		
PAD 3	1 SP/180 SF	28		
PAD 5	4 SP/1000 SF	37		
DRUG	4 SP/1000 SF	70		
BANK	1 SP/180 SF	26		
TOTAL		1,721		1,841

MAJOR 1 FRONT FIELD PROVIDED:	382
MAJOR 1 PARKING RATIO PROVIDED:	3.42 SP/1000 SF
MAJOR 2 FRONT FIELD PROVIDED:	543
MAJOR 2 PARKING RATIO PROVIDED:	4.30 SP/1000 SF
TOTAL PARKING RATIO PROVIDED:	4.52 SP/1000 SF

BUILDING CODE ANALYSIS

ALL BUILDINGS TYPE VB

ZONING CLASSIFICATION

JURISDICTION	CITY OF RIVERSIDE
EXISTING ZONING	C-R COMMERCIAL RETAIL
REQUIRED ZONING	C-R COMMERCIAL RETAIL

BUILDING SETBACK

FRONT & STREET SIDE	0'
SIDE & REAR	0'

LANDSCAPING SETBACK

FRONT & STREET SIDE	15'
SIDE & REAR	0'

DUDEK

6765-01
2011

SOURCE: MCG 2010

FIGURE 4.9-2
Site Plan

GLESS RANCH–DEIR

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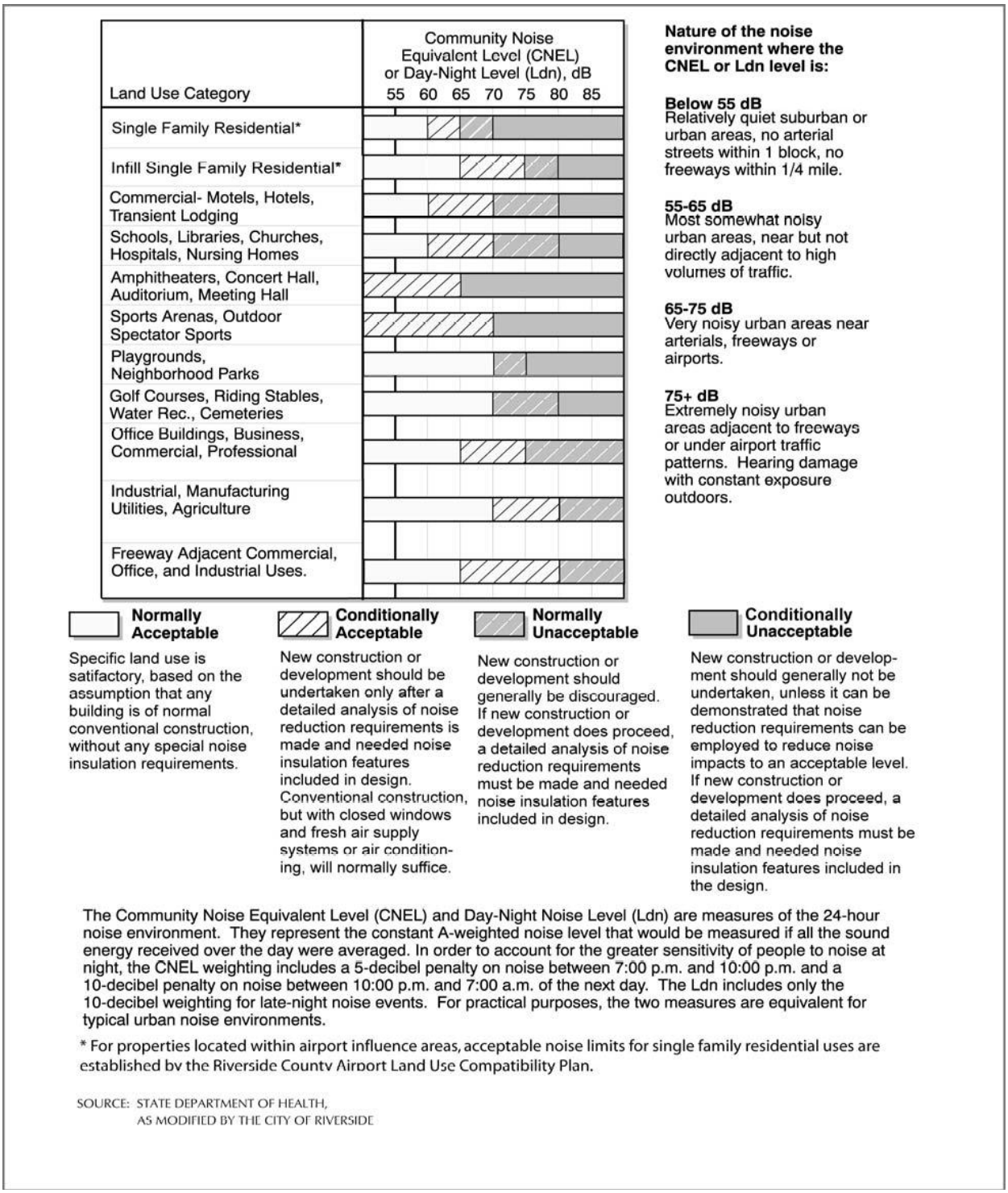
Local

General Plan – Noise Element

The City's Noise Element can be found in the General Plan document. The Noise Element examines noise sources in the City with a view toward identifying and appraising the potential for noise conflicts and identifying ways to reduce existing and potential noise impacts to sensitive receptors. In particular, the Noise Element contains policies and programs to achieve and maintain noise levels compatible with various types of land uses. The Noise Element addresses noise, which affects the community at large, rather than noise associated with site-specific conditions. However, the programs in the Noise Element do address effective strategies to reduce and limit community exposure to loud noise sources.

In regard to land use compatibility criteria, new construction or development generally should not be undertaken if it falls within the conditionally unacceptable range, unless it can be demonstrated that noise reduction requirements can be employed to reduce noise impacts to an acceptable level. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design. Table 4.9-3 depicts the noise compatibility criteria established by the City Noise Element. Based on the Noise/land Use Noise Compatibility Criteria, the City considers a CNEL greater than 75 dB to be normally unacceptable for commercial uses, and greater than 65 CNEL to be normally unacceptable for single-family residential uses.

Table 4.9-3, Noise/Land Use Noise Compatibility Criteria



Source: City of Riverside General Plan Final PEIR 2007

Title 7 - City Noise Code

The City's Noise Code (Title 7– Ord.6273. 1) sets internal and external noise standards for specific land uses/zoning (Sections 7.25.010 and 7.30.015). The City Noise Code also has general noise regulations (Section 7.35.010), which regulates noise from construction activities, or any excessive or offensive noise, which causes discomfort to anyone of normal sensitivity.

Noise-generating sources in Riverside are regulated in Title 7 of the City's Municipal Code (City of Riverside 2010). The noise limits apply to noise generation from one property to an adjacent property. The noise level limits depend on time of day, duration of the noise, and land use. The exterior noise level limits are depicted in Table 4.9-4. The noise level limits shall not be exceeded on or beyond the boundaries of the property on which the noise is produced. The noise level limit between two different districts is the arithmetic mean of the two districts. Thus, the base noise level limits between commercial use and residential use are 55 dBA between the hours of 10:00 p.m. to 7:00 a.m., and 60 dBA between the hours of 7:00 a.m. to 10:00 p.m.

The City has established hourly restrictions and noise level limits for construction and demolition activities (City of Riverside 2010). Construction and demolition activities are allowed between the hours of 7:00 a.m. and 7:00 p.m. on weekdays, and between 8:00 a.m. and 5:00 p.m. on Saturdays (City of Riverside 2010).

Table 4.9-4, Exterior Noise Limits

Land Use Category	Noise Level (dB(A))	
	10 p.m. to 7 a.m.	*7 a.m. to 10 p.m.*
Residential	45	55
Office/Commercial	65	65
Industrial/Non-Urban	70	70
Community Support	60	60
Public Recreation Facility	65	65

Notes:

Unless a variance has been granted, it shall be unlawful to cause or allow the creation of noise that exceeds the following:

1 The exterior noise standard of the applicable land use category, up to 5 decibels, for a cumulative period of more than 30 minutes in any hour
2 The exterior noise standard of the applicable land use category, plus 5 decibels, for a cumulative period of more than 15 minutes in any hour
3 The exterior noise standard of the applicable land use category, plus 10 decibels, for a cumulative period of more than 5 minutes in any hour
4 The exterior noise standard of the applicable land use category, plus 15 decibels, for the cumulative period of more than 1 minute in any hour
5 The exterior noise standard for the applicable land use category, plus 20 decibels or the maximum measured ambient noise level, for any period of time.

Source: City of Riverside 2010, Municipal Code Title 7 Noise Control

City of Riverside General Plan 2025

The noise section of the City's 2025 General Plan (2007) includes the following selected policies related to noise standards for construction-related, point source and transportation-related sources that will be applied to the proposed project:

Policy N-1.2: Require the inclusion of noise-reducing design features in development consistent with standards in (Table 4.9-3, Noise/Land Use Compatibility Criteria) Title 24 California Code of Regulations and Title 7 of the Municipal Code.

Policy N-1.3: Enforce the City of Riverside Noise Control Code to ensure that stationary noise and noise emanating from construction activities, private developments/residences and special events are minimized.

Policy N-1.4: Incorporate noise considerations into the site plan review process, particularly with regard to parking and loading areas, ingress/egress points, and refuse collection areas.

Policy N-1.5: Avoid locating noise-sensitive land uses in existing and anticipated noise-impacted areas.

Policy N-1.7: Evaluate noise impacts from roadway improvement projects by using the City's Acoustical Assessment Procedure.

Policy N-1.8: Continue to consider noise concerns in evaluating all proposed development decisions and roadway projects.

Policy N-2.1: Ensure that new development can be made compatible with the noise environment by using noise/land use compatibility standards (Table 4.9-3, Noise/Land Use Noise Compatibility Criteria) and the airport noise contour maps (found in the Riverside County Airport Land Use Compatibility Plans) as guides to future planning and development decisions.

Policy N-4.1: Ensure that noise impacts generated by vehicular sources are minimized through the use of noise reduction features (i.e., earthen berms, landscaped walls, lowered streets, improved technology).

Policy N-4.5: Use speed limit controls on local streets as appropriate to minimize vehicle traffic noise.

Policy CCM-2.9: Design all street improvement projects in a comprehensive fashion to include consideration of street trees, pedestrian walkways, bicycle lanes, equestrian pathways, signing, lighting, noise, and air quality wherever any of these factors are applicable.

4.9.2 Thresholds of Significance

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts. Based on the IS prepared for the project and

Appendix G, a development project could have a significant impact related to noise if the proposed project would:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels
- Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project
- Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

4.9.3 Project Elements that Can Reduce Impacts

Construction and site preparation for the proposed project would not include the use of pile driving or blasting that would be significant sources of construction noise and vibration impacts. All mechanical equipment would be enclosed or set back in an effort to reduce noise levels at the project site property line. Additionally, building shell construction (i.e., exterior wall, window and door) would provide adequate sound insulation to meet the acceptable interior noise level of 45 dBA CNEL, as required by the Title 24 of the California Code of Regulations.

Consistent with the General Plan policies listed above, the site design has taken noise impacts into consideration. For instance, the vehicle repair/tire store proposed for the site, along the western edge, has been oriented away from adjacent residential uses. The closest repair bay would be located approximately 90 feet from the nearest residential property. Additionally, drive-through driveways associated with future fast food restaurants have also been oriented away from adjacent residential uses and the menu board speakers would be located more than 300 feet away from the closest residential property. The loading bays for the Target and home improvement store have also been designed in a way to reduce noise impacts. For example, the proposed site plan shows a minimum 25-foot landscape setback along the southerly property line, adjacent to Gless Ranch Road. A maximum 8 ½-foot-tall decorative retaining wall with a maximum 6-foot-tall decorative screen wall will be provided at the rear (north) portion of the landscape area. Along the entirety of the westerly project boundary, adjacent to single-family residences, citrus trees will be replanted to serve as a landscape buffer. A majority of the landscape setback area along this property line includes 2:1 slopes, such that the existing houses to the west of the proposed home improvement store will be approximately 10 to 14 feet lower than the building pad elevation of the proposed home improvement store, along the southernmost approximately one-half of the westerly property line. A new decorative retaining wall, up to 13 feet in height, is proposed to be constructed a few feet in from the westerly property line, and a separate 6-foot-tall decorative screen wall would be constructed at the top of the slope, at the rear of the 25-foot setback area. In addition, to attenuate roof-

top noise associated with mechanical equipment, the project buildings will include parapets that will act as sound-walls to block noise generated from rooftop equipment.

4.9.4 Environmental Impacts before Mitigation

Ambient noise measurements were conducted to quantify the existing daytime noise environment at three sites. Noise levels resulting from the proposed construction activities have been obtained from reports prepared by the Federal Transit Administration (FTA 2006) and field data from files. The noise impact assessment utilized criteria established in the City of Riverside General Plan (2007) and Municipal Code (City of Riverside 2010).

The noise level associated with selected roadways was determined based on ambient noise measurements and using the Federal Highway Administration Traffic Noise Model (FHWA TNM), version 2.5 (FHWA 2004).

Threshold: Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The noise levels used to determine significance associated with on-site activities are shown in Table 4.9-4. For the purposes of this analysis, project-generated traffic noise impacts are considered significant when they exceed 3 dB CNEL and either elevate noise levels above 65 dB CNEL or exceed a 3 dB CNEL increase above an already noisy existing condition (i.e., 65 dB CNEL). The City's conditionally acceptable noise level for single-family residences is 65 dB CNEL; therefore, this threshold is utilized. The residential uses in the immediate vicinity of the project site are single family. As stated above, a 3 dB increase is generally considered to be the point of change in environmental noise that can just be detected by the human ear.

On-site noise-generating activities associated with the project would include short-term construction and site clearing and long-term operational noise related to various commercial activities, such as loading dock/delivery truck activities and outdoor mechanical equipment. The project would generate off-site traffic noise along various roads in the area. In addition, the project site will be subject to noise from Van Buren Boulevard and Barton Street.

Construction Noise

Development activities for the project construction would generally involve the following sequence: (1) demolition, (2) site preparation, (3) building construction, and (4) paving. The following are typical types of construction equipment that would be expected:

- Tractor/Backhoes
- Dozers
- Loaders
- Scrapers
- Graders
- Off-Highway Water Trucks
- Roller
- Cranes
- Forklifts
- Trenchers
- Paving Equipment
- Excavators
- Materials Delivery Trucks
- Concrete Trucks
- Asphalt Trucks
- Pneumatic Tools.

As demonstrated by the previous summary, construction equipment anticipated for project development includes only standard equipment that would be employed for any routine construction project of this scale; construction equipment with substantially higher noise-generation characteristics (such as pile drivers, rock drills, blasting equipment, etc.) would not be necessary for development of the proposed project. Construction noise is difficult to quantify because of the many variables involved, including the size of equipment used, percentage of time, and number of pieces of equipment that will actually operate on the site. However, maximum construction noise levels at 50 feet would range from approximately 75 to 90 dB for the type of equipment to be used for construction of the project. The hourly average noise levels would vary, but construction noise levels of up to approximately 75 to 80 dB at 50 feet are typical. The typical noise levels associated with various pieces of construction equipment are depicted in Table 4.9-5

Table 4.9-5, Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dB) 50 feet from Source
Air Compressor	81
Backhoe	80
Ballast Equalizer	82
Ballast Tamper	83
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88

Table 4.9-5, Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dB) 50 feet from Source
Crane, Mobile	83
Dozer	85
Generator	81
Grader	85
Impact Wrench	85
Jackhammer	88
Loader	85
Paver	89
Pile-driver (Impact)	101
Pile-driver (Sonic)	96
Pneumatic Tool	85
Pump	76
Rail Saw	90
Rock Drill	98
Roller	74
Saw	76
Scarifier	83
Scraper	89
Shovel	82
Spike Driver	77
Tie Cutter	84
Tie Handler	80
Tie Inserter	85
Truck	88

Source: *Traffic Noise and Vibration Assessment*, FTA 2006

The closest residences are located along the western and southern portions of the site. The 1-hour average noise level could range up to approximately 75 to 80 dB at the closest existing residences. This noise level could occur for a few days when construction equipment is operating immediately adjacent to the residential properties. The remainder of the time the noise level would typically be much less (i.e., 5 to 20 dB) because the equipment would be working in a large area farther away from the existing residences.

As part of the construction activities, the existing orange trees that are to be removed will be chipped on site. Noise from a chipper would be approximately 90 dB at a distance of 50 feet. This noise level could result in significant noise impacts if the chipping operation is located directly adjacent to the existing residences. Therefore, a mitigation measure requiring setback of the chipping operation is included as part of the noise mitigation (MM-Noise-1, below).

Construction activities associated with demolition of the existing buildings and development of the project could also have the potential to adversely affect adjacent noise-sensitive uses (i.e., residential).

As such, these noise levels are considered to represent a potentially significant impact. The project would be required to limit construction hours, place mufflers on equipment engines, and orient stationary sources to direct noise away from sensitive uses. These measures are included as a part of the noise mitigation (MM-Noise-1, below).

Operational Noise

Long-term operational noise would result from various commercial activities such as loading dock/delivery truck activities, outdoor mechanical equipment associated with the building operations (e.g., air conditioning), and the proposed tire/automotive facility proposed on site. The project would also create noise by generating off-site traffic noise along various roads in the area.

Loading Dock and Delivery Truck Noise

Loading docks would be located at the home improvement center (Major 1), Target (Major 2), and at the remaining major retail site (Major 3) within the project area (see Figure 4.9-2, Site Plan. These three stores will require truck delivery routes that are planned to be located along the western and southern boundaries of the site. In general, the average noise level associated with delivery/loading dock noise will vary, depending on such factors as truck engine power and idling times, the way loads are placed on hand trucks and fork lifts, and the number of operating minutes in any hour. To determine the approximate noise levels that would be generated at one of the project loading dock areas, noise measurements conducted by Dudek of similar activities at four existing Home Depot and Target stores located in Vista, Encinitas, San Marcos, and Escondido were used. The measurements were conducted at various periods in 2010 using an ANSI Type 1 sound level meter. These stores were selected because they have similar loading facilities and operations as the proposed project's major stores. Based on these measurements, the 1-hour average sound level during the loading dock activities is approximately 50 to 55 dB at 100 feet from the loading dock.

The distances from the adjacent residential properties to the loading docks and on-site access routes would vary. The property lines of the closest homes would be approximately 25 feet from the on-site parking lot area and 85 feet to the closest loading dock. Based on the distances between the various residential properties and delivery truck and loading dock areas, the delivery truck and loading dock 1-hour average noise level would generally range between 57 and 63 dB at the adjacent residential property lines along the western and southern portions of the site. **These noise levels would exceed the City's daytime 60 dB and nighttime 55 dB noise criteria and would result in a significant noise impact if not mitigated. With implementation of the sound walls required by mitigation measure MM-Noise-2, the noise levels would be reduced by approximately 7 to 15 dBA at the adjacent residences and would mitigate the noise impact. The noise level calculations are provided in Appendix B of the Noise Technical Report (see Appendix I of the DEIR). Therefore, the implementation of Mitigation Measure MM-Noise-2, would reduce this impact to less than significant.**

Additional deliveries would occur at the other remaining retail buildings using primarily small delivery trucks. **These deliveries would not generate a substantial level of noise, and would be located at least 70 feet way from the existing residences at the western and southern boundaries of the site. Delivery activities associated with the other uses on site (i.e., not Major 1, 2, or 3) are considered less than significant.**

Outdoor Mechanical Equipment

Outdoor mechanical equipment such as heating, ventilation, and air conditioning (HVAC) equipment could be mounted on roofs or at the ground level of the commercial buildings. Mechanical equipment plans are not currently available; therefore, this analysis is based on general industry standards. The noise levels generated by this equipment would vary, but typically range from approximately 45 to 55 dB at a distance of 50 feet. The closest residential property to the proposed stores would be located approximately 70 feet from the major stores. At this distance, the unmitigated noise level would range up to 52 dB, assuming the equipment is not shielded by intervening parapets. However, the project would include parapets on the roof that will attenuate noise levels to less than 45 dB at the adjacent property lines. **This noise level would comply with the City's noise ordinance standards and result in a less-than-significant noise impact.**

Automotive Repair/Maintenance Facility

An automotive repair/maintenance facility would be located at Pad 4 per the site plan (see Figure 4.9-2), which is located on the western edge of the project adjacent to existing residential uses. Noise-generating equipment at the facility would most likely include tire changers, wheel balancers, air compressors, and various tools. The primary noise sources would be the power and pneumatic tools, as well as noise from hitting and banging car parts such as hubcaps, tires, car hoods, etc. This facility would operate during the daytime hours only.

Based on previous noise measurements of these types of facilities that Dudek has collected at facilities such as automotive dealership repair shops, Evans Tire and Service Center, and Wal-Mart stores the average noise level from an automotive repair/maintenance facility can range up to approximately 60 to 65 dBA at a distance of 50 feet directly in front of the open bay doors. The maximum noise level ranges from approximately 75 to 80 dB, and it results from the use of pneumatic tools and banging on tires or hubcaps. The closest residential property would be located approximately 80 feet from the work bays proposed on Pad 4 of the site plan (see Figure 4.9-2). At this distance the noise level would be approximately 61 dB. **This noise level would exceed the City's noise ordinance standard by 1 dB and, if not mitigated, would result in a significant noise impact. However, the implementation of Mitigation Measure MM-Noise-2, would reduce this impact to less than significant.**

Off-site Traffic Noise Level Increase

The project would generate traffic along adjacent roads including Van Buren Boulevard, Gless Ranch Road, and Barton Street. The City does not have a specific noise criterion for evaluating off-site noise impacts from project-related traffic to residences or noise-sensitive areas. For the purposes of this analysis, such impacts are considered significant when they exceed 3 dB CNEL and either elevate noise levels above 65 dB CNEL or exceed a 3 dB CNEL increase above an already noisy existing condition (i.e., 65 dB CNEL). The City's conditionally acceptable noise level for single-family residences is 65 dB CNEL; therefore, this threshold is utilized. The residential uses in the immediate vicinity of the project site are single family. As stated above, a 3 dB increase is generally considered to be the point of change in environmental noise that can just be detected by the human ear.

With the exception of Barton Street between Van Buren Boulevard and Gless Ranch Road and Gless Ranch Road west of Barton Street, the existing traffic noise in conjunction with the project traffic noise would generate a noise level increase of 1 dB CNEL or less along the studied roads in the vicinity of the site. The noise level increase along Barton Street between Van Buren Boulevard and Gless Ranch Road would be 2 dB CNEL. There are no existing residents along this segment of Van Buren Boulevard. The noise level increase along Gless Ranch Road west of Barton Street would be 2 dB CNEL. However, the noise level increase would result in a noise level of less than 60 dB CNEL. The noise level increases associated with the additional traffic volume are depicted in **Table 4.9-6**. **The additional traffic volume along the adjacent roads would not substantially increase the existing noise level in the project vicinity, and the traffic noise level increase is considered less than significant, and no mitigation measures are necessary.**

Table 4.9-6, Existing Plus Project Off-Site Traffic Noise Level Increase

Street (Segment)	Existing ADT	Existing + Project ADT	Existing Noise Level (CNEL) @ 50' to Center Line	Existing + Project Noise Level (CNEL) @ 50' to Center Line	Noise Level Increase (CNEL)
Van Buren Boulevard					
Washington St. to Porter Ave.	39,683	40,674	74.2	74.3	0.1
Porter Ave. to Wood Rd.	36,197	38,139	73.8	74.0	0.2
Wood Rd. to Cole Ave.	35,890	37,832	73.7	74.0	0.2
Cole Ave. to Barton St.	31,333	38,453	73.2	74.0	0.9
Barton St. to Orange Terrace Pkwy.	35,000	38,236	73.6	74.0	0.4
Orange Terrace Pkwy. To Village West Dr.	35,000	36,942	73.6	73.9	0.2
Village West Dr. to Harmon St.	33,204	34,499	73.4	73.6	0.2

Table 4.9-6, Existing Plus Project Off-Site Traffic Noise Level Increase

Street (Segment)	Existing ADT	Existing + Project ADT	Existing Noise Level (CNEL) @ 50' to Center Line	Existing + Project Noise Level (CNEL) @ 50' to Center Line	Noise Level Increase (CNEL)
Trautwein Road					
Grove Community Dr. to Orange Terrace Pkwy.	21,798	25,164	71.6	72.2	0.6
Orange Terrace Pkwy. To Van Buren Blvd.	20,324	24,208	71.3	72.0	0.8
Cole Avenue					
Van Buren Blvd. to Krameria Ave.	11,013	12,308	68.6	69.1	0.5
Barton Street					
Orange Terrace Pkwy. to Van Buren Blvd.	5,000	5,647	65.2	65.7	0.5
Van Buren Blvd. to Gless Ranch Rd.	8,525	12,409	67.5	69.1	1.6
Gless Ranch Rd. to Larry Parrish Dr.	9,013	10,566	67.7	68.4	0.7
Larry Parrish Dr. to Nandina Ave.	5,275	5,793	65.4	65.8	0.4
Krameria Avenue					
Cole Ave. to Barton St.	1,775	2,163	60.7	61.6	0.9
Gless Ranch Road					
West of Barton Street	788	1,176	57.2	58.9	1.7

Note: Based on FHWATNM 2.5 Noise Model

Looking at the project along with other cumulative projects and ambient growth in Year 2013, (i.e., existing plus ambient growth, plus cumulative, plus project ADT) traffic noise would generate a noise level increase of less than 2 dB CNEL as compared to the noise level without the project. The noise level increases associated with the Year 2013 conditions are depicted in **Table 4.9-7**. **Therefore, in the ambient plus cumulative condition, the additional project traffic volume along the adjacent roads would not substantially increase the existing noise level in the project vicinity, and the traffic noise level increase is considered less than significant, and no mitigation measures are necessary.**

Table 4.9-7, Cumulative in 2013 Off-Site Traffic Noise Level Increase

Street (Segment)	Year 2013 ADT	Year 2013 + Project ADT	Year 2013 ADT (CNEL) @ 50' to Center Line	Year 2013 + Project ADT (CNEL) @ 50' to Center Line	Noise Level Increase (CNEL)
Van Buren Boulevard					
Washington St. to Porter Ave.	48,922	49,913	75.1	75.2	0.1
Porter Ave. to Wood Rd.	46,896	48,838	74.9	75.1	0.2
Wood Rd. to Cole Ave.	43,396	45,338	74.6	74.8	0.2
Cole Ave. to Barton St.	43,030	50,150	74.5	75.2	0.7
Barton St. to Orange Terrace Pkwy.	49,489	52,725	75.1	75.4	0.3
Orange Terrace Pkwy. to Village West Dr.	54,696	56,638	75.6	75.7	0.2
Village West Dr. to Harmon St.	55,730	57,025	75.7	75.8	0.1
Trautwein Road					
Grove Community Dr. to Orange Terrace Pkwy.	30,234	33,600	73.0	73.5	0.5
Orange Terrace Pkwy. to Van Buren Blvd.	26,019	29,903	72.4	73.0	0.6
Cole Avenue					
Van Buren Blvd. to Krameria Ave.	15,255	16,550	70.0	70.4	0.4
Barton Street					
Orange Terrace Pkwy. to Van Buren Blvd.	7,753	8,400	67.1	67.4	0.3
Van Buren Blvd. to Gless Ranch Rd.	11,191	15,075	68.7	70.0	1.3
Gless Ranch Rd. to Larry Parrish Dr.	13,560	15,113	69.5	70.0	0.5
Larry Parrish Dr. to Nandina Ave.	9,282	9,800	67.9	68.1	0.2
Krameria Avenue					
Cole Ave. to Barton St.	1,962	2,350	61.1	61.9	0.8
Gless Ranch Road					
West of Barton Street	912	1,300	57.8	59.3	1.5

Note: Based on FHWA TNM 2.5 Noise Model

<u>Threshold:</u> Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

The heavier pieces of construction equipment used at this site could include bulldozers, graders, loaded trucks, water trucks, and pavers. Groundborne vibration information related to construction activities has been collected by California Department of Transportation (Caltrans) (Caltrans 2004). Information from Caltrans indicates that continuous vibrations with a peak particle velocity of approximately 0.1 inch/second

begin to annoy people. Groundborne vibration is typically attenuated over short distances. The closest homes would be approximately 25 feet or more from the construction area along the edge of the site. At this distance and with the anticipated construction equipment, the peak particle velocity would be less than 0.1 inch/second at the adjacent homes. **Therefore, construction activities are not anticipated to result in continuous vibration levels that typically annoy people, and the vibration impact would be considered less than significant, and no mitigation measures are necessary.**

Threshold: Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

As discussed previously, long-term operational noise would result from various commercial activities such as loading dock/delivery truck activities and outdoor mechanical equipment and would be considered a permanent noise source. The project would also generate off-site traffic noise along various roads in the area as patrons using the proposed commercial center to go to and from the site.

The delivery truck and loading dock activities would exceed the City's daytime 60 dB and nighttime 55 dB noise criteria and would result in a significant noise impact if not mitigated. **However, the implementation of Mitigation Measure MM-Noise-2, below, would reduce this impact to less than significant.**

Also, as discussed previously, the impacts related to outdoor mechanical equipment such as HVAC would be less than significant with the incorporation of the roof parapets. **Noise associated with the proposed automotive repair/maintenance facility would be considered potentially significant at the closest residential property and would be located approximately 80 feet from the work bays. However, the implementation of Mitigation Measure MM-Noise-2, below, would mitigate this impact to less than significant.**

The project would generate traffic along adjacent roads including Van Buren Boulevard, Gless Ranch Road, and Barton Street. With the exception of Barton Street between Van Buren Boulevard and Gless Ranch Road, and Gless Ranch Road west of Barton Street, the existing traffic noise in conjunction with the project traffic noise would generate a noise level increase of less than 1 dB CNEL along the studied roads in the vicinity of the site. The noise level increase along Barton Street between Van Buren Boulevard and Gless Ranch Road would be approximately 1.6 dB CNEL as previously shown in Table 4.9-6. There are no existing residents along this segment of Van Buren Boulevard. The noise level increase along Gless Ranch Road west of Barton Street would be 1.7 dB CNEL. The noise level increase would result in a noise level of less than 60 dB CNEL. **The additional traffic volume along the adjacent roads would not substantially increase the existing noise level in the project vicinity, and the traffic noise level increase is considered less than significant, and no mitigation measures are necessary.**

When the project is considered with other area projects, along with an ambient growth factor, in Year 2013, the project would generate a noise level increase of less than 2 dB CNEL as compared to the noise level without the project. **Therefore, the additional project traffic volume along the adjacent roads in the cumulative, plus ambient, plus project condition would also not substantially increase the existing noise level in the project vicinity, and the traffic noise level increase is considered less than significant, and no mitigation measures are necessary**

Threshold: Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

The project's temporary noise increases result from construction activities. As discussed previously, construction activities for the project would generally involve the following sequence: (1) demolition, (2) site preparation, (3) building construction, and (4) paving.

The closest residences are located along the western and southern portions of the site, approximately 70 feet from the property line. As discussed previously, during demotion, the existing orange trees will be chipped on site. This noise level could result in significant noise impacts if the chipping operation is located directly adjacent to the existing residences. Therefore, a mitigation measure requiring setback of the chipping operation is included as part of the noise mitigation (MM-Noise-1, below) in order to reduce impacts related to construction to less-than-significant levels.

Construction activities associated with demolition of the existing buildings and development of the project have the potential to adversely affect adjacent noise-sensitive uses that are located approximately 70 feet from the property line. As such, these noise levels are considered to represent a potentially significant impact. **The project would be required to limit construction hours, place mufflers on equipment engines, and orient stationary sources to direct noise away from sensitive uses. These measures are included as a part of the noise mitigation (MM-Noise-1, below). With incorporation of this mitigation measures, impacts related to temporary noise impacts is considered less than significant.**

4.9.5 Mitigation Measures

CEQA Guidelines, Section 15126.4, requires environmental impact reports (EIRs) to describe feasible measures that can minimize significant adverse impacts. The following mitigation measures have been evaluated for feasibility and are incorporated in order to reduce potentially significant impacts related to increases in noise levels from both construction (temporary impacts) and operation (permanent impacts) of the project site.

MM Noise-1: In order to mitigate the noise impact associated with construction noise, and in order to meet the City's noise criteria related to construction noise, the applicant shall ensure prior to grading or demolition permit issuance that:

- All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers.
- Construction noise reduction methods such as shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible. Unattended construction vehicles shall not idle for more than 5 minutes when located within 200 feet from residential properties.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from or shielded from the residences located along the western and southern boundaries.
- The tree-chipping operation shall be located a minimum of 400 feet from any existing homes.
- During construction, stockpiling and vehicle staging areas shall be located as far as practical from noise sensitive receptors, or at least 200-feet from residential properties. A plan shall be provided to the City's Planning Department identifying the staging areas prior to issuance of a construction permit.
- Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow surrounding property owners and residents to contact the job superintendent if necessary. In the event the City receives a complaint, appropriate corrective actions shall be implemented and a report of the action provided to the reporting party.

MM Noise-2: In order to mitigate for the impacts related to exceeding the City's noise standards, as well as to mitigate the noise associated with the proposed docking and loading bays associated with the buildings identified as Majors 1, 2, and 3 on the site plan, and the proposed auto repair/tire facility, the project shall construct a 6- to 8-foot-high (as measured from the top of slope) masonry block sound wall along the west and south sides of the project site. With implementation of these sound walls the noise levels would be reduced by approximately 7 to 15 dBA at the adjacent residences and would mitigate the noise impact.

4.9.6 Environmental Impacts after Mitigation Is Incorporated

With implementation of these mitigation measures, construction and operational noise impacts would be less than significant.

4.9.7 References

Caltrans (California Department of Transportation). 1998. Traffic Noise Analysis Protocol. October 1998.

Caltrans. 2004. Transportation Related Earthborne Vibrations. January 23, 2004.

City of Riverside. 2007. Riverside General Plan 2025 – Noise Element. Adopted November 2007.

City of Riverside. 2010. Riverside Municipal Code, Title 7 – Noise Control.

Dudek. 2011. Appendix I. *Gless Ranch Project – Final Environmental Noise* Assessment. July 2011.

FHWA (Federal Highway Administration). 2004. FHWA Traffic Noise Model User's Guide (Version 2.5 Addendum). April 2004.

FTA (Federal Transit Administration). 2006. Transit Noise and Vibration Impact Assessment. May 2006.

LLG (Linscott, Law and Greenspan). 2010. Gless Ranch Center Traffic Data. December 2010.

MCG Architecture. 2010. "Gless Ranch Site Plan" (Riverside, California) [map].

USGS (U.S. Geographic Survey). "Riverside East Quadrangle" [map]. USGS 7.5-Minute Series.

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4.10 Traffic

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AM	morning
Caltrans	California Department of Transportation
EIR	Environmental Impact Report
HCM	Highway Capacity Manual
I-215	Interstate 215
ITE	Institute of Transportation Engineers
LOS	level of service
MM	mitigation measure
mph	miles per hour
PM	evening
RTA	Riverside Transit Agency
SCAG	Southern California Association of Governments
Sec/veh (or sec/veh)	seconds per vehicle
SPA	specific plan amendment
SR	state route
TIA	Traffic impact analysis
v/c ratios	volume-to-capacity ratio

This section presents a discussion of transportation and traffic that would be affected by the proposed project. The following issues were found to be less than significant or had no impacts in the Initial Study/Notice of Preparation for the project (Appendix A): 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; substantially increase hazards due to a design feature or incompatible uses; result in inadequate emergency access; conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. As a result of the Scoping Session held on January 6, 2011, the City of Riverside Planning Commission asked that the environmental impact report (EIR) address connectivity to existing trails. Therefore, although the Initial Study determined that the project would have less-than-significant impacts related to conflicting with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, the impact analysis that follows will address this issue further.

According to the Initial Study, the following issues were found to have potentially significant impacts associated with implementation of the proposed project and therefore will be addressed in the following sections: conflicts 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; and/or conflicts with an applicable congestion management program, including but not limited to level of service (LOS) standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

In addition to other documents, the following sources were used in the preparation of this section of the draft environmental impact report:

- Linscott, Law & Greenspan, Engineers. 2011. Appendix J. *Traffic Impact Analysis Report*. June 9, 2011.

4.10.1 Setting

Existing Street Network

Interstate 215 (I-215) provides regional access to the project site. The I-215 freeway, located east of the project site, is an interstate highway that extends throughout Riverside County. Direct access to the project site from the I-215 freeway is provided via an interchange at Van Buren Boulevard.

The principal local network of streets serving the project area includes Van Buren Boulevard and Barton Street. The following discussion provides a brief synopsis of these key area streets. The descriptions are based on an inventory of existing roadway conditions.

Van Buren Boulevard is a four-lane, divided roadway west of Wood Road; a six-lane, divided roadway between Wood Road and Trautwein Road/Cole Avenue; a five-lane, divided roadway (two eastbound lanes and three westbound lanes) between Trautwein Road/Cole Avenue and Orange Terrace Parkway; and a four-lane, divided roadway east of Orange Terrace Parkway, oriented in the east–west direction. Van Buren Boulevard borders the project site to the north and will provide access to the project site via one full-access signalized driveway and two "right-turn in/right-turn out" only driveways. On-street parking is not permitted within the vicinity of the project. The posted speed limit along Van Buren Boulevard varies between 50 miles per hour (mph) and 55 mph. Van Buren Boulevard is classified as a 120-foot-wide Arterial (Scenic and Special Boulevard and Parkway) in the City of Riverside Circulation and Community Mobility Element. Within the County of Riverside, Van Buren Boulevard is classified as an Urban Arterial (152-foot right-of-way) per the County of Riverside General Plan Circulation Element.

Barton Street is a two-lane, undivided roadway north of Van Buren Boulevard; a two-lane undivided roadway between Van Buren Boulevard and Gless Ranch Road; a three-lane, undivided roadway (one northbound lane and two southbound lanes) between Gless Ranch Road and Lurin Avenue; and a two-lane, undivided roadway south of Lurin Avenue, oriented in the north–south direction. Barton Street borders the project site to the east and will provide access to the project site via one full access signalized driveway and two driveways. On-street parking is not permitted within the vicinity of the project. There is no posted speed limit along Barton Street within the vicinity of the project. Barton

Street is classified as an 88-foot-wide Arterial in the City of Riverside Circulation and Community Mobility Element.

Figure 4.10-1 presents an inventory of the existing roadway conditions for the arterials and intersections evaluated in this section. The number of travel lanes and intersection controls for the key area intersections are identified.

Existing Traffic Volumes

Twenty-nine key study intersections have been identified as the locations at which to evaluate existing and future traffic operating conditions. Some portion of potential project-related traffic will pass through each of these intersections, and their analysis will reveal the expected relative impacts of the project. These key intersections were selected for evaluation based on discussions with City of Riverside staff.

As directed by City of Riverside staff, existing morning (AM) and evening (PM) peak hour traffic volumes for the 29 key study intersections evaluated in this report were obtained from either the *Meridian Specific Plan Amendment (SPA) Traffic Impact Analysis (TIA),* prepared by Kimley-Horn and Associates (2010), or from manual morning and evening peak hour turning movement counts conducted by the firm City Traffic Counters in November 2010. It should be noted that the *Meridian Specific Plan Amendment Traffic Impact Analysis* report contains 18 common intersections with the proposed project study area.

Table 4.10-1 lists the key study intersections and indicates the source/date of the existing traffic data. As shown in Table 4.10-1, the *Specific Plan Amendment Traffic Impact Analysis* provided existing traffic data for the 18 common key study intersections and the traffic counts conducted by City Traffic Counters provided the existing traffic data for the remaining 11 key study intersections. Further review of Table 4.10-1 indicates that the existing traffic count data from the *Specific Plan Amendment Traffic Impact Analysis* is older than 1 year (i.e., from Year 2008 and Year 2009). However, based on a traffic count comparison at key common study intersections, the Year 2008 and Year 2009 existing traffic counts are greater than the Year 2010 existing traffic counts. Therefore, the Year 2008 and Year 2009 existing traffic counts are conservative and deemed appropriate for use in the traffic analysis. It should be noted that for the purposes of this traffic study, all traffic counts represent a Year 2010 existing baseline.

Figures 4.10-2 and 4.10-3 illustrate the existing AM and PM peak hour traffic volumes at the 29 key study intersections evaluated in this report, respectively. Appendix J contains the detailed peak hour count sheets for the key intersections evaluated in this section.

Table 4.10-1
Source and Date of Existing Traffic Counts

Key Study Intersection	Jurisdiction	Traffic Count Source	Traffic Count Date
1) Washington Street at Van Buren Boulevard	Riverside County	City Traffic Counters	November 2010
2) Porter Avenue at Van Buren Boulevard	Riverside County	City Traffic Counters	November 2010
3) Wood Road at Van Buren Boulevard	Riverside	Meridian SPA TIA	September 2009
4) Alessandro Blvd at Arlington Ave/Chicago Ave	Riverside	City Traffic Counters	November 2010
5) Alessandro Boulevard at Century Avenue	Riverside	City Traffic Counters	November 2010
6) Alessandro Boulevard at Via Vista Drive	Riverside	City Traffic Counters	November 2010
7) Alessandro Blvd at Canyon Crest Drive/Overlook Pkwy	Riverside	Meridian SPA TIA	June 2009
8) Trautwein Road at Alessandro Boulevard	Riverside	Meridian SPA TIA	June 2009
9) Trautwein Road at Mission Grove Parkway	Riverside	Meridian SPA TIA	June 2009
10) Trautwein Road at John F. Kennedy Drive	Riverside	Meridian SPA TIA	June 2009
11) Trautwein Road at Grove Community Drive	Riverside	City Traffic Counters	November 2010
12) Trautwein Road at Orange Terrace Parkway	Riverside	Meridian SPA TIA	June 2009
13) Trautwein Rd/Cole Ave at Van Buren Boulevard	Riverside	Meridian SPA TIA	September 2009
14) Cole Avenue at Krameria Avenue	Riverside	City Traffic Counters	November 2010
15) Cole Avenue at Mariposa Avenue	Riverside County	City Traffic Counters	November 2010
16) Barton Street at Orange Terrace Parkway	Riverside	City Traffic Counters	November 2010
17) Barton Street at Van Buren Boulevard	Riverside	Meridian SPA TIA	September 2009
18) Barton Street at Gless Ranch Road	Riverside	City Traffic Counters	November 2010
19) Barton Street at Krameria Avenue	Riverside	Meridian SPA TIA	June 2009
20) Barton Street at Lurin Avenue	Riverside	Meridian SPA TIA	June 2009
21) Barton Street at Mariposa Ave/Larry Parrish Pkwy	Riverside County	City Traffic Counters	November 2010
22) Barton Street at Nandina Avenue	Riverside County	Meridian SPA TIA	June 2009
23) Coyote Bush Road at Van Buren Boulevard	Riverside	Meridian SPA TIA	September 2009

Table 4.10-1
Source and Date of Existing Traffic Counts

Key Study Intersection	Jurisdiction	Traffic Count Source	Traffic Count Date
24) Orange Terrace Parkway at Van Buren Boulevard	Riverside	Meridian SPA TIA	April 2008
25) Village West Drive at Van Buren Boulevard	Riverside County	Meridian SPA TIA	April 2008
26) Harmon Street/Meridian Pkwy at Van Buren Blvd	Riverside County	Meridian SPA TIA	June 2009
27) Opportunity Way at Van Buren Boulevard	Riverside County	Meridian SPA TIA	June 2009
28) I-215 Southbound Ramps at Van Buren Boulevard	Caltrans	Meridian SPA TIA	June 2009
29) I-215 Northbound Ramps at Van Buren Boulevard	Caltrans	Meridian SPA TIA	June 2009

Notes:
SPA = Specific Plan Amendment
TIA = Traffic Impact Analysis

Existing Level of Service

Table 4.10-2 shows 3 key intersections, and Table 4.10-3 summarizes the existing peak hour service level calculations for the 29 key study intersections based on existing traffic volumes and current street geometry. Table 4.10-3 indicates that 3 of the 29 key study intersections currently operate at an unacceptable LOS during the AM and/or PM peak hours. The remaining 26 key study intersections currently operate at an acceptable LOS during the AM and PM peak hours. The 3 intersections operating at an adverse LOS are:

Table 4.10-2
Key Intersections

Key Intersection	Jurisdiction	AM Peak Hour		PM Peak Hour	
		HCM	*LOS*	*HCM*	*LOS*
4. Alessandro Blvd at Arlington Ave/Chicago Ave	Riverside	—	—	106.4 sec/veh	F
28. I-215 Southbound Ramps at Van Buren Boulevard	Caltrans	46.0 sec/veh	E	56.5 sec/veh	F
29. I-215 Northbound Ramps at Van Buren Boulevard	Caltrans	107.4 sec/veh	F	—	—

Notes:
HCM= *Highway Capacity Manual*
LOS = level of service
sec/veh = seconds per vehicle

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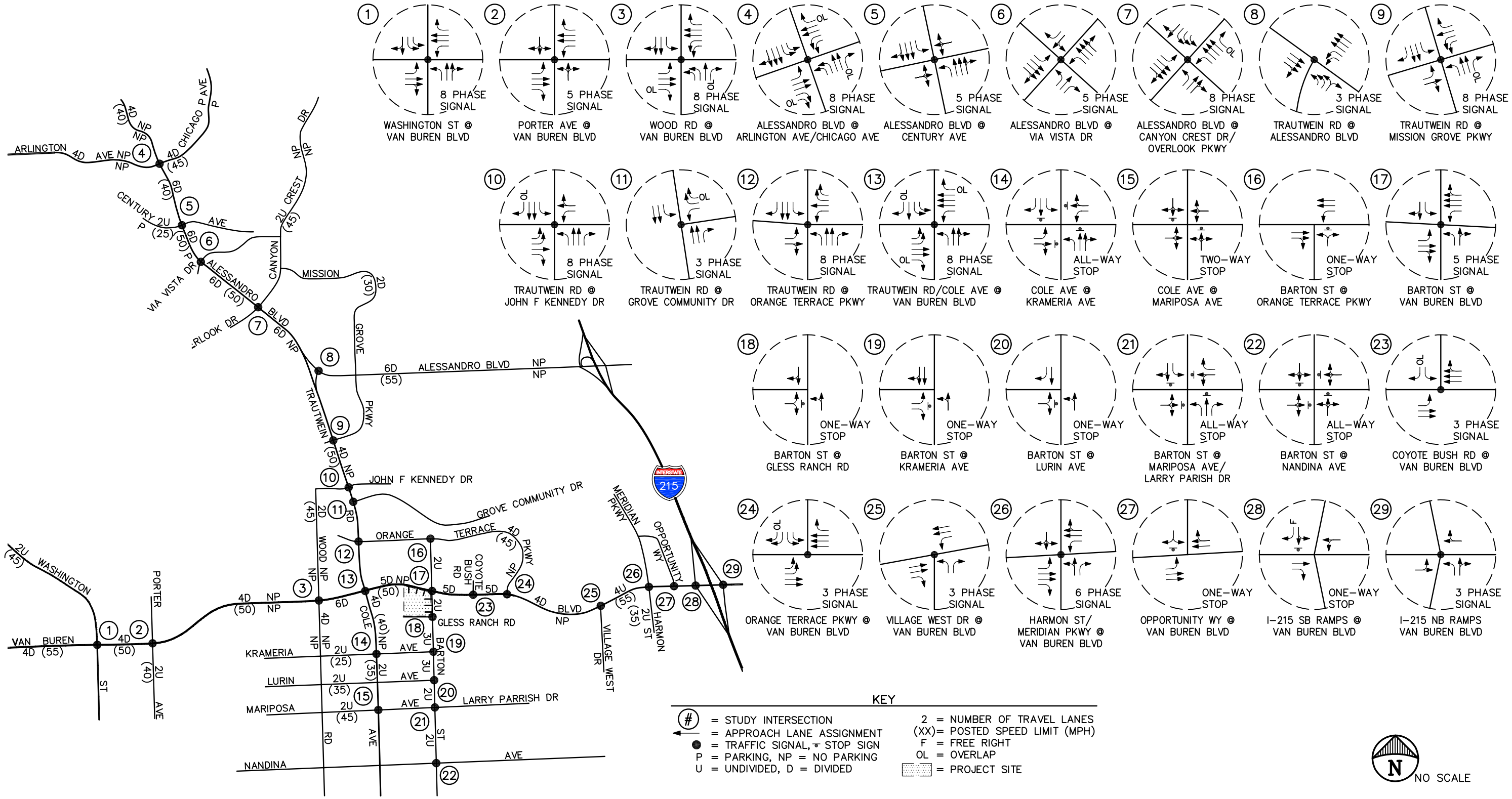

SOURCE: LINSCOTT, LAW & GREENSPAN, ENGINEERS, 2011

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FIGURE 4.10-1
Existing Roadway Conditions and Intersection Controls

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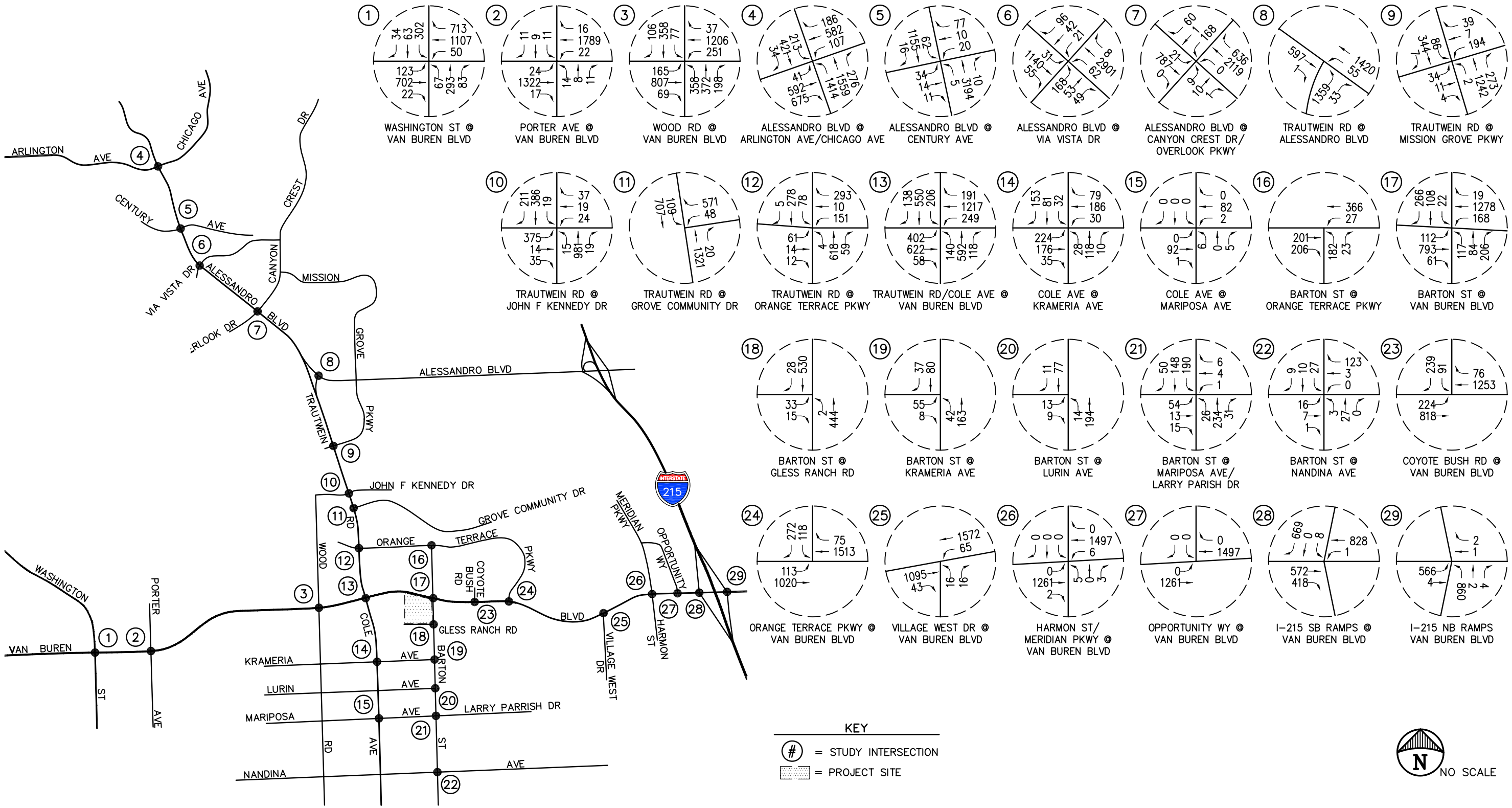

SOURCE: LINSCOTT, LAW & GREENSPAN, ENGINEERS, 2011

FIGURE 4.10-2

Existing AM Peak Hour Traffic Volumes

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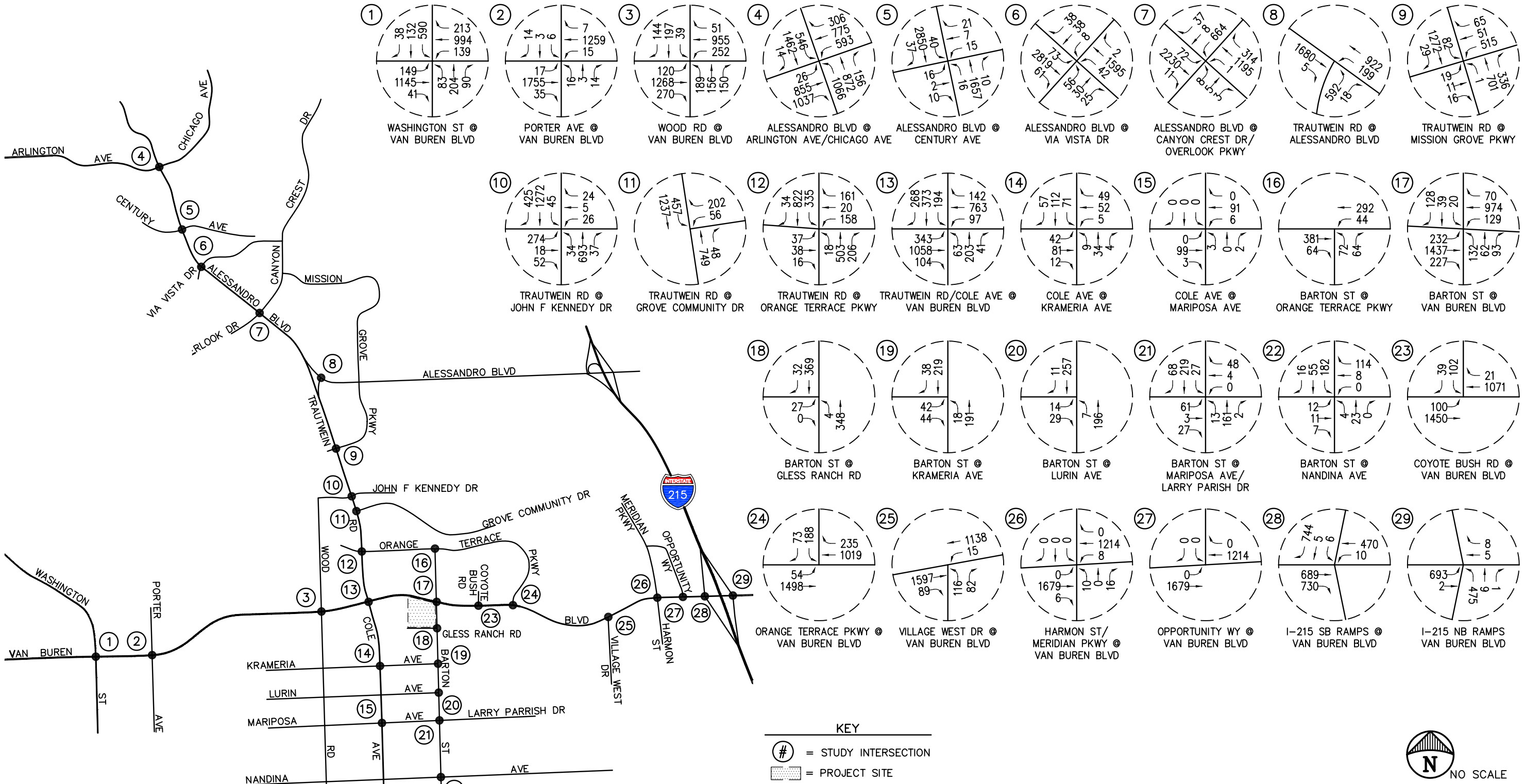

SOURCE: LINSCOTT, LAW & GREENSPAN, ENGINEERS, 2011

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FIGURE 4.10-3
Existing PM Peak Hour Traffic Volumes

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The peak hour *Highway Capacity Manual*/LOS calculation worksheets for the 29 key study intersections are found in Appendix J.

Table 4.10-3
Year 2010 Existing Peak Hour Levels of Service [1]

Key Intersection		Jurisdiction	Time Period	Control Type	Year 2010 Existing Traffic Conditions	
					HCM	*LOS*
1.	Washington Street at Van Buren Boulevard	Riverside County	AM PM	8Ø Traffic Signal	37.1 sec/veh 41.4 sec/veh	D D
2.	Porter Avenue at Van Buren Boulevard	Riverside County	AM PM	5Ø Traffic Signal	11.8 sec/veh 10.5 sec/veh	B B
3.	Wood Road at Van Buren Boulevard	Riverside	AM PM	8Ø Traffic Signal	40.3 sec/veh 26.6 sec/veh	D C
4.	Alessandro Blvd at Arlington Ave/Chicago Ave	Riverside	AM PM	8Ø Traffic Signal	37.4 sec/veh **106.4 sec/veh**	D **F**
5.	Alessandro Boulevard at Century Avenue	Riverside	AM PM	5Ø Traffic Signal	17.7 sec/veh 9.0 sec/veh	B A
6.	Alessandro Boulevard at Via Vista Drive	Riverside	AM PM	5Ø Traffic Signal	20.5 sec/veh 10.9 sec/veh	C B
7.	Alessandro Blvd at Canyon Crest Drive/Overlook Pkwy	Riverside	AM PM	8Ø Traffic Signal	12.4 sec/veh 25.2 sec/veh	B C
8.	Trautwein Road at Alessandro Boulevard	Riverside	AM PM	3Ø Traffic Signal	21.4 sec/veh 17.0 sec/veh	C B
9.	Trautwein Road at Mission Grove Parkway	Riverside	AM PM	8Ø Traffic Signal	18.8 sec/veh 25.1 sec/veh	B C
10.	Trautwein Road at John F. Kennedy Drive	Riverside	AM PM	8Ø Traffic Signal	22.8 sec/veh 18.7 sec/veh	C B
11.	Trautwein Road at Grove Community Drive	Riverside	AM PM	3Ø Traffic Signal	22.1 sec/veh 15.4 sec/veh	C B
12.	Trautwein Road at Orange Terrace Parkway	Riverside	AM PM	8Ø Traffic Signal	26.5 sec/veh 27.0 sec/veh	C C
13.	Trautwein Rd/Cole Ave at Van Buren Boulevard	Riverside	AM PM	8Ø Traffic Signal	46.9 sec/veh 28.5 sec/veh	D C
14.	Cole Avenue at Krameria Avenue	Riverside	AM PM	All-Way Stop	14.0 sec/veh 8.9 sec/veh	B A
15.	Cole Avenue at Mariposa Avenue	Riverside County	AM PM	Two-Way Stop	9.3 sec/veh 9.3 sec/veh	A A
16.	Barton Street at Orange Terrace Parkway	Riverside	AM PM	One-Way Stop	21.1 sec/veh 14.4 sec/veh	C B
17.	Barton Street at Van Buren Boulevard	Riverside	AM PM	5Ø Traffic Signal	28.7 sec/veh 25.2 sec/veh	C C

Table 4.10-3
Year 2010 Existing Peak Hour Levels of Service [1]

Key Intersection		Jurisdiction	Time Period	Control Type	Year 2010 Existing Traffic Conditions	
					HCM	*LOS*
18.	Barton Street at Gless Ranch Road	Riverside	AM PM	One-Way Stop	22.0 sec/veh 17.3 sec/veh	C C
19.	Barton Street at Krameria Avenue	Riverside	AM PM	One-Way Stop	11.1 sec/veh 10.6 sec/veh	B B
20.	Barton Street at Lurin Avenue	Riverside	AM PM	One-Way Stop	10.1 sec/veh 10.8 sec/veh	B B
21.	Barton St at Mariposa Ave/ Larry Parrish Pkwy	Riverside County	AM PM	All-Way Stop	10.9 sec/veh 10.9 sec/veh	B B
22.	Barton Street at Nandina Avenue	Riverside County	AM PM	All-Way Stop	7.3 sec/veh 8.9 sec/veh	A A
23.	Coyote Bush Road at Van Buren Boulevard	Riverside	AM PM	3Ø Traffic Signal	19.4 sec/veh 10.7 sec/veh	B B
24.	Orange Terrace Parkway at Van Buren Boulevard	Riverside	AM PM	3Ø Traffic Signal	12.9 sec/veh 10.9 sec/veh	B B
25.	Village West Drive at Van Buren Boulevard	Riverside County	AM PM	3Ø Traffic Signal	17.8 sec/veh 9.3 sec/veh	B A
26.	Harmon St/Meridian Pkwy at Van Buren Blvd	Riverside County	AM PM	6Ø Traffic Signal	5.9 sec/veh 6.6 sec/veh	A A
27.	Opportunity Way at Van Buren Boulevard	Riverside County	AM PM	One-Way Stop	0.0 sec/veh 0.0 sec/veh	A A
28.	I-215 Southbound Ramps at Van Buren Boulevard	Caltrans	AM PM	One-Way Stop	**46.0 sec/veh** **56.5 sec/veh**	**E** **F**
29.	I-215 Northbound Ramps at Van Buren Boulevard	Caltrans	AM PM	3Ø Traffic Signal	**107.4 sec/veh** 43.5 sec/veh	**F** D

Notes:
[1] LOS = Level of service, please refer to *Tables 4.10-4 and 4.10-5* for the LOS definitions
HCM = *Highway Capacity Manual*
sec/veh = seconds per vehicle
BOLD = exceeds LOS standard

Related Regulations

Federal

Highway Capacity Manual Method of Analysis (Signalized Intersections)

The *Highway Capacity Manual* is a publication produced by the federal Transportation Research Board. The *Highway Capacity Manual* is used by transportation engineers to calculate and study roadway capacity and quality of service. The 2000 version of the *Highway Capacity Manual* was utilized in the analysis included herein.

Based on the *Highway Capacity Manual* operations method of analysis, LOS for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometries, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents and when there are no other vehicles on the road.

In Chapter 16 of the *Highway Capacity Manual*, only the portion of total delay attributed to the control facility is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay and final acceleration delay. In contrast, in previous versions of the *Highway Capacity Manual* (1994 and earlier), delay included only stopped delay.

Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle. The six qualitative categories of LOS that have been defined along with the corresponding *Highway Capacity Manual* control delay value range for signalized intersections are shown in Table 4.10-4.

Table 4.10-4
Level of Service Criteria for Signalized Intersections (HCM)

Level of Service (LOS)	Control Delay Per Vehicle (seconds/vehicle)	Level of Service Description
A	≤ 10.0	This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10.0 and ≤ 20.0	This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.
C	> 20.0 and ≤ 35.0	Average traffic delays. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	> 35.0 and ≤ 55.0	Long traffic delays. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55.0 and ≤ 80.0	Very long traffic delays. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high *v/c* ratios. Individual cycle failures are frequent occurrences.

Table 4.10-4
Level of Service Criteria for Signalized Intersections (HCM)

Level of Service (LOS)	Control Delay Per Vehicle (seconds/vehicle)	Level of Service Description
-F	≥ 80.0	Severe congestion This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high *v/c* ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

Source: HCM (*Highway Capacity Manual) 2000,* Chapter 16 (Signalized Intersections).

Highway Capacity Manual Method of Analysis (Unsignalized Intersections)

The 2000 *Highway Capacity Manual* unsignalized methodology was utilized in the analysis of stop-controlled intersections. For all-way stop-controlled intersections, this methodology estimates the average control delay for each of the subject movements and determines the LOS for each movement. The overall average control delay measured in seconds per vehicle and LOS is then calculated for the entire intersection. The *Highway Capacity Manual* control delay value translates to an LOS estimate, which is a relative measure of the intersection performance.

For one-way and two-way stop-controlled (minor street stop-controlled) intersections, this methodology estimates the worst side street delay, measured in seconds per vehicle and determines the LOS for that approach. The *Highway Capacity Manual* delay value translates to an LOS estimate, which is a relative measure of the intersection performance. The six qualitative categories of LOS have been defined along with the corresponding *Highway Capacity Manual* control delay value range, as shown in Table 4.10-5.

Table 4.10-5
Level of Service Criteria for Unsignalized Intersections (HCM)

Level of Service	Highway Capacity Manual Delay Value (sec/veh)	Level of Service Description
A	≤ 10.0	Little or no delay
B	> 10.0 and ≤ 15.0	Short traffic delays
C	> 15.0 and ≤ 25.0	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
E	> 35.0 and ≤ 50.0	Very long traffic delays
F	> 50.0	Severe congestion

Source: HCM (*Highway Capacity Manual) 2000,* Chapter 17 (Unsignalized Intersections).

State

Sustainable Communities Strategies: Senate Bill 375 – Land Use Planning

Senate Bill 375 provides for a new planning process to coordinate land use planning and regional transportation plans and funding priorities in order to help California meet the greenhouse gas reduction goals established in Assembly Bill 32. Senate Bill 375 requires regional transportation plans, developed by metropolitan planning organizations, relevant to the project Site (e.g., Southern California Association of Governments [SCAG]), to incorporate a "sustainable communities strategy" in their regional transportation plans that will achieve greenhouse gas emission reduction targets set by the California Air Resources Board. Senate Bill 375 also includes provisions for streamlined California Environmental Quality Act review for some infill projects such as Transit-Oriented Developments. Senate Bill 375 is similar to the Regional Blueprint Planning Program, established by the California Department of Transportation (Caltrans), which provides discretionary grants to fund regional transportation and land use plans voluntarily developed by metropolitan planning organizations working in cooperation with Council of Governments.

SCAG has engaged in a public involvement process in developing its regional transportation plans and programs. As a metropolitan planning organization, SCAG is responsible for preparing and utilizing a public participation plan which is developed in consultation with all interested parties and provides reasonable opportunities for interested parties to comment on the content of SCAG's proposed Regional Transportation Plan and the Regional Transportation Improvement Program. Senate Bill 375 requires SCAG to adopt a public participation plan for development of the sustainable communities strategy and an alternative planning strategy. Furthermore, as required by Senate Bill 375, SCAG will conduct at least two informational meetings in each county within the region for members of the board of supervisors and city councils on the sustainable communities strategy and alternative planning strategy, if any. The purpose of the meeting shall be to present a draft of the sustainable communities strategy to members of the board of supervisors and city council members in that county and to solicit and consider their input and recommendations.

Local

City of Riverside General Plan 2025

The Circulation and Community Mobility Element of the City of Riverside General Plan 2025 contains goals, recommendations, objectives, guidelines, and standards for the management of circulation and mobility in the City. The following General Plan policies are applicable to the proposed project and aim to minimize adverse conditions to traffic and transportation for the City.

Policy CCM-1.2: Support the addition of capacity improvements to State Route (SR)-91, SR-60, I-215 and I-15.

Policy CCM-1.4: Support improvement of the Van Buren Boulevard/I-215 interchange and along the length of Van Buren between I-215 and SR-91.

Policy CCM-2.2: Balance the need for free traffic flow with economic realities and environmental and aesthetic considerations, such that streets are designed to handle normal traffic flows with tolerances to allow for potential short term delays at peak flow hours.

Policy CCM-2.3: Maintain LOS D or better on Arterial Streets wherever possible. At key locations, such as City Arterials that are used by regional freeway bypass traffic and at heavily traveled freeway interchanges, allow LOS E at peak hours as the acceptable standard on a case-by-case basis.

Policy CCM-2.4: Minimize the occurrence of streets operating at LOS "F" by building out the planned street network and by integrating land use and transportation in accordance with the General Plan principles.

Policy CCM-2.6: Consider all alternatives for increasing street capacity before widening is recommended for streets within existing neighborhoods.

Policy CCM-2.7: Limit driveway and local street access on Arterial Streets to maintain a desired quality of traffic flow. Wherever possible, consolidate driveways and implement access controls during redevelopment of adjacent parcels.

Policy CCM-2.8: Design street improvements considering the effect on aesthetic character and livability of residential neighborhoods, along with traffic engineering criteria.

Policy CCM-2.9: Design all street improvement projects in a comprehensive fashion to include consideration of street trees, pedestrian walkways, bicycle lanes, equestrian pathways, signing, lighting, noise and air quality wherever any of these factors are applicable.

Policy CCM-2.10: Emphasize the landscaping of parkways and boulevards.

Policy CCM-2.11: Consider the use of special design traffic control devices which reflect the historic or aesthetic character of the neighborhoods in which they are located.

Policy CCM-5.1: Coordinate impacts of new roadway connections with adjacent cities and Riverside County to ensure consistency in design and operations of the new facilities and connections.

Policy CCM-5.2: Support implementation of the SCAG Regional Transportation Plan.

Policy CCM-5.6: Integrate signal systems with adjacent jurisdictions and Caltrans.

Policy CCM-7.4: Limit local roadway improvements to those that are necessary to support proposed General Plan land uses.

Policy CCM-7.5: Discourage improvements beyond those contained in the Circulation and Community Mobility Element to accommodate additional regional traffic.

Policy CCM-8.2: Promote walking and biking as a safe mode of travel for children attending local schools.

Policy CCM-9.1: Encourage increased use of public transportation and multi-modal transportation as means of reducing roadway congestion, air pollution and nonpoint source water pollution, through such techniques as directing new growth along transportation corridor.

Policy CCM-9.2: Support implementation of Riverside Transit Agency's (RTA's) Bus Rapid Transit Program and recommendations of the Go Riverside Task Force.

Policy CCM-9.5: Incorporate facilities for transit and other alternative modes of transportation, such as park-and-ride lots and bus turnouts, in the design of future developments.

Policy CCM-9.6: Enhance and encourage the provision of attractive and appropriate transit amenities, including shaded bus stops, to facilitate use of public transportation.

Policy CCM-9.7: Ensure adequate connections among all alternative modes.

Policy CCM-9.8: Preserve options for future transit use where appropriate when designing improvements for roadways.

The *City of Riverside General Plan* 2025, Circulation and Community Mobility Element (adopted November 2007) allows LOS "D" to be used as the maximum acceptable threshold for the study intersections and roadways of Collector or higher classification. However, at some key locations, such as City arterial roadways which are used as a freeway bypass by regional through traffic and at heavily traveled freeway interchanges, LOS "E" may be acceptable as determined on a case-by-case basis. Locations that may warrant the LOS "E" standard include portions of Arlington Avenue/Alessandro Boulevard, Van Buren Boulevard throughout the City, portions of La Sierra Avenue and selected freeway interchanges. The City also recognizes that along key freeway-feeder segments during peak commute hours, LOS F may be expected due to regional travel patterns. A higher standard, such as LOS "C" or better, may be adopted for Local streets in residential areas.

Nineteen of the 29 key study intersections are located within the City of Riverside and will be required to maintain the aforementioned LOS standards, which will primarily apply to the long-term analyses, since the City's sliding scale criteria will be applied to the near-term analyses.

County of Riverside

The *County of Riverside General Plan*, Chapter 4, Circulation Element, considers LOS "C" acceptable along all County maintained roads and conventional state highways. As an exception, LOS "D" may be allowed

in Community Development areas, only at intersections of any combination of Secondary Highways, Major Highways, Urban Expressways, conventional state highways, or freeway ramp intersections. LOS "E" may be allowed in designated community centers to the extent that it would support transit-oriented development and walk able communities. Eight of the twenty-nine (29) key study intersections are located within the County of Riverside and will be required to maintain the following LOS requirements (Table 4.10-6):

Table 4.10-6
Level of Service (LOS) C and D Requirements

LOS "C" Requirements	
15. Cole Avenue at Mariposa Avenue	21. Barton Street at Mariposa Ave/Larry Parish Pkwy
LOS "D" Requirements	
1. Washington Street at Van Buren Boulevard	25. Village West Drive at Van Buren Boulevard
2. Porter Avenue at Van Buren Boulevard	26. Harmon St/Meridian Pkwy at Van Buren Boulevard
22. Barton Street at Nandina Avenue	27. Opportunity Way at Van Buren Boulevard

County of Riverside Congestion Management Plan

The passage of Proposition 111 in June 1990 established a process for each metropolitan county in California, with an urbanized area of more than 50,000 population, including Riverside, to prepare a Congestion Management Plan. The Congestion Management Plan, which was prepared by the Riverside County Transportation Commission in consultation with the County and cities in Riverside County, is an effort to more directly align land use, transportation, and air quality management efforts, to promote reasonable growth management programs that effectively use statewide transportation funds, while ensuring that new development pays its fair share of needed transportation improvements. Additionally, the passage of Proposition 111 provided additional transportation funding through a $0.09 per gallon increase in the state gas tax.

Although implementation of the Congestion Management Plan was made voluntary by the passage of Assembly Bill 2419, the Congestion Management Plan requirement has been retained in all five urbanized counties within the SCAG region. In addition to their value as a transportation management tool, congestion management plans have been retained in these counties because of the Federal Congestion Management System requirement that applies to all large, urban areas that are not in attainment of federal air quality standards. These counties recognize that the Congestion Management Plan provides a mechanism through which locally implemented programs can fulfill most aspects of a regional requirement that would otherwise have to be addressed by the Regional Agency (SCAG).

The focus of the Congestion Management Plan is the development of an Enhanced Traffic Monitoring System in which real-time traffic count data can be accessed by the Riverside County Transportation Commission to evaluate the condition of the Congestion Management System as well as meet other monitoring requirements at the State and Federal levels. Per the Congestion Management Plan-adopted LOS standard of "E," when a Congestion Management System segment falls to "F," a deficiency plan is required. Preparation of a deficiency plan would be the responsibility of the local agency where the deficiency is located. Other agencies identified as contributors to the deficiency would also be required to coordinate with the development of the plan. The plan must contain mitigation measures, including Transportation Demand Management strategies and transit alternatives, and a schedule of mitigating the deficiency. To ensure that the Congestion Management System is appropriately monitored to reduce the occurrence of Congestion Management Plan deficiencies, it is the responsibility of local agencies, when reviewing and approving development proposals, to consider the traffic impacts on the Congestion Management System.

Congestion Management Plan facilities within the project area include the I-215 and Van Buren Boulevard. The County of Riverside, in cooperation with the State of California (Cal Trans) is in the process of implementing the I-215/Van Buren Boulevard interchange project which involves the complete reconstruction of the interchange, This includes the bridge overpass, which will allow for the future widening of I-215 to four mixed flow and one high occupancy vehicle lane in each direction without further need to lengthen the bridge. This interchange project will also raise the overhead structure on Van Buren Boulevard over the Perris Valley Line to provide 24 feet of clearance. The partial funding was approved by Riverside County Transportation Commission's at its June 8, 2011, meeting. These improvements are intended to address the current deficiencies in the project area.

Western Riverside County Transportation Uniform Mitigation Fee

As discussed in the General Plan EIR, the jurisdictions of western Riverside County agreed to participate in the Western Riverside County Transportation Uniform Mitigation Fee (TUMF) Program. TUMF is a multi-jurisdictional impact fee program that funds capacity improvements on a defined system of arterial highways as needed to mitigate cumulative impacts associated with new growth. All new development in each of the participating jurisdictions is subject to TUMF, based on the proposed intensity and type of development. Riverside's participation in this program constitutes an important step toward making needed improvements to the regional transportation system. Pursuant to Riverside Municipal Code Section 16.68, all new development is required to pay fees into the TUMF program.

WRCOG is designated as the program administrator for the TUMF program. (WRCOG 2011). As administrator, WRCOG receives all fees generated from the TUMF as collected by the local jurisdictions. WRCOG invests, accounts for, and expends the fee in accordance with the TUMF ordinance, the administrative plan and applicable state laws.

The early years of the TUMF (beginning in 2003) were devoted to identifying transportation projects that would address future demand, developing preliminary cost estimates, and preparing those projects for the financial agreements that would allow them to be constructed. Today, the initial list of Zone projects continues to be added to and first round zone projects continue to be developed and implemented. (WRCOG 2010). Local jurisdictions implement the projects approved for each zone. (WRCOG 2011a). RCTC receives regional TUMF dollars (46.9 percent of the total fees collected for programming) in accordance with a Memorandum Of Understanding with WRCOG. RCTC has 24 projects on the TIP, of which 2 projects are under construction, 8 projects are in engineering, 10 projects are in planning and environmental stages, and 4 projects are completed. (WRCOG 2010).

The I-215 interchange at Van Buren discussed above is a TUMF facility, and improvements to it will be constructed using some TUMF funds. (WRCOG 2011b). Additionally, the TUMF program covers additional lanes on Van Buren, consistent with the ultimate number of lanes determined in the Transportation Uniform Mitigation Fees Nexus Study 2009 Update, and associated exhibits and appendices, but does not cover other improvements unless specifically detailed in said study. (WRCOG 2011c.)

4.10.2 Thresholds of Significance

Appendix G of the California Environmental Quality Act Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts. Based on the Initial Study prepared for the project and Appendix G, as well as comments received from the Planning Commission during the Scoping Session, a development project could have a significant impact on traffic if the proposed project would:

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

The following is a more detailed discussion of acceptable thresholds pertaining to the three entities that have jurisdiction over the various 29 study intersections.

City of Riverside

The following impact criteria and thresholds will be utilized for the 19 key study intersections located within the City of Riverside.

Near-Term Analyses

The City of Riverside allows LOS "D" to be used as the maximum acceptable threshold for the study intersections and roadways of Collector or higher classification. At some locations, such as City arterial roadways which are used as a freeway bypass by regional through traffic and at heavily traveled freeway interchanges, LOS "E" may be acceptable as determined on a case-by-case basis. A higher standard, such as LOS "C" or better, may be adopted for Local streets in residential areas. For projects in conformance with the General Plan a significant impact occurs at a study intersection when the peak hour LOS falls below C, or D, as per CCM-2.3. For projects which intensify the use above General Plan a significant impact at a study intersection is when the addition of project generated trips causes either peak hour LOS to degrade from acceptable LOS (A thru D) to unacceptable LOS (E or F) or peak hour delay to increase as follows (Table 4.10-7):

Table 4.10-7
Project –Related increase in Delay

Level of Service	Project-Related Increase in Delay that Would Trigger a Significant Impact
A / B	By 10.0 seconds
C	By 8.0 seconds
D	By 5.0 seconds
E	By 2.0 seconds
F	By 1.0 second

Long-Term Analyses

The City of Riverside allows LOS "D" to be used as the maximum acceptable threshold for the study intersections and roadways of Collector or higher classification. However, at some key locations, such as City arterial roadways which are used as a freeway bypass by regional through traffic and at heavily traveled freeway interchanges, LOS "E" may be acceptable as determined on a case-by-case basis. Locations that may warrant the LOS "E" standard include portions of Arlington Avenue/Alessandro Boulevard, Van Buren Boulevard throughout the City, portions of La Sierra Avenue and selected freeway interchanges. The City also recognizes that along key freeway-feeder segments during peak commute hours, LOS F may be expected due to regional travel patterns. A higher standard, such as LOS "C" or better, may be adopted for Local streets in residential areas.

County of Riverside

The *County of Riverside General Plan*, Chapter 4, Circulation Element, considers LOS "C" acceptable along all County maintained roads and conventional state highways. As an exception, LOS "D" may be allowed in Community Development areas, only at intersections of any combination of Secondary Highways, Major Highways, Urban Expressways, conventional state highways, or freeway ramp intersections. LOS "E" may be allowed in designated community centers to the extent that it would support transit-oriented development and walk able communities. Eight of the 29 key study intersections are located within the County of Riverside and will be required to maintain the following LOS requirements (Table 4.10-8):

Table 4.10-8
Level of Service (LOS) Requirements

LOS "C" Requirements	
15. Cole Avenue at Mariposa Avenue	21. Barton Street at Mariposa Ave/Larry Parish Pkwy
LOS "D" Requirements	
1. Washington Street at Van Buren Boulevard	25. Village West Drive at Van Buren Boulevard
2. Porter Avenue at Van Buren Boulevard	26. Harmon St/Meridian Pkwy at Van Buren Boulevard
22. Barton Street at Nandina Avenue	27. Opportunity Way at Van Buren Boulevard

County of Riverside Congestion Management Plan

Per the Congestion Management Plan-adopted LOS standard of "E," when a Congestion Management System segment falls to "F," a deficiency plan is required. Both the County and City of Riverside general plans require levels of service that conform to the Congestion Management Plan standards. Therefore, if a project is in compliance with the County and City LOS standards, the project would also be in compliance with the Congestion Management Plan.

Caltrans

The Caltrans Guide for the Preparation of Traffic Impact Studies (December 2002) requires that all ramp intersections maintain a minimum LOS of LOS "D" or better. This LOS standard will apply to the two remaining key study intersections (i.e., the I-215 Southbound Ramps/Van Buren Boulevard and the I-215 Northbound Ramps/Van Buren Boulevard).

4.10.3 Project Elements that can Reduce Impacts

The following list of planned improvements will be constructed as part of the proposed project. These improvements will maintain acceptable levels of service in the project vicinity.

Barton Street at Van Buren Boulevard: Widen and/or restripe Barton Street to provide a second northbound left-turn lane and an exclusive northbound right-turn lane. Widen and/or restripe Van Buren Boulevard to provide a third eastbound through lane, an exclusive eastbound right-turn lane and a second westbound left-turn lane. Widen and/or restripe Van Buren Boulevard for three eastbound departure lanes. Modify the existing traffic signal for eight-phase operation.

Barton Street at Gless Ranch Road: Widen and/or restripe Barton Street to provide a second southbound through lane.

4.10.4 Environmental Impacts Before Mitigation

Threshold: Would the project 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?

To determine whether a project will affect the performance of a circulation system, the project's traffic must be evaluated. The first component of that analysis is traffic generation. Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation rates used in the traffic forecasting procedure are found in the eighth edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE 2008). The trip generation factor used for this project is Institute of Transportation Engineers Land Use Code 820: Shopping Center. This Institute of Transportation Engineers trip generation factor assumes a "blended" retail and commercial use on the site, including retail, financial institutions, fast-food, grocery, office, and other restaurant uses.

Table 4.10-9 presents the forecast daily and peak hour project traffic volumes for a "typical" weekday. As shown, the proposed project is expected to generate 17,260 daily trips, with 361 trips (218 inbound, 143 outbound) produced in the AM peak hour and 1,664 trips (815 inbound, 849 outbound) produced in the PM peak hour. To account for trips that come directly from the everyday traffic stream on the adjoining streets (i.e., Van Buren Boulevard and Barton Street), applicable pass-by reduction factors were incorporated into the daily AM peak hour and PM peak hour traffic forecasts. Therefore, accounting for these pass-by trips, the net, or more actual traffic generation for the proposed project would be 12,945 daily trips, 325 AM peak hour trips (196 inbound, 129 outbound), and 1,231 PM peak hour trips (603 inbound, 628 outbound).

Given the above generation numbers, the project's pattern of distribution, or how the project traffic is expected to move through the area roadways, is determined. Figures 4.10-4 and 4.10-5 present the near-term and long-term traffic distribution patterns for the proposed project, respectively. It should be noted that the near-term (project build out at Year 2013) and long-term (Year 2025) traffic distribution patterns for the proposed project are generally the same.

Table 4.10-9
Project Traffic Generation Forecast

Institute of Transportation Engineers Land Use Code/Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	*Exit*	*Total*	*Enter*	*Exit*	*Total*
Generation Forecast:							
Gless Ranch Center (420,000 square feet)	17,260	218	143	361	815	849	1,664
Pass-By Reduction[1]	-4,315	-22	-14	-36	-212	-221	-433
Subtotal	12,945	196	129	325	603	628	1,231
Traffic Generation Forecast	**12,945**	**196**	**129**	**325**	**603**	**628**	**1,231**

Existing Plus Project Traffic Conditions

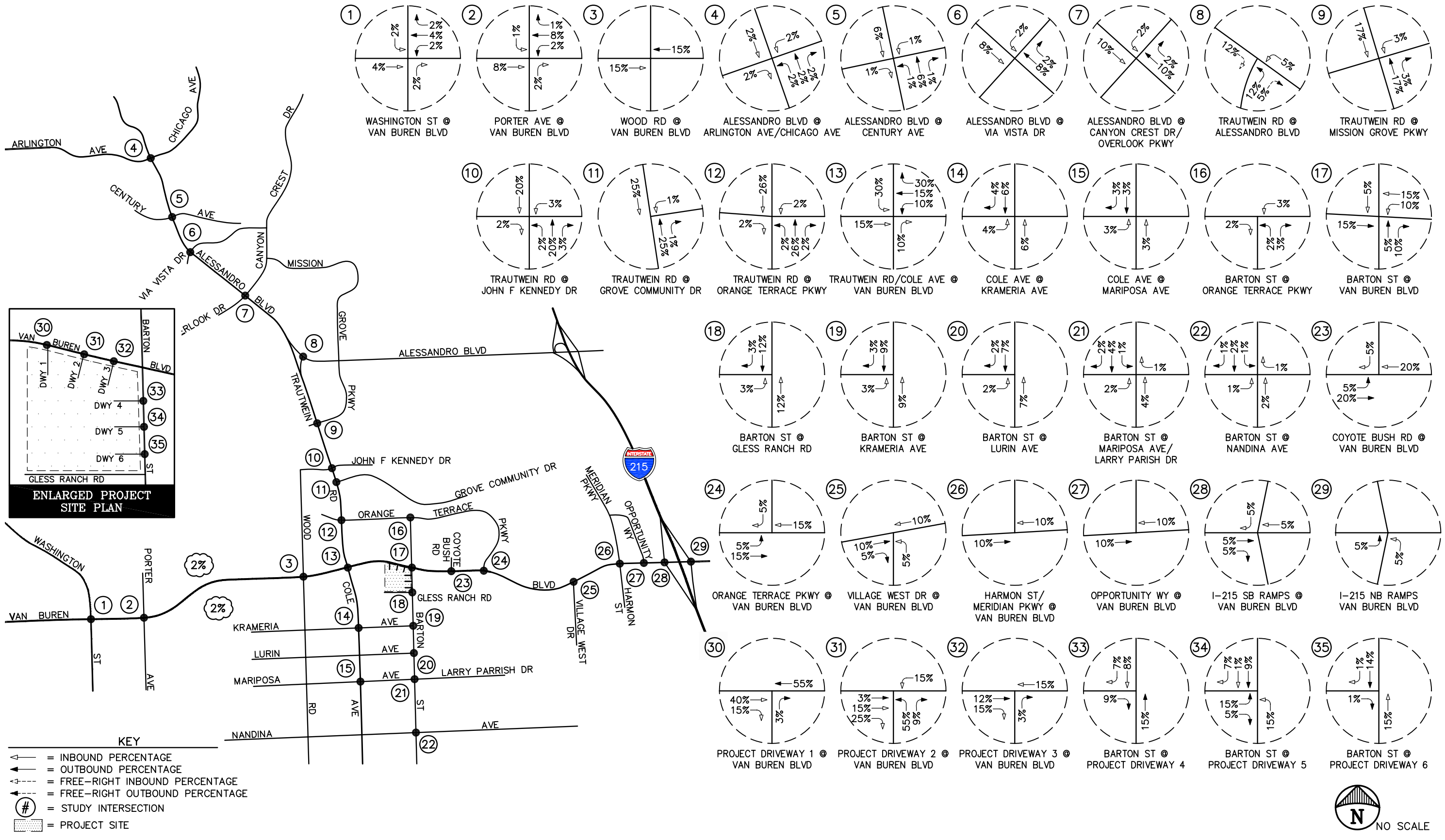
Table 4.10-10 indicates key intersections and Table 4.10-11 indicates that traffic associated with the proposed project will significantly impact 3 of the 29 key study intersections, when compared to the LOS standards and significant impact criteria specified above. The remaining 26 key study intersections are forecast to continue to operate at an acceptable LOS with the addition of project generated traffic to existing traffic. The 3 locations projected to operate at an unacceptable LOS with the addition of project traffic to existing traffic are as follows:

Table 4.10-10
Key Intersections

Key Intersection	Jurisdiction	AM Peak Hour		PM Peak Hour	
		HCM	*LOS*	*HCM*	*LOS*
4. Alessandro Blvd at Arlington Ave/Chicago Ave	Riverside	—	—	109.2 sec/veh	F
28. I-215 Southbound Ramps at Van Buren Boulevard	Caltrans	47.3 sec/veh	E	64.9 sec/veh	F
29. I-215 Northbound Ramps at Van Buren Boulevard	Caltrans	112.2 sec/veh	F	—	—

Notes:
HCM = *Highway Capacity Manual*
LOS = level of service
sec/veh = seconds per vehicle

[1] Pass-by trips are trips made as intermediate stops on the way from an origin to a primary trip destination. Pass-by trips are attracted from traffic passing the site on adjacent streets (i.e., Van Buren Boulevard and Barton Street), which contain direct access to the generator. The *Trip Generation Handbook*, 2nd edition (ITE 2004) recommends a pass-by reduction factor of 26% for the PM peak hour. The PM peak hour pass-by percentage (T) was calculated based on the following equation: Ln (T) = -0.29Ln (X) + 5.00, where X = gross leasable area. The AM peak hour pass-by percentage was estimated to be 10%. A smaller pass-by percentage is utilized in the AM peak hour to account for the fact that not all businesses are open during the morning peak hour. The daily pass-by percentage was estimated to be 25%.



DUDEK

6765-01
2011

SOURCE: LINSCOTT, LAW & GREENSPAN, ENGINEERS, 2011

FIGURE 4.10-4
Project Trip Distribution Pattern (Near-Term)

GLESS RANCH – DEIR

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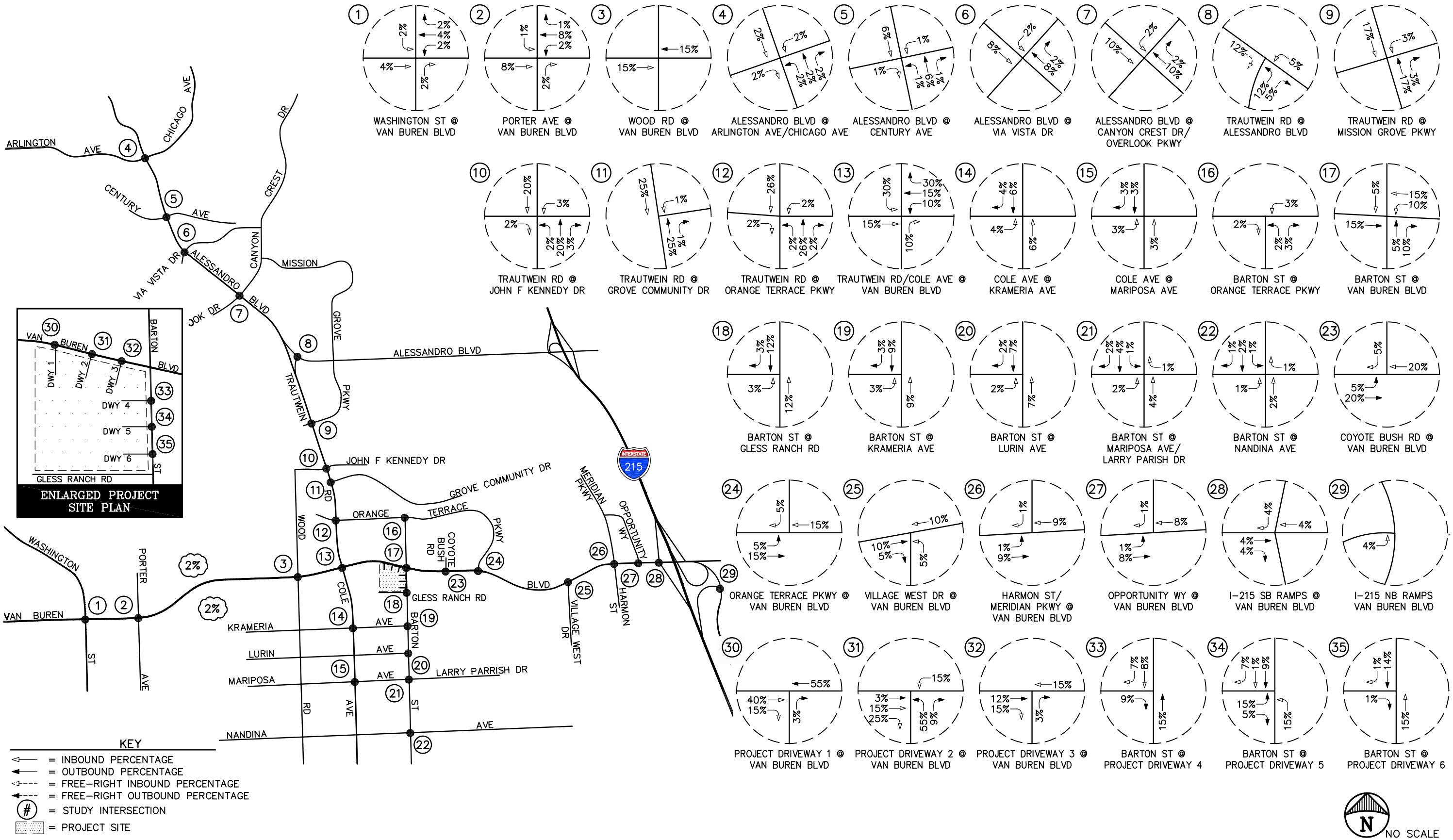

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SOURCE: LINSCOTT, LAW & GREENSPAN, ENGINEERS, 2011

FIGURE 4.10-5
Project Trip Distribution Pattern (Long-Term)

GLESS RANCH – DEIR

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It should be noted that as discussed previously under existing conditions, these three intersections currently operate at the same LOS shown on Table 4.10-10. As shown in Table 4.10-11, the implementation of mitigation measure (MM)-TRAFFIC-1 at the impacted key study intersection of Alessandro Blvd at Arlington Ave/Chicago Ave completely offsets the impact of project traffic. Although the intersection of Alessandro Boulevard/Arlington Avenue-Chicago Avenue will continue to operate at unacceptable LOS F during the PM peak hour, the implementation of recommended improvements will offset the impact of project traffic per City of Riverside requirements and the intersection will operate at better than the pre-project condition. Accordingly, once mitigation is implemented, the project will not cause a delay that would be considered a significant impact at this intersection (see Table 4.10-7).

For impacts to I-215 Southbound Ramps at Van Buren Boulevard and I-215 Northbound Ramps at Van Buren Boulevard, these intersections are in the County of Riverside and are under the control and jurisdiction of Cal Trans and with the project would operate at LOS E and F (AM and PM Peak Hour) and LOS F (AM Peak Hour), respectively, per Table 4.10-10. The County, in cooperation with Cal Trans, is in the process of implementing the I-215/Van Buren Boulevard interchange project. The I-215 project completely reconstructs the interchange and with that project, the LOS will be reduced to an acceptable level. This project will be required to pay its TUMF fees, which is contributing to the I-215 improvement project. Once completed, the impacts will be reduced to a less than significant level. Because the City does not have control over the timing of the improvements that will be made by the County, such improvements are considered infeasible as discussed below under 4.10.5, Mitigation Measures. Since the City cannot dictate timing or implementation of the improvements, impacts to these intersections are considered significant and unavoidable.

Table 4.10-11
Existing Plus Project Peak Hour Intersection Capacity Analysis Summary

Key Intersection		Jurisdiction	Time Period	Existing Traffic Conditions		Existing Plus Project Traffic Conditions		Significant Impact*		Existing Plus Project With Improvements	
				Delay	*LOS*	*Delay*	*LOS*	*Delay Increase*	*Yes/No*	*Delay*	*LOS*
1.	Washington Street at	Riverside County	AM	37.1 sec/veh	D	37.6 sec/veh	D	0.5 sec/veh	No	—	—
	Van Buren Boulevard		PM	41.4 sec/veh	D	43.9 sec/veh	D	2.5 sec/veh	No	—	—
2.	Porter Avenue at	Riverside County	AM	11.8 sec/veh	B	12.0 sec/veh	B	0.2 sec/veh	No	—	—
	Van Buren Boulevard		PM	10.5 sec/veh	B	11.1 sec/veh	B	0.6 sec/veh	No	—	—
3.	Wood Road at	Riverside	AM	40.3 sec/veh	D	41.3 sec/veh	D	1.0 sec/veh	No	—	—
	Van Buren Boulevard		PM	26.6 sec/veh	C	27.3 sec/veh	C	0.7 sec/veh	No	—	—
4.	Alessandro Blvd at	Riverside	AM	37.4 sec/veh	D	38.2 sec/veh	D	0.8 sec/veh	No	34.1 sec/veh	C
	Arlington Ave/Chicago Ave		PM	**106.4 sec/veh**	**F**	**109.2 sec/veh**	**F**	**2.8 sec/veh**	**Yes**	**84.2 sec/veh**	**F**
5.	Alessandro Boulevard at	Riverside	AM	17.7 sec/veh	B	18.1 sec/veh	B	0.4 sec/veh	No	—	—
	Century Avenue		PM	9.0 sec/veh	A	9.3 sec/veh	A	0.3 sec/veh	No	—	—
6.	Alessandro Boulevard at	Riverside	AM	20.5 sec/veh	C	21.0 sec/veh	C	0.5 sec/veh	No	—	—
	Via Vista Drive		PM	10.9 sec/veh	B	11.2 sec/veh	B	0.3 sec/veh	No	—	—

Table 4.10-11
Existing Plus Project Peak Hour Intersection Capacity Analysis Summary

Key Intersection		Jurisdiction	Time Period	Existing Traffic Conditions		Existing Plus Project Traffic Conditions		Significant Impact*		Existing Plus Project With Improvements	
				Delay	*LOS*	*Delay*	*LOS*	*Delay Increase*	*Yes/No*	*Delay*	*LOS*
7.	Alessandro Blvd at Canyon Crest Drive/Overlook Pkwy	Riverside	AM	12.4 sec/veh	B	12.4 sec/veh	B	0.0 sec/veh	No	—	—
			PM	25.2 sec/veh	C	25.8 sec/veh	C	0.6 sec/veh	No	—	—
8.	Trautwein Road at Alessandro Boulevard	Riverside	AM	21.4 sec/veh	C	21.6 sec/veh	C	0.2 sec/veh	No	—	—
			PM	17.0 sec/veh	B	18.4 sec/veh	B	1.4 sec/veh	No	—	—
9.	Trautwein Road at Mission Grove Parkway	Riverside	AM	18.8 sec/veh	B	18.8 sec/veh	B	0.0 sec/veh	No	—	—
			PM	25.1 sec/veh	C	26.4 sec/veh	C	1.3 sec/veh	No	—	—
10.	Trautwein Road at John F. Kennedy Drive	Riverside	AM	22.8 sec/veh	C	22.7 sec/veh	C	-0.1 sec/veh	No	—	—
			PM	18.7 sec/veh	B	19.2 sec/veh	B	0.5 sec/veh	No	—	—
11.	Trautwein Road at Grove Community Drive	Riverside	AM	22.1 sec/veh	C	22.3 sec/veh	C	0.2 sec/veh	No	—	—
			PM	15.4 sec/veh	B	15.8 sec/veh	B	0.4 sec/veh	No	—	—
12.	Trautwein Road at Orange Terrace Parkway	Riverside	AM	26.5 sec/veh	C	26.2 sec/veh	C	-0.3 sec/veh	No	—	—
			PM	27.0 sec/veh	C	27.1 sec/veh	C	0.1 sec/veh	No	—	—

Table 4.10-11
Existing Plus Project Peak Hour Intersection Capacity Analysis Summary

Key Intersection		Jurisdiction	Time Period	Existing Traffic Conditions		Existing Plus Project Traffic Conditions		Significant Impact*		Existing Plus Project With Improvements	
				Delay	*LOS*	*Delay*	*LOS*	*Delay Increase*	*Yes/No*	*Delay*	*LOS*
13.	Trautwein Rd/Cole Ave at	Riverside	AM	46.9 sec/veh	D	48.7 sec/veh	D	1.8 sec/veh	No	—	—
	Van Buren Boulevard		PM	28.5 sec/veh	C	32.2 sec/veh	C	3.7 sec/veh	No	—	—
14.	Cole Avenue at	Riverside	AM	14.0 sec/veh	B	14.5 sec/veh	B	0.5 sec/veh	No	—	—
	Krameria Avenue		PM	8.9 sec/veh	A	9.5 sec/veh	A	0.6 sec/veh	No	—	—
15.	Cole Avenue at	Riverside County	AM	9.3 sec/veh	A	9.9 sec/veh	A	0.6 sec/veh	No	—	—
	Mariposa Avenue		PM	9.3 sec/veh	A	10.7 sec/veh	B	1.4 sec/veh	No	—	—
16.	Barton Street at	Riverside	AM	21.1 sec/veh	C	22.3 sec/veh	C	1.2 sec/veh	No	—	—
	Orange Terrace Parkway		PM	14.4 sec/veh	B	15.8 sec/veh	C	1.4 sec/veh	No	—	—
17.	Barton Street at	Riverside	AM	28.7 sec/veh	C	33.9 sec/veh	C[2]	5.2 sec/veh	No	—	—
	Van Buren Boulevard		PM	25.2 sec/veh	C	26.2 sec/veh	C	1.0 sec/veh	No	—	—

2 The level of service calculations for this key study intersection include the following project improvements:
Second northbound left-turn lane, exclusive northbound right-turn lane, third eastbound through lane, exclusive eastbound right-turn lane, second westbound left-turn lane and signal modification

Table 4.10-11
Existing Plus Project Peak Hour Intersection Capacity Analysis Summary

Key Intersection		Jurisdiction	Time Period	Existing Traffic Conditions		Existing Plus Project Traffic Conditions		Significant Impact*		Existing Plus Project With Improvements	
				Delay	*LOS*	*Delay*	*LOS*	*Delay Increase*	*Yes/No*	*Delay*	*LOS*
18.	Barton Street at	Riverside	AM	22.0 sec/veh	C	23.3 sec/veh	C[3]	1.3 sec/veh	No	—	—
	Gless Ranch Road		PM	17.3 sec/veh	C	22.9 sec/veh	C	5.6 sec/veh	No	—	—
19.	Barton Street at	Riverside	AM	11.1 sec/veh	B	11.5 sec/veh	B	0.4 sec/veh	No	—	—
	Krameria Avenue		PM	10.6 sec/veh	B	12.0 sec/veh	B	1.4 sec/veh	No	—	—
20.	Barton Street at	Riverside	AM	10.1 sec/veh	B	10.4 sec/veh	B	0.3 sec/veh	No	—	—
	Lurin Avenue		PM	10.8 sec/veh	B	12.0 sec/veh	B	1.2 sec/veh	No	—	—
21.	Barton Street at	Riverside County	AM	10.9 sec/veh	B	11.1 sec/veh	B	0.2 sec/veh	No	—	—
	Mariposa Ave/Larry Parrish Pkwy		PM	10.9 sec/veh	B	12.0 sec/veh	B	1.1 sec/veh	No	—	—
22.	Barton Street at	Riverside County	AM	7.3 sec/veh	A	7.4 sec/veh	A	0.1 sec/veh	No	—	—
	Nandina Avenue		PM	8.9 sec/veh	A	9.2 sec/veh	A	0.3 sec/veh	No	—	—

3 The level of service calculations for this key study intersection include the following project improvements: Second southbound through lane

Table 4.10-11
Existing Plus Project Peak Hour Intersection Capacity Analysis Summary

Key Intersection		Jurisdiction	Time Period	Existing Traffic Conditions		Existing Plus Project Traffic Conditions		Significant Impact*		Existing Plus Project With Improvements	
				Delay	*LOS*	*Delay*	*LOS*	*Delay Increase*	*Yes/No*	*Delay*	*LOS*
23.	Coyote Bush Road at	Riverside	AM	19.4 sec/veh	B	19.8 sec/veh	B	0.4 sec/veh	No	—	—
	Van Buren Boulevard		PM	10.7 sec/veh	B	11.1 sec/veh	B	0.4 sec/veh	No	—	—
24.	Orange Terrace Parkway at	Riverside	AM	12.9 sec/veh	B	13.1 sec/veh	B	0.2 sec/veh	No	—	—
	Van Buren Boulevard		PM	10.9 sec/veh	B	11.2 sec/veh	B	0.3 sec/veh	No	—	—
25.	Village West Drive at	Riverside County	AM	17.8 sec/veh	B	19.1 sec/veh	B	1.3 sec/veh	No	—	—
	Van Buren Boulevard		PM	9.3 sec/veh	A	10.5 sec/veh	B	1.2 sec/veh	No	—	—
26.	Harmon Street/Meridian Pkwy at	Riverside County	AM	5.9 sec/veh	A	6.5 sec/veh	A	0.6 sec/veh	No	—	—
	Van Buren Blvd		PM	6.6 sec/veh	A	6.9 sec/veh	A	0.3 sec/veh	No	—	—
27.	Opportunity Way at	Riverside County	AM	0.0 sec/veh	A	0.0 sec/veh	A	0.0 sec/veh	No	—	—
	Van Buren Boulevard		PM	0.0 sec/veh	A	0.0 sec/veh	A	0.0 sec/veh	No	—	—
28.	I-215 Southbound Ramps at	Caltrans	AM	**46.0 sec/veh**	**E**	**47.3 sec/veh**	**E**	**1.3 sec/veh**	**Yes****	N.F.	--
	Van Buren Boulevard		PM	**56.5 sec/veh**	**F**	**64.9 sec/veh**	**F**	**8.4 sec/veh**	**Yes****	N.F.	--

Table 4.10-11
Existing Plus Project Peak Hour Intersection Capacity Analysis Summary

Key Intersection		Jurisdiction	Time Period	Existing Traffic Conditions		Existing Plus Project Traffic Conditions		Significant Impact*		Existing Plus Project With Improvements	
				Delay	*LOS*	*Delay*	*LOS*	*Delay Increase*	*Yes/No*	*Delay*	*LOS*
29.	I-215 Northbound Ramps at Van Buren Boulevard	Caltrans	AM	**107.4 sec/veh**	**F**	**112.2 sec/veh**	**F**	**4.8 sec/veh**	**Yes****	N.F.	--
			PM	43.5 sec/veh	D	50.6 sec/veh	D	7.1 sec/veh	No	N.F.	--

Notes:
*See Table 4.10-7 for an explanation of significance determination.
** Caltrans requires that all ramp intersections maintain a minimum level of service of LOS "D" or better. This LOS standard therefore applies to the I-215 SB Ramps/Van Buren Boulevard and the I-215 NB Ramps/Van Buren Boulevard ramp intersections.

LOS = Level of service, please refer to *Tables 4.10-4 and 4.10-5* for the LOS definitions
HCM = *Highway Capacity Manual*
sec/veh = seconds per vehicle
N.F. – None Feasible

Bold HCM/LOS values indicate adverse service levels based on the LOS standards defined in this traffic study.

Existing Plus Ambient Growth to the Year 2013 Traffic Conditions

An analysis of future (Year 2013) traffic conditions indicates that the addition of ambient traffic growth (calculated per City direction at 2% per year; applied to existing Year 2010 traffic volumes results in a 6% increase in growth for near-term Year 2013) will adversely impact 4 of the 29 key study intersections (Table 4.10-12). This condition does not include any project traffic. The remaining 25 key study intersections are forecast to continue to operate at an acceptable LOS in the Year 2013 with the addition of ambient traffic growth to existing traffic. As reported on Table 4.10-13, the second column, the four locations projected to operate at an unacceptable LOS are as follows:

Table 4.10-12
Key Intersections

Key Intersection	Jurisdiction	AM Peak Hour		PM Peak Hour	
		HCM	*LOS*	*HCM*	*LOS*
4. Alessandro Blvd at Arlington Ave/ Chicago Ave	Riverside	—	—	124.8 sec/veh	F
13. Trautwein Rd/Cole Ave at Van Buren Blvd	Riverside	55.9 sec/veh	E	—	—
28. I-215 Southbound Ramps at Van Buren Boulevard	Caltrans	53.7 sec/veh	F	67.9 sec/veh	F
29. I-215 Northbound Ramps at Van Buren Boulevard	Caltrans	133.9 sec/veh	F	—	—

Notes:
HCM = *Highway Capacity Manual*
LOS = level of service
sec/veh = seconds per vehicle

Table 4.10-13
Year 2013 Peak Hour Intersection Capacity Analysis Summary 1

Key Intersection			Time Period	Existing Traffic Conditions		Year 2013 Plus Ambient Growth Traffic Conditions		Year 2013 Plus Ambient Growth Plus Project Traffic Conditions		Significant Impact		Year 2013 Plus Ambient Growth Plus Project With Improvements		Year 2013 Plus A.G. Plus Project Plus Cumulative Traffic Conditions		Year 2013 Cumulative Impact		Year 2013 Plus A.G. Plus Project Plus Cumulative With Improvements	
				Delay	*LOS*	*Delay*	*LOS*	*Delay*	*LOS*	*Delay Increase*	*Yes/No*	*Delay*	*LOS*	*Delay*	*LOS* [2]	*Delay Increase*	*Yes/No*	*Delay*	*LOS*
1.	Washington Street at Van Buren Boulevard	Riverside County	AM	37.1 sec/veh	D	43.1 sec/veh	D	43.8 sec/veh	D	0.7 sec/veh	No	—	—	41.9 sec/veh	D	-1.2 sec/veh	No	N.F.	--
			PM	41.4 sec/veh	D	47.5 sec/veh	D	49.8 sec/veh	D	2.3 sec/veh	No	—	—	**63.9 sec/veh**	**E**	**16.4 sec/veh**	**Yes**	N.F.	--
2.	Porter Avenue at Van Buren Boulevard	Riverside County	AM	11.8 sec/veh	B	12.6 sec/veh	B	12.8 sec/veh	B	0.2 sec/veh	No	—	—	14.7 sec/veh	B	2.1 sec/veh	No	—	—
			PM	10.5 sec/veh	B	11.0 sec/veh	B	11.6 sec/veh	B	0.6 sec/veh	No	—	—	12.8 sec/veh	B	1.8 sec/veh	No	—	—
3.	Wood Road at Van Buren Boulevard	Riverside	AM	40.3 sec/veh	D	45.5 sec/veh	D [3]	46.8 sec/veh	D	1.3 sec/veh	No	—	—	52.9 sec/veh	D	**7.4 sec/veh**	**Yes**	42.7 sec/veh	D
			PM	26.6 sec/veh	C	28.2 sec/veh	C	30.0 sec/veh	C	1.8 sec/veh	No	—	—	32.7 sec/veh	C	4.5 sec/veh	No	31.2 sec/veh	C
4.	Alessandro Blvd at Arlington Ave/Chicago Ave	Riverside	AM	37.4 sec/veh	D	43.8 sec/veh	D	42.8 sec/veh	D	-1.0 sec/veh	No	38.3 sec/veh	D	46.0 sec/veh	D	2.2 sec/veh	No	45.9 sec/veh	D
			PM	**106.4 sec/veh**	**F**	**124.8 sec/veh**	**F**	**127.7 sec/veh**	**F**	**2.9 sec/veh**	**Yes**	**102.1 sec/veh**	**F**	**129.5 sec/veh**	**F**	**4.7 sec/veh**	**Yes**	**104.3 sec/veh**	**F**
5.	Alessandro Boulevard at Century Avenue	Riverside	AM	17.7 sec/veh	B	22.8 sec/veh	C	23.4 sec/veh	C	0.6 sec/veh	No	—	—	28.3 sec/veh	C	5.5 sec/veh	No	—	—
			PM	9.0 sec/veh	A	9.7 sec/veh	A	10.0 sec/veh	B	0.3 sec/veh	No	—	—	11.0 sec/veh	B	1.3 sec/veh	No	—	—
6.	Alessandro Boulevard at Via Vista Drive	Riverside	AM	20.5 sec/veh	C	23.9 sec/veh	C	24.2 sec/veh	C	0.3 sec/veh	No	—	—	26.5 sec/veh	C	2.6 sec/veh	No	—	—
			PM	10.9 sec/veh	B	11.6 sec/veh	B	12.0 sec/veh	B	0.4 sec/veh	No	—	—	12.6 sec/veh	B	1.0 sec/veh	No	—	—
7.	Alessandro Blvd at Canyon Crest Drive/Overlook Pkwy	Riverside	AM	12.4 sec/veh	B	13.0 sec/veh	B	13.0 sec/veh	B	0.0 sec/veh	No	—	—	15.2 sec/veh	B	2.2 sec/veh	No	—	—
			PM	25.2 sec/veh	C	27.0 sec/veh	C	27.5 sec/veh	C	0.5 sec/veh	No	—	—	29.8 sec/veh	C	2.8 sec/veh	No	—	—
8.	Trautwein Road at Alessandro Boulevard	Riverside	AM	21.4 sec/veh	C	22.1 sec/veh	C	22.3 sec/veh	C	0.2 sec/veh	No	—	—	23.8 sec/veh	C	1.7 sec/veh	No	—	—
			PM	17.0 sec/veh	B	17.5 sec/veh	B	18.9 sec/veh	B	1.4 sec/veh	No	—	—	22.6 sec/veh	C	5.1 sec/veh	No	—	—
9.	Trautwein Road at Mission Grove Parkway	Riverside	AM	18.8 sec/veh	B	19.4 sec/veh	B	19.5 sec/veh	B	0.1 sec/veh	No	—	—	20.0 sec/veh	C	0.6 sec/veh	No	—	—
			PM	25.1 sec/veh	C	26.6 sec/veh	C	27.8 sec/veh	C	1.2 sec/veh	No	—	—	31.2 sec/veh	C	4.6 sec/veh	No	—	—

Table 4.10-13
Year 2013 Peak Hour Intersection Capacity Analysis Summary 1

Key Intersection			Time Period	Existing Traffic Conditions		Year 2013 Plus Ambient Growth Traffic Conditions		Year 2013 Plus Ambient Growth Plus Project Traffic Conditions		Significant Impact		Year 2013 Plus Ambient Growth Plus Project With Improvements		Year 2013 Plus A.G. Plus Project Plus Cumulative Traffic Conditions		Year 2013 Cumulative Impact		Year 2013 Plus A.G. Plus Project Plus Cumulative With Improvements	
				Delay	*LOS*	*Delay*	*LOS*	*Delay*	*LOS*	*Delay Increase*	*Yes/No*	*Delay*	*LOS*	*Delay*	*LOS* [2]	*Delay Increase*	*Yes/No*	*Delay*	*LOS*
10.	Trautwein Road at John F. Kennedy Drive	Riverside	AM	22.8 sec/veh	C	23.2 sec/veh	C	23.1 sec/veh	C	-0.1 sec/veh	No	—	—	23.9 sec/veh	C	0.7 sec/veh	No	—	—
			PM	18.7 sec/veh	B	19.3 sec/veh	B	19.8 sec/veh	B	0.5 sec/veh	No	—	—	20.9 sec/veh	C	1.6 sec/veh	No	—	—
11.	Trautwein Road at Grove Community Drive	Riverside	AM	22.1 sec/veh	C	24.3 sec/veh	C	24.7 sec/veh	C	0.4 sec/veh	No	—	—	30.8 sec/veh	C	6.5 sec/veh	No	—	—
			PM	15.4 sec/veh	B	15.6 sec/veh	B	16.2 sec/veh	B	0.6 sec/veh	No	—	—	17.6 sec/veh	B	2.0 sec/veh	No	—	—
12.	Trautwein Road at Orange Terrace Parkway	Riverside	AM	26.5 sec/veh	C	26.7 sec/veh	C	26.3 sec/veh	C	-0.4 sec/veh	No	—	—	25.3 sec/veh	C	-1.4 sec/veh	No	—	—
			PM	27.0 sec/veh	C	27.5 sec/veh	C	27.8 sec/veh	C	0.3 sec/veh	No	—	—	28.7 sec/veh	C	1.2 sec/veh	No	—	—
13.	Trautwein Rd/Cole Ave at Van Buren Boulevard	Riverside	AM	46.9 sec/veh	D	**55.9 sec/veh**	**E**	**57.1 sec/veh**	**E**	1.2 sec/veh	No	—	—	**89.5 sec/veh**	**F**	**33.6 sec/veh**	**Yes**	50.0 sec/veh	D
			PM	28.5 sec/veh	C	29.6 sec/veh	C	34.1 sec/veh	C	4.5 sec/veh	No	—	—	48.1 sec/veh	D	**18.5 sec/veh**	**Yes**	31.5 sec/veh	C
14.	Cole Avenue at Krameria Avenue	Riverside	AM	14.0 sec/veh	B	15.1 sec/veh	C	15.6 sec/veh	C	0.5 sec/veh	No	—	—	19.3 sec/veh	C	4.2 sec/veh	No	—	—
			PM	8.9 sec/veh	A	9.1 sec/veh	A	9.6 sec/veh	A	0.5 sec/veh	No	—	—	12.3 sec/veh	B	3.2 sec/veh	No	—	—
15.	Cole Avenue at Mariposa Avenue	Riverside County	AM	9.3 sec/veh	A	9.4 sec/veh	A	10.0 sec/veh	A	0.6 sec/veh	No	—	—	11.0 sec/veh	B	1.6 sec/veh	No	—	—
			PM	9.3 sec/veh	A	9.4 sec/veh	A	10.7 sec/veh	B	1.3 sec/veh	No	—	—	11.6 sec/veh	B	2.2 sec/veh	No	—	—
16.	Barton Street at Orange Terrace Parkway	Riverside	AM	21.1 sec/veh	C	23.9 sec/veh	C	25.5 sec/veh	D	1.6 sec/veh	No	—	—	25.5 sec/veh	D	1.6 sec/veh	No	—	—
			PM	14.4 sec/veh	B	15.1 sec/veh	C	16.8 sec/veh	C	1.7 sec/veh	No	—	—	16.8 sec/veh	C	1.7 sec/veh	No	—	—
17.	Barton Street at Van Buren Boulevard	Riverside	AM	28.7 sec/veh	C	31.2 sec/veh	C	36.9 sec/veh	D [4]	**5.7 sec/veh**	**Yes**	30.7 sec/veh	C	37.4 sec/veh	D	**6.2 sec/veh**	**Yes**	32.7 sec/veh	C
			PM	25.2 sec/veh	C	28.6 sec/veh	C	27.0 sec/veh	C	-1.6 sec/veh	No	26.3 sec/veh	C	35.1 sec/veh	D	**6.5 sec/veh**	**Yes**	30.6 sec/veh	C
18.	Barton Street at Gless Ranch Road	Riverside	AM	22.0 sec/veh	C	24.3 sec/veh	C	25.9 sec/veh	D [5]	1.6 sec/veh	No	—	—	**43.8 sec/veh**	**E**	**19.5 sec/veh**	**Yes**	28.8 sec/veh	D
			PM	17.3 sec/veh	C	18.4 sec/veh	C	24.8 sec/veh	C	6.4 sec/veh	No	—	—	**44.1 sec/veh**	**E**	**25.7 sec/veh**	**Yes**	24.6 sec/veh	C

Table 4.10-13
Year 2013 Peak Hour Intersection Capacity Analysis Summary 1

Key Intersection			Time Period	Existing Traffic Conditions		Year 2013 Plus Ambient Growth Traffic Conditions		Year 2013 Plus Ambient Growth Plus Project Traffic Conditions		Significant Impact		Year 2013 Plus Ambient Growth Plus Project With Improvements		Year 2013 Plus A.G. Plus Project Plus Cumulative Traffic Conditions		Year 2013 Cumulative Impact		Year 2013 Plus A.G. Plus Project Plus Cumulative With Improvements	
				Delay	*LOS*	*Delay*	*LOS*	*Delay*	*LOS*	*Delay Increase*	*Yes/No*	*Delay*	*LOS*	*Delay*	*LOS* [2]	*Delay Increase*	*Yes/No*	*Delay*	*LOS*
19.	Barton Street at Krameria Avenue	Riverside	AM	11.1 sec/veh	B	11.3 sec/veh	B	11.7 sec/veh	B	0.4 sec/veh	No	—	—	15.5 sec/veh	C	4.2 sec/veh	No	—	—
			PM	10.6 sec/veh	B	10.8 sec/veh	B	12.3 sec/veh	B	1.5 sec/veh	No	—	—	16.1 sec/veh	C	5.3 sec/veh	No	—	—
20.	Barton Street at Lurin Avenue	Riverside	AM	10.1 sec/veh	B	10.2 sec/veh	B	10.6 sec/veh	B	0.4 sec/veh	No	—	—	13.8 sec/veh	B	3.6 sec/veh	No	—	—
			PM	10.8 sec/veh	B	11.0 sec/veh	B	12.2 sec/veh	B	1.2 sec/veh	No	—	—	15.9 sec/veh	C	4.9 sec/veh	No	—	—
21.	Barton Street at Mariposa Ave/Larry Parrish Pkwy	Riverside County	AM	10.9 sec/veh	B	11.3 sec/veh	B	11.5 sec/veh	B	0.2 sec/veh	No	—	—	16.8 sec/veh	C	5.5 sec/veh	No	—	—
			PM	10.9 sec/veh	B	11.3 sec/veh	B	12.6 sec/veh	B	1.3 sec/veh	No	—	—	24.6 sec/veh	C	13.3 sec/veh	No	—	—
22.	Barton Street at Nandina Avenue	Riverside County	AM	7.3 sec/veh	A	7.4 sec/veh	A	7.4 sec/veh	A	0.0 sec/veh	No	—	—	7.8 sec/veh	A	0.4 sec/veh	No	—	—
			PM	8.9 sec/veh	A	9.1 sec/veh	A	9.4 sec/veh	A	0.3 sec/veh	No	—	—	10.5 sec/veh	B	1.4 sec/veh	No	—	—
23.	Coyote Bush Road at Van Buren Boulevard	Riverside	AM	19.4 sec/veh	B	20.1 sec/veh	C	20.6 sec/veh	C	0.5 sec/veh	No	—	—	21.3 sec/veh	C	1.2 sec/veh	No	—	—
			PM	10.7 sec/veh	B	11.0 sec/veh	B	11.4 sec/veh	B	0.4 sec/veh	No	—	—	15.2 sec/veh	B	4.2 sec/veh	No	—	—
24.	Orange Terrace Parkway at Van Buren Boulevard	Riverside	AM	12.9 sec/veh	B	13.2 sec/veh	B	13.4 sec/veh	B	0.2 sec/veh	No	—	—	14.7 sec/veh	B	1.5 sec/veh	No	—	—
			PM	10.9 sec/veh	B	11.3 sec/veh	B	11.7 sec/veh	B	0.4 sec/veh	No	—	—	19.2 sec/veh	B	7.9 sec/veh	No	—	—
25.	Village West Drive at Van Buren Boulevard	Riverside County	AM	17.8 sec/veh	B	21.0 sec/veh	C	22.3 sec/veh	C	1.3 sec/veh	No	—	—	24.0 sec/veh	C	3.0 sec/veh	No	—	—
			PM	9.3 sec/veh	A	9.8 sec/veh	A	11.1 sec/veh	B	1.3 sec/veh	No	—	—	17.9 sec/veh	B	8.1 sec/veh	No	—	—
26.	Harmon Street/Meridian Pkwy at Van Buren Blvd	Riverside County	AM	5.9 sec/veh	A	6.3 sec/veh	A	6.7 sec/veh	A	0.4 sec/veh	No	—	—	**63.8 sec/veh**	**E**	**57.5 sec/veh**	**Yes**	N.F.	--
			PM	6.6 sec/veh	A	7.1 sec/veh	A	7.3 sec/veh	A	0.2 sec/veh	No	—	—	**124.6 sec/veh**	**F**	**117.5 sec/veh**	**Yes**	N.F.	--
27.	Opportunity Way at Van Buren Boulevard	Riverside County	AM	0.0 sec/veh	A	0.0 sec/veh	A	0.0 sec/veh	A	0.0 sec/veh	No	—	—	14.0 sec/veh	B	14.0 sec/veh	No	—	—
			PM	0.0 sec/veh	A	0.0 sec/veh	A	0.0 sec/veh	A	0.0 sec/veh	No	—	—	17.5 sec/veh	B	17.5 sec/veh	No	—	—

Table 4.10-13
Year 2013 Peak Hour Intersection Capacity Analysis Summary 1

Key Intersection			Time Period	Existing Traffic Conditions		Year 2013 Plus Ambient Growth Traffic Conditions		Year 2013 Plus Ambient Growth Plus Project Traffic Conditions		Significant Impact		Year 2013 Plus Ambient Growth Plus Project With Improvements		Year 2013 Plus A.G. Plus Project Plus Cumulative Traffic Conditions		Year 2013 Cumulative Impact		Year 2013 Plus A.G. Plus Project Plus Cumulative With Improvements	
				Delay	*LOS*	*Delay*	*LOS*	*Delay*	*LOS*	*Delay Increase*	*Yes/No*	*Delay*	*LOS*	*Delay*	*LOS* [2]	*Delay Increase*	*Yes/No*	*Delay*	*LOS*
28.	I-215 Southbound Ramps at Van Buren Boulevard	Caltrans	AM	**46.0 sec/veh**	**E**	**53.7 sec/veh**	**F**	**55.3 sec/veh**	**F**	**1.6 sec/veh**	**Yes**	31.5 sec/veh	C	**151.0 sec/veh**	**F**	**97.3 sec/veh**	**Yes**	N.F.	--
			PM	**56.5 sec/veh**	**F**	**67.9 sec/veh**	**F**	**78.7 sec/veh**	**F**	**10.8 sec/veh**	**Yes**	25.7 sec/veh	C	**103.0 sec/veh**	**F**	**35.1 sec/veh**	**Yes**	N.F.	--
29.	I-215 Northbound Ramps at Van Buren Boulevard	Caltrans	AM	**107.4 sec/veh**	**F**	**133.9 sec/veh**	**F**	**139.1 sec/veh**	**F**	**5.2 sec/veh**	**Yes**	35.3 sec/veh	D	**159.7 sec/veh**	**F**	**25.8 sec/veh**	**Yes**	N.F.	--
			PM	43.5 sec/veh	D	52.2 sec/veh	D	**62.2 sec/veh**	**E**	**10.0 sec/veh**	**Yes**	29.4 sec/veh	C	**116.6 sec/veh**	**F**	**64.4 sec/veh**	**Yes**	N.F.	--

Notes:
LOS = Level of service, please refer to *Tables 4.10-4 and 4.10-5* for the LOS definitions
sec/veh = seconds per vehicle
A.G. = ambient growth
N.F. = None Feasible

1 **Bold HCM/LOS values** indicate adverse service levels based on the LOS standards defined in this traffic study.
2 Please note that the delay/LOS values reported in this column include all improvements recommended to mitigate the Year 2013 plus ambient growth plus project traffic condition (i.e., the fifth column).
3 The level of service calculations for this key study intersection includes the following City of Riverside planned improvement:
- Convert the exclusive northbound right-turn lane to a share through/right-turn lane

4 The LOS calculations for this key study intersection include the following project improvements:
- Second northbound left-turn lane, exclusive northbound right-turn lane, third eastbound through lane, exclusive eastbound right-turn lane, second westbound left-turn lane and signal modification

5 The LOS calculations for this key study intersection include the following project improvements:
- Second southbound through lane

Existing Plus Ambient Growth to the Year 2013 Plus Project Traffic Conditions

Review of column 3 on Table 4.10-13 above indicates that traffic associated with the proposed project will significantly impact 4 of the 29 key study intersections (Table 4.10-14), when compared to the LOS standards and significant impact criteria specified in this report. Although the intersection of Trautwein Road-Cole Avenue/Van Buren Boulevard is forecast to operate at unacceptable LOS E during the AM peak hour both with the addition of ambient growth traffic and with the addition of project traffic, the project's impact is not considered significant because the proposed project is expected to add less than 2.0 seconds to the Delay value, which is the LOS "E" threshold of significance established by the City of Riverside. The remaining 24 key study intersections are forecast to continue to operate at an acceptable LOS with the addition of project generated traffic in the Year 2013. It should be noted that except for the Barton Street at Van Buren Boulevard intersection, the other 3 intersections listed below also operate at unacceptable levels in the existing condition, without the project. The 4 locations projected to operate at an unacceptable LOS with existing plus ambient growth plus project traffic in Year 2010 are as follows:

Table 4.10-14
Key Intersections

		AM Peak Hour		PM Peak Hour	
Key Intersection	*Jurisdiction*	*HCM*	*LOS*	*HCM*	*LOS*
4. Alessandro Blvd at Arlington Ave/Chicago Ave	Riverside	—	—	127.7 sec/veh	F
17. Barton Street at Van Buren Boulevard	Riverside	36.9 sec/veh	D	—	—
28. I-215 Southbound Ramps at Van Buren Boulevard	Caltrans	55.3 sec/veh	F	78.7 sec/veh	F
29. I-215 Northbound Ramps at Van Buren Boulevard	Caltrans	139.1 sec/veh	F	62.2 sec/veh	E

Notes:
HCM = *Highway Capacity Manual*
LOC = level of service
sec/veh = seconds per vehicle

As shown in Table 4.10-13, the implementation of mitigation measures MM-TRAFFIC-1 and MM-TRAFFIC-2 at the impacted key study intersections of Alessandro Blvd at Arlington Ave/Chicago Ave and Barton Street at Van Buren Boulevard completely offset the impacts of project traffic at these intersections. The intersection of Barton Street at Van Buren Boulevard is forecast to operate at an acceptable LOS during the AM and PM peak hours with implementation of mitigation measure MM-TRAFFIC-2), as shown in column 5 of Table 4.10-13. Although the intersection of Alessandro Boulevard/Arlington Avenue-Chicago Avenue will continue to operate at unacceptable LOS F during the PM peak hour (as it does in the existing no-project condition), the implementation of recommended improvements (MM TRAFFIC 1) will offset the impact of project traffic per City of Riverside requirements and the intersection will operate at better than the pre-project and existing condition. Accordingly, once mitigation is implemented, the project will

not cause a delay that would be considered a significant impact (see Table 4.10-7) at the intersections of Alessandro Blvd at Arlington Ave/Chicago Ave and Barton Street at Van Buren Boulevard.

For impacts to I-215 Southbound Ramps at Van Buren Boulevard and I-215 Northbound Ramps at Van Buren Boulevard, these intersections are in the County of Riverside and are under the control and jurisdiction of Cal Trans, and with the project would operate at LOS E and F (AM and PM Peak Hour) and LOS F (AM Peak Hour), respectively, per Table 4.10-10. The County, in cooperation with Cal Trans, is in the process of implementing the I-215/Van Buren Boulevard interchange project. The I-215 project completely reconstructs the interchange and with that project, the LOS will be reduced to an acceptable level. This project will be required to pay its TUMF fees, which contributes to the I-215 improvement project. Once completed, the impacts will be reduced to a less than significant level. Because the City does not have control over the timing of the improvements that will be made by the County, such improvements are considered infeasible as discussed below under 4.10.5, Mitigation Measures. Since the City cannot dictate timing or implementation of the improvements, impacts to these intersections are considered significant and unavoidable.

Year 2013 Cumulative Traffic Conditions

Columns 6 and 7 of Table 4.10-13 show that nine of the 29 key study intersections (Table 4.10-15) are cumulatively impacted by the proposed project. The nine locations cumulatively impacted by the proposed project are as follows:

Table 4.10-15
Nine Locations Cumulatively Impacted

Key Intersection	Jurisdiction	AM Peak Hour		PM Peak Hour	
		HCM	*LOS*	*HCM*	*LOS*
1. Washington Street at Van Buren Boulevard	Riverside County	—	—	63.9 sec/veh	E
3. Wood Road at Van Buren Boulevard	Riverside	52.9 sec/veh	D	—	—
4. Alessandro Blvd at Arlington Ave/Chicago Ave	Riverside	—	—	129.5 sec/veh	F
13. Trautwein Rd/Cole Ave at Van Buren Blvd	Riverside	89.5 sec/veh	F	48.1 sec/veh	D
17. Barton Street at Van Buren Boulevard	Riverside	37.4 sec/veh	D	35.1 sec/veh	D
18. Barton Street at Gless Ranch Road	Riverside	43.8 sec/veh	E	44.1 sec/veh	E
26. Harmon St/Meridian Pkwy at Van Buren Blvd	Riverside County	63.8 sec/veh	E	124.6 sec/veh	F

Table 4.10-15
Nine Locations Cumulatively Impacted

Key Intersection	Jurisdiction	AM Peak Hour		PM Peak Hour	
		HCM	*LOS*	*HCM*	*LOS*
28. I-215 Southbound Ramps at Van Buren Boulevard	Caltrans	151.0 sec/veh	F	103.0 sec/veh	F
29. I-215 Northbound Ramps at Van Buren Boulevard	Caltrans	159.7 sec/veh	F	116.6 sec/veh	F

Notes:
HCM = *Highway Capacity Manual*
LOS = level of service
sec/veh = seconds per vehicle

As shown in Table 4.10-13, the implementation of improvements (MM TRAFFIC 3-7)at five of the nine cumulatively impacted key study intersections within the City of Riverside offsets the project's impact contribution to this cumulative impact. The five mitigated cumulatively impacted key study intersections are forecast to operate at an acceptable LOS during the AM and PM peak hours with implementation of improvements, except for the intersection of Alessandro Boulevard/Arlington Avenue-Chicago Avenue. Although the intersection of Alessandro Boulevard/Arlington Avenue-Chicago Avenue will continue to operate at unacceptable LOS F during the PM peak hour, the implementation of recommended improvements will offset the cumulative impact of project traffic per City of Riverside requirements and the intersection will operate at better than the pre-project and existing condition.

The remaining four impacted intersections are located in the Riverside County. For impacts to Washington Street/Van Buren Boulevard and Harmon Street-Meridian Parkway/Van Buren Boulevard, these intersections are in the County of Riverside. The County of Riverside has two established mitigation funds for road improvements, the Development Impact Fee (DIF) program and Road and Bridge Benefit District (RBBD) program. Both of these programs are available to County projects only, and there is no method for which the City can contribute funds to pay for fair share contributions for impacts (Personal Communication with Kevin Tsang, County of Riverside Transportation Department). For impacts to I-215 Southbound Ramps at Van Buren Boulevard and I-215 Northbound Ramps at Van Buren Boulevard, these intersections are in the County of Riverside and are under the control and jurisdiction of Cal Trans. The County, in cooperation with Cal Trans, is in the process of implementing the I-215/Van Buren Boulevard interchange project. The I-215 project completely reconstructs the interchange and with that project, the LOS will be reduced to an acceptable level. This project will be required to pay its TUMF fees, which contributes to the I-215 improvement project. Once completed, the impacts will be reduced to a less than significant level. Since the City cannot dictate timing or implementation of the improvements, impacts to these intersections are considered significant and unavoidable.

Because the City does not have control over the timing of the improvements that will be made by the County, and since there is no established method for the City to pay into the County's roadway

mitigation programs, such improvements to the County intersections are considered infeasible for the project to make as discussed below under 4.10.5, Mitigation Measures. The project cannot dictate timing or implementation of the improvements, and therefore impacts to these intersections are considered significant and unavoidable.

Long-Term (Year 2025) Plus Project Traffic Conditions

Table 4.10-16 summarizes the impacts to LOS at the study intersections. The first column (1) lists long-term traffic conditions, but without any traffic generated from the project. It should be noted that the delay/LOS values shown in column 1 include any planned improvements at the key study intersection. The City and County General Plan build-out planned improvements considered in this analysis include improvements for the intersections of:

- Wood Road/Van Buren Boulevard
- Alessandro Boulevard/Canyon Crest Drive-Overlook Parkway
- Trautwein Road/Mission Grove Parkway
- Trautwein Road-Cole Avenue/Van Buren Boulevard
- Barton Street/Van Buren Boulevard
- Barton Street/Gless Ranch Road
- Barton Street/Krameria Avenue
- Barton Street/Lurin Avenue
- Barton Street/Nandina Avenue
- Coyote Bush Road/Van Buren Boulevard
- Orange Terrace Parkway/Van Buren Boulevard
- Village West Drive/Van Buren Boulevard
- Harmon Street-Meridian Parkway/Van Buren Boulevard
- Opportunity Way/Van Buren Boulevard
- I-215 SB Ramps/Van Buren Boulevard
- I-215 NB Ramps/Van Buren Boulevard.

The second column presents long-term traffic conditions with the addition of project traffic. The third column indicates whether the traffic associated with the project will have a significant impact based on the impact criteria defined above. The fourth column indicates the anticipated operating conditions with implementation of improvements recommended to mitigate project traffic and/or achieve an acceptable LOS.

Table 4.10-16 shows that projected long-term without project traffic will adversely impact 8 of the 29 key study intersections (impacted intersections are listed in Table 4.10-17). The remaining 21 key study intersections are forecast to operate at an acceptable LOS for long-term traffic conditions. The locations projected to operate at an adverse LOS are shown on the Table 4.10-17.

Table 4.10-16
Long-Term (Year 2025) Peak Hour Intersection Capacity Analysis Summary [1]

Key Intersection		Jurisdiction	Time Period	Long-Term Without Project Traffic Conditions		Long-Term Plus Project Traffic Conditions		Significant Impact*	Long-Term Plus Project With Improvements	
				*Delay**	*LOS*	*Delay**	*LOS*	*Yes/No*	*Delay**	*LOS*
1.	Washington Street at Van Buren Boulevard	Riverside County	AM PM	**74.6 sec/veh** **134.9 sec/veh**	**E** **F**	**75.6 sec/veh** **142.3 sec/veh**	**E** **F**	**Yes** **Yes**	N.F. N.F.	-- --
2.	Porter Avenue at Van Buren Boulevard	Riverside County	AM PM	40.3 sec/veh **67.5 sec/veh**	D **E**	41.1 sec/veh **72.0 sec/veh**	D **E**	No **Yes**	N.F. N.F.	-- --
3.	Wood Road at Van Buren Boulevard	Riverside	AM PM	41.4 sec/veh 42.4 **sec/veh**	D D	42.0 sec/veh 44.0 **sec/veh**	D D	No No	— —	— —
4.	Alessandro Blvd at Arlington Ave/Chicago Ave	Riverside	AM PM	**95.2 sec/veh** **197.1 sec/veh**	**F** **F**	**95.7 sec/veh** **200.4 sec/veh**	**F** **F**	**No** **Yes**	64.1 sec/veh **171.2 sec/veh**	E **F**
5.	Alessandro Boulevard at Century Avenue	Riverside	AM PM	40.0 sec/veh 12.4 **sec/veh**	D B	41.2 sec/veh 13.1 **sec/veh**	D B	No No	— —	— —
6.	Alessandro Boulevard at Via Vista Drive	Riverside	AM PM	44.3 sec/veh 14.9 sec/veh	D B	46.2 sec/veh 16.0 sec/veh	D B	No No	— —	— —
7.	Alessandro Blvd at Canyon Crest Drive/Overlook Pkwy	Riverside	AM PM	42.7 sec/veh 73.3 sec/veh	D E	43.5 sec/veh 77.2 sec/veh	D E	No No	— —	— —

Table 4.10-16
Long-Term (Year 2025) Peak Hour Intersection Capacity Analysis Summary [1]

Key Intersection		Jurisdiction	Time Period	Long-Term Without Project Traffic Conditions		Long-Term Plus Project Traffic Conditions		Significant Impact*	Long-Term Plus Project With Improvements	
				*Delay**	*LOS*	*Delay**	*LOS*	*Yes/No*	*Delay**	*LOS*
8.	Trautwein Road at Alessandro Boulevard	Riverside	AM PM	71.0 sec/veh 19.9 sec/veh	E B	72.3 sec/veh 21.2 sec/veh	E C	No No	— —	— —
9.	Trautwein Road at Mission Grove Parkway	Riverside	AM PM	31.0 sec/veh 30.0 sec/veh	C C	31.6 sec/veh 31.8 sec/veh	C C	No No	— —	— —
10.	Trautwein Road at John F. Kennedy Drive	Riverside	AM PM	34.1 sec/veh 23.3 sec/veh	C C	34.9 sec/veh 24.8 sec/veh	C C	No No	— —	— —
11.	Trautwein Road at Grove Community Drive	Riverside	AM PM	18.5 sec/veh 15.8 sec/veh	B B	18.5 sec/veh 16.0 sec/veh	B B	No No	— —	— —
12.	Trautwein Road at Orange Terrace Parkway	Riverside	AM PM	42.8 sec/veh 37.8 sec/veh	D D	43.6 sec/veh 40.3 sec/veh	D D	No No	— —	— —
13.	Trautwein Rd/Cole Ave at Van Buren Boulevard	Riverside	AM PM	35.9 sec/veh 33.4 sec/veh	D C	37.3 sec/veh 37.1 sec/veh	D D	No No	— —	— —

Table 4.10-16
Long-Term (Year 2025) Peak Hour Intersection Capacity Analysis Summary [1]

Key Intersection		Jurisdiction	Time Period	Long-Term Without Project Traffic Conditions		Long-Term Plus Project Traffic Conditions		Significant Impact*	Long-Term Plus Project With Improvements	
				*Delay**	*LOS*	*Delay**	*LOS*	*Yes/No*	*Delay**	*LOS*
14.	Cole Avenue at Krameria Avenue	Riverside	AM PM	21.5 sec/veh 9.7 sec/veh	C A	22.5 sec/veh 10.3 sec/veh	C B	No No	— —	— —
15.	Cole Avenue at Mariposa Avenue	Riverside County	AM PM	16.2 sec/veh 13.8 sec/veh	C B	16.9 sec/veh 15.3 sec/veh	C C	No No	— —	— —
16.	Barton Street at Orange Terrace Parkway	Riverside	AM PM	23.7 sec/veh 17.0 sec/veh	C C	24.9 sec/veh 18.9 sec/veh	C C	No No	— —	— —
17.	Barton Street at Van Buren Boulevard	Riverside	AM PM	**421.2 sec/veh** **289.7 sec/veh**	**F** **F**	**158.5 sec/veh** **181.9 sec/veh**	**F** [2] **F**	**Yes** **Yes**	N.F. N.F.	N.F. N.F.
18.	Barton Street at Gless Ranch Road	Riverside	AM PM	**51.0 sec/veh** 31.0 sec/veh	**F** D	**63.0 sec/veh** **51.5 sec/veh**	**F** [3] **F**	**Yes** **Yes**	33.5 sec/veh 34.3 sec/veh	D D
19.	Barton Street at Krameria Avenue	Riverside	AM PM	12.1 sec/veh 17.0 sec/veh	B B	12.2 sec/veh 17.0 sec/veh	B B	No No	— —	— —
20.	Barton Street at Lurin Avenue	Riverside	AM PM	5.9 sec/veh 10.4 sec/veh	A B	6.0 sec/veh 10.5 sec/veh	A B	No No	— —	— —

Table 4.10-16
Long-Term (Year 2025) Peak Hour Intersection Capacity Analysis Summary [1]

Key Intersection		Jurisdiction	Time Period	Long-Term Without Project Traffic Conditions		Long-Term Plus Project Traffic Conditions		Significant Impact*	Long-Term Plus Project With Improvements	
				*Delay**	*LOS*	*Delay**	*LOS*	*Yes/No*	*Delay**	*LOS*
21.	Barton Street at Mariposa Ave/Larry Parrish Pkwy	Riverside County	AM PM	**202.3 sec/veh** **135.9 sec/veh**	**F** **F**	**208.2 sec/veh** **158.3 sec/veh**	**F** **F**	**Yes** **Yes**	N.F. N.F.	-- --
22.	Barton Street at Nandina Avenue	Riverside County	AM PM	32.7 sec/veh 31.1 sec/veh	C C	33.0 sec/veh 31.3 sec/veh	C C	No No	— —	— —
23.	Coyote Bush Road at Van Buren Boulevard	Riverside	AM PM	43.6 sec/veh 35.6 sec/veh	D D	45.9 sec/veh 36.6 sec/veh	D D	No No	— —	— —
24.	Orange Terrace Parkway at Van Buren Boulevard	Riverside	AM PM	17.2 sec/veh 38.5 sec/veh	B D	17.3 sec/veh 38.2 sec/veh	B D	No No	— —	— —
25.	Village West Drive at Van Buren Boulevard	Riverside County	AM PM	**85.6 sec/veh** **168.7 sec/veh**	**F** **F**	**86.2 sec/veh** **174.0 sec/veh**	**F** **F**	**Yes** **Yes**	N.F. N.F.	-- --.
26.	Harmon Street/Meridian Pkwy at Van Buren Blvd	Riverside County	AM PM	45.7 sec/veh **74.0 sec/veh**	D **E**	46.2 sec/veh **77.4 sec/veh**	D **E**	No **Yes**	N.F. N.F.	-- --
27.	Opportunity Way at Van Buren Boulevard	Riverside County	AM PM	18.1 sec/veh 43.4 sec/veh	B D	18.3 sec/veh 46.3 sec/veh	B D	No No	— —	— —

Table 4.10-16
Long-Term (Year 2025) Peak Hour Intersection Capacity Analysis Summary [1]

Key Intersection		Jurisdiction	Time Period	Long-Term Without Project Traffic Conditions		Long-Term Plus Project Traffic Conditions		Significant Impact*	Long-Term Plus Project With Improvements	
				*Delay**	*LOS*	*Delay**	*LOS*	*Yes/No*	*Delay**	*LOS*
28.	I-215 Southbound Ramps at Van Buren Boulevard	Caltrans	AM PM	34.2 sec/veh 49.1 sec/veh	C D	34.4 sec/veh 50.7 sec/veh	C D	No No	— —	— —
29.	I-215 Northbound Ramps at Van Buren Boulevard	Caltrans	AM PM	28.2 sec/veh 18.5 sec/veh	C B	28.5 sec/veh 18.5 sec/veh	C B	No No	— —	— —

Notes:
LOS = Level of service, please refer to *Tables 4.10-4 and 4.10-5* for the LOS definitions
sec/veh = seconds per vehicle
N.F. = None Feasible
*The delay increment is only applied to the existing plus project analysis and the Year 2013 analysis. The long term analysis (2025) which is included in this table uses an LOS standard for significance (also see subsection 4.10.2, Thresholds of Significance, above).
[1] **Bold HCM/LOS values** indicate adverse service levels based on the LOS standards defined in this traffic study.
[2] The LOS calculations for this key study intersection include the following project improvements:
Second northbound left-turn lane, exclusive northbound right-turn lane, third eastbound through lane, exclusive eastbound right-turn lane, second westbound left-turn lane and signal modification
[3] The LOS calculations for this key study intersection include the following project improvements:
Second southbound through lane

Table 4.10-17
Key Intersections

Key Intersection	Jurisdiction	AM Peak Hour		PM Peak Hour	
		HCM	*LOS*	*HCM*	*LOS*
1. Washington Street at Van Buren Boulevard	Riverside County	74.6 sec/veh	E	134.9 sec/veh	F
2. Porter Avenue at Van Buren Boulevard	Riverside County	—	—	67.5 sec/veh	E
4. Alessandro Blvd at Arlington Ave/Chicago Ave	Riverside	95.2 sec/veh	F	197.1 sec/veh	F
17. Barton Street at Van Buren Boulevard	Riverside	421.2 sec/veh	F	289.7 sec/veh	F
18. Barton Street at Gless Ranch Road	Riverside	51.0 sec/veh	F	—	—
21. Barton St at Mariposa Ave/Larry Parish Pkwy	Riverside County	202.3 sec/veh	F	135.9 sec/veh	F
25. Village West Drive at Van Buren Boulevard	Riverside County	85.6 sec/veh	F	168.7 sec/veh	F
26. Harmon St/Meridian Pkwy at Van Buren Blvd	Riverside County	—	—	74.0 sec/veh	E

Notes:
HCM = *Highway Capacity Manual*
LOS = level of service
sec/veh = seconds per vehicle

Long-Term Plus Project Traffic Conditions

Table 4.10-18 shows that 8 of the 29 key study intersections are significantly impacted by the proposed project in the long-term condition with the project. The eight locations significantly impacted by the proposed project are as follows:

Table 4.10-18
Key Intersections

Key Intersection	Jurisdiction	AM Peak Hour		PM Peak Hour	
		HCM	*LOS*	*HCM*	*LOS*
1. Washington Street at Van Buren Boulevard	Riverside County	75.6 sec/veh	E	142.3 sec/veh	F
2. Porter Avenue at Van Buren Boulevard	Riverside County	—	—	72.0 sec/veh	E
4. Alessandro Blvd at Arlington Ave/Chicago Ave	Riverside	95.7 sec/veh	F	200.4 sec/veh	F
17. Barton Street at Van Buren Boulevard	Riverside	158.5 sec/veh	F	181.9 sec/veh	F
18. Barton Street at Gless Ranch Road	Riverside	63.0 sec/veh	F	51.5 sec/veh	F

Table 4.10-18
Key Intersections

Key Intersection	Jurisdiction	AM Peak Hour		PM Peak Hour	
		HCM	*LOS*	*HCM*	*LOS*
21. Barton St at Mariposa Ave/Larry Parish Pkwy	Riverside County	208.2 sec/veh	F	158.3 sec/veh	F
25. Village West Drive at Van Buren Boulevard	Riverside County	86.2 sec/veh	F	174.0 sec/veh	F
26. Harmon St/Meridian Pkwy at Van Buren Blvd	Riverside County	—	—	77.4 sec/veh	E

Notes:
HCM = *Highway Capacity Manual*
LOS = level of service
sec/veh = seconds per vehicle

As shown on the last column of Table 4.10-16, after implementation of mitigation measures (MM-TRAFFIC-4, MM-TRAFFIC-6, and MM-TRAFFIC-7) only one of the eight impacted key study intersections (Barton Road/Gless Ranch) in the City of Riverside are forecast to operate at an acceptable LOS during the AM and PM peak hours after mitigation is incorporated. The intersection of Alessandro Boulevard/Arlington Avenue-Chicago Avenue will continue to operate at unacceptable LOS F during the PM peak hour with improvements (as it currently does in the existing, no-project condition), however this intersection will operate at better than the pre-project condition with the proposed mitigation measures incorporated. The intersection of Barton Street/Van Buren Boulevard has existing right-of-way constraints that affect the ability to improve these intersections to the ultimate general plan build-out widths.

It should be noted that per the *City of Riverside General Plan 2025,* Circulation and Community Mobility Element (adopted November 2007), the City recognizes that along key freeway-feeder segments during the peak commute hours, LOS F may be expected due to regional travel patterns. As described in Section 5.15 of the *City of Riverside General Plan EIR* (certified November 2007), the existing (1994) General Plan allows LOS E to serve as "a minimum acceptable standard for transportation planning and facility design." The existing General Plan also allows LOS F to "continue to exist in some circumstances" (Policy T 1.2, City of Riverside General Plan, 1994). Additionally, the City of Riverside General Plan EIR made a Statement of Overriding Considerations for intersections that operate at LOS E or F and could not be widened to accommodate additional traffic. Furthermore, the project's contribution to the impacts at these intersections is minimal and the project will make fair share contributions to these intersections. For these reasons, since the City of Riverside has determined LOS F would be acceptable along a regional freeway-feeder, and all of these intersections are along Van Buren Boulevard which is a regional feeder, LOS F is acceptable. Therefore, impacts at the intersection of Barton Street/Van Buren Boulevard are considered less than significant.

The intersections of Village West Drive/Van Buren Boulevard and Harmon Street-Meridian Parkway/Van Buren Boulevard have existing right-of-way constraints that affect the ability to improve these intersections to the ultimate general plan build-out widths and are located in Riverside County, and are under the jurisdiction of the County. Additionally, for impacts to Washington Street/Van Buren Boulevard, Porter Avenue/Van Buren Boulevard, Barton Street/Mariposa Avenue/Larry Parish Drive, Village West Drive/Van Buren Boulevard and Harmon Street-Meridian Parkway/Van Buren Boulevard, these intersections are in the County of Riverside, and would operate at LOS E or F in the AM and PM Peak Hour per the thresholds outlined on Table 4.10-8. The County of Riverside has two established mitigation funds for road improvements, the Development Impact Fee (DIF) program and Road and Bridge Benefit District (RBBD) program. Both of these programs are available to County projects only, and there is no method for which the City can contribute funds to pay for fair share contributions for impacts. Therefore, because the City does not have control over the timing of the improvements that will be made by the County, such improvements are considered infeasible as discussed below under 4.10.5, Mitigation Measures. The project cannot dictate timing or implementation of the improvements, and therefore impacts to these intersections are considered significant and unavoidable.

For the impacts to Alessandro Boulevard/Arlington Avenue-Chicago Avenue, the project contributes 6.6% to the Year 2013 condition in the PM peak hour and 2.5% in the Long Term condition in the PM Peak Hour. However, since this existing intersection already operates at LOS F without the project, and since the project will be conditioned to implement Mitigation Measure MM-TRAFFIC 4, impacts to this intersection are considered less than significant.

Therefore, based on the analysis conducted by LLG, as detailed in Appendix J, the project does contribute to impacts in the Existing Plus Project, Year 2013 condition, as well as in the Year 2025 condition. MM TRAFFIC-1 through MM TRAFFIC-7 will reduce impacts at the related intersections to less than significant. However, since the timing and funding of fair share improvements cannot be guaranteed, impacts are considered significant and unavoidable. Additionally, the project will be required to pay TUMF fees which contribute towards improvements at the I-215 intersections and Van Buren widening. Finally, the intersections of Washington Street/Van Buren Boulevard, Porter Avenue/Van Buren Boulevard, Barton Street/Mariposa Avenue/Larry Parish Drive, Village West Drive/Van Buren Boulevard and Harmon Street-Meridian Parkway/Van Buren Boulevard are in the County of Riverside. Since the City cannot control the timing and funding for improvements to these intersections, impacts at these intersections would remain significant and unavoidable. With implementation of the mitigation measures provided below as well as given the City, County and/or Caltrans standards discussed above, LOS at all other intersections will be at acceptable levels with the project incorporated.

<u>Threshold:</u> Would the project 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?

The focus of a Congestion Management Plan is the development of an Enhanced Traffic Monitoring System in which real-time traffic count data can be accessed by the Riverside County Transportation Commission to evaluate the condition of the Congestion Management System as well as meet other monitoring requirements at the State and Federal levels. Per the Congestion Management Plan-adopted LOS standard of "E," when a Congestion Management System segment falls to "F," a deficiency plan is required. Preparation of a deficiency plan would be the responsibility of the local agency where the deficiency is located. Other agencies identified as contributors to the deficiency would also be required to coordinate with the development of the plan. The plan must contain mitigation measures, including Transportation Demand Management strategies and transit alternatives, and a schedule of mitigating the deficiency. To ensure that the Congestion Management System is appropriately monitored to reduce the occurrence of Congestion Management Plan deficiencies, it is the responsibility of local agencies, when reviewing and approving development proposals, to consider the traffic impacts on the Congestion Management System.

Congestion Management Plan facilities within the project area include I-215, and Van Buren Boulevard.

As discussed above, the County of Riverside Congestion Management Plan has an adopted LOS standard of "E." Both the County and City of Riverside General Plans require levels of service that conform to the Congestion Management Plan standards. Therefore, if a project is in compliance with the County and City LOS standards, the project would also be in compliance with the Congestion Management Plan.

For impacts to I-215 Southbound Ramps at Van Buren Boulevard and I-215 Northbound Ramps at Van Buren Boulevard, these intersections are in the County of Riverside and are under the control and jurisdiction of Cal Trans, and with the project would operate at LOS E and F (AM and PM Peak Hour) and LOS F (AM Peak Hour), respectively, per Table 4.10-10. The County, with the cooperation of Cal Trans, is in the process of implementing the I-215/Van Buren Boulevard interchange project. The I-215 project completely reconstructs the interchange and with that project, the LOS will be reduced to an acceptable level. Once completed, the impacts will be reduced to a less than significant level. Because the City does not have control over the timing of the improvements that will be made by the County, such improvements are considered infeasible as discussed below under 4.10.5, Mitigation Measures. This project will, however, be required to pay its TUMF fees, which contributes to the I-215 improvement project. However, since the City cannot dictate timing or implementation of the improvements, impacts to these intersections are considered significant and unavoidable.

As shown in Table 4.10-13 above, impacts along Van Buren Boulevard would be reduced to LOS C and/or LOS D after implementation of required mitigation measures (MM-TRAFFIC-3, MM-TRAFFIC-5, and MM-TRAFFIC-6) for both the 2013 and long-range scenarios at the following City intersections:

3) Wood Road at Van Buren Boulevard
13) Trautwein Rd/Cole Ave at Van Buren Boulevard
17) Barton Street at Van Buren Boulevard

Although the following intersections are located in the County, they would operate at LOS E or better during peak hours and therefore impacts would be less than significant:

2) Porter Avenue at Van Buren Boulevard
23) Coyote Bush Road at Van Buren Boulevard
24) Orange Terrace Parkway at Van Buren Boulevard
27) Opportunity Way at Van Buren Boulevard

Impacts at Washington Street and Van Buren Boulevard would exceed the County-adopted LOS standard of E during the PM peak hour. Because this intersection is located within the jurisdiction of the County, the City cannot ensure that improvements would be made and therefore must assume that this impact would remain.

Additionally, in the long-term (Year 2025) LOS, according to Table 4.10-16, the project would exceed the Congestion Management Plan LOS E acceptable levels at one intersection without the project: Village West Drive/Van Buren Boulevard. With the project, in the long-term this same intersection remains at LOS F, which exceeds the Congestion Management Plan standard of LOS E. Although the existing right of way limits the ability of this intersection to be widened to its ultimate general plan build-out width, the City of Riverside's General Plan allows for certain regional feeders (Van Buren Boulevard) to function at LOS F levels. It should be noted that the County General Plan only allows LOS D at intersections of any on Major Streets, Arterials, Expressways, or conventional State highways within one mile of a freeway interchange (which this portion of Van Buren Boulevard would qualify as).

Therefore, because the intersection of Washington Street/Van Buren Boulevard and Village West Drive/Van Buren Boulevard exceed the LOS E standard from the Congestion Management Plan, this impact would be considered significant and unavoidable.

<u>Threshold:</u> Would the project conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The Circulation and Community Mobility Element of the City of Riverside General Plan 2025 contains goals, recommendations, objectives, guidelines, and standards for the management of circulation and

mobility in the City. The following General Plan policies relate to transit, bicycle, or pedestrian facilities and are applicable to the proposed project:

> **Policy CCM-2.8:** Design street improvements considering the effect on aesthetic character and livability of residential neighborhoods, along with traffic engineering criteria.
>
> **Policy CCM-2.9:** Design all street improvement projects in a comprehensive fashion to include consideration of street trees, pedestrian walkways, bicycle lanes, equestrian pathways, signing, lighting, noise, and air quality wherever any of these factors are applicable.
>
> **Policy CCM-2.10:** Emphasize the landscaping of parkways and boulevards.
>
> **Policy CCM-8.2:** Promote walking and biking as a safe mode of travel for children attending local schools.
>
> **Policy CCM-9.1:** Encourage increased use of public transportation and multi-modal transportation as means of reducing roadway congestion, air pollution and nonpoint source water pollution, through such techniques as directing new growth along transportation corridor.
>
> **Policy CCM-9.2:** Support implementation of RTA's Bus Rapid Transit Program and recommendations of the Go Riverside Task Force.
>
> **Policy CCM-9.5:** Incorporate facilities for transit and other alternative modes of transportation, such as park-and-ride lots and bus turnouts, in the design of future developments.
>
> **Policy CCM-9.6:** Enhance and encourage the provision of attractive and appropriate transit amenities, including shaded bus stops, to facilitate use of public transportation.
>
> **Policy CCM-9.7:** Ensure adequate connections among all alternative modes.

The City's Transportation Demand Management Regulations (Chapter 19.880 of the City's Municipal Code) provides regulations to protect the public health, safety, and welfare by reducing air pollution caused by vehicle trips and vehicles miles traveled. The applicant will incorporate the following transportation demand measures (Transportation Demand Management) to help achieve the required vehicle reduction targets:

- Alternative work schedules/flex-time;
- Preferential parking for carpool vehicles;
- Bicycle parking and bike facilities;

- Bus stop improvements;
- Local transportation management and roadway improvements;
- Contributions to funds for regional facilities such as park-and-ride lots, multi-modal transportation centers, satellite work centers, etc.; and
- On-site amenities such as cafeterias, restaurants, automated teller machines and other services that would eliminate the need for additional trips.

Specifically, the proposed project will include a bus stop along Van Buren Boulevard, a bike lane along Van Buren Boulevard connecting to the existing bike lane in the vicinity, and bicycle racks on the project site. These features help to achieve the General Plan policies and Transportation Demand Management listed above, which support the City's transit and pedestrian goals and objectives and providing methods to achieve vehicle reduction targets. The proposed project does include the ability of pedestrians and bikes to circulate through the shopping center through the use of connected sidewalks.

As discussed in the Initial Study and noted above, extensive bus service throughout the City is provided by the Riverside Transit Agency. The bus stop proposed by the project along Van Buren Boulevard (RTA 2010) supports this bus system and provides direct bus rider access to the site.

The City's Bicycle Master Plan serves to develop a feasible plan for an interconnected on-street and off-street bicycle lane network throughout the City. Construction activities associated with the proposed project will comply with the planning level guidance for the accommodation of bicycles in construction zones addressed in Appendix C of the City's Bicycle Master Plan (City of Riverside 2007e). The proposed project also includes a bike lane along Van Buren Boulevard that will tie into the existing bike route in the project vicinity. Bicycle racks will be provided on the site and will be reviewed as part of the City's Design Review process.

Additionally, there are no regional trails in the vicinity of the project that would be negatively affected by the project. Van Buren Boulevard contains a designated Class 2 bikeway adjacent to the project site (City of Riverside 2007) Because the proposed project is incorporating the Transportation Demand Management measures listed above, including bike racks and facilities, the project would support the existing bikeway and would not conflict with the City of Riverside General Plan or other adopted plans.

For these reasons, the proposed project would not conflict with adopted policies, plans, or programs supporting alternative transportation and impacts would be less than significant.

4.10.5 Mitigation Measures

For the intersections where future traffic volumes are expected to result in poor operating conditions, improvements are recommended which would change the intersection geometry to increase capacity.

These capacity improvements usually involve roadway widening and/or restriping to reconfigure or add lanes to various approaches of a key intersection. The proposed improvements are expected to offset the impact of future traffic, and improve levels of service to an acceptable range.

Prior to issuance of building permits, the project applicant shall contribute funds for future traffic improvements through fair-share fees paid to the City for the following intersections. The City shall construct the identified improvements prior to that time at which the level of service is forecast to fall below the requisite level of service.

- Alessandro Boulevard at Arlington Avenue/Chicago Avenue
- Wood Road at Van Buren Boulevard
- Trautwein Road/Cole Avenue at Van Buren Boulevard
- Barton Street at Van Buren Boulevard
- Barton Street at Gless Ranch Road

Additionally, the project applicant shall pay TUMF fees pursuant to Riverside Municipal Code Section 16.68.

Existing Plus Project Traffic Conditions

The following improvements listed below have been identified to mitigate the existing plus project impacts at the three impacted key study intersections.

MM TRAFFIC-1: Alessandro Boulevard at Arlington Avenue/Chicago Avenue: Widen and/or restripe Alessandro Boulevard to provide a third northbound left-turn lane. Widen and/or restripe Arlington Avenue for three westbound departure lanes. Modify the existing traffic signal.

Existing Plus Ambient Plus Project Traffic Conditions

In addition to Mitigation Measure 1 above, the following improvements listed below have been identified to mitigate the existing plus ambient plus project impacts at the impacted key study intersections.

MM TRAFFIC-2: Barton Street at Van Buren Boulevard: Widen and/or restripe Barton Street to provide an exclusive southbound right-turn lane. Modify the existing traffic signal.

Year 2013 Cumulative Traffic Conditions

The following improvements listed below have been identified to mitigate the Year 2013 impacts at the nine cumulatively impacted key study intersections.

MM TRAFFIC-3: Wood Road at Van Buren Boulevard: Provide a fair-share contribution towards or construct the following improvements. Widen and/or restripe Van Buren Boulevard and convert the exclusive westbound right-turn lane to a shared through/right-turn lane. Modify the existing traffic signal.

MM TRAFFIC-4: Alessandro Boulevard at Arlington Avenue/Chicago Avenue: Provide a fair-share contribution towards or construct the following improvements. Widen and/or restripe Chicago Avenue to provide a third westbound left-turn lane. Modify the existing traffic signal.

MM TRAFFIC-5: Trautwein Road/Cole Avenue at Van Buren Boulevard: Provide a fair-share contribution towards or construct the following improvements. Widen and/or restripe Trautwein Road/Cole Avenue to provide an exclusive northbound right-turn lane and a second southbound through lane. Widen and/or restripe Van Buren Boulevard to provide a third eastbound through lane and a second westbound left-turn lane. Modify the existing traffic signal.

MM TRAFFIC-6: Barton Street at Van Buren Boulevard: Provide a fair-share contribution towards or construct the following improvements. Modify the traffic signal and install a northbound right-turn overlap phase.

MM TRAFFIC-7: Barton Street at Gless Ranch Road: Provide a fair-share contribution towards or construct the following improvements. Widen and/or restripe Barton Street to provide a second northbound through lane and a second northbound departure lane.

Long-Term (2025) Traffic Conditions

With the implementation of Mitigation Measures 1, 4, 6, and 7 above, there are no other feasible mitigation measures needed to reduce impacts in the 2025 scenario.

Mitigation Rejected as Infeasible

The proposed project would result in several impacts at Riverside County intersections and two freeway on-ramps. County intersections are under the jurisdiction of the County, and freeway onramps are under the jurisdiction of the Cal Trans neither of which are the lead agency for the project. The County of Riverside has two established mitigation funds for road improvements, the Development Impact Fee (DIF) program and Road and Bridge Benefit District (RBBD) program. Both of these programs are available to County projects only, and there is no method for which the City can contribute funds to pay for fair share contributions for impacts. Because the City does not have jurisdiction over these locations, it cannot direct, require or impose the improvements, nor require the project applicant to contribute to the County's mitigation programs. The City cannot dictate timing of

the improvements that will be made by the County. For this reason, the following improvements are considered infeasible.

I-215 Southbound Ramps at Van Buren Boulevard:

- Install a traffic signal and design for three-phase operation (split-phase in all directions). Install a southbound right-turn overlap. Restripe Van Buren Boulevard to provide a second westbound through lane. (Existing Plus Project, Existing Plus Ambient Plus Project)

- Provide a fair-share contribution towards or construct the following improvements. Widen and/or restripe Van Buren Boulevard to provide a second eastbound through lane and a second eastbound departure lane. Convert the eastbound right-turn lane to a free right-turn lane. Widen and/or restripe the off-ramp to provide a second southbound right-turn lane. Modify the traffic signal. (Year 2013 Cumulative)

I-215 Northbound Ramps at Van Buren Boulevard:

- Restripe the off-ramp to provide an exclusive northbound left-turn lane and a shared left-turn/through/right-turn lane. Restripe Van Buren Boulevard for two westbound departure lanes. Modify the existing traffic signal. (Existing Plus Project, Existing Plus Ambient Plus Project)

- Provide a fair-share contribution towards or construct the following improvements. Widen and/or restripe Van Buren Boulevard to provide an exclusive eastbound left-turn lane. Widen and/or restripe the on-ramp for two receiving lanes. Modify the existing traffic signal. (Year 2013 Cumulative)

Washington Street at Van Buren Boulevard:

- Provide a fair-share contribution towards or construct the following improvements. Widen and/or restripe Van Buren Boulevard to provide a second eastbound left-turn lane and a third eastbound through lane. Modify the existing traffic signal. (Year 2013 Cumulative)

- Provide a fair-share contribution to the County towards or construct the following improvements. Widen and/or restripe Van Buren Boulevard to provide a second eastbound left-turn lane, a third eastbound through lane and a third westbound through lane. Widen and/or restripe Washington Street to provide a third southbound left-turn lane. Modify the existing traffic signal and install a westbound right-turn overlap phase. (Long Term Plus Project)

Harmon Street/Meridian Parkway at Van Buren Boulevard:

- Provide a fair-share contribution towards or construct the following improvements. Widen and/or restripe Meridian Parkway to provide a southbound free right-turn lane and two northbound

departure lanes. Widen and/or restripe Van Buren Boulevard to provide a second eastbound left-turn lane. Modify the traffic signal. (Year 2013 Cumulative)

- For the Long Term Plus Project Scenario, improvements to this intersection have right-of-way constraints that affect the ability to improve these intersections to widths. (Long Term Plus Project)

Porter Avenue at Van Buren Boulevard: Provide a fair-share contribution towards or construct the following improvements. Widen and/or restripe Van Buren Boulevard to provide a third eastbound through lane. Modify the existing traffic signal. (Long Term Plus Project)

Barton Street at Mariposa Avenue/Larry Parish Drive: Provide a fair-share contribution towards or construct the following improvements. Install a two-phase traffic signal. (Long Term Plus Project)

Village West Drive/Van Buren Boulevard: For the Long Term Plus Project scenario, this intersection has right-of-way constraints that affects the ability to improve the intersection to an acceptable LOS. (Long Term Plus Project)

4.10.6 Environmental Impacts After Mitigation is Incorporated

A combination of funding sources is utilized for the construction of roadways and intersection improvements. Typically, project proponents install internal streets and improvements within the project site. For streets that are affected by the proposed project, a fair-share amount is typically contributed by the project proponent to the city's roadway program. Each jurisdiction determines when and how to allocate the development contributions it receives. Funds received as part of a citywide development mitigation program can be spent on any transportation projects within the city's jurisdiction that have been listed in the city's program documentation (e.g., a capital improvement plan or a transportation facility project list).

Fair share fees that are collected are placed in a separate interest bearing account pursuant to the requirements of Government Code Section 66000 et seq. The timing to use the fair share transportation funds is established by the City's Public Works Department. Annually the City prepares a capital improvement program to determine the timing of improvements to ensure that the construction of improvements occurs prior to or concurrent with that time at which the LOS is forecast to fail to achieve the performance standards established by the City.

As discussed above, the project will reduce impacts at all City study intersections to less than significant levels. This will be done, by either incorporating all of the feasible mitigation measures listed above, as well as following the General Plan policies and LOS standards. Once all mitigation measures have been incorporated, most City intersections will operate at acceptable LOS standards. For a few remaining intersections, although the LOS standard may be exceeded, the City of Riverside's General Plan allows for that exceedance. For the City of Riverside intersections (Barton Street/Van Buren and Alessandro Blvd at

Arlington/Chicago), the General Plan does not contemplate these streets being widened any further beyond their designated General Plan Circulation Element widths; however, the City's General Plan EIR allows intersections along regional feeders (i.e., Van Buren Boulevard) to operate at LOS E or F. Therefore, impacts would be less than significant.

However, the following intersections are located in the County, and therefore the City does not have control over when potential improvements could be made, and therefore no assurances can be made by this project that the impacts can be reduced to less than significant levels. For the I-215 ramps, they are part of a current project by the County and are being partially funded by TUMF fees, to which this project is contributing. The intersections include:

1) Washington Street/Van Buren Boulevard
2) Porter Avenue/Van Buren Boulevard
21) Barton Street/Mariposa Avenue/Larry Parish Drive
25) Village West Drive/Van Buren Boulevard
26) Harmon Street-Meridian Parkway/Van Buren Boulevard
28) I-215 Southbound Ramps at Van Buren Boulevard
29) I-215 Northbound Ramps at Van Buren Boulevard

Therefore, for the County intersections, the project will have significant and unavoidable impacts. This impact will require a Statement of Overriding Considerations.

4.10.7 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

Caltrans (California Department of Transportation). 2002. *Caltrans Guide for the Preparation of Traffic Impact Studies*. December 2002.

ITE (Institute of Transportation Engineers). 2004. *The Trip Generation Handbook*, 2nd ed. Washington D.C.: ITE. June 2004.

ITE. 2008. *The Trip Generation Handbook, 8th ed.* Washington D.C.: ITE.

City of Riverside. 2007. *City of Riverside General Plan 2025,* "Circulation and Community Mobility Element" (Policy). Adopted November 2007.

County of Riverside Transportation and Land Management Agency. 2003. General Plan Final Environmental Impact Report, volume I. Certified October 2003.

Kimley-Horn and Associates. 2010. *Meridian Specific Plan Amendment (SPA) Traffic Impact Analysis (TIA)*. April 2010.

LLG. 2011. Appendix J. *Traffic Impact Analysis Report*. June 9, 2011.

Personal Communication, Kevin Tsang, County of Riverside Transportation and Land Management Agency, Department of Transportation. 951-955-2862.

Transportation Research Board. 2000. *Highway Capacity Manual*, Chapter 16, "Signalized Intersections," and Chapter 17 "Unsignalized Intersections."

RTA (Riverside Transit Agency). 2010.

Western Riverside Council of Governments (WRCOG). 2006. Transportation Uniform Mitigation Fee: 10-Year Strategic Plan and Transportation Improvement Program Development Guidelines. Accessed October 10, 2011. Available at: http://www.wrcog.cog.ca.us/downloads/TUMF10YrStrategicPlan_071106_Final_Amended%20_06-05-07_.pdf.

WRCOG, 2010. 2010 Transportation Uniform Mitigation Fee Annual Report. Accessed October 10, 2011. Available at: http://www.wrcog.cog.ca.us/downloads/Annual%20Report%202010a%20(FINAL).pdf

WRCOG. 2011a. *Administration*. Accessed October 10, 2011. Available at: http://www.wrcog.cog.ca.us/content/administration.asp.

WRCOG. 2011b. *TIP Spreadsheet*. Accessed October 13, 2011. Available at: http://www.wrcog.cog.ca.us/downloads/Northwest%20Zone%205-Year%20TIP%20Amendment%20(2-17-11).pdf

WRCOG, 2010c. 2010 Transportation Uniform Mitigation Fee Nexus Study. Accessed October 14, 2011. Available at: http://www.wrcog.cog.ca.us/content/resources.asp

4.11 Urban Decay

This section presents a discussion of potential impacts regarding urban decay or deterioration that could be created by the proposed project. Urban decay is an environmental, economic and social problem that may be caused by the abandonment of existing retail development that results from highly competitive new retail development. This abandonment can lead to higher vacancy rates and deferred maintenance of existing retail square footage by its owners, who no longer receive the level of rental income necessary to maintain their properties. This in turn can lead to lower property values, higher crime rates, a damaged business environment and a continuing cycle of events that can cause a variety of economic and social problems for a municipality.

4.11.1 Background

Consideration of this topic in environmental documents prepared under the California Environmental Quality Act (CEQA) is in direct response to the California Appeals Court decision (December 2004) case known as *Bakersfield Citizens for Local Control v. City of Bakersfield*. In that decision, the Court determined that pursuant to CEQA Guidelines Section 15054, "when the economic or social effects of a project cause physical change, this change is regarded as a significant effect in the same manner as any other physical change resulting from the project."

The Bakersfield project consisted of construction and operation of two shopping centers, both of which include a Wal-Mart Supercenter. In the Bakersfield case, existing case law was emphasized where the Court stated, "the lead agency must consider whether the proposed shopping center will take business away from the downtown shopping area and thereby cause business closures and eventual deterioration of downtown Bishop." (*Citizens Association for Sensible Development of Bishop Area v. County of Inyo* [1985]) The Bakersfield court stated that, "when there is evidence suggesting that the economic and social effects caused by the proposed shopping center ultimately could result in urban decay or deterioration, then the lead agency is obligated to assess this indirect impact."

More recently, in the *Anderson First Coalition v. City of Anderson* (June 2005), the Court found that social or economic changes that may have a physical impact should be considered in an Environmental Impact Report (EIR). In addition, the Andersen case distinguished the Bakersfield case, thus reaffirming the need for an EIR to consider potential social and economic impacts associated with a proposed project.

The focus of the following discussion and analysis, based on the above discussed case law, concerns the potential for the proposed project to result in physical impacts to the surrounding community related to urban decay and deterioration.

The following analysis was used in the preparation of this section of the draft environmental impact report:

- David Taussig and Associates, Inc. 2011. *Gless Ranch Center Urban Decay Analysis*. September 9, 2011 (Appendix K).

4.11.2 Methodology

To evaluate the potential for the proposed project to cause urban decay due to closures of existing retail stores, the supply and demand for each specific retail category (e.g., general merchandise, food stores, etc.) was evaluated in each of the geographic areas that will be impacted by the proposed project, otherwise known as the project's Trade Areas. To determine existing retail conditions, the most recent annualized data available to the City (2010), was obtained from The Nielsen Company, a reputable demographics consulting firm that provides population, median income, retail sales, and consumer expenditure information for customized geographical sub areas throughout the United States. The analysis assumes that the proposed project will open in 2012, but that stabilized sales within the project will first occur in 2013. As sales of new residential units within the Trade Areas have been minimal during the current recession, the "Future Conditions" conservatively does not assume any future residential growth, and thus demand is projected to increase due to an increase in purchasing power. However, the Future Conditions scenario does add to the supply of retail uses those uses associated with the project.

To determine the likelihood of urban decay occurring within the Trade Areas, the following methodology was applied in this analysis:

1. The boundaries of the Primary and Secondary Trade Areas that would support the project were identified;

2. The land uses for Scenarios #1 and Scenario #2 were identified, and retail sales under each of the Scenarios were defined, for specific retail categories expected within the project;

3. Current consumer demand generated by existing residents in each of the Trade Areas, by specific retail category, was determined;

4. Current retail sales in each of the Trade Areas, by specific retail category, were estimated;

5. The amount of existing retail leakage (local demand greater than local supply) or retail surplus (local supply greater than local demand) in each of the Trade Areas, by specific retail category, was calculated;

6. In each of the Scenarios, projected future retail demand versus retail supply in 2013 was calculated by specific retail category under Future Conditions, to determine if future retail leakage or retail supply surplus is expected to occur;

7. Other planned retail developments in the Trade Areas were identified where possible - and the Future Conditions retail supply was increased to include additional sales generated by the

successful completion of these other retail developments – to determine the impact of this additional retail supply on the retail leakage or supply surplus calculated under Task 6, above;

8. Current retail vacancy rates in the Riverside-Moreno Valley-Corona metropolitan area were determined;

9. The impacts of the project under the Existing Conditions were discussed, and the extent to which the project is likely to contribute to Urban Decay (assuming Existing Conditions prevail) was assessed; and

10. The extent to which the project is likely to contribute to urban decay in the Trade Areas, based on the findings under Tasks 1-8, was assessed. Evidence of retail leakage in the future despite the construction of the project would suggest little potential for urban decay, whereas evidence of an oversupply of retail space would be a reason for greater concern regarding the potential for urban decay.

To assess the potential impacts of the project on existing retail development, the market area and population that would be served by the project needs to be determined. Local-serving retail uses include grocery and drug stores, cleaners, and other retail uses commonly found in neighborhood shopping centers, all of which generally attract customers from within the Primary Trade Area. Regional retail uses consist of goods and services for which consumers are willing to travel outside of their immediate neighborhoods, and include general merchandise, apparel, home furnishings and other retail uses. These regional uses generally attract customers from throughout both the Primary and Secondary Trade Areas. While consumers are sometimes willing to travel considerable distances to purchase certain goods and services, all else being equal, they generally tend to shop at centers closest to their places of residence. Therefore, the Primary and Secondary Trade Area boundaries for the project were established based on the distance between local residences and their nearest retail centers, as well as existing roadway systems and traffic patterns that impact where local residents will do their shopping.

The Urban Decay Analysis (UDA) (Appendix K) prepared for the project first discusses the project's impacts on existing conditions and then examines the current market dynamics within each of the Trade Areas to determine the ability of each Trade Area to capture the expected retail demand of its own residents. The extent to which retail demand generated by Trade Area residents is not currently captured by retailers within the Trade Area indicates that there is existing excess demand to support the project's planned retail developments, and not negatively impact existing businesses within the Trade Areas.

Project Impacts on Existing Conditions

In order to effectively highlight possible environmental impacts of the project, the UDA analyzed the effects of the project under Existing Conditions. Current retail demand exceeds current sales by approximately $347.3 million in the Primary Trade Area, and approximately $781.1 million in the combined Primary and Secondary Trade Areas (see Figure ES-1 and ES-2 of Appendix K, *Gless Ranch Center*

Urban Decay Analysis). The project is expected to generate approximately $139.2 million and $144.5 million annually in retail sales under Scenario #1 and Scenario #2, respectively. Assuming that Existing Conditions prevail when the project is developed, an overall surplus of demand over supply will continue to exist in both the Primary Trade Area and the combined Primary and Secondary Trade Areas.

Under Existing Conditions, both the Primary Trade Area and the combined Primary and Secondary Trade Areas, produce a surplus of demand over supply in every retail category. If the project were developed under Existing Conditions, the following would be expected:

1. Under Scenario #1 for the Primary Trade Area, an analysis of each of the individual retail categories indicates the potential for a surplus of supply only in the home furnishing and appliances retail category. The surplus of approximately $950,546 represents approximately 0.4% of the overall leakage occurring after the project is developed.
2. Under Scenario #2 for the Primary Trade Area, an analysis of each of the individual retail categories indicates the potential for a surplus of retail supply only in the food retail category. This surplus of approximately $1.5 million constitutes approximately 0.6% of the overall leakage occurring once the project is developed.
3. Under both Scenarios within the combined Primary and Secondary Trade Areas, all retail categories show an annual leakage in sales.

In theory, this excess supply could create a potential problem of decay for existing stores in the Trade Areas for these specific retail categories. However, the potential surplus identified under each Scenario is not considered a significant contributor to the potential for urban decay due to the overall leakage of $235.9 million and $231.7 million in the Primary Trade Area for Scenario #1 and Scenario #2, respectively. The overall shortfall in retail supply suggests that there is a substantial need for additional retail square footage. Furthermore, the overall leakage indicates that the retail demand in the Trade Area is strong enough to support additional retail supply, and that any projected excess in an individual retail category is likely to be reallocated to one of the other many retail categories that are characterized by significant leakage.

Determination of Existing Retail Demand within the Trade Areas

In order to determine the existing demand within the Trade Areas for each type of retail use expected in the project, as well as the current sales levels experienced within these Trade Areas, the UDA relied primarily on data provided by The Nielsen Company.

For conservative purposes, it was assumed that the project would not generate new business for a Trade Area or create new buying power beyond the demand level generated by residents within the Trade Area. In other words, it was assumed that the project could only attract customers from existing businesses, fulfill a currently unmet need, or capture the increase in purchasing power that accrues with inflation.

The retail demand for various product types was based on estimates provided by The Nielsen Company for each of the Trade Areas. These demand figures were derived from the Consumer Expenditure Survey data published by the U.S. Bureau of Labor Statistics. **Table 4.11-1** below, summarizes the resulting demand estimates in the Primary and Secondary Trade Areas of the project. The total 2010 retail demand (the Existing Conditions) generated by residents of the Primary Area for applicable retail categories was estimated to be $676 million, while the combined retail demand for residents of both the Primary and Secondary Areas was $1.2 billion.

Table 4.11-1, Gless Ranch Center Total Projected Annual Retail Demand Existing Conditions

Retail Category	Primary Trade Area Annual Demand	Primary and Secondary Trade Area Annual Demand
Food	$84,787,368	$149,090,632
General Merchandise	$119,147,547	$209,662,517
Apparel	$30,500,586	$52,945,721
Eating and Drinking Places	$68,140,792	$120,177,100
Building Materials	$63,733,849	$112,146,234
Automotive	$132,484,149	$231,392,499
Other Retail	$107,782,923	$189,947,698
Home Furnishing and Appliances	$18,630,246	$32,851,609
Service Stations	$50,831,630	$89,622,767
Total	**$676,045,090**	**$1,187,836,777**

Source: The Nielsen Company

Determination of Existing Retail Supply within the Trade Areas

The level of existing retail sales for each retail category within the Trade Areas was also provided by The Nielsen Company. Table 4.11-2 summarizes the projected levels of existing retail sales for the project's Trade Areas. Total sales were estimated at $328.7 million in the Primary Trade Area, and $406.7 million in both the Primary and Secondary Trade Areas.

Table 4.11-2, Gless Ranch Center Total Projected Annual Retail Supply Existing Conditions

Retail Category	Primary Trade Area Annual Supply	Primary and Secondary Trade Area Annual Supply
Food	$64,616,058	$77,893,989
General Merchandise	$90,263,794	$94,451,912
Apparel	$6,018,916	$6,456,974
Eating and Drinking Places	$57,925,183	$71,033,294

Table 4.11-2, Gless Ranch Center Total Projected Annual Retail Supply Existing Conditions

Retail Category	Primary Trade Area Annual Supply	Primary and Secondary Trade Area Annual Supply
Building Materials	$9,238,334	$22,231,391
Automotive	$13,989,630	$14,442,681
Other Retail	$34,413,324	$60,484,934
Home Furnishing and Appliances	$4,344,782	$6,547,580
Service Stations	$47,928,996	$53,172,139
Total	**$328,739,017**	**$406,714,894**

Source: The Nielsen Company

Current Primary Trade Area Surplus/Leakage Analysis

As reflected below in Table 4.11-3, the current annual retail demand of $676 million in the Primary Trade Area exceeds the $328.7 million in sales by $347.3 million each year. This indicates that overall, there is a current leakage of 51.4% of the Primary Trade Area resident expenditures to retail stores outside of the area. The leakage appears to be occurring in all retail categories and is most severe within other retail ($73.4 million), building materials ($54.5 million), general merchandise stores ($28.9 million) and apparel ($24.5 million). To a lesser extent, food ($20.2 million), home furnishing ($14.3 million), and eating and drinking places ($10.2 million) are also categories that fail to fully capture potential spending. This data indicates that current retail businesses within the Primary Trade Area are failing to capture all the possible retail expenditures of their population. Thus, households residing within this area must travel elsewhere in order to meet their current retail needs as every retail category in the Trade Area is underserved.

Table 4.11-3, Gless Ranch Center Primary Trade Area Retail Demand Versus Retail Supply Existing Conditions

Retail Category	Primary Trade Area Annual Demand	Primary Trade Area Annual Supply	Excess/(Leakage)
Food	$84,787,368	$64,646,058	($20,171,310)
General Merchandise	$119,147,547	$90,263,794	($28,883,753)
Apparel	$30,500,586	$6,018,916	($24,481,670)
Eating and Drinking Places	$68,140,792	$57,925,183	($10,215,609)
Building Materials	$63,733,849	$9,238,334	($54,495,515)
Automotive	$132,484,149	$13,989,630	($118,494,519)
Other Retail	$107,782,923	$34,413,324	($73,369,599)
Home Furnishing and	$18,630,246	$4,344,782	($14,285,464)

Table 4.11-3, Gless Ranch Center Primary Trade Area Retail Demand Versus Retail Supply Existing Conditions

Retail Category	Primary Trade Area Annual Demand	Primary Trade Area Annual Supply	Excess/(Leakage)
Appliances			
Service Stations	$50,837,630	$47,928,996	($2,908,634)
Total	**$676,045,090**	**$328,739,017**	**($347,306,073)**

Source: David Taussig & Associates, Inc.
Note: Refer to Exhibit 10 in Appendix A of the Gless Ranch UDA Tech Report (see Appendix K of this DEIR for UDA Tech Report) for details on the derivation of these calculations.

Current Secondary Trade Area Surplus/Leakage Analysis

Combining the Primary and Secondary Trade Areas also generates an overall existing leakage of retail demand, as illustrated in Table 4.11-4, below. The current annual retail demand in the Primary and Secondary Trade Areas is estimated to be approximately $1.2 billion in total retail goods per year. This compares to a current annual retail supply estimate of $406.7 million, which indicates an overall leakage of retail expenditures in the amount of $781.1 million per year within the Primary and Secondary Trade Area. Similar to results for the Primary Trade Area alone, the leakage appears to be occurring in all retail categories and is most severe within other retail ($129.5 million), general merchandise ($115.2 million), building materials ($89.9 million), and food ($71.2 million). To a lesser extent, eating and drinking places ($49.1 million), apparel ($46.5 million), and home furnishings ($26.3 million) are also categories that fail to fully capture potential spending. This data indicates that current retail businesses within the combined Primary and Secondary Trade Areas are also failing to capture all the possible retail expenditures of their population, as was the case in the Primary Trade Area. Thus, households residing within this combined area must travel elsewhere in order to meet their current retail needs as every retail category in the Trade Areas is underserved.

Table 4.11-4, Gless Ranch Center Primary and Secondary Trade Area Retail Demand Versus Retail Supply Existing Conditions

Retail Category	Primary and Secondary Trade Area Annual Demand	Primary and Secondary Trade Area Annual Supply	Excess/(Leakage)
Food	$149,090,632	$77,893,989	($71,196,643)
General Merchandise	$209,662,517	$94,451,912	($115,210,605)
Apparel	$52,945,721	$6,456,974	($46,488,747)
Eating and Drinking Places	$120,177,100	$71,033,294	($49,143,806)
Building Materials	$112,146,234	$22,231,391	($89,914,843)
Automotive	$231,392,499	$14,442,681	($216,949,818)

Table 4.11-4, Gless Ranch Center Primary and Secondary Trade Area Retail Demand Versus Retail Supply Existing Conditions

Retail Category	Primary and Secondary Trade Area Annual Demand	Primary and Secondary Trade Area Annual Supply	Excess/(Leakage)
Other Retail	$189,947,698	$60,484,934	($129,462,764)
Home Furnishing and Appliances	$32,851,609	$6,547,580	($26,304,029)
Service Stations	$89,622,767	$53,172,139	($36,450,628)
TOTAL	**$1,187,836,777**	**$406,714,894**	**($781,121,883)**

Source: David Taussig & Associates, Inc.
Note: Refer to Exhibit 11 in Appendix A of Gless Ranch UDA Tech Report (see Appendix K of this DEIR for UDA Tech Report) for details on the derivation of these assumptions.

4.11.2 Thresholds of Significance

Section 15131(b) of the CEQA Guidelines state that a project's economic impacts on a community are considered significant only if they can be tied to direct physical changes in the market area (i.e., physical deterioration of existing retail centers/facilities).

Accordingly, a project could have a significant impact related to urban decay if the proposed project would:

- Result in diversion of sales from existing retail facilities severe enough to result in business closings and subsequent long-term vacancies;
- Result in business closures significant enough in scale (i.e., in terms of the total square footage affected and/or loss of key "anchor" tenants) to affect the viability of existing shopping centers.

4.11.4 Environmental Analysis

<u>Threshold:</u> Would the project result in diversion of sales from existing retail facilities severe enough to result in business closings and subsequent long-term vacancies?

The most recent full calendar year for which base taxable retail sales data are available (2009), the United States economy was in a very severe recession. Signs of recovery are evident nationally, with most economists agreeing that the recession itself actually ended in early 2009, since which time a slow recovery has been occurring. However, development in the City and County have not picked up significantly since the end of the recession.

The retail market analysis comparing existing retail demand generated by residents of each Trade Area versus existing retail supply within each Trade Area illustrates a current shortfall of $347.3 million (Table 4.11-3) in retail sales in the Primary Trade Area, versus a shortfall of $781.1 million (Table 4.11-4) in retail sales in the combined Primary and Secondary Trade Areas. The project is expected to

generate approximately $139.2 million and $144.5 million annually in retail sales under Scenario #1 and Scenario #2, respectively. Assuming that Existing Conditions prevail when the project is developed, an overall surplus of demand over supply will continue to exist in both the Primary Trade Area and the combined Primary and Secondary Trade Areas.

Under Existing Conditions, both the Primary Trade Area and the combined Primary and Secondary Trade Areas, produce a surplus of demand over supply in every retail category. If the project were developed under Existing Conditions, the following would be expected:

1. Under Scenario #1 for the Primary Trade Area, an analysis of each of the individual retail categories indicates the potential for a surplus of supply only in the home furnishing and appliances retail category. The surplus of approximately $950,546 represents approximately 0.4% of the overall leakage occurring after the project is developed.
2. Under Scenario #2 for the Primary Trade Area, an analysis of each of the individual retail categories indicates the potential for a surplus of retail supply only in the food retail category. This surplus of approximately $1.5 million constitutes approximately 0.6% of the overall leakage occurring once the project is developed.
3. Under both Scenarios within the combined Primary and Secondary Trade Areas, all retail categories show an annual leakage in sales.

In theory, this excess supply could create a potential problem of decay for existing stores in the Trade Areas for these specific retail categories. However, the potential surplus identified under each Scenario is not considered a significant contributor to the potential for urban decay due to the overall leakage of $235.9 million and $231.7 million in the Primary Trade Area for Scenario #1 and Scenario #2, respectively. The overall shortfall in retail supply suggests that there is a substantial need for additional retail square footage. Furthermore, the overall leakage indicates that the retail demand in the Trade Area is strong enough to support additional retail supply, and that any projected excess in an individual retail category is likely to be reallocated to one of the other many retail categories that are characterized by significant leakage.

The data in Table 4.11-3 and Table 4.11-4 indicates that the demand for retail goods in the Trade Areas is much greater than the sales experienced by retail outlets currently located in these areas. An analysis of each of the specific retail categories to be included in the project indicates that in both the Primary and Secondary Trade Areas, all retail categories experience leakage (i.e., retail demand greater than retail supply) of sales to retail stores located outside the Trade Areas.

The project is not expected to compete with existing retailers located beyond the Secondary Trade Area, as any consumer who resides beyond these boundaries would have multiple shopping center options to patronize that are located closer to their residences (or in some cases, their places of work).

Additionally, the projected retail sales of the project represent a small percentage of total retail sales currently occurring beyond the Secondary Trade Area, so they are unlikely to have a major impact on the shopping habits of residents outside of the Primary and Secondary Trade Areas. Demographic data for 2010 (the "Existing Conditions") provided by The Nielsen Company indicates a population of 44,884 residents in the Primary Trade Area, versus 77,444 residents in the combined Primary and Secondary Trade Areas, with median household incomes of $92,894 and $90,184, respectively.

As detailed in the UDA (Appendix K), the development of the project will serve to benefit the market within the Primary Trade Area and expand on the limited retail shopping opportunities currently available. The significant consumer spending that is still not being met, even after the addition of the project, in the Primary Trade Area indicates the project does not have significant potential to contribute to store closures and declining economic conditions that can result in urban decay. **Therefore, implementation of the project will not cause physical deterioration or impacts to the existing community.**

Threshold: Would the project result in business closures significant enough in scale (i.e., in terms of the total square footage affected and/or loss of key "anchor" tenants) to affect the viability of existing shopping centers?

As stated above, the development of the project would not result in business closures. In fact, there will still be unmet retail demand in the project area. Therefore, the proposed project would not result in business closures, and therefore would not affect the viability of existing shopping centers. **Therefore, there will be no physical impacts to existing shopping centers in the project area as a result of project implementation.**

4.11.7 References

David Taussig and Associates, Inc. 2011. Appendix K. *Gless Ranch Center Urban Decay Analysis*. September 9, 2011.

4.12 Utilities and Service Systems

The focus of the following discussion and analysis, based on the initial study, public scoping session, and Notice of Preparation (NOP) public comment period, is related to the project's potential impacts to utilities and service systems including stormwater drainage facilities, wastewater/water demand, and solid waste disposal from implementation of the proposed project.

The following were used in the preparation of this section of the draft environmental impact report (DEIR), and are hereby incorporated by reference:

- City of Riverside General Plan 2025 (2007a).
- City of Riverside's *Wastewater Collection and Treatment Facilities Integrated Master Plan* (2010).
- Western Municipal Water District Will-Serve Letter (see Appendix L).
- Western Municipal Water District *Urban Water Management Plan*, 2005.
- Western Municipal Water District *Urban Water Management Plan,* draft (2010).
- Metropolitan Water District *Regional Urban Water Management Plan*, draft, (2010).

4.12.1 Setting

The discussion related to stormwater, potable water, wastewater, and solid waste below describes the existing environmental conditions at the time the NOP was published and is therefore considered the baseline.

Stormwater

The City of Riverside (City) is located in the Santa Ana River Region, which is within the Riverside County Drainage Area Management Plan (DAMP). The DAMP addresses the requirements of the municipal separate storm sewer system (MS4) permits issued to the Riverside County Co-Permittees by the Santa Ana Regional Water Quality Control Board (RWQCB). These are the third MS4 permits issued by each Regional Board and are referred to as the Third-Term MS4 Permits. The City is a permittee under the Third-Term MS4 Permits. Under these permits, the City is required to enforce and comply with stormwater discharge requirements.

The project site is currently served by an existing 48-inch storm drain off Kinnow Lane and a 36-inch and 30-inch storm drain with an 18-inch stub off Gless Ranch Road.

Potable Water

Potable water service within the project site is provided by Western Municipal Water District (WMWD). An existing WMWD 30-inch water line is located along Van Buren Boulevard and Barton Street, and an existing 8-inch water line is located along Gless Ranch Road and Kinnow Lane.

WMWD is a supplemental water supplier for 13 water purveyors within the WMWD wholesale service area (Western Municipal Water District, 2010, ES-1). Currently, WMWD serves eight water agency customers, which includes the City of Riverside. Additionally, WMWD serves approximately 23,000 domestic and 130 irrigation connections in its retail service area (approximately 85,000 persons). WMWD's general district (wholesale and retail areas combined) consists of a 527 square mile area of western Riverside County and an estimated population of more than 860,000 people (Western Municipal Water District, 2010, ES-1). WMWD currently sells approximately 125,000 acre-feet of water annually (Western Municipal Water District, 2010, ES-1).

Approximately 66% of the water WMWD sells is treated; the balance is untreated or raw water. About 25% of WMWD's water sales are for domestic purposes; the rest are wholesale. Nearly all water sold by WMWD for agricultural purposes is used to irrigate citrus and avocados planted since the 1950s.

WMWD is a member agency of the Metropolitan Water District of Southern California (MWD). MWD is a legislatively created entity with a statutory mandate to provide regional water supply management for the greater Southern California region. In this capacity, MWD holds contractual rights to receive State Water Project (SWP) and Colorado River water supplies. MWD has evaluated the dependability of WMWD's imported supplies and concluded that the combination of imported water and expanded local resource programs will ensure that these supplies can be met in the future (Western Municipal Water District, 2010, ES-7). Further, WMWD's 2010 UWMP Table ES-3 demonstrates that Western anticipates adequate supplies for years 2015 to 2035 under normal conditions (Western Municipal Water District, 2010, ES-10). WMWD's UWMP Table ES-4 demonstrates that Western anticipates adequate supplies for years 2015 to 2035 under single-dry year conditions (Western Municipal Water District, 2010, ES-11). Finally, WMWD's 2010 UWMP Table ES-5 demonstrates that Western anticipates adequate supplies for years 2015 to 2035 under multiple-dry year conditions (Western Municipal Water District 2010, ES-12).

Water Supply

WMWD provides water supplies from three existing water sources: imported water, groundwater, and recycled water (Western Municipal Water District, 2010, ES-2). WMWD obtains a majority of its total supply through imported water sources from MWD (Western Municipal Water District, 2010, ES-2). About one quarter of the water WMWD purchases from MWD comes from the Colorado River Aqueduct and about three-quarters from the State Water Project (SWP) (Western Municipal Water

District, 2010, ES-2). WMWD also purchases water from the Elsinore Valley Municipal Water district and from the City of Riverside (Western Municipal Water District, 2010, ES-2). WMWD's local supplies come from groundwater in the Arlington, San Bernardino Basin Area, and Murrieta basins, as well as from recycled water supply from WMWD's own water recycling facility (Western Municipal Water District, 2010, ES-2). Future supplies will be developed locally, in the Perris North, Arlington, and Chino basins, as well as through expansion of the Western Water Recycling Facility (Western Municipal Water District, 2010, ES-2). Table ES-2 in the Western Municipal Water Supply Urban Water Management Plan shows the existing and planned water supplies (Western Municipal Water District, 2010, ES-7).

Imported Water

Under normal year circumstances, WMWD's retail service area relies primarily on imported water supplies from the SWP (Western Municipal Water District, 2010 (ES-2). Additionally, WMWD receives Colorado River water under a permanent service contract with the Secretary of the Interior (Metropolitan Water District, 2010, 1-19).

Uncertainty arising from possible extended dry conditions, pending environmental and regulatory mandates, pending and potential litigation concerning water supplies, and long-term water supply planning efforts could all affect imported water from the SWP and the Colorado River. Under extreme circumstances, these issues could potentially result in interim supply shortage for WMWD. The following is a discussion of the major issues surrounding these uncertainties.

State Water Project

As noted, WMWD receives potable water from the SWP. There were lower than normal precipitation in the Sierra Mountains in 2008, however, it resulted in record dry conditions in spring of 2008, leading to low runoff projections for the SWP watershed. As a result, the Department of Water Resources (DWR) determined 2008 to be a critically dry year. However, statewide hydrologic conditions have improved in recent years, and as of the end of Water Year 2010 (September 30, 2010), statewide precipitation is 110 percent of average to date, runoff is 90 percent of average to date, and statewide reservoir storage is 105 percent of average to date (California Department of Water Resources, 2010, 1).

Additionally, SWP water supplies are affected by state and federal environmental regulations. Mandated protection of endangered species under the federal and California Endangered Species Acts has affected the SWP's ability to meet its annual supply obligations. An annual environmental water account established under the CALFED Bay-Delta Program has helped to mitigate these impacts, but pending litigation in this area may result in additional uncertainties on overall water supply from the SWP. In response to court decisions related to the Biological Opinions for fish species listed under the ESAs, DWR altered the operations of the SWP (Metropolitan Water District, 2010, ES-4). This resulted in export restrictions and reduced SWP deliveries. In June 2007, Metropolitan's Board approved a Delta

Action Plan that provides a framework for staff to pursue actions with other agencies and stakeholders to build a sustainable Delta and reduce conflicts between water supply conveyance and the environment (Metropolitan Water District, 2010, ES-4). The Delta Action Plan aims to prioritize immediate short-term actions to stabilize the Delta while an ultimate solution is selected, and mid-term steps to maintain the Bay- Delta while the long-term solution is implemented (Metropolitan Water District, 2010, ES-4). In the near-term, the physical and operational actions in the Bay-Delta being developed include measures that protect fish species and reduce supply impacts with the goal of reducing conflicts between water supply conveyance and environmental needs (Metropolitan Water District, 2010, ES-4). State and federal resource agencies and various environmental and water user entities are currently engaged in the development of the Bay Delta Conservation Plan (BDCP), which is aimed at addressing the basic elements that include the Delta ecosystem restoration, water supply conveyance, and flood control protection and storage development (Metropolitan Water District, 2010, ES-4). Further, recently passed state legislation included pathways for establishing governance structures and financing approaches to implement and manage the identified elements (Metropolitan Water District, 2010, ES-4).

Colorado River

MWD possesses a legal right to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior (Western Municipal Water District, 2010, ES-7). Up to 1.7 million acre-feet of water per year may be conveyed through the Colorado River Aqueduct to MWD's member agencies, subject to availability of water for delivery (Western Municipal Water District, 2005, 25). Other California users, as well as users from Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming, also possess water rights to Colorado River water, resulting in supply competition and the need for cooperation among these right holders.

As with the SWP, environmental laws protecting endangered species have the potential to restrict MWD's Colorado River water supplies. Additionally, the MWD Colorado River supply has recently been impacted by an outbreak of quagga mussels, a European invasive species that, if unmanaged, can clog intakes and raw water conveyance systems (Metropolitan Water District, 2007, 1). These issues have the potential to limit water imported from the Colorado River (Metropolitan Water District, 2007, 1). In 2007, Metropolitan Water District developed a quagga mussel control plan for the long-term management of quagga mussels (Metropolitan Water District, 2010, 1-29).

Groundwater

In addition to its routine use of imported water supplies, WMWD currently has the capability to obtain local groundwater supplies via interconnections with the City of Riverside and the City of Corona (Western Municipal Water District, 2010, ES-2). To reduce overall dependence on imported water supplies and the uncertainties associated with these supplies, WMWD has begun to develop new and expand existing local groundwater sources for use under both nonemergency and emergency conditions

(Western Municipal Water District, 2005, 14). WMWD's Water Resources staff have evaluated a number of projects and identified promising water supply projects as potential sources of local groundwater, including the Perris North Groundwater Basin, Arlington Desalter Expansion, and Chino Desalters Expansion (Western Municipal Water District, 2010, ES-11).

Recycled Water

In addition to its water supply operations, WMWD also provides wastewater services to portions of Riverside County. The Western Water Recycling Facility (WWRF) has an operational capacity of 850,000 gallons a day, and produces secondary treated recycled water (Western Municipal Water District, 2010, 4-2). The WWRF is currently being expanded to 3 million gallons per day and will include treatment upgrades that will allow the production of tertiary treated recycled water (Western Municipal Water District, 2010, 4-2).

The WWRF currently provides recycled water for landscape irrigation (Western Municipal Water District, 2010, 4-4). With the addition of tertiary treatment capability, the service area for recycled water will expand to the west, providing water for commercial and institutional irrigation use, thus offsetting demand for imported and other potable water supplies (Western Municipal Water District, 2010, 4-2, 4-3).

Specifically, in relation to the project site, there is an existing non-potable "purple" line serving the project site's orange groves.

Water Conservation

Given the constraints on imported water supplies, water conservation strategies are being implemented at the state, regional, and local levels. At the state level, CalGreen, California's new building code imposes mandatory measures for water efficiency and conservation. To meet the state-mandated goal of a 20 percent reduction in per capita water usage by 2020, WMWD is expanding its water conservation project by developing a Water Use Efficiency Master Plan (WUEMP) (Western Municipal Water District, 2010, 2-23). The plan includes a number of programs to achieve its conservation goals (Western Municipal Water District, 2010, 2-23). Additionally, both a Water Conservation and Supply Shortage Program (WCSSP) and a Drought Allocation Plan (DAP) have been prepared by Western in conjunction with its retail agencies. (Western Municipal Water District, 2010, ES-8) The DAP provides Western's and its wholesale customers with a means of allocating limited imported water supplies from MWD under shortage conditions (Western Municipal Water District, 2010, ES-8). The WCSSP addresses the retail area, and describes six stages of water supply shortages and provides a set of strategies to ensure that water is beneficially used at the customer level (Western Municipal Water District, 2010, ES-8).

Risk of Statewide Drought

After three consecutive years of drought from 2007-2009, California's Governor proclaimed a state of drought emergency on February 27, 2009, and ordered immediate actions to manage the crisis. The Governor directed state agencies to immediately implement a water use reduction plan and take immediate water conservation actions. As a result, in November 2009 the state adopted a mandate to reduce per capita water use by 20 percent by 2020. Hydrologic conditions have improved significantly since 2009, and California's Governor proclaimed an end to the drought in 2011 (Office of Governor Jerry Brown, 2011).

WMWD has developed a Drought Allocation Process (DAP) to provide customers with an equitable means for allocating limited imported water supplies from MWD in the event of a prevailing drought condition (Western Municipal Water District, 2010, 6-1).

Global Climate Change

Various California agencies, including the Department of Water Resources (DWR), have undertaken efforts to assess the potential effects of anthropogenic global climate change on California's water supply. Climate change impacts to the SWP system could include (a) shorter, more intense wet seasons that reduce the period of time during which freshwater can be collected by the SWP and other state water systems; (b) reduced snowfall and smaller snowpacks, which would reduce streamflows fed by snowmelt and consequently reduce the state's potential freshwater collection period; and (c) rising sea levels may cause additional salt water intrusions into the Delta (California Department of Water Resources, 2009, 30-32).

Wastewater

The City of Riverside Public Works Department provides for the collection, treatment, and disposal of most of the wastewater generated within the City, through its Riverside Regional Water Quality Control Plant (WQCP), and complies with state and federal requirements governing the treatment and discharge of wastewater. Primary, secondary, and tertiary treatment of wastewater from the Jurupa, Rubidoux, and Edgemont Community Services Districts is also provided by the WQCP.

The City's wastewater collection system includes over 776 miles of gravity sewers, ranging in size from 6 to 54 inches in diameter. The system also includes 18 wastewater pump stations, designed for flows of 100 to 400 gallons per minute (gpm). There are two large lift stations with design capacities in excess of 2,000 gpm. The Public Works Department installs and maintains the wastewater system. The plant currently discharges tertiary-treated effluent to the Santa Ana River and delivers recycled water to irrigation customers.

An existing 8-inch sewer line is located at the westerly end of the project site off Kinnow Lane.

Solid Waste

The proposed project is serviced by Burrtec Waste Industries Inc. (Burrtec) for solid waste collection. All non-hazardous solid waste collected by Burrtec is taken to the Robert A. Nelson Transfer Station (also known as Agua Mansa Material Recovery Facilities), which is owned by the County of Riverside and operated under a 20-year franchise by Burrtec. Burrtec then transfers the waste to Badlands Landfill and other county landfills in the area such as El Sobrante landfill (City of Riverside 2007b).

Related Regulations

Federal

Clean Water Act

In 1972, the Federal Water Pollution Control Act (Clean Water Act) was amended to prohibit the discharge of pollutants to waters of the United States unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The Clean Water Act (CWA) focused on tracking point sources, primarily from wastewater treatment facilities and industrial waste dischargers, and required implementation of control measures to minimize pollutant discharges. The CWA was amended again in 1987, adding Section 402(p), to provide a framework for regulating municipal and industrial stormwater discharges. In November 1990, the U.S. Environmental Protection Agency (EPA) published final regulations that establish application requirements for specific categories of industries, including construction projects that encompass greater than or equal to 5 acres of land. The Phase II Rule became final in December 1999, expanding regulated construction sites to those greater than or equal to 1 acre. The regulations require that stormwater and non-stormwater runoff associated with construction activity, which discharges either directly to surface waters or indirectly through MS4s, must be regulated by an NPDES permit.

State

California Water and Government Code

The California Water Code (CWC) was established to regulate the use and conservation of water for the public benefit. Under the CWC, urban water suppliers are obligated to prepare urban water management plans (UWMPs), which include a description of all water supply projects and programs that might be undertaken to meet total projected water use over the next 20 years. MWD's Regional Urban Water Management Plan (RUWMP) assesses water supply and demand for all MWD member agencies, whereas WMWD's Urban Water Management Plan (UWMP) is concerned only with WMWD's service area. Both documents meet the requirements of the California Water Code and the abovementioned legislation.

Senate Bills 610 (which amended CWC 10910 et. seq.) and 221 (which added Government Code section 66473.7), adopted in 2003, were passed to ensure sufficient water supplies to meet demand associated with proposed development in California. Section 10910 et seq. of the CWC requires that a water supply assessment (WSA) be prepared if the proposed project has certain use and size characteristics (if, for example, the residential development is greater than 500 dwelling units). The WSA must evaluate the anticipated water demands of the project and determine if the local water supplier has adequate supplies to serve the project and meet existing and projected obligations. Section 66473.7 requires a water supply verification when a project's tentative map, parcel map or development agreement is submitted for a land use agency for approval. This determination requires an analysis of whether the total water supply available during normal, single-dry, and multiple-dry years within a 20-year projected will meet the projected demand associated with the proposed project, in addition to existing and planned future uses. For the purposes of SB 610, a "project" is a proposed development with water demand of 500-dwelling units or more. For industrial development, a "project" is a proposed development larger than 650,000 square feet or 40 acres. For commercial development, a "project" is a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space. The proposed project anticipates 600-650 employees at full buildout during peak hours working shifts. The requirements of SB 221 are applicable to residential developments of more than 500 dwelling units. As the proposed project does not fall within any of these definitions, neither a WSA nor verification is required.

Sections 13550-13556 of the Water Code states that local, regional, or State agencies shall not use water from any source of quality for nonpotable uses if suitable recycled water is available as provided in Section 13550 of the Water Code.

Protection of Underground Infrastructure

The California Government Code Section 4216-4216.9, Protection of Underground Infrastructure, requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least 2 days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for Southern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities.

California State Water Resource Control Board

In the State of California, the State Water Resources Control Board (SWRCB), and nine RWQCBs are responsible for implementing the CWA and the state Porter-Cologne Water Quality Control Act.

The Porter-Cologne Water Quality Control Act, Section 13000, directs each RWQCB to develop a Water Quality Control Plan (Basin Plan) for all areas within its region. The Basin Plan is the basis for each RWQCB's regulatory programs. The proposed project is located within the purview of the Santa Ana RWQCB (Region 8), and must comply with applicable elements of the region's Basin Plan, as well as the Porter-Cologne Water Quality Control Act.

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989, also known as Assembly Bill (AB) 939, requires that each city or county prepare a new Integrated Waste Management Plan. The Act further required each city to prepare a Source Reduction and Recycling Element (SRRE) by July 1, 1991. Each source reduction element includes a plan for achieving a solid waste goal of 25% by January 1, 1995, and 50% by January 1, 2000. A number of changes to the municipal solid waste diversion requirements under the Integrated Waste Management Act were adopted, including a revision to the statutory requirement for 50% diversion of solid waste. Under these provisions, local governments shall continue to divert 50% of all solid waste on and after January 1, 2000. In 2009, the City's waste diversion rate was 68%, which is in compliance with AB 939 (CalRecycle, 2009).

California Water Conservation in Landscaping Act

California recently updated the Water Conservation in Landscaping Act (Government Code Sections 65591 et seq.) to ensure that adequate supplies are available for future uses and to promote the conservation and efficient use of water. The Act requires that the California Department of Water Resources update the state's model landscaping ordinance and that local agencies adopt a water-efficient landscape ordinance or similar measures by 2011. If such an ordinance has not been adopted within the applicable time frame, the state model ordinance shall apply within the affected jurisdiction.

Local

Landscape Water Use Efficiency Program (Ordinance 375)

Ordinance 375 of the WMWD establishes a Landscape Water Use Efficiency Program providing compliance measures in support of State Landscape Model Ordinance requirements. The program includes the following:

- Establish provisions for water management practices and water waste prevention;
- Establish a structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated projects;
- To reduce the water demands from landscapes without a decline in landscape quality or quantity;
- To retain flexibility and encourage creativity through appropriate design;

- To assure the attainment of water-efficient landscape goals by requiring that landscapes not exceed a maximum water demand of seventy percent (70%) of its reference evapotranspiration or any lower percentage as may be required by WMWD policy or state legislation, whichever is stricter;
- To eliminate water waste from overspray and/or runoff;
- To achieve water conservation by raising the public awareness of the need to conserve water through education and motivation to embrace an effective water demand management program; and
- To implement the requirements to meet the state of California Water Conservation in Landscaping Act 2006 and the California Code of Regulations Title 23, Division 2, Chapter 2.7.

The applicant shall consult with WMWD during the development review process to ensure that future recycled water facilities meet the projected demand and that the landscape plans comply with the applicable standards, approvals, and implementation requirements of WMWD.

Water Conservation and Supply Shortage Program (Ordinance 374)

WMWD Water Conservation and Supply Shortage Program is designed to eliminate outdoor water waste at all stages of water supply for a retail uses. The purpose of the program is to ensure the highest beneficial use of WMWD water supplies and to provide sufficient water supplies to meet the basic needs of human consumption, sanitation, and fire protection within WMWD direct retail service area. The project will be required to comply with WMWD's water conservation.

Subdivision Code, Title 18

The Subdivision Code (Title 18, Section 18.48.020) requires drainage fees to be paid to the City for new construction. Fees are transferred into a drainage facilities fund that is maintained by Riverside County Flood Control and Water Conservation District. Section 18.48.020 also complies with the California Government Code (Section 66483), which provides for the payment of fees for construction of drainage facilities. Fees are required to be paid as part of the conditions of approval/waiver for filing of a final map or parcel map. Pursuant to the City's Subdivision Code (Title 18, Section 18.48.020), the project applicant would be required to pay all sewer connection fees and facilities fees. The project will also be required to comply with all rules, regulations, and other requirements of the City for use of stormwater facilities.

City of Riverside General Plan 2025

The Public Facilities and Infrastructure Element and Open Space and Conservation Element of the City's 2025 General Plan (2007a) includes the following selected policies that will be applied to the proposed project:

Stormwater Control

Policy PF-3.4: Continue to investigate and carry out cost-effective methods for reducing stormwater flows into the wastewater system and the Santa Ana River.

Policy PF-4.2: Continue to cooperate in regional programs to implement the National Pollutant Discharge Elimination System Program.

Policy PF-4.3: Continue to routinely monitor and evaluate the effectiveness of the storm drain system and make adjustments as needed.

Wastewater

Policy PF-3.1: Coordinate the demands of new development with the capacity of the wastewater system.

Policy PF-3.2: Continue to require that new development fund fair-share costs associated with the provision of wastewater service.

Policy PF-3.3: Pursue improvements and upgrades to the City's wastewater collection facilities consistent with current master plans and the City's Capital Improvement Program.

Policy PF-3.4: Continue to investigate and carry out cost-effective methods for reducing stormwater flows into the wastewater system and the Santa Ana River.

Policy PF-5.4: Implement more severe fines for dumping bio-solids into the City's sewer and storm drain system.

Water Resources

Policy OS-10.1: Support the development and promotion of water conservation programs.

Policy OS-10.5: Establish standards for the use of reclaimed water for landscaping.

Policy PF-1.2: Support the efforts of the Riverside Public Utilities Department, Eastern Municipal Water District, and Western Municipal Water District to work together for coordination of water services.

Policy PF-1.4: Ensure the provision of water services consistent with the growth planned for the General Plan area, including the Sphere of Influence, working with other providers.

Policy PF-1.5: Implement water conservation programs aimed at reducing demands from new and existing development.

Policy PF-2.1: Expand the use of reclaimed water for irrigation and other applications.

Policy PF-4.2: Continue to cooperate in regional programs to implement the National Pollutant Discharge Elimination System Program.

Solid Waste

Policy PF-5.1: Develop innovative methods and strategies to reduce the amount of waste materials entering landfills. The City should aim to achieve 100% recycling citywide for both residential and non-residential development.

Policy PF-5.2: Gradually expand recycling and waste diversion programs to all City addresses.

Policy PF 5.4: Implement more severe fines for dumping bio-solids into the City's sewer and storm drain system.

4.12.2 Thresholds of Significance

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts. Based on the initial study prepared for the project and Appendix G, a development project could have a significant impact on utilities and service systems if the proposed project would:

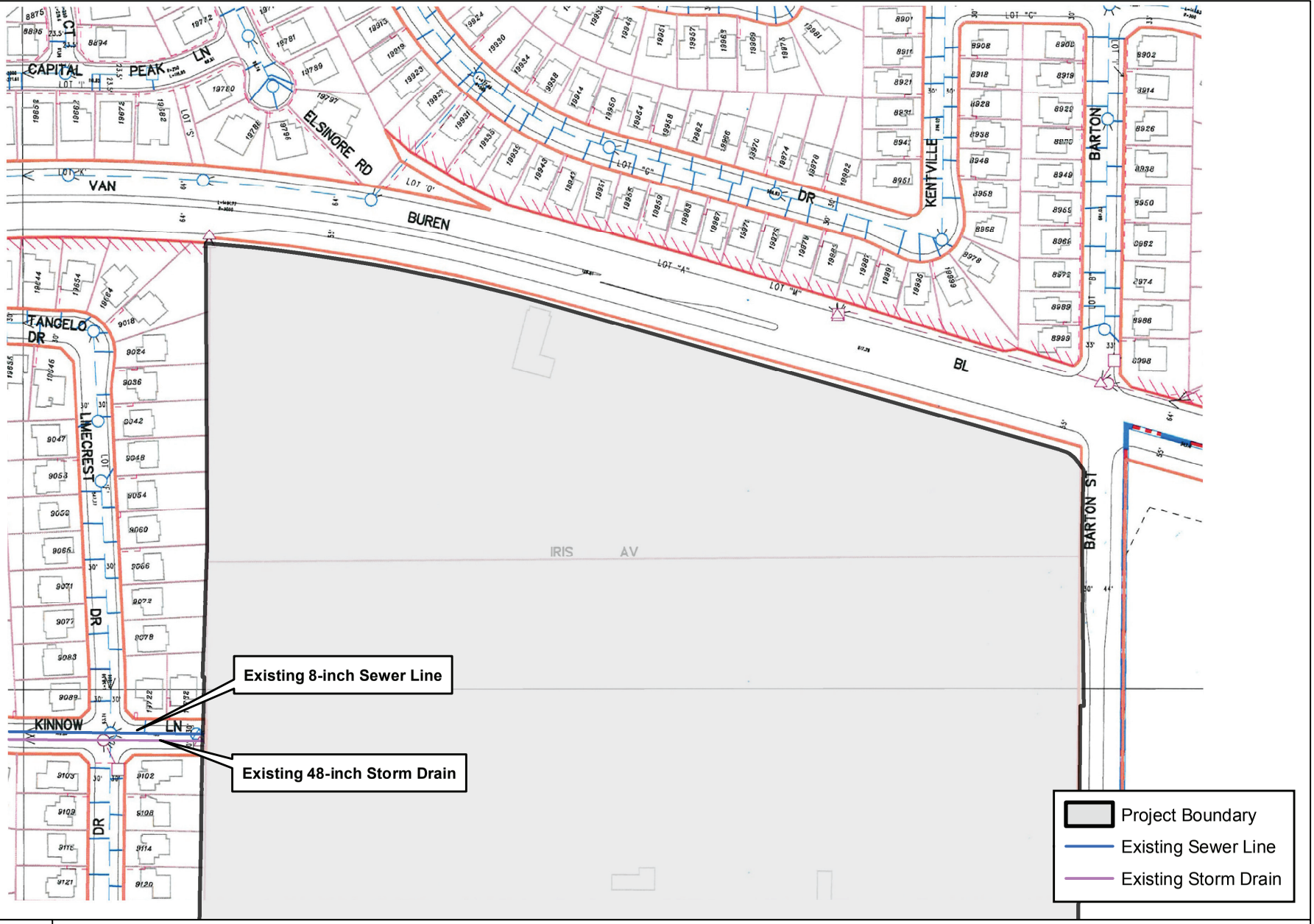
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or need new or expanded entitlements.
- 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.
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Comply with federal, state, and local statutes and regulations related to solid waste.

4.12.3 Project Elements That Can Reduce Impacts

The proposed project will connect to the following existing facility systems (see Figure 4.12-1):

Stormwater

- 48-inch storm drain off Kinnow Lane
- 36-inch and 30-inch storm drain with an 18-inch stub off Gless Ranch Road.



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2011

SOURCE: City of Riverside CADME

FIGURE 4.12-1

Existing Facility System

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Potable Water

- 30-inch water line off Barton Street
- 8-inch water line off Gless Ranch Road and Kinnow Lane.

Wastewater

- 8-inch sewer line off Kinnow Lane.

Water Conservation Project Design Features

The proposed project will use recycled water for water efficient landscaping. Landscaping features that will assist in water conservation include:

- Extensive use of drought tolerant and low water use plant materials;
- Shade trees for reduced heat-island effect;
- Mulch in all planter areas;
- Drip irrigation at all planter areas;
- Precision spray and rotor nozzles at limited parkway turf;
- Smart irrigation controller; and
- Master valve and flow sensor.

The Target store will incorporate water-saving technologies such as low-flow toilets that meet Federal standards and ultra-low-flow hand-wash faucets that use 80% less water and energy.

4.12.4 Environmental Impacts before Mitigation

<u>Threshold:</u> Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Existing stormwater facilities serving the site are located off Kinnow Lane and Gless Ranch Road. The proposed project will connect to the existing 48-inch storm drain and to the existing 36-inch and 30-inch storm drain with an 18-inch stub along Gless Ranch Road (see Figure 4.12-1). The proposed project includes infrastructure that would collect surface runoff from rainfall events on site via grated inlets and curb-opening catch basins and then direct the runoff to on-site treatment facilities. Runoff would then be

discharged into the existing City storm drain facilities at the western edge of the project. The hydrology report prepared for the proposed project shows that the increase in permeable surfaces on the site would not result in an increase of runoff because of the planned infrastructure. As discussed in Section 4.8, Hydrology and Water Quality, the proposed project would not result in an increased flow rate compared to existing conditions. Consequently, development of the proposed project would not exceed the capacity of existing or planned stormwater drainage systems. The existing storm drain system currently serving the project site would not need to be upgraded to accommodate the proposed project. However, as part of the proposed project, the 18-inch stub off Gless Ranch Road would be upgraded. The proposed project shall incorporate pollution prevention measures as part of the final project design such as Stormwater Pollution Prevention Plan (SWPPP) and implement Best Management Practices (BMPs) to meet or exceed minimum treatment levels. Since the project would be required to install new stormwater connections into the existing stormwater system, and since the existing system has been designed to accommodate the additional stormwater from the project site, and the project will include SWPPP and implement BMPs, **impacts are less than significant and no mitigation measures are required.**

<u>Threshold:</u> Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Water supply for the project site is provided by WMWD. MWD has evaluated the dependability of WMWD's imported supplies and concluded that the combination of imported water and expanded local resource programs will ensure that these supplies can be met in the future (Western Municipal Water District, 2010, ES-7). According to the WMWD's 2005 Urban Water Management Plan (UWMP), approximately 156,722 acre-feet/year would be available in 2015, 203,545 acre-feet/year would be available in 2020, 222,803 acre-feet/year would be available in 2025 and to 241,649 acre-feet/year by 2035 (Western Municipal Water District, 2005). The Draft 2010 UWMP which has not yet been adopted, estimates that the WMWD would have supplies that approximate 186,983 acre-feet/year would be available in 2015, 211,357 acre-feet/year would be available in 2020, 221,921 acre-feet/year would be available in 2025 and to 234,211 acre-feet/year by 2035 (Western Municipal Water District, 2010 ES-2) which represents an increase in available supplies compared to the 2005 projections. The applicant has obtained a will-serve letter from the WMWD, confirming their intent to serve the project with potable water and indicating that they have adequate supplies. WMWD's total anticipated water demand in 2035 (approximately 156,231 acre-feet) is below the 248,065 acre-feet that the Urban Water Management Plan anticipates will **be available that year (Western Municipal Water District, 2010 ES-2 and ES-7).** Table 4.12-A breaks down the estimated water demand anticipated for the project by each commercial use.

Table 4.12-A
Estimated Gless Ranch Water Usage

Tenant/Store	Acre-Feet Per Year (approximate)
Target	2.80
Home Improvement Center/Garden Center	3.92
Restaurant	5.60
Pad 4	2.24
Shop Building 1 & 2	12.33
Pad 6 – Fast food Restaurant	2.80
Drug Store	2.24
Pad 2 & 5	11.21
Fast Food Drive-Thru Restaurant	2.80
Financial/Bank	2.24
Pad 3 – Dental Building	3.92
Major 3 – Retail/Grocery	3.36
Landscape/Irrigation – Non-Potable	14.32
Existing Fruit Stand	0.56
Estimated Project Water Demand	**70.34**

Source: Harvey, pers. comm. 2010.

As shown on Table 4.12-A, the proposed project would consume approximately 70.34 acre-feet per year, which is within the available supply from WMWD as discussed in their will-serve letter. The water usage from the orange grove operation in July 2010 was reported to be 194.49 acre-feet per year and the water usage from the shop and fruit stand in July 2010 was reported to be 1.76 acre-feet per year, for a total water usage of 196.25 acre-feet per year (email comm. Jay Harvey, July 19, 2011). Water is currently being used on the site. Therefore, implementation of the proposed project would therefore reduce water demand at the project site by approximately 125.91 acre-feet per year (196.25 - 70.34 acre-feet per year). According to the 2005 WMWD Urban Water Management Plan, total existing and planned supplies for 2010 in the service area amount to approximately 128,598 acre-feet per year (Western Municipal Water District, 2005). The project would be operational in 2013, and the estimated available water supplies for 2015 from WMWD would be approximately 156,722 acre-feet/year (Western Municipal Water District, 2005). Thus, the proposed water use for the proposed project is approximately .0449% (70.34/156,722 of the total project water available in WMWD in 2015 when the project is operational; the project water usage is a fraction *of a percent of* the total supply available. Further, the project would use .0345% of the 203,545 acre-feet/year available in 2020; .0316% of the 222,803 acre-feet/year available in 2025; and .0291% of the 241,649 acre-feet/year available by 2035.

The draft 2010 WMWD Urban Water Management Plan presents an even more favorable picture; according to this document, the total existing supplies for the service area increase to 151,778 acre-feet/year in 2010, and 186,983 acre-feet/year in 2015 (Western Municipal Water District, 2010, ES-2). According to these updated numbers, the proposed increase in water use at the project site would be

approximately .0376 % of the total project water available in 2015 when the project is operational. Further, the project would use .0333% of the 211,357 acre-feet/year available in 2020; .0317% of the 221,921 acre-feet/year available in 2025; and .0300% of the 234,211 acre-feet/year available in 2035. Implementation of the proposed project would decrease water usage at the project site, thus, water use at the site would not significantly contribute to the overall projected increase in water use in WMWD's service area.

Currently, a 30-inch potable water line along Barton Street and an 8-inch potable water line along Gless Ranch Road and Kinnow Lane serve the project site (see Figure 4.12-1). The proposed project would connect to these lines, and would also be required to upsize the water line to a 12-inch line and realign its current path. Specific requirements for the proposed project from WMWD will be conditioned during the entitlement process. There is also an existing non-potable "purple" line serving the project site. The non-potable water line will be retained and utilized to irrigate the landscaping for Gless Ranch proposed development.

In summary, since WMWD has planned for a 40-acre commercial development on the site, will condition the project to connect to existing lines and upsize the water line, and has indicated that it has adequate water supplies to support the proposed project, impacts are considered **less than significant and no mitigation measures are required**.

<u>Threshold:</u> Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Wastewater from the site would be treated at the City's Wastewater Treatment Plant located at the Regional Water Quality Control Plant, 5950 Acorn Street, in the City of Riverside. Existing sanitary sewer service is provided to the site from Kinnow Lane. The project would connect to the existing 8-inch sewer line located at the westerly end of the project site off Kinnow Lane (see Figure 4.12-1). It is unlikely that the project will connect to the sewer line off Van Buren Boulevard. Wastewater from the project site will be collected through the sewer pipeline off Kinnow Lane that will flow into the RWQCP for treatment. Based on the City's General Plan 2025 and The Integrated Master Plan for Wastewater Collection and Treatment Facilities, the City's wastewater treatment plant is proposing to upgrade the capacity from a current capacity of 40mgd to approximately 52.2 mgd by year 2025 (City of Riverside, 2007a and City of Riverside Integrated Wastewater Master Plan, 2010). Since the project is consistent with the land use assumptions in the City's General Plan, the project site's additional wastewater generation has been considered and planned for. Adequate wastewater services are therefore available for the project, and no new facilities are needed to serve the project. Based on this, **impacts are considered less than significant and no mitigation measures are required.**

<u>Threshold:</u> Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

The project site is serviced by Burrtec for solid waste pickup and removal. On-site waste collected from Burrtec would most likely be taken to the Robert A. Nelson Transfer Station (City of Riverside 2007a), which is then transferred by Burrtec to Badlands Landfill and other County landfills in the area such as El Sobrante landfill. Implementation of the proposed project will generate an increased demand for solid waste collection and disposal capacity. The amount of solid waste generated during operation of the proposed project is expected to be within the permitted capacity of nearby landfills. Table 4.12-B provides information on the existing landfills.

Table 4.12-B, Existing Landfills

Landfill	Current Remaining Capacity (tons)	Maximum Permitted Capacity (tons)	Estimated Close Date	Maximum Permitted Daily Load (tons/day)	Average Daily Load (tons/day) CY2010	Annual Usage (tons) CY2010
Badlands Landfill	9.53 million as of March 2010	17.620 million	2024	4,000	1,667	516,676
El Sobrante Landfill	39.2 million (in-county)	52.3 million (in-county)	2031	10,000	2,223	691,338 (in-county)
Lamb Canyon Landfill	9.7 million as of January 2009	15.646 million	2021	5,000	1,703	529,744
Total	**58.43 million**	**85.566 million**		**19,000**	**5,593**	**1,737,758**

Source: County of Riverside Waste Management Department Landfill Information; email dated April 14, 2011

Since the project site is consistent with the land uses assumed in the City's General Plan, and since County Waste Management who oversees the landfill has taken the land use on the site into its planning, potential **impacts associated with solid waste capacity are considered less than significant and no mitigation measures are required.**

<u>Threshold:</u> Would the project comply with federal, state, and local statutes and regulations related to solid waste?

Anticipated uses on the project site are consistent with the City's General Plan, and any tenant or use on the site will be required to comply with any federal, state, or local statutes or regulations related to solid waste generation and disposal. The proposed project will be expected to participate in the City's efforts to comply with the California Integrated Waste Management Act (AB 939) under the Public Resource Code and ensure that at least 50% of the waste stream is diverted away from the Badlands landfill. Since the proposed project will comply with federal, state, and local statutes and regulations

related to solid waste, impacts are considered **less than significant and no mitigation measures are required.**

4.12.5 Mitigation Measures

Because impacts to utilities and service systems are found to be less than significant, no mitigation measures are necessary.

4.12.6 Environmental Impacts after Mitigation Is Incorporated

Since there would not be significant impacts needing mitigation, residual impacts would be less than significant.

4.12.7 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

California Department of Water Resources. 2009. *State Water Project Delivery Reliability Report 2009*. Accessed June 23, 2011: http://baydeltaoffice.water.ca.gov/swpreliability/Reliability2010final101210.pdf.

California Department of Water Resources. 2010. *Notice to State Water Project Contractors 10-11*, June 22, 2010. Accessed June 24, 2011: http://www.water.ca.gov/swpao/docs/notices/10-11.pdf.

CalRecycle. 2002. "Riverside Cities Exceed 50 Percent Waste Diversion." March 5, 2002. Accessed April 6, 2011. http://www.calrecycle.ca.gov/Archive/IWMBPR/2002/march/014.htm.

CalRecycle. 2009. Annual Report Summary: Riverside (2009).

CalRecycle. 2011. "Solid Waste Information System (SWIS)". Facility/Cite Listing. Accessed May 10, 2011. http://www.calrecycle.ca.gov/SWFacilities/Directory/SearchList/List?COUNTY=Riverside.

City of Riverside. 2007a. *City of Riverside General Plan 2025*. Adopted November 2007. Riverside, CA: City of Riverside Community Development Department. Accessed January 5, 2011. http://www.riversideca.gov/planning/gp2025program/general-plan.asp.

City of Riverside. 2007b. *City of Riverside General Plan 2025 PFEIR*. Accessed January 5, 2011: http://www.riversideca.gov/planning/2008-0909/FPEIR/Volume_2/5-16_Utilities_Service_Systems.pdf.

City of Riverside. 2010. *Wastewater Collection and Treatment Facilities Integrated Master Plan*. City of Riverside Public Works Department. Accessed January 5, 2011: http://www.riversideca.gov/pworks/pdf/masterplan-wastewater/FEIR_Riverside_IMP_101012.pdf.

Harvey, Jay. 2010. Jay Harvey obtained estimates from WMWD prior to issuance of the Will-Serve Letter. Email provided by Jay Harvey, dated December 9, 2010.

Harvey, Jay. 2011. Jay Harvey provided water usage for the site for July 2010. Email provided by Jay Harvey, dated July 19, 2011.

Metropolitan Water District. 2007. Press Release: quagga Mussel Control Program Launched by Metropolitan Water Board. Accessed June 24, 2011: http://www.mwdh2o.com/mwdh2o/pages/news/press_releases/2007-02/quagga_control.htm

Metropolitan Water District. 2010. *Regional Urban Water Management Plan*, draft. Accessed June 21, 2011: http://www.mwdh2o.com/mwdh2o/pages/yourwater/RUWMP/RUWMP_2010.pdf.

Office of Governor Jerry Brown. 2011. Press Release: Governor Brown Ends State's Drought Status, Urges Californians to Continue to Conserve. Accessed June 24, 2011: http://gov.ca.gov/news.php?id=16959.

Western Municipal Water District. 2005. *Urban Water Management Plan.* Accessed on June 29, 2011: http://www.wmwd.com/pdfs/UrbanWaterMgtPlan.pdf.

Western Municipal Water District. 2008. *Water Use Efficiency Master Plan.* Accessed June 21, 2011: http://www.wmwd.com/pdfs/WaterUseEfficiencyMasterPlan_Volume1_2_lowres.pdf.

Western Municipal Water District. 2010. *Urban Water Management Plan*, draft. Accessed June 21, 2011: http://www.wmwd.com/pdfs/UWMP2011_Update_WMWD_Draft.pdf.

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4.13 Energy Conservation

The following discussion and analysis is based on the CEQA Guidelines Section 15126.4 and Appendix F of the CEQA Guidelines, which require that EIRs include a discussion of the potential energy impacts of projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The section is also related to the project's potential impacts to energy consumption including electricity, natural gas, and gasoline consumption from implementation of the proposed project.

The following references were used in the preparation of this section of the draft environmental impact report (DEIR):

- *City of Riverside General Plan 2025* (2007)
- *2009 Integrated Energy Policy Report* (2009).

4.13.1 Setting

Electricity

In 2008, California used over 285,574 gigawatt hours of electricity (this is the most recent data available, found in the 2009 IEPR, California Energy Commission 2009). Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building.

In 2008, California generated approximately 68% of its electricity, with the balance imported from other states, Canada, and Mexico. Supply infrastructure is connected to the overall Western Interconnection covering most of western North America, from British Columbia and Alberta to the north, Baja Mexico to the south, and Colorado to the east. California's electricity suppliers attempt to continually match supply with demand, with a mix of generating resources that include large hydroelectric (11%), natural gas (45.7%), nuclear (14.4%), coal (18.2%), and renewables (10.6%) (California Energy Commission 2009).

Because of the state's energy efficiency standards and efficiency and conservation programs, California's per capital energy use has remained stable for more than 30 years while the national average has steadily increased. The California Energy Commission's 2009 Integrated Energy Policy Report estimates that electricity consumption will grow by 1.2 percent per year from 2010–2018, with peak demand growing an average of 1.3 percent annually over the same period (California Energy Commission 2009).

Natural Gas

In 2009, California used approximately 2.3 trillion cubic feet of natural gas (this is the most recent data made available by the US Department of Energy, US Energy Information Administration, US Department

of Energy 2011). Eighty-seven percent of natural gas supplies are imported via pipelines from the Southwest, the Rocky Mountains, and Canada.

California is the second largest natural gas consumer in the United States, representing more than 10 percent of national natural gas consumption. In 2008, residential and commercial uses accounted for 29 percent of the state's natural gas demand. Large consumers such as electricity generators and the industrial sector accounted for about 71 percent of demand. California remains heavily dependent on natural gas to generate electricity, which accounted for more than 40 percent of natural gas demand in 2008 (California Energy Commission 2009).

The California Energy Commission's 2009 Integrated Energy Policy Report states that since 1970, the number of households in California has almost doubled, but because of California's building and appliance efficiency standards, the average per household natural gas consumption rate has dropped more than 36 percent California Energy Commission 2009).

The California Energy Commission's 2009 Integrated Energy Policy Report includes a forecast of natural gas demand by end users (excluding electricity generation) which shows that by 2018, consumption is expected to be about 8 percent lower than in the prior forecast. However, the report projects that as the economy recovers, annual growth in natural gas consumption would exceed California Energy Demand 2007 forecast growth for 2010–2018 (California Energy Commission 2009).

Petroleum

In 2009, California used approximately 657.2 million barrels of petroleum (this is the most recent data made available by the US Department of Energy, US Energy Information Administration, U.S. Department of Energy 2011). Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel. Californians presently consume roughly 41.2 million gallons of gasoline and diesel each day (U.S. Department of Energy 2011). Although the economic recession has slowed the demand for gasoline and diesel fuels in since 2007, demographics indicate that population and travel demand in the state will continue to increase (California Energy Commission 2009).

According to the California Energy Commission's 2009 Integrated Energy Policy Report, crude oil production in the state has declined at an average rate of 3.2 percent per year since 1986. Although crude oil prices continue to rise, and drilling activity increases in the state, the state's refinery capacity is expanding at a slower rate than other parts of the world. California's refinery capacity growth is expected to increase at an average rate of between zero and 0.45 percent per year through 2030. The California Energy Commission's 2009 Integrated Energy Policy Report projects that imports of foreign crude oil will increase as in-state and Alaskan supplies diminish.

Related Regulations

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act which established the first fuel economy standards for on-road motor vehicles in the U.S. Pursuant to the Act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2010, fuel economy standards were set at 27.5 miles per gallon for new passenger cars and 23.5 miles per gallon for new light trucks. Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the U.S.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. In addition to setting increased Corporate Average Fuel Economy (CAFE) standards for motor vehicles, the EISA includes other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (Section 202);
- Appliance and Lighting Efficiency Standards (Sections 301–325);
- Building Energy Efficiency (Sections 411–441).

This federal legislation requires ever-increasing levels of renewable fuels – a Renewable Fuel Standard (RFS) – to replace petroleum. EPA is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The Renewable Fuel Standard (RFS) program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act (EPAct) of 2005, and established the first renewable fuel volume mandate in the United States. As required under EPAct, the original RFS program (RFS1) required 7.5 billion gallons of renewable- fuel to be blended into gasoline by 2012. Under the Energy Independence and Security Act (EISA) of 2007, the RFS program was expanded in several key ways which lay the foundation for achieving significant reductions of greenhouse gas emissions from the use of renewable fuels, for reducing imported petroleum, and encouraging the development and expansion of our nation's renewable fuels sector. The updated program is referred to as RFS2 and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline;
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;

- EISA established new categories of renewable fuel, and set separate volume requirements for each one.
- EISA required EPA to apply lifecycle greenhouse gas performance threshold standards to ensure that each category of renewable fuel emits fewer greenhouse gases than the petroleum fuel it replaces.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs".

State

Title 24 of the California Code of Regulations

Energy consumption by new buildings in California is regulated by the State Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations. The efficiency standards apply to new construction of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in Title 24 guidelines.

Senate Bill 1368

On September 29, 2006, Governor Arnold Schwarzenegger signed into law Senate Bill 1368 (Perata, Chapter 598, Statutes of 2006). The law limits long-term investments in baseload generation by the state's utilities to power plants that meet an emissions performance standard (EPS) jointly established by the California Energy Commission and the California Public Utilities Commission.

The Energy Commission has designed regulations that:

- Establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 lbs CO_2 per megawatt-hour (MWh). This will encourage the development of power plants that meet California's growing energy needs while minimizing their emissions of greenhouse gases;
- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the Energy Commission website. This will facilitate public awareness of utility efforts to meet customer needs for energy over the long-term while meeting the State's standards for environmental impact, and;
- Establish a public process for determining the compliance of proposed investments with the EPS. (Perata, Chapter 598, Statutes of 2006)

Assembly Bill 1493

Adopted in 2002 by the state legislature, AB1493 required that the California Air Resources Board (ARB) develop and adopt, no later than January 1, 2005, regulations to achieve the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles.

The first California request to implement GHG standards for passenger vehicles, known as a waiver request, was made in December 2005 and was denied by the U.S. EPA in March 2008. That decision was based on a finding that California's request to reduce GHG emissions from passenger vehicles did not meet the Clean Air Act requirement of showing that the waiver was needed to meet "compelling and extraordinary conditions."

The U.S. EPA granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks and sport utility vehicles on June 30, 2009. On September 24, 2009, the California Air Resources Board (ARB) adopted amendments to the "Pavley" regulations that reduce greenhouse gas (GHG) emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. ARB's September 2009 amendments will allow for California's enforcement of the Pavley rule while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to harmonize its rules with the federal rules for passenger vehicles.

It is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, all while improving fuel efficiency and reducing motorists' costs.

ARB has adopted a new approach to passenger vehicles—cars and light trucks—by combining the control of smog-causing pollutants and greenhouse gas emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. (Pavley, Chapter 200, Statutes of 2002).

Local

City of Riverside General Plan 2025

The Open Space and Conservation Element of the City's General Plan 2025 (2007a) includes the following energy-related policies that are applicable to and be implemented in the proposed project:

Policy OS-8.2: Require incorporation of energy conservation features in the design of all new construction and substantial rehabilitation projects pursuant to Title 24, and encourage the installation of conservation devices in existing developments.

Policy OS-8.5: Develop landscaping guidelines that support the use of vegetation for shading and wind reduction and otherwise help reduce energy consumption in new development for compatibility with renewable energy sources (i.e., solar pools).

Policy OS-8.6: Require all new development to incorporate energy-efficient lighting, heating and cooling systems pursuant to the Uniform Building Code and Title 24.

Policy OS-8.10: Support the use of public transportation, bicycling and other alternative transportation modes in order to reduce the consumption of non-renewable energy supplies.

Policy OS-8.12: Require bicycle parking in new non-residential development.

4.13.2 Thresholds of Significance

The State of California CEQA Guidelines provide no specific thresholds for impacts associated with energy consumption. However, Appendix F of the CEQA Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts with regard to energy. Based on Appendix F, a development project could have a significant impact on utilities and service systems if the proposed project would:

- Result in wasteful, inefficient, or unnecessary consumption of energy;
- Conflict with existing energy standards and regulations; or
- Place a significant demand on local and regional energy supplies or require a substantial amount of additional capacity.

4.13.3 Project Elements That Can Reduce Impacts

The proposed project's building envelope, heating, ventilation, and air-conditioning (HVAC), lighting, other systems such as electric motor equipment, shall be designed to maximize energy performance. Additionally, the proposed project will be designed to reduce its overall demand for electricity and exceed the 2008 Title 24 requirements by 15 percent. The project will also employ the following water conservation measures which could in turn reduce the amount of electricity needed to supply the water to the site:

- Use low-flow fixtures, reducing water use by 30%.
- Use customized irrigation settings to avoid over watering of landscaping.
- Comply with the local water-efficient landscape requirements.
- Utilize reclaimed water for 100 percent of outdoor water use.
- Extensive use of drought tolerant and low water use plant materials
- Planting of shade trees for reduced heat-island effect

- Using mulch in all planter areas
- Using drip irrigation at all planter areas
- Using precision spray and rotor nozzels at limited parkway turf
- Using smart irrigation controllers
- Using a master valve and flow sensor
- Regularly assess and maintain stormwater treatment systems.

As discussed in Section 4.6, Greenhouse Gas Emissions, the following sustainable features will be incorporated into the Project design as a means to reduce impacts related to greenhouse gas emissions. In many cases, reducing greenhouse gas emissions occurs when consumption of energy sources is decreased, as with the following:

- Report Target's carbon footprint annually to the Carbon Disclosure Project.
- Use high-efficiency rooftop heating and air conditioning equipment.
- Use a highly reflective white roof membrane to reduce cooling load.
- Install store-based integrated energy management system controls for lighting, refrigeration, heating and cooling equipment, and exhaust fans to ensure energy management over time.
- Use two-lamp, T8 fluorescent lamps and electronic ballasts throughout the store, and motion-sensor lighting in stock rooms.
- Use reevaluated temperature settings, lighting levels, and equipment run times to identify efficiency opportunities.
- Verify energy efficiencies and identify potential improvements by instituting a "building commissioning" department.
- Reduce employee vehicle miles traveled (VMT) by following Target's practice of hiring, on average, more than 85% of Target's team members from the immediate area surrounding the store.
- Reduce VMT by redesigning the retail buildings to be closer together in order to encourage people to walk from one store to another within the shopping center.

The City's Transportation Demand Management Regulations (Chapter 19.880 of the City's Municipal Code) provides regulations to protect the public health, safety, and welfare by reducing air pollution caused by vehicle trips and vehicles miles traveled. The applicant will incorporate the following transportation demand measures (TDM) to help achieve the required vehicle reduction targets:

- Alternative work schedules/flex-time;
- Preferential parking for carpool vehicles;

- Bicycle parking and shower facilities;
- Bus stop improvements;
- Local transportation management and roadway improvements;
- Contributions to funds for regional facilities such as park-and-ride lots, multi-modal transportation centers, satellite work centers, etc.; and
- On-site amenities such as cafeterias, restaurants, automated teller machines and other services that would eliminate the need for additional trips.

4.13.4 Environmental Impacts before Mitigation

Threshold: Would the project result in wasteful, inefficient, or unnecessary consumption of energy?

Implementation of the Project would increase the demand for electricity and natural gas at the project site and gasoline consumption in the region during construction and operation.

Electricity

The construction phase will require electricity for the manufacture and transportation of building materials, preparation of the site, and construction of the buildings and infrastructure. The operational phase will require electricity for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances, electronics, office equipment, and commercial machinery.

Natural Gas

Natural gas would be consumed throughout construction and operations of the Project. Energy would be required during construction for the production of building materials, and construction of buildings and infrastructure. Natural gas consumption during construction would be required for various purposes including, but not limited to, building heating and cooling and restaurant uses.

Using the natural gas generation rates in the South Coast Air Quality Management District California Emissions Estimator Model (CalEEMod), Version 2011.1.1, the proposed 420,000 square foot retail center would consume approximately 974,400 cubic feet per year (SCAQMD 2011). This estimation does not take into consideration the effectiveness of the Project's energy conservation features listed previously that would result in a lower demand for electricity than is estimated; however, to provide for a conservative analysis, this reduction is not accounted for in the analysis.

Petroleum

Petroleum would be consumed throughout construction and operations of the Project. Energy would be required during construction for the transportation of building materials, and construction of buildings and infrastructure. Gasoline and diesel use account for the vast majority of construction-period energy needs. During operations, the majority of fuel consumption resulting from the project would involve the use of motor vehicles.

Petroleum fuel consumption associated with the project is a function of the vehicle miles traveled (VMT) as a result of project construction and operations. As discussed in Sections 4.10 (Traffic,), 4.3 (Air Resources) and 4.6 (Greenhouse Gas), the analysis has estimated the number of trips associated with the project which would result in additional fuel consumption and energy use associated with transportation.

It should, however, be noted that, as discussed above, as a result of anticipated fuel efficiency improvements, additional VMT will not necessarily result in a proportional increase in fuel consumption. Additionally, as noted in Section 4.6, Greenhouse Gas Emissions, many do not consider traffic associated with new commercial or retail and existing residences to be "new" trips. This traffic already exists from the existing residences, and the construction of new commercial or retail uses does not increase traffic; rather, it displaces the trips from another area. Moreover, it is believed that the construction and implementation of the project could reduce vehicle miles traveled. There are four Target stores located within 12 miles of the project site: three in the City of Riverside, located at 2755 Canyon Springs Parkway (approximately 7.5 miles northeast of the project site), 3333 Arlington Avenue (approximately 7 miles northwest of the project site), and 3520 Tyler Street (approximately 10 miles west of the project site), and one in Moreno Valley, located at 27100 Eucalyptus Avenue (approximately 12 miles northeast of the project site). The closest Target store to the south of the proposed project is located in Menifee, at 30340 Haun Road, approximately 19 miles south of the project site. In addition to residents located within the project vicinity, including the Woodcrest and Orangecrest communities, the proposed Target center would serve neighborhoods located south of the project area, including City of Perris residences that would be closer to the proposed Target than the existing Target in Menifee. A proposed Target store at 4th Street and Redlands Avenue in Perris was approved in 2009 but has not yet begun construction. This location would be approximately 10 miles south of the project site. Furthermore, residential development is concentrated near the proposed Gless Ranch; thus, a relatively large population would be served by the proposed Target in comparison to less dense areas in Riverside County. As such, it is reasonable to assume that the proposed retail center could potentially result in a reduction in VMT by future customers that would be traveling instead to other Target or other retail stores located farther away. Finally, as discussed below, the project incorporates a variety of features intended to reduce VMT associated with the Project.

Additionally, as discussed above, the project would be designed in accordance with Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings and would exceed these standards

by 15%. These standards include minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., HVAC and water heating systems), indoor and outdoor lighting, and illuminated signs. The incorporation of the 2008 Title 24 standards and exceedance of these standards by 15% would ensure that the project would not result in the inefficient, unnecessary, or wasteful consumption of energy. Therefore, **impacts related to wasteful, inefficient, or unnecessary consumption of energy would be less than significant and no mitigation measures are required.**

Threshold: Would the project conflict with existing energy standards and regulations?

As discussed above, although the proposed project would result in an increased demand for electricity, natural gas and petroleum, the project would exceed current energy efficiency standards by 15%. This exceedance would reduce the project's energy consumption by more than required by the state of California, and would therefore fall within the growth rate planned by the California Energy Commission's 2009 Integrated Energy Policy Report. The report projects energy demand growth and matches supply resources to this estimated demand. Because the project would implement design features and programs to reduce energy consumption beyond what is required by the state, the project would be consistent with existing energy standards and regulations. Therefore, **impacts related to conflict with existing energy standards and regulations would be less than significant and no mitigation measures are required.**

Threshold: Would the project place a significant demand on local and regional energy supplies or require a substantial amount of additional capacity?

As discussed above, although the proposed project would result in an increased demand for electricity, natural gas and petroleum, the project would exceed current energy efficiency standards by 15%. This exceedance would reduce the project's energy consumption by more than required by the state of California, and would therefore fall within the growth rate planned by the California Energy Commission's 2009 Integrated Energy Policy Report. The report projects energy demand growth and matches supply resources to this estimated demand. Because the project would implement design features and programs to reduce energy consumption beyond what is required by the state, the project would not place a substantial demand on planned or projected supplies of electricity, or natural gas or petroleum. Therefore, **impacts related to energy supplies and capacity would be less than significant and no mitigation measures are required.**

4.13.5 Mitigation Measures

Because impacts related to energy conservation are found to be less than significant, no mitigation measures are necessary.

4.13.6 Environmental Impacts after Mitigation Is Incorporated

Since there would not be significant impacts needing mitigation, residual impacts would be less than significant.

4.13.7 References

California Energy Commission. 2009. *2009 Integrated Energy Policy Report.*

City of Riverside. 2007. *City of Riverside General Plan 2025*. Adopted November 2007. Riverside, CA: City of Riverside Community Development Department. Accessed January 5, 2011. http://www.riversideca.gov/planning/gp2025program/general-plan.asp.

SCAQMD (South Coast Air Quality Management District). 2011. California Emissions Estimator Model (CalEEMod) Version 2011.1.1. Developed by ENVIRON International Corporation in collaboration with SCAQMD and other California Air Districts.

U.S. Department of Energy. 2011. US Energy Information Administration, Independent Statistics & Analysis, California Consumption Data. Accessed July 12, 2011. http://www.eia.gov/state/state-energy-profiles-data.cfm?sid=CA#Consumption.

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5.0 MANDATORY CEQA TOPICS

CEQA Guidelines Section 15126 requires EIRs to include a discussion of: the significant environmental effects of a project; the unavoidable significant environmental effects if the project is implemented; any irreversible changes should the project be implemented; growth inducing impacts; mitigation measures proposed by the project and the Alternatives to the project.

The following is a guide to where most of these issues are discussed in this document:

- Significant Environmental Effects – throughout Section 4.0
- Growth Inducing Impacts – Section 8.0
- Mitigation Measures – Executive Summary and throughout Section 4.0
- Alternatives – Section 7.0

See below for a discussion of the unavoidable and irreversible changes that the project may cause.

5.1 Unavoidable Environmental Effects

CEQA Guidelines Sections 15126.2 (b) further directs EIRs to address impacts from a project which will result in significant impacts, including those which cannot be mitigated below a level of significance. A summary of all the environmental issue areas and the resultant significance and listing of mitigation measures is found in the Executive Summary of this document. To summarize from the Executive Summary, the following issue areas will result in significant impacts, even after mitigation measures have been incorporated, thus resulting in unavoidable impacts:

- **Aesthetics** – impacts associated with changing the visual character of the area cannot be mitigated below a level of significance.
- **Agricultural Resources** – impacts associated with the conversion of designated Farmland to non-agricultural uses cannot be mitigated below a level of significance.
- **Air Quality** – air emissions related to construction and operation will exceed SCAQMD significance thresholds and therefore be cumulatively considerable and expose sensitive receptors to pollutants. Although mitigation measures have been imposed, none can reduce these impacts to less than significant levels.
- **Greenhouse Gas Emissions** – Given the size of the project, the project's anticipated emissions in comparison to the existing conditions and the business-as-usual scenario, and the current status of climate change science and regulations, to be conservative, the City has determined that the project will have a cumulatively considerable contribution and hence a

cumulatively significant impact in terms of climate change. Mitigation measures have been imposed, but none that can reduce impacts below a level of significance.

- **Traffic** – The project will contribute to impacts within the City in the Existing Plus Project, Year 2013 condition, as well as in the Year 2025 condition. MM TRAFFIC-1 through MM TRAFFIC-7 will reduce impacts at the related intersections to less than significant. However, since the timing and funding of fair share improvements cannot be guaranteed, impacts are considered significant and unavoidable. Additionally, the project will impact intersections outside the City of Riverside. Because the City of Riverside cannot control the timing or implementation of improvements needed to make the intersections outside the City achieve LOS standards, impacts are considered significant and unavoidable. Additionally, because the intersection of Washington Street/Van Buren Boulevard and Village West Drive/Van Buren Boulevard exceed the LOS E standard from the Congestion Management Plan, this impact would be considered significant and unavoidable. Mitigation measures have been incorporated, where feasible.

5.2 Irreversible Environmental Effects

Section 15126.2(c) clarifies that an EIR should disclose whether the project will result in the need for uses of nonrenewable resources that may be irreversible if a larger commitment of resources makes removal or nonuse unlikely. Any irreversible damage from environmental accidents as a result of the project also should be discussed.

The proposed shopping center by its nature would not by itself be a use that would create a high risk of environmental accidents that would cause irreversible environmental impacts. The shopping center use is being proposed in an area that is already developed, surrounded by established residential uses on three sides. There are no unique or sensitive resources on the site that would be considered to be so significant that if impacted are considered to have irreversible impacts.

The loss of the orange grove on the site would not be considered an irreversible change, as the orange grove is an agricultural crop which could be planted on any other location or site. Moreover, should the City ever not want a development project on this site, buildings could be removed and the land can be reused in another manner. The development of the shopping center is not considered to be wholly irreversible.

The project would by its nature, require the need for energy, mainly in the form of electricity to support the development. Petroleum resources will also be needed to supply the vehicles of the employees and customers using the development. The proximity of the shopping center and its potential tenants may reduce trips from the surrounding developments, and overall decrease the amount of petroleum projects to supply the vehicle trips. More details of this can be found in the Energy Conservation Section 4.13 of this document.

6.0 CUMULATIVE IMPACT ANALYSIS

CEQA requires that an EIR examine the cumulative impacts associated with a project, in addition to project-specific impacts. The discussion of cumulative impacts must reflect the severity of the impacts and the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone (*State CEQA Guidelines* Section 15130(b)).

As stated in the *State CEQA Guidelines*, an EIR "shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable (Section 15130(a))." "Cumulatively considerable" means that "the incremental effects of an individual 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 as defined in Section 15130" (Section 15065(c)). Section 15355 of the *State CEQA Guidelines* states that "cumulative impacts" occur from "…the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."

A cumulative impact is not considered significant if the impact can be mitigated to below the level of significance through mitigation, including providing improvements and/or contributing funds through fee-payment programs. The EIR must examine "reasonable options for mitigating or avoiding any significant cumulative effects of a proposed project" (*State CEQA Guidelines* Sections 15130(a)(3) and 15130(b)(5)).

6.1 Cumulative Analysis Setting

The cumulative impact analysis for the proposed project is based on information contained in the City's General Plan (GP), City's GP Final EIR, and the Orangecrest Specific Plan since the site is located in the Orangecrest community, in the City, within the County of Riverside. All three of these documents are hereby incorporated by reference. Because of the nature of individual environmental factors, the cumulative area for every issues addressed in this Draft EIR will not be identical. The individual cumulative areas for the issues addressed in this Draft EIR are provided in the respective impact sections.

6.2 Cumulative Forecasting Methodology

Section 15130 (b)(1)(A) of the CEQA Guidelines allows for the preparation of a list of past, present, and reasonably anticipated future project as a viable method of determining cumulative impacts. This discussion utilizes that approach: an initial list and description of all related projects followed by a discussion of the effects that the proposed project may have on each environmental category of concern, such as traffic, noise, etc. Consistent with CEQA, this discussion is guided by the standards of practicality and reasonableness.

6.3 List of Related Projects

This section of the analysis provides a list of past, present, and reasonably foreseeable future projects that the City determined were most relative to the proposed project. As described previously, in the past, the project area has been developed with mainly residential uses surrounding the site on three sides. Existing commercial development is also in the project vicinity. Several development proposals and City projects have been submitted for consideration or have been recently approved in proximity to the proposed project that together with the proposed project would result in an increase in construction-related environmental impacts. Table 6.0-A, Cumulative Projects, list the development proposals within a 2-mile radius from the project site.

Table 6.0-A, Cumulative Projects

No.	Cumulative Project	Location/Address	City/Jurisdiction	Description	Project Status
1.	P07-1028 – Alessandro Business Park	NWC of Alessandro Blvd and Brown St	Riverside	Industrial/Manufacturing (662,018 SF)	Approved. No permit activity or construction.
2.	P04-0912 – TTM 32646	Lurin Ave between Gamble Ave and Chicago Ave	Riverside	Residential SFR (96 Units)	Approved and rough graded. Map has not been recorded.
3.	P04-1372 – TTM 32997	NEC of Lurin Ave and Chicago Ave	Riverside	Residential SFR (100 Units)	Approved and rough graded. Map has not been recorded.
4.	P05-0325 – TTM 32647	NWC of Mariposa Ave and Taft St	Riverside	Residential SFR (103 Units)	Approved, but has not been recorded.
5.	P06-1396 – TTM 33482	South of Lurin Ave between Wood Rd and Trautwein Rd	Riverside	Residential SFR (20 Units)	Approved, but has not been recorded.
6.	P06-1395 – TTM 33481	NWC of Mariposa Ave and Trautwein Rd	Riverside	Residential SFR (20 Units)	Approved, but has not been recorded.
7.	P06-1355 – TTM 33480	NWC of Mariposa Ave and Barton St	Riverside	Residential SFR (20 Units)	Approved, but has not been recorded.
8.	P06-0899 –	SEC of Lurin Ave	Riverside	Residential SFR (17 Units)	Approved,

Table 6.0-A, Cumulative Projects

No.	Cumulative Project	Location/Address	City/Jurisdiction	Description	Project Status
	TTM 32302	and Wood Rd			rough graded. Map has not been recorded. Plans for houses on lots have expired.
9.	March Lifecare Campus Specific Plan	SEC of Cactus Ave and Riverside Dr	March JPA (Riverside County)	Medical Office/Retail/Research & Education/Hospital/Institutional Residential (600,000 SF/50 Rooms/660 DU)	Construction underway.
10.	Meridian Business Park North/ Metrolink Station (March JPA)	NEC of Cactus Ave And Meridian Pkwy	March JPA (Riverside County)	Metrolink Station/Warehouse Distribution/Light Industrial/Business Park (2,085,264 SF/300 Spaces)	Pending.
11.	Moreno Valley Gateway Business Park	SEC of Alessandro Blvd and Old 215 Frontage Rd	Moreno Valley	Business Park/Industrial Park (119,411 SF/134,329 SF)	Approved. No permit activity or construction.
12.	Ben Clark Training Center	NEC of Nandina Ave and Barton Rd	Riverside County	Training Center (4,654 Students)	Approved. No permit activity or construction.
13.	PP 22925	SWC of Alessandro Blvd and Sycamore Canyon Rd	Riverside County	Office Park/Warehouse/Light Industrial/Retail/ Fast-Food (719,600 SF)	Approved. No permit activity or construction.

Source: Traffic Impact Analysis Report (LLG 2011)
Notes:
SF = Square-Feet, TTM = Tentative Tract Map, JPA = Joint Powers Authority, SFR = Single Family Residential

6.4 Assessment of Cumulative Impacts

6.4.1 Aesthetics

The approximate 40-acre project site is currently developed with orange groves, as well as a fruit stand, two mobile homes used as residences, and a warehouse/workshop shed. Five windmill-type fans are scattered throughout the project site and six aboveground storage tanks, a mobile fuel storage tank, and

a fuel dispenser are present in the southeast portion of the site, all of which are reportedly no longer in use. Van Buren Boulevard borders the site on the north, which is a major thoroughfare through the City and is designated as a scenic and special boulevard and a parkway in the City's General Plan 2025. The existing visual setting of the project area is characterized by residential development to the north, south, and west, and vacant land and views of the San Jacinto Mountains to the east. The surrounding area is built-out with predominately residential development and some commercial uses and a few schools. There are no related projects adjacent to the project sites that would contribute a cumulatively significant aesthetic impact as viewed from the project area looking toward the surrounding resources such as the Box Springs Mountain or the San Jacinto Mountains. Essentially, the Proposed Project combined with the related projects would not result in a wall of development that would block the available views of surrounding resources such as the Box Springs Mountain or the San Jacinto Mountains. No cumulative impacts to scenic views resulting from development of the proposed project would occur.

Although the proposed project would comply with the City's Design and Sign Guidelines, the removal of orange groves with the development of a commercial retail center would contribute to the suburban character of the surrounding area and substantially change the current appearance, character and visibility of the project site. Therefore, project impacts related to the change in the visual character and quality of the project site would be considered significant because some people may consider the loss of the view of the orange groves to be a substantial degradation of their views. None of the other cumulative projects would impact the orange groves on site, nor would they impact any other existing orange groves, which would compound the project's impacts, as no orange groves exist on any of the other entitled sites listed in Table 6.0-A for development. Therefore, this impact is not considered to be cumulatively significant since none of the other projects in the area would contribute to this impact.

Therefore, the proposed project in conjunction with the related projects, would not result in significant cumulative impacts with regard to the aesthetic and visual character of the area.

6.4.2 Agricultural Resources

The site has been designated by the State Department of Conservation (DOC) Farmland Mapping and Monitoring Program as having Unique Farmland and Farmland of Statewide Importance (DOC 2008). Approximately 9 acres of the project site are included in the Unique Farmland category, and approximately 29.24 acres of the project site are included in the Farmland of Statewide Importance category. The project site's current zoning and land use designation is commercial. Therefore, the proposed project will be in compliance with the City's commercial designation. In addition, although the project will convert lands that are designated as Farmland, the City of Riverside General Plan 2025 EIR found that the loss of agricultural land in the City was an unavoidable significant impact and made a Statement of Overriding Considerations for this impact. (City of Riverside, 2007c).Nevertheless, as discussed in Section 4.2, Agricultural Resources, the project's conversion of existing agricultural lands to

non-agricultural lands is considered significant based on the designation of the site as having Unique Farmland and Farmland of Statewide Importance.

However, there are no other agricultural uses surrounding this site, and specifically no orange groves. Although the project would have a significant impact with regard to conversion of agricultural uses to non-agricultural uses, the City of Riverside General Plan 2025 EIR already analyzed the City-wide conversion of agricultural land and disclosed potential impacts. Further, the General Plan 2025 EIR identified areas within the City that were best suited for agricultural activities. The project site and surrounding vicinity was not identified as such. There are no related projects that would compounded this impact as the related projects within close proximity would not contribute to this impact. **Therefore, cumulative impacts to agricultural resources resulting from the proposed project are considered less than significant.**

6.4.3 Air Quality

In analyzing cumulative impacts from the proposed project, the assessment must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the South Coast Air Basin (SCAB) is designated as nonattainment for the National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS. Implementation of the project would result in short-term impacts to air quality associated with construction and long-term impacts associated with increased vehicle traffic to and from the site as well as energy use.

Construction of the proposed project could occur as early as mid-February 2012 to mid-November 2012, lasting approximately 9 months. Construction schedules for potential future projects in the area are currently unknown; therefore, potential impacts to sensitive receptors that might be located within an area of overlap between emissions from two simultaneous projects are speculative. The CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (Title 14, California Code of Regulations, Section 15145).

Air pollutant emissions associated with construction activity of future projects would be reduced through the implementation of control measures required by the SCAQMD. Cumulative PM10 and PM2.5 emissions would be reduced because all future projects would be subject to SCAQMD Rule 403 (Fugitive Dust), which sets forth general and specific requirements for all construction sites in the SCAQMD. The application of architectural coatings (exterior/interior paint and other finishings) would produce VOC emissions that would exceed the SCAQMD's quantitative significance threshold. Since VOCs are precursors to O3, construction of the proposed project along with other nearby projects would contribute to the SCAB's O3 nonattainment designation. The maximum 24-hour PM10 and PM2.5 concentrations are anticipated to exceed the LSTs at the maximally impacted sensitive receptor in the vicinity of the project site (residences located directly to the south of the project site) during

project construction. Fugitive dust, as well as vehicle and equipment exhaust, generated during project construction would also contribute to the SCAB nonattainment designation for PM10 and PM2.5.

Operations of the project would produce VOCs, NOx, CO, SOx, PM10, and PM2.5 emissions from project retail and commercial land uses. The projected operational emissions from vehicular emissions are above the SCAQMD significance criteria for VOCs, NOx, and CO. Long-term operational air quality impacts are considered significant and unmitigable, even with application of all feasible mitigation measures. **The cumulative effect of the proposed project and other projects in the vicinity would incrementally contribute to the SCAB's levels of O3, NO2, CO, PM10, and PM2.5. The location of the project within a nonattainment area for O3, NO2, PM10, and PM2.5, when combined with other foreseeable projects within the area, would result in significant, unmitigable cumulative air quality impacts, even with incorporation of all feasible area source and vehicular source mitigation measures.** Because feasible mitigation measures consist of many emission reduction strategies (e.g., architectural design features, encouragement of alternative transportation), most of which help reduce emissions, current technology does not allow for a complete reduction of emissions given the types of development proposed. Therefore, despite the City of Riverside's efforts to require all feasible mitigation, significant unavoidable impacts would remain.

With regard to cumulative impacts associated with nonattainment pollutants, in general, if a project is consistent with the community and general plans, it has been accounted for in the attainment demonstration contained within the State Implementation Plan and would, therefore, not cause a cumulatively significant impact on the ambient air quality. The project's zoning is CR-S-2-X-SP – Commercial Retail, Height and Setback Restriction, and Specific Plan (Orangecrest) Overlay Zones. The Riverside General Plan 2025 (GP 2025) land use designation is C – Commercial (City of Riverside 2007). The proposed commercial shopping center will serve not only as a neighborhood center, but as a regional retail center as well, and it is consistent with both the site's zoning and GP 2025 land use designation. The project site and surrounding area is also within the Orangecrest Specific Plan (amended on October 7, 1997, and May 26, 1998). The site is designated as Commercial in this specific plan (City of Riverside 1998). The proposed project is therefore consistent with the land use designation from the Orangecrest Specific Plan. Accordingly, the proposed project would result in employment and commute and customer vehicle trips that are consistent with the planned development of the project site and the growth projections anticipated in the SCAQMD's 2007 AQMP.

Regardless, the proposed project would result in significant project-level emissions of VOCs, NOx, and PM10. Emissions of O3 precursors (VOCs and NOx) and PM10 during construction would exceed thresholds. Although the surrounding residential uses would realistically contribute less vehicle trips overall than in the existing condition because they can travel a shorter distance to the retail uses proposed by the project, the vehicle trips generated by the proposed retail center based on the air quality modeling would result in a significant increase of O3 precursors during operation. **Thus, the proposed project would result in a cumulatively considerable contribution to**

concentrations of O3, NO2, and PM10, which are nonattainment pollutants in the SCAB due to cumulative emissions in the air basin. As a result, implementation of the proposed project would result in a significant cumulative impact to air quality.

6.4.4 Biological Resources

The project site is currently developed with orange groves with Van Buren Boulevard followed by residential development to the north, residential development and Gless Ranch Road to the south, residential development to the west, and Barton Street and vacant land to the east. No suitable habitat is expected to occur on site given the highly disturbed nature of the site. Implementation of the proposed project would not result in direct impacts to 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 (CDFG) or United States Fish and Wildlife Services (USFWS) as assured by mitigation measures that require Migratory Bird Treaty Act (MBTA) surveys to avoid impacts to nesting raptors. Although some wildlife (e.g., coyotes) using the annual grassland on the east may come onto the project site to forage, the use of the site by wildlife is expected to be limited due to the site's current agricultural operations.

There is one unvegetated, ephemeral drainage on site which appears to receive runoff from Van Buren Boulevard as well as the existing residential development north of Van Buren Boulevard. Significant direct impacts to the unvegetated ephemeral drainage under the jurisdiction of CDFG would be addressed by compliance with the 1602 Streambed Alteration Agreement and a report of waste discharge must also be submitted to the Regional Water Quality Control Board (RWQCB). This drainage does not connect to any other natural drainage around the site, and is most likely a remnant from the area when it was undeveloped. Removal of this ephemeral drainage from the site will not affect any other biological or hydrological significant features in the project vicinity.

The proposed project would not conflict with any local policies or ordinances protecting biological resources, including the goals and policies of the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) as discussed in Section 4.4 of this document. The MSHCP is a regional-level analysis of biological resources in Western Riverside County, whereby it aims to conserve 500,000 acres in exchange for development in other area of the County. For projects that are determined to be consistent with the MSHCP, the cumulative biological impacts from any one project are mitigated through the MSHCP. Even though there will be a cumulative loss of foraging habitat on the project site for some of the wildlife, the loss is not considered significant since the loss has already been addressed through the MSHCP and the applicant will pay MSHCP fees. The project site is not located within an identified wildlife corridor or linkage area within the MSHCP. Given that the project site itself was not envisioned to be preserved for biological resources under the MSHCP, and since the project site does not support resources or habitat that if lost, could affect other resources, **cumulative impacts to biological resources are considered less than significant.**

6.4.5 Cultural Resources

The proposed project will integrate the Gless Ranch citrus history by retaining the existing fruit stand and expanding it as part of the larger development plan as well as incorporating the various historic elements used during the agricultural operation, including the existing windmill and tractors, and creating a signage that incorporates the site's citrus use as part of the design features within the commercial shopping center.

Based on City records, none of the existing structures on the proposed project site are over 50 years old, designated as historic under the City's Title 20, or have structures on site that have state or federal designations. Based on the archaeological site records and literature search of the California Historical Resources Information System at the Eastern Information Center (EIC) that was conducted within 0.5 mile of the proposed project area, 12 cultural resources have been recorded and 13 prior cultural resources studies have been undertaken. The majority of the previously recorded prehistoric archaeological sites in the region are bedrock milling sites lacking associated artifacts and subsurface deposits. No evidence of prehistoric milling activity was evidenced on site and no cultural resources have been recorded within the project site. The surrounding area consists of suburban development. The vacant land to the east of the project site does not have any records of cultural resources. Therefore, there are no known established cultural resources in the area, that with the development of the site would be harmed.

Cumulative impacts on cultural resources evaluate whether impacts of the proposed project and related projects, when taken as a whole, substantially diminish the number of historic resources within the same or similar context or property type. However, impacts to cultural resources, if any, tend to be site-specific. It is anticipated that cultural resources that are potentially affected by related projects would also be subject to the same requirements of CEQA as the proposed project. These determinations would be made on a case-by-case basis and the effects of cumulative development on historic resources would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. However, because this project will not have any impacts to any cultural resources, it will not contribute cumulatively to any other of the listed projects impacts to cultural resources, if any. **Therefore, the proposed project would not contribute to any potential cumulative impacts, and cumulative impacts on cultural resources would be less than significant.**

6.4.6 Greenhouse Gas Emissions (GHGs)

While the proposed project would result in emissions of GHGs during construction and operation, no guidance exists to indicate what level of GHG emissions would be considered substantial enough to result in a significant adverse impact on global climate. However, it is generally the case that an individual project is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the

global GHG inventory. Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008). Accordingly, the analysis section 4.6 was conducted from a cumulative perspective.

To summarize, the proposed project would result in an increase in GHG emissions relative to existing conditions. The proposed project would incorporate project design features that would conserve energy and potable water. As well, several statewide GHG reduction measures would reduce GHG emissions associated with motor vehicles and electrical generation over time. The benefits of these measures are compared to the GHG emissions that would be generated under a business-as-usual scenario. However, it is important to note that project design features listed in Section 4.6.3 will reduce the project's GHG emissions. However, the majority of these measures could not be quantified. Accordingly, the calculations considering the reduction from the business-as-usual scenario only take GHG reduction credit for the project's exceedance of Title 24 by 15% and use of reclaimed water. As shown in Table 4.6-4, the proposed project along with implementation of the statewide measures would result in a 22.1% reduction compared to business-as-usual, but it would not achieve a 28.5% reduction to meet the goal of AB 32. Because the vehicle related emissions are such a large proportion of the total emissions, it is not possible to achieve the 28.5% reduction below BAU.

While the project has incorporated various measures to reduce vehicle trips including local hiring policies, public transportation and other alternative mode of transportation improvements, and the incorporation of TDM measures, the emissions from vehicle exhaust are controlled by the State and Federal governments and are outside the control of the project applicant and the City. Similarly, the City has no jurisdiction to control the climate change impacts of projects outside its boundaries. So long as levels of GHG emissions in the atmosphere are generally at levels that create adverse impacts (i.e., climate change), the emissions of a particular project, or several projects combined such as the projects listed on Table 6.0-A, even if not significant in terms of thresholds, may nonetheless contribute to an adverse, unavoidable impact because other projects do not meet such standards and because other actors (e.g., State and Federal government actors) may not take action to reduce emissions from mobile sources. So long as levels of GHG emissions in the atmosphere are generally at levels that create adverse impacts (i.e., climate change), the emissions of a particular project, even if not significant in terms of thresholds, may nonetheless contribute to an adverse, unavoidable impact because other projects do not meet such standards. The degree to which a project's, or any combination of projects, contribution to a cumulative impact is considered cumulatively considerable is necessarily relative in terms of the size and impacts of a project(s) or development(s). **Given the size of the project, the project's anticipated emissions in comparison to the existing conditions and the business-as-usual scenario, and the current status of climate change science and regulations, to be conservative, the City has determined that the proposed project will have a cumulatively considerable contribution and hence a cumulatively significant impact in terms of climate change.**

6.4.7 Hazards and Hazardous Materials

Risks associated with hazardous materials are generally site-specific and localized, and are thus limited to the project site. Based on the Phase I Environmental Site Assessment by GeoSoils conducted in 2008, six aboveground storage tanks (ASTs) that contain petroleum products or pesticides are present on site. Based on the ASTs and the agricultural operations, mitigation measures have been included for the proposed project to remove the top 6 inches of soil on site so that impacts to hazards and hazardous materials can be mitigated to less-than-significant levels. Commercial uses in the proposed project will not use quantities of hazardous waste or substances that would pose a risk to the public. Therefore, the proposed project was found to have less than significant impacts related to the public or the environment from the accidental release of hazardous materials.

Due to the historical agricultural use of the site, an environmental regulatory database search was conducted to focus on the presence of above and underground storage tanks, potential for contaminated soil and/or groundwater, and evidence of poor material handling and/or storage which may have resulted in soil and/or groundwater contamination within the project area. Based on Track Info Services LLC's report that is included as Appendix D of the GeoSoils report, there are four mapped risk sites (March Air Force Base, Earhart Middle School, Benjamin Franklin Elementary School, and Elementary School No. 32) and four unmapped risk sites identified within one mile of the proposed project area. All of the unmapped risk sites and three of the four risk sites do not present a significant potential to environmentally affect the subject property. The March Air Force Base, located to the east of the site, has a low potential to environmentally affect the groundwater and soil beneath the subject property. As such, the potential for cumulative impacts to occur is limited. The proposed project does not include the use of on-site groundwater for its potable or irrigation water sources since the site will use recycled water for irrigation purposes and potable sources will come from Western Municipal Water District, which does not use local groundwater supplies. Although each development site has potentially unique hazardous materials consideration, it is expected that future development within the area will generally comply with federal, state, and local statutes and regulations applicable to hazardous materials. Development of the project site will not create a cumulative impact related to exposing the public to hazardous materials. For these reasons, **cumulative impacts to the public or environment resulting from the accidental release of hazardous materials would be less than significant.**

6.4.8 Hydrology and Water Quality

The proposed project includes features that will reduce potential impacts to water quality. All on-site stormwater would be treated for pollutants of concern before entering the City storm drain. The proposed project includes on-site grated inlets and curb-opening catch basins to catch runoff, which would then be directed to one of the five detention basins to remove any pollutants of concern to existing City storm drain systems via existing flow paths and drainage facilities. According to the revised

Water Quality Management Plan (WQMP) dated April 27, 2011, prior to entering the treatment/detention basins, stormwater will be pre-treated for sediment and trash by proprietary treatment devices, which will be determined with the final design to be reviewed and approved by the City. The on-site detention devices will retain the required treatment volume prior to discharge into the public system in conformance with the California Stormwater Quality Association (CASQA) Best Management Practices (BMP) design. The proposed project would also include site design BMPs to address runoff and sources of urban water pollution that may originate from the site and get into stormwater runoff and ensure that water quality on the project site would not be degraded as a result of project construction and/or operation. Potential impacts associated with violations of water quality standards or waste discharge requirements would be less than significant. The proposed project will also implement nonstructural BMPs.

The proposed project does not include the use of on-site groundwater for its potable or irrigation water sources since the site will use recycled water for irrigation purposes and potable sources will come from Western Municipal Water District, which does not use local groundwater supplies. The proposed project site would be approximately 80% to 85% covered with impermeable surfaces that would reduce the amount of percolation and recharge of groundwater. The five detention basins would allow collected runoff to percolate into the ground and recharge groundwater basins. Roughly the same amount of water that would have percolated on site under the current condition will do so in the developed condition; it will just percolate in a more specific location such as to the detention basins.

The project site supports one natural, ephemeral drainage that currently provides conveyance of stormwater flows entering the site from the north, from off-site residential development, and flows off-site and discharges to the existing storm drain system. With implementation of the proposed project, the site will drain to the existing stormwater system to the west in Kinnow Lane or to the south in Gless Ranch Road. The use of the existing system will ensure that erosion does not occur downstream of the project site. The stormwater runoff rates at the project site would be less with implementation of the proposed project. The inclusion of detention and treatment systems would reduce runoff and runoff could be held during peak flow times on the site, and would be treated before being discharged. In addition, the proposed project would be required to comply with NPDES Program (i.e. SWPPP and WQMP) to ensure that erosion does not occur on or off site. Consequently, development of the proposed project would not cause an increase in flows from the site during the projected 100-year storm event.

As such, impacts related to water quality, groundwater, drainage patterns of the site or area, or potential flooding, and impacts related to the existing and planned stormwater drainage systems would be less than significant.

On a cumulative basis, the proposed project, along with offsite area development, could contribute to regional water quality impacts through introduction of pollutants to runoff into the Santa Ana River and

San Jacinto River. However, all proposed projects are required to comply with applicable Federal, State, and local water quality regulations and comply with National Pollutant Discharge Elimination System (NPDES) regulations. As new developments would be required to control the amount of stormwater runoff coming from their respective sites, new construction does not generally lead to substantial additional runoff. Thus, in the event that any off-site areas served by local storm drains were to increase peak flows to the system, the proposed project would not contribute to a significant cumulative impact. **Therefore, no cumulatively considerable impacts on water runoff and water quality would occur.**

6.4.9 Noise

On-site noise-generating activities associated with the project would include short-term construction and site clearing. Development activities related to project construction would involve site demolition, site preparation, building construction, and paving. Construction equipment anticipated for project development includes only standard equipment that would be employed for any routine construction project of this scale. Construction hours would be limited to the hours as allowed per the city's Noise Ordinance. In addition, construction activities would be approximately 25 feet or more from adjacent residential uses and is not anticipated to result in continuous vibration levels that typically annoy people and vibration impacts are considered to be less than significant. Temporary noise impacts are considered less than significant with mitigation incorporated.

Long-term operational noise related to various commercial activities, such as loading dock/delivery truck activities, outdoor mechanical equipment associated with the building operations, and the proposed tire/automotive facility proposed on site. Sound walls would be implemented to mitigate for the noise impacts related to loading dock/delivery trucks onto adjacent residential properties. Outdoor rooftop mechanical equipment would be screened by parapets and ground level equipment would be reviewed and approved by the City when mechanical equipment plans are submitted to the City. The proposed tire/automotive facility have been oriented as far away from adjacent residential uses and would mitigate noise impacts onto adjacent residents with implementation of sound walls and reduce impacts to less than significant. The project would generate off-site traffic noise along various roads in the area. In addition, the project site will be subject to noise from Van Buren Boulevard, Gless Ranch Road, and Barton Street. The additional traffic volume along the adjacent roads as outlined in table 4.9-7 of the DEIR Noise Section would not substantially increase the existing noise level in the project vicinity, and the traffic noise level increase is considered less than significant.

The proposed project's site layout and landscape setbacks, along with the requirement to place mufflers on equipment engines, setback requirements for the chipping operation to remove the existing orange groves, and orienting stationary sources to direct noise away from sensitive uses as part of the proposed project's mitigation would reduce the proposed project to less than significant impacts to noise.

On cumulative basis, cumulative noise impacts would come from two sources –noise from all the cumulative projects using the roadways surrounding the project and noise from the surrounding land uses. Given the growth anticipated by the projects listed in Table 6.0-A, it would be expected that there will be increased traffic noise associated with these projects. Looking at the project along with other cumulative projects and ambient growth in Year 2013, (i.e., existing plus ambient growth, plus cumulative, plus project ADT) traffic noise would generate a noise level increase of less than 2 dB CNEL as compared to the noise level without the project. The project traffic along with other cumulative traffic would not substantially increase the existing noise level in the project vicinity, since a 2 dB increase is not considered audible. Projects listed on Table 6.0-A and future projects, have/would also be reviewed to ensure the uses are placed in the lease sensitive areas and shall meet the City's noise criteria. There are no other surrounding land uses that would by themselves, or cumulative create a significant source of noise that would adversely affect the project. The project is a commercial development, which is not considered a sensitive noise receptor. Therefore, in the ambient plus cumulative condition, the additional project traffic volume along the adjacent roads would not substantially increase the existing noise level in the project vicinity, and the traffic noise level increase is considered less than significant, and no mitigation measures are necessary. **Cumulative impacts related to noise both in the short-term and long-term would be less than significant.**

6.4.10 Traffic

The following intersections would be improved as part of the proposed project:

- Barton Street at Van Buren Boulevard: Widen and/or restripe Barton Street to provide a second northbound left-turn lane and an exclusive northbound right-turn lane. Widen and/or restripe Van Buren Boulevard to provide a third eastbound through lane, an exclusive eastbound right-turn lane and a second westbound left-turn lane. Widen and/or restripe Van Buren Boulevard for three eastbound departure lanes. Modify the existing traffic signal for eight-phase operation.
- Barton Street at Gless Ranch Road: Widen and/or restripe Barton Street to provide a second southbound through lane.

The above mentioned improvements will maintain acceptable LOS in the project vicinity. In addition, The City's Transportation Demand Management Regulations (Chapter 19.880 of the City's Municipal Code) provides regulations to protect the public health, safety and welfare by reducing air pollution caused by vehicle trips and vehicle miles traveled. The applicant will incorporate a combination of the following methods into its design features/project operation in order to its trip reduction plans to help achieve the required vehicle reduction targets:

- Alternative work schedules/flex-time;
- Preferential parking for carpool vehicles;

- Bicycle parking and bike facilities;
- Bus stop improvements;
- Local transportation management and roadway improvements;
- Contributions to funds for regional facilities such as park-and-ride lots, multi-modal transportation centers, satellite work centers, etc.; and
- On-site amenities such as cafeterias, restaurants, automated teller machines and other services that would eliminate the need for additional trips.

Public Transit, Bicycle, or Pedestrian Facilities

The proposed project includes a bus stop along Van Buren Boulevard, a bike lane along Van Buren Boulevard connecting to the existing bike lane in the vicinity, bicycle racks on the project site, and 750 citrus trees. These features help support the City's transit and pedestrian goals and objectives as outlined in the City's General Plan policies. The proposed project does include the ability of pedestrians and bikes to circulate through the shopping center through the use of connected sidewalks. The bus stop along Van Buren Boulevard supports the Riverside Transit Agency's bus system and the bicycle lane along Van Buren Boulevard connects to the city's bicycle network. As such, the proposed project would not conflict with adopted policies, plans, or programs supporting alternative transportation and impacts would be less than significant.

On a cumulative basis, all projects not categorically or statutorily exempt from CEQA are subject to an analysis relative to alternative modes of transportation, and provide access or connections to bike trails, bus routes and pedestrian connections, per the City's polices, plans and programs supporting alternative methods of transportation. Therefore, the project, along with other projects, will work towards making the overall public transportation and alternative modes of transportation better in the project area.

Traffic Characteristics

The Traffic Impact Analysis analyzed fifteen cumulative projects within a two-mile radius of the proposed project. The cumulative projects are expected to generate a combined total of 65,502 daily trips on a "typical" weekday, with 6,019 trips forecasted during the AM peak hour and 6,585 trips during the PM peak hour.

Twenty-nine key study intersections were identified as the locations at which to evaluate existing and future traffic operating conditions. Table 4.10-1 of the DEIR Traffic Section lists out the key study intersections. Three of the twenty-nine key study intersections currently operate at an unacceptable level of service (LOS) during the AM and/or PM peak hours:

- Alessandro Boulevard at Arlington Avenue/Chicago Avenue;

- I-215 Southbound (SB) Ramps at Van Buren Boulevard; and
- I-215 Northbound (NB) Ramps at Van Buren Boulevard.

Circulation System

The proposed project's forecasted daily and peak hour project traffic volumes for a "typical" weekday is expected to generate 17,260 daily trips, with 361 trips produced in the AM peak hour and 1,664 trips produced in the PM peak hour. To account for trips that come directly from the everyday traffic stream on the adjoining streets such as Van Buren Boulevard and Barton Street, applicable pass-by reduction factors were incorporated into the daily AM/PM peak hour traffic forecasts, which resulted in a more actual traffic generation from the proposed project of 12,945 daily trips, with 325 AM peak hour trips and 1,231 PM peak hour trips.

Existing Plus Project Traffic Conditions

Traffic associated with the proposed project will significantly impact three of the twenty-nine key study intersections:

- Alessandro Boulevard at Arlington Avenue/Chicago Avenue;
- I-215 SB Ramps at Van Buren Boulevard; and
- I-215 NB Ramps at Van Buren Boulevard.

These three intersections mentioned above with implementation of the proposed project would operate at the same LOS as the existing conditions. Alessandro Boulevard at Arlington Avenue/Chicago Avenue will continue to operate at unacceptable LOS F during the PM peak hour; however, implementation of recommended improvements will offset the impact of project traffic per City of Riverside requirements and the intersection would operate at better than the pre-project condition. For impacts to I-215 Southbound Ramps at Van Buren Boulevard and I-215 Northbound Ramps at Van Buren Boulevard, these intersections are in the County of Riverside and are under the control and jurisdiction of Cal Trans and with the project would operate at LOS E and F (AM and PM Peak Hour) and LOS F (AM Peak Hour), respectively, per Table 4.10-10. The County, in cooperation with Cal Trans, is in the process of implementing the I-215/Van Buren Boulevard interchange project. This project will be required to pay its TUMF fees, which is contributing to the I-215 improvement project. Once completed, the impacts will be reduced to a less than significant level. Because the City does not have control over the timing of the improvements that will be made by the County, such improvements are considered infeasible and are considered significant and unavoidable.

Existing Plus Ambient Growth to the Year 2013 Traffic Conditions

An analysis of Year 2013 traffic conditions indicates that the addition of ambient traffic growth will adversely impact four of the twenty-nine key study intersections. The intersections include:

- Alessandro Boulevard at Arlington Avenue/Chicago Avenue;
- Trautwein Road/Cole Avenue at Van Buren Boulevard;
- I-215 SB Ramps at Van Buren Boulevard; and
- I-215 NB Ramps at Van Buren Boulevard.

This condition does not include any project traffic.

Existing Plus Ambient Growth to the Year 2013 Plus Project Traffic Conditions

Four out of the twenty-nine key study intersections projected to operate at an unacceptable LOS with existing plus ambient growth plus project traffic in year 2013. As shown in Table 4.10-13, the implementation of mitigation measures MM-TRAFFIC-1 and MM-TRAFFIC-2 at the impacted key study intersections of Alessandro Blvd at Arlington Ave/Chicago Ave and Barton Street at Van Buren Boulevard completely offset the impacts of project traffic at these intersections. The intersection of Barton Street at Van Buren Boulevard is forecast to operate at an acceptable LOS during the AM and PM peak hours with implementation of mitigation measure MM-TRAFFIC-2), as shown in column 5 of Table 4.10-13. The intersection of Alessandro Boulevard/Arlington Avenue/Chicago Avenue will continue to operate at unacceptable LOS F during the PM peak hour (as it does in the existing no-project condition. However, implementation of recommended improvements (MM TRAFFIC 1) will offset the impact of project traffic per City of Riverside requirements and the intersection will operate at better than the pre-project and existing condition.

For impacts to I-215 Southbound Ramps at Van Buren Boulevard and I-215 Northbound Ramps at Van Buren Boulevard, these intersections are in the County of Riverside and are under the control and jurisdiction of Cal Trans, and with the project would operate at LOS E and F (AM and PM Peak Hour) and LOS F (AM Peak Hour), respectively, per Table 4.10-10. The County, in cooperation with Cal Trans, is in the process of implementing the I-215/Van Buren Boulevard interchange project. The I-215 project completely reconstructs the interchange and with that project, the LOS will be reduced to an acceptable level. This project will be required to pay its TUMF fees, which contributes to the I-215 improvement project. Once completed, the impacts will be reduced to a less than significant level. Because the City does not have control over the timing of the improvements that will be made by the County, such improvements are considered infeasible and impacts to these intersections are considered significant and unavoidable.

Year 2013 Cumulative Traffic Conditions

Nine of the twenty-nine key study intersections would be cumulatively impacted by the proposed project:

- Washington Street at Van Buren Boulevard;
- Wood Road at Van Buren Boulevard;
- Alessandro Boulevard at Arlington Avenue/Chicago Avenue;
- Trautwein Road/Cole Avenue at Van Buren Boulevard;
- Barton Street at Van Buren Boulevard;
- Barton Street at Gless Ranch Road;
- Harmon Street/Meridian Parkway at Van Buren Boulevard;
- I-215 SB Ramps at Van Buren Boulevard; and
- I-215 NB Ramps at Van Buren Boulevard.

The implementation of improvements (MM TRAFFIC 3-7) at five of the nine cumulatively impacted key study intersections within the City of Riverside offsets the project's impact contribution to this cumulative impact, except for the intersection of Alessandro Boulevard at Arlington Avenue/Chicago Avenue; but implementation of recommended improvements will offset the cumulative impact of project traffic at this intersection.

The remaining four impacted intersections are located in the Riverside County. For impacts to Washington Street/Van Buren Boulevard and Harmon Street-Meridian Parkway/Van Buren Boulevard, these intersections are in the County of Riverside. The County of Riverside has two established mitigation funds for road improvements, the Development Impact Fee (DIF) program and Road and Bridge Benefit District (RBBD) program. Both of these programs are available to County projects only, and there is no method for which the City can contribute funds to pay for fair share contributions for impacts (personal communication with Kevin Tsang, County of Riverside Transportation Department). Because the City does not have control over the timing of the improvements that will be made by the County, and since there is no established method for the City to pay into the County's roadway mitigation programs, such improvements to the County intersections are considered infeasible for the project to make as discussed below under 4.10.5, Mitigation Measures. The project cannot dictate timing or implementation of the improvements, and therefore impacts to these intersections are considered significant and unavoidable.

For impacts to I-215 Southbound Ramps at Van Buren Boulevard and I-215 Northbound Ramps at Van Buren Boulevard, these intersections are in the County of Riverside and are under the control and jurisdiction of Cal Trans. The County, in cooperation with Cal Trans, is in the process of implementing

the I-215/Van Buren Boulevard interchange project. The I-215 project completely reconstructs the interchange and with that project, the LOS will be reduced to an acceptable level. This project will be required to pay its TUMF fees, which contributes to the I-215 improvement project. Once completed, the impacts will be reduced to a less than significant level. Since the City cannot dictate timing or implementation of the improvements, impacts to these intersections are considered significant and unavoidable.

Long-Term (Year 2025) Plus Project Traffic Conditions

Eight of the twenty-nine key study intersections would be adversely impacted with Year 2025 Plus Project Traffic Conditions; they include:

- Washington Street at Van Buren Boulevard;
- Porter Avenue at Van Buren Boulevard;
- Alessandro Boulevard at Arlington Avenue/Chicago Avenue;
- Barton Street at Van Buren Boulevard;
- Barton Street at Gless Ranch Road;
- Barton Street at Mariposa Avenue/Larry Parish Parkway;
- Village West Drive at Van Buren Boulevard; and
- Harmon Street/Meridian Parkway at Van Buren Boulevard.

After implementation of mitigation measures (MM-TRAFFIC-4, MM-TRAFFIC-6, and MM-TRAFFIC-7) only one of the eight impacted key study intersections (Barton Road/Gless Ranch) are forecast to operate at an acceptable LOS during the AM and PM peak hours after mitigation is incorporated. The intersection of Alessandro Boulevard at Arlington Avenue/Chicago Avenue will continue to operate at unacceptable LOS F during the PM Peak hour with improvements; however the intersection will operate at better than pre-project condition with proposed mitigation measures incorporated.

The intersection of Barton Street/Van Buren Boulevard has existing right-of-way constraints that affect the ability to improve these intersections to the ultimate general plan build-out widths. Under the City of Riverside General Plan 2025, Circulation and Community Mobility Element, the City recognizes that along key freeway-feeder segments during the peak commute hours, LOS F may be expected due to regional travel patterns. Additionally, the City has made a Statement of Overriding Considerations for intersections that operate at LOS E or F and could not be widened to accommodate additional traffic. Therefore, impacts at the intersection of Barton Street/Van Buren Boulevard are considered less than significant.

The intersections of Village West Drive/Van Buren Boulevard and Harmon Street-Meridian Parkway/Van Buren Boulevard have existing right-of-way constraints that affect the ability to improve these intersections to the ultimate general plan build-out widths and are located in Riverside County, and are under the jurisdiction of the County. Additionally, for impacts to Washington Street/Van Buren Boulevard, Porter Avenue/Van Buren Boulevard, Barton Street/Mariposa Avenue/Larry Parish Drive, Village West Drive/Van Buren Boulevard and Harmon Street-Meridian Parkway/Van Buren Boulevard, these intersections are in the County of Riverside, and would operate at LOS E or F in the AM and PM Peak Hour per the thresholds outlined on Table 4.10-8. The County of Riverside has two established mitigation funds for road improvements, the Development Impact Fee (DIF) program and Road and Bridge Benefit District (RBBD) program. Both of these programs are available to County projects only, and there is no method for which the City can contribute funds to pay for fair share contributions for impacts. Therefore, because the City does not have control over the timing of the improvements that will be made by the County, such improvements are considered infeasible as discussed below under 4.10.5, Mitigation Measures. The project cannot dictate timing or implementation of the improvements, and therefore impacts to these intersections are considered significant and unavoidable.

Therefore, the project does contribute to impacts in the Existing Plus Project, Year 2013 condition, as well as in the Year 2025 condition. MM TRAFFIC-1 through MM TRAFFIC-7 will reduce impacts at the related intersections to less than significant. With implementation of the mitigation measures as well as those under the jurisdiction of the County and/or Caltrans standards, LOS at all other intersections will be at acceptable levels with the project incorporated. However, since the timing and funding of fair share improvements cannot be guaranteed, impacts are considered significant and unavoidable.

Congestion Management Plan (CMP)

A cumulative plan by design, the passage of Proposition 111 in June 1990 established a process for each metropolitan county in California, with an urbanized area of more than 50,000 population, including Riverside, to prepare a Congestion Management Plan. The Congestion Management Plan, which was prepared by the Riverside County Transportation Commission in consultation with the County and cities in Riverside County, is an effort to more directly align land use, transportation, and air quality management efforts, to promote reasonable growth management programs that effectively use statewide transportation funds, while ensuring that new development pays its fair share of needed transportation improvements.

The County of Riverside CMP has an adopted LOS standard of "E." Both the County and City of Riverside General Plans require LOS that conforms to the CMP standards. All impacts to key study intersections would reach LOS standards after implementation of mitigation measures, except Village West Drive at Van Buren Boulevard and Washington at Van Buren Boulevard, which would exceed the CMP LOS E acceptable levels in the long-term (Year 2025) LOS with a LOS F. The City of Riverside's

General Plan has allowed for LOS F to be adequate for certain regional feeders (Van Buren Boulevard) to function at LOS F levels and since this intersection is along a regional feeder. The County General Plan only allows LOS D at intersections of any on Major Streets, Arterials, Expressways, or conventional State highways within one mile of a freeway interchange (which this portion of Van Buren Boulevard would qualify as). However, because the intersection of Washington Street/Van Buren Boulevard and Village West Drive/Van Buren Boulevard exceed the LOS E standard from the Congestion Management Plan, this impact would be considered significant and unavoidable.

6.4.11 Urban Decay

As discussed in the Section 4.11, Urban Decay, when the project is implemented, there will still be more demand than supply of retail commercial uses in the project area along with the background and cumulative growth expected to occur. Table 4.11-3 and Table 4.11-4 in the section show that the demand for retail goods in the Trade Areas is much greater than the sales experienced by retail outlets currently located in these areas. The potential surplus identified under each Scenario in the section illustrates an overall leakage of $235.9 million and $231.7 million in the Primary Trade Area for Scenario #1 and Scenario #2, respectively. The overall shortfall in retail supply suggests that there is a substantial need for additional retail square footage. Therefore, incorporation of the project along with other projects will not result in the promotion of vacancies which will lead to physical deterioration of the surrounding community**.**

6.4.12 Utilities and Service Systems

The proposed project will connect to the existing stormwater, potable water, and wastewater system on the project site (see Figures 4.12-1 in Utilities Section). Some of these facility systems will be realigned and some pipes may be upgraded which would be conditioned for the proposed project. The project would decrease water usage at the project site in comparison to the existing agricultural use. Additionally, irrigation needs will be served with reclaimed water. Solid waste pickup will be serviced by Burrtec and be taken to the Robert A. Nelson Transfer Station, which is then taken to the Badlands landfill and other County landfills in the area. The proposed project will be expected to participate in the City's efforts to comply with the California Integrated Waste Management Act (AB 939) under the Public Resource Code and ensure that at least 50% of the waste stream is diverted away from the Badlands landfill.

On a cumulative basis, the surrounding area has been built-out and the utilities for the land uses has been considered and planned for in the City's General Plan. The project site is consistent with the land use assumptions in the City's General Plan, therefore the utilities needed to supply the project have been considered in the City's General Plan EIR, which found adequate services. The Regional Water Quality Control Plant is proposing to upgrade its wastewater capacity to accommodate for the project and other cumulative projects, and until that upgrade is conducted, the existing water treatment plant has capacity to service the project. The area's potable water would be serviced by WMWD. The

applicant has obtained a will-serve letter from the WMWD, confirming their intent to serve the project with potable water and indicating that they have adequate supplies in consideration of anticipated future demand. This reflects the projections in the UWMP, which takes into consideration cumulative growth conditions. Additionally, according to County Waste Management, the area landfills would have enough capacity to service this project along with others. As such, **cumulative impacts to utilities and service systems are less than significant.**

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7.0 ALTERNATIVES TO THE PROPOSED PROJECT

CEQA requires that an EIR evaluate a "reasonable" range of alternatives. According to the CEQA Guidelines, "…an EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives (Cal. Code Regs., Title 14, Section 15126.6(a))." According to this section of the State CEQA Guidelines, "…an EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation." Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to an alternative.

With respect to the selection of alternatives to be considered in an EIR, Section 15126.6(b) of the State CEQA Guidelines states "…the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." Each alternative must be capable of avoiding or substantially lessening any significant effects of the proposed project. The Initial Study prepared for the project determined that there could be potentially significant environmental impacts related to aesthetics, agricultural resources, air quality, biological resources, cultural resources, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, traffic, urban decay analysis, and utilities and service systems. During the DEIR analysis, impacts to agricultural resources, hydrology and water quality, and utilities and service systems were found to be less-than-significant and no mitigation measures were necessary. With mitigation incorporated, impacts to biological resources, cultural resources, hazards and hazardous materials, and noise remain less-than-significant. Aesthetic, agricultural, air quality greenhouse gas emissions, and traffic impacts were found to be significant and unavoidable. The rationale for selecting the alternatives to be evaluated, and a discussion of the "No Project" Alternative are also required, per Section 15126.6.

As stated in Section 2 of this DEIR, the Project Objectives for which the Alternatives were analyzed against include:

- Provide a broad range of retail sales and service with updated, modern, and energy-efficient buildings within the nearby residential community;
- Create a development consistent with the City's land use and general plan designation that will contribute to the maintenance of an economic base that provides high-quality jobs for those who choose to both live and work in Riverside;

- Create short-term construction employment and long-term operational employment;
- Utilize a commercially zoned and designated site that is located within an urbanized area through the development of an economically productive retail project;
- Improve the local and regional economy through job generation and increased tax revenues from the proposed retail uses;
- Incorporate elements of sustainable development to promote the efficient use of energy and water;
- Provide adequate parking facilities to serve the proposed retail uses;
- Provide improved public amenities and infrastructure;
- Develop a retail center with amenities within proximity to nearby residential community in order to reduce vehicles miles traveled to like services.

Pursuant to the guidelines stated above, as well as the Project Objectives, a range of alternatives to the proposed project are considered and evaluated in this EIR. These alternatives were developed by the City in the course of project planning, environmental review, and public hearings. In order to summarize these project alternatives, as suggested in CEQA Section 15126.6(d), a matrix has been prepared to summarize and compare the impacts of each project alternative, see **Table 7.0-A**, Comparison of Alternatives**.**

7.1 Alternatives Considered but Rejected by the Lead Agency

The following alternative was eliminated from further consideration.

7.1.1 Alternative Site Location

Off-site alternative locations were considered as part of the alternatives process. Section 15126.6(f)(2)(A) of the State CEQA Guidelines indicate that, in determining the consideration of an alternative location, the key question and first step in the analysis of the off-site location is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location.

It should be noted that the availability of an alternative site does not in and of itself reduce impact potential. It is expected that developing a similar project would result in a similar array of project impacts and would simply transfer this impact potential to areas surrounding the alternate site location. Alternative sites that are 40-acres in size and situated further from residential development could result in an increase in vehicles miles traveled as residents would have to travel further. Furthermore, the applicant does not own any of the alternative sites and it is not guaranteed if the applicant could acquire an alternative site in the future either in the City or County (i.e., March Air Reserve Base site to the east of the project site). Additionally, the project site is zoned for commercial uses, and a study of the surrounding area within the City determined that there were no viable 40-acre sites with commercial

zoning or land use designations. For these reasons, an alternate site location would not necessarily be preferred over the proposed project site.

Project Description

Due to the developed nature and existing land use designations found throughout much of the areas surrounding the project vicinity, suitable sites do not exist for this type/scale of development in the surrounding area. The vacant land to the east of the project site is owned by March Joint Powers Authority and is proposed for Business Park development.

Environmental Analysis

Because of the type of retail proposed by the project, a similar amount of land (i.e. 40 acres) would be required to accommodate the project at a different location. By reviewing current aerial photos, there are no vacant or undeveloped 40-acre parcels available for development within an approximately 2 mile radius and within the City of Riverside. Additionally, although the land to the east of the project site is vacant, it is designated for Business and Office Park uses, and is located in the County of Riverside. The March JPA owns this land and has an approved specific plan for this area, targeting it for business and office uses, not commercial retail. The project would still be expected to result in similar impacts to aesthetics, air quality, biological resources, cultural resources, greenhouse gas emissions, hazards and hazardous materials, urban decay analysis, noise, and traffic to that of the proposed project at its present location, and would require a similar level of mitigation to reduce identified impacts to less than significant levels. An alternative location would also have unavoidable air quality and greenhouse gas emission impacts due to application of architectural coatings, and projected operational emissions from both area source and vehicular emissions. The trip generation associated with the project would be the same regardless of the site location; therefore, the alternative site location would be expected to contribute to similar mitigations and significant impacts that are unavoidable.

Consideration/Elimination

Per CEQA Guidelines Section 15126.6 (f)(1), "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)." The applicant currently owns the project site and has control over types of land use development provided it meets the City's codes. The applicant cannot reasonably acquire, control, or otherwise have access to an alternative site. As stated above, there is also a lack of viable 40-acre undeveloped site in the vicinity of the project; therefore, an alternative site is infeasible. Additionally, since project related impacts would be similar for surrounding area properties, project

development on an alternative site would simply shift impacts from one area to another, without the benefit of removing any significant unavoidable impacts.

7.2 Description and Evaluation of Alternatives

Pursuant to Section 15126.6(a) of the *State CEQA Guidelines*, each alternative must be capable of avoiding or substantially lessening any significant effects of the proposed project. The proposed project was found to have potential significant environmental impacts related to aesthetics, agricultural resources, air quality, biological resources, cultural resources, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, traffic, and utilities and service systems. With mitigation, long-term impacts to aesthetics, biological resources, cultural resources, hazards and hazardous materials, noise, and traffic remain less-than-significant.

The rationale for selecting the alternatives to be evaluated and a discussion of the "No Project" Alternative are also required, per Section 15126.6 of the *State CEQA Guidelines*.

Five alternatives were deemed appropriate for analysis in this DEIR section. While the "No Project" Alternative would not likely meet most of the project objectives, CEQA requires that this scenario also be analyzed. Inclusion of the No Project Alternative provides the public/decision makers with a reasonable range of choices and allows comparison of impacts of approving the proposed project with the impacts of not approving the proposed project.

Each alternative is analyzed for potential environmental effects that were previously described for the proposed project. Since some of the proposed alternatives include residential development, potential environmental impacts to population/housing, public services, and recreation will be analyzed in each alternative. Due to the lack of significant impacts to geology/soils, and mineral resources, these issues are not discussed in this alternatives analysis. After each environmental issue is analyzed, a consideration/elimination discussion follows. This discussion relates to the project's feasibility as well as the project's relationship to the project objectives previously mentioned.

7.2.1 Proposed Project

The proposed project, as described in detail in Section 2.4 of this DEIR, proposes the removal of the majority of the existing orange grove with the development of a commercial retail center not to exceed 420,000 square feet in total size. The 40-acre site will be developed into a commercial retail center (Gless Ranch). The commercial retail center will include an approximately 138,516-square feet Target store, an approximately 124,076-square feet home improvement center, and approximately 125,608-square feet of other retail pads as permitted by 19.150.020 – Permitted Uses Table of the City of Riverside's Municipal Code. Approximately 104 existing citrus trees would remain on site along Gless Ranch Road. Approximately 646 new trees, including 200 dwarf citrus trees, will be planted throughout the project site. The citrus trees will be used as part of the landscape buffer between the proposed

Target store, home improvement center, and residential uses which are located along the southern and western boundaries of the site. New and different varieties of citrus trees will also be planted near the expanded fruit stand courtyard. The existing fruit stand will stay on site and be incorporated into the larger development plan.

7.2.2 No Project Alternative – Continued Agricultural Use

The No Project Alternative assumes that the project site would not be developed and the existing orange grove along with the existing fruit stand would remain and continue operation. The agricultural use on the site would maintain the non-conforming use on the project site as the site is planned for commercial land uses in the existing Zoning and General Plan Planned Land Use Map. Project-level impacts would be avoided. While this alternative would not meet the project objectives, CEQA requires the alternative to be analyzed.

7.2.3 Alternative 1 - Keep Natural Blueline Stream Feature Alternative

Keeping the Natural Blueline Stream Features Alternative would retain and enhance the existing unvegetated, ephemeral drainage located across the site. Retaining and enhancing the drainage will provide a natural aesthetic feature to the site design, making it more pedestrian and community friendly. Citrus trees could be planted along/near the drainage feature. It is assumed there would be a minimum building setback of 50 feet from the drainage feature. The Target and home improvement center will remain as the anchor tenants on site, along with six pads and the existing fruit stand. Courtyards will be provided at the westerly end of Target and the home improvement center for the employees. A pedestrian bridge will be constructed at the southwesterly portion of the drainage feature near the home improvement center so that both employees and visitors are able to access the entire shopping center. This alternative will reduce the number of pads on site and reduce the overall project footprint by approximately 118,000 square feet, making the total square footage of this Alternative to be 302,000 square feet. However, the alternative design of keeping the Blueline Stream is impractical as the home improvement center building would have to be divided into two buildings with the Blueline Stream running through the middle. In addition, the parking lot would have to be redesigned and multiple parking spaces would be lost resulting in an inefficient configuration.

7.2.4 Alternative 2 - Mixed Use Development

The Mixed-Use Development Alternative proposes a horizontal type mixed-use development with commercial use along the frontage of Van Buren Boulevard and Barton Street and residential development toward the southerly and westerly portion of the site. A General Plan Amendment and Rezoning would be required for the mixed-use zoning as mixed uses are not allowed in the existing Commercial zone for the site. The residential development would consist of 2-story, multiple-family housing units (condominiums/apartments). Commercial uses would be placed on the north portion of

the site, away from the residential development to the south and west property lines. Target will serve as the anchor tenant along the northeast portion of the site. The development will feature restaurants, a bank, the existing fruit stand and other light commercial type uses as permitted by the Commercial Zoning Code (Ch. 19.150). Landscaped buffers utilizing orange trees would be incorporated. Walking paths will link the residential and commercial type uses to provide connection within the mixed-use development.

7.2.5 Alternative 3 - Scaled-Down Commercial Center

The Scaled-Down Commercial Center Alternative would involve the development of a commercial retail center similar to that proposed; however, the size of the project would be less. Instead of developing a site with up to 420,000 square feet of retail commercial space with 15 tenants, an approximate total of 250,000 square feet would be constructed (an approximate 40% reduction in total building square footage). The site would be prepared, graded, and designed in the same manner as the proposed project, but would be pulled away from residences to the south and west, and pulled farther north. This project alternative would involve the development of a smaller retail development that would include only two retail stores - Target and another midsize tenant (i.e., grocery store). These two main retail anchor tenants will be set back farther from the residential uses (closer to Van Buren Boulevard) with the addition of more rows of citrus trees to serve as a landscape buffer along the southerly and westerly side of the site. The existing fruit stand will also remain on site.

7.2.6 Alternative 4 - Residential Development Alternative

The Residential Development Alternative would consist of single-family residential development. A General Plan Amendment and Rezoning from commercial to residential designation would be required as part of the entitlement process. The proposed zoning would be R-1-7000, single-family residential to match the existing surrounding residential development pattern. The density would be approximately four dwelling units per acre, which would result in approximately 140 to 150 residential lots with associated roads, sidewalk, open space, and utility improvements. The citrus trees could be incorporated as backyard landscaping in the residential lots and within the open space areas. The overall aesthetics of the residential development will be similar to the surrounding residences and avoid large scale retail buildings and parking lot lights.

7.3 Evaluation of Alternatives

In accordance with the State CEQA Guidelines Section 15126.6(d), the discussion of the environmental effects of the alternatives may be less detailed than the discussion of the impacts of the proposed project. Table 7.0-1 provides a summary of the alternatives impact analysis; an analysis comparing the impacts of the alternatives with the proposed project is provided below.

Table 7.0-1
Summary of Comparison of Alternatives Impacts

Environmental Issue Area	Proposed Project	No Project	Alternative 1 – Keep Natural Blueline Stream Feature	Alternative 2 – Mixed Use Development	Alternative 3 – Scaled Down Commercial Center	Alternative 4 – Residential Development
Aesthetics	Significant and Unavoidable	Better	Better	Same	Better	Better
Agricultural Resources	Significant and Unavoidable	Better	Same	Same	Same	Same
Air Quality	Significant and Unavoidable	Better	Better	Worse	Better	Worse
Biological Resources	Less than Significant Impacts with Mitigation Incorporated	Better	Better	Same	Same	Same
Cultural Resources	Less than Significant Impacts with Mitigation Incorporated	Better	Same	Same	Same	Same
Greenhouse Gas Emissions	Significant and Unavoidable	Better	Same	Same	Same	Same
Hazards and Hazardous Materials	Less than Significant Impacts with Mitigation Incorporated	Same	Same	Same	Same	Same
Hydrology and Water Quality	Less than Significant	Worse	Better	Same	Better	Same
Noise	Less than Significant Impacts with Mitigation Incorporated	Better	Same	Better	Better	Better
Transportation / Traffic	Significant and Unavoidable	Better for traffic impacts. Worse for alternate modes of transportation.	Better	Worse	Better	Worse
Utilities and Service Systems	Less than Significant Impacts	Worse	Same	Worse	Better	Worse

No Project Alternative

The No Project Alternative assumes that the project site would not be developed and the existing orange grove along with the existing fruit stand would remain and continue operation. The agricultural use on the site would maintain the non-conforming use on the project site as the site is planned for commercial land uses in the existing Zoning and General Plan Planned Land Use Map.

Aesthetics

Under the No Project Alternative, the proposed retail commercial center would not be constructed by the project proponent. The site would remain as an orange grove which is considered to be visually appealing to the surrounding residents and beneficial as a type of open space or semi-natural environment. Residents would still see the orange groves since the orange groves and associated structures would remain on site along with the area's scenic vistas. No new lighting or glare would be proposed since the existing orange groves would remain. Therefore, this alternative is considered superior to the Proposed Project since the orange groves would remain.

Agricultural Resources

Under the No Project Alternative, the existing orange groves and existing fruit stand would remain and continue operation. No forest land designation is on the project site. The Unique Farmland and Farmland of Statewide Importance designations on site would remain and not be impacted by a No Project Alternative; however, the site would still remain zoned for commercial uses and have the general plan designation for commercial uses. Therefore, the impacts of the No Project Alternative are considered to be less than impacts associated with the Proposed Project and superior to the Proposed Project as they relate to agricultural resources.

Air Quality

Under the No Project Alternative, the existing orange groves would remain and continue operation. The existing orange grove maintenance includes the use of pesticides that could be considered objectionable odor to some people, but the orange grove maintenance and operation has been in compliance with SCAQMD's AQMP. Vehicles would be limited to those going to the existing fruit stand and equipment used for the orange groves operation. This alternative would not require grading of the site, construction, or long-term operation that would violate any air quality standard, contribute substantially to an existing or project air quality violation, result in cumulatively considerable net increase of any criteria pollutant, or expose sensitive receptors to substantial pollutant concentrations. Grading causes air quality emissions, such as fugitive dust and other exhaust emissions created by construction equipment. Therefore, this alternative is environmentally superior to the Proposed Project with respect to air quality.

Biological Resources

Under the No Project Alternative, the existing orange grove would remain and provide the limited amount of cover for any wildlife moving across the site. The existing orange grove operation does not affect any local biological policies and would not trigger the need to comply with the MSHCP. The No Project Alternative would not affect federally protected wetlands as defined by Section 404 of the Clean Water Act since the ephemeral drainage on site is not considered waters or wetlands under the jurisdiction of the ACOE. This alternative is environmentally superior to the Proposed Project with respect to biological resources.

Cultural Resources

Under the No Project Alternative, the existing operation and structures would remain unchanged. No ground disturbance other than what is already occurring related to the operation of the citrus grove would occur. No known human remains are on site. This alternative is environmentally superior to the Proposed Project with respect to cultural resources.

Greenhouse Gas (GHG) Emissions

Under the No Project Alternative, the existing orange grove would remain and no construction would occur. Therefore, no generation of emissions above what is already occurring due to the existing operation or loss of sequestered carbon would occur with the No Project Alternative. For this reason, the No Project Alternative is environmentally superior to the Proposed Project with respect to GHG.

Hazards and Hazardous Materials

Under the No Project Alternative, the pesticides and fuels used as part of the existing orange grove operation would continue to be properly stored on site per local and state laws. No significant amount of soils would be removed from the site as a result of the existing citrus grove operation. This alternative is neither environmentally superior or inferior to the Proposed Project with respect to Hazards and Hazardous Materials because in both instances, fuels would be stored on site, with the No Project Alternative storing and using pesticides and the Proposed Project using and storing cleaning supplies.

Hydrology and Water Quality

Under the No Project Alternative, the existing orange grove operation would continue with no formal treatment facilities to control run off from pesticide use or petroleum products used in the existing orange grove operations. The site would retain the orange groves and not be paved. The site would continue to use imported sources and percolation rates would remain unchanged. No change to the natural drainage would occur and the drainage pattern of the site would remain unchanged. However, under the unchanged condition, no NPDES requirements would be implemented to ensure erosion or

flooding impacts are addressed. The existing orange grove operation conveys stormwater either thru the natural drainage connecting to the existing stormwater facilities or sheet flow off site. There is currently no source of pollution prevention or treatment on the site. Water quality from the site would continue to be untreated. Therefore, impacts to hydrology and water quality would be increased under this alternative and considered inferior to the Proposed Project.

Noise

Under the No Project Alternative, no new construction would be proposed. The existing orange grove would continue its operation and not generate new noise than what currently exists with its operation. The equipment and vehicles used for the orange grove operation would not exceed the noise levels established in the City's General Plan or noise ordinance. The Proposed Project, however, would result in an increase of noise events on the site, during construction and operation, and would require mitigation for such events. Therefore, this alternative is environmentally superior to the Proposed Project with respect to noise.

Transportation/Traffic

Under the No Project Alternative, intersection improvements to the surrounding roadway system would not take place. However, the existing orange grove operation does not cause a substantial increase in traffic or vehicle trips that affects the performance of the current circulation system. The existing orange grove operation does not cause additional vehicles to travel through the area than what has been previously analyzed. However, there are no bicycle lanes, bicycle racks, public transit, or sidewalks along Van Buren Boulevard or Barton Street that would be installed. This alternative is environmentally superior to the Proposed Project in respect to vehicular transportation and traffic, but inferior to the Proposed Project in respect to alternate modes of transportation.

Utilities and Service Systems

Under the No Project Alternative, the existing orange grove operation would still be connected to the existing facilities and still have adequate capacity to serve the orange grove operation's projected demand. Western Municipal Water District currently supplies water to the site, but water costs are expected to increase over time making the viability of irrigating with potable water sources infeasible. Disposal of waste would be similar to that of the Proposed Project such that the waste would be taken to the Robert A. Nelson Transfer Station which has sufficient capacity to accommodate solid waste disposal needs and still comply with federal, state, and local statutes related to solid waste, but amounts of solid waste generated from the site is expected to be less than the Proposed Project. Therefore, since the No Project Alternative would continue to irrigate with potable sources which is inefficient and expensive, this alternative would be inferior to the Proposed Project.

Relationship to Project Objectives and Feasibility

Under the No Project Alternative, the orange grove operation would continue its operation. This alternative would not result in new construction. Table 7.0-2 provides a list of the project objectives and whether or not the alternative meets each objective.

Table 7.0-2
Summary of No Project Alternative Success at Meeting Project Objectives

Project Objective	Alternative Meets Objective?
Provide a broad range of retail sales and service with updated, modern, and energy-efficient buildings within the nearby residential community.	No; the No Project Alternative would not result in the development of a retail center. The project site would continue its orange grove operation.
Create a development consistent with the City's land use and general plan designation that will contribute to the maintenance of an economic base that provides high-quality jobs for those who choose to both live and work in Riverside.	No, the No Project Alternative would allow the existing orange groves to be a non-conforming use under the currently commercial zoning and land use designation.
Create short-term construction employment and long-term operational employment.	No; the No Project Alternative would not result involve new construction/development that would create short-term construction employment and long-term operational employment. The project site would continue its orange grove operation.
Utilize an under-utilized site that is located within an urbanized area through the development of an economically productive retail project.	No; the No Project Alternative would not result involve new construction/development. The project site would continue its orange grove operation.
Improve the local and regional economy through job generation and increased tax revenues from the proposed retail uses.	No; the No Project Alternative would not result in the development of a retail center. The project site would continue its orange grove operation.
Incorporate elements of sustainable development to promote the efficient use of energy and water.	No; the No Project Alternative would not incorporate elements of sustainable development to promote efficient use of energy and water since no new development would be proposed. The project site would continue its orange grove operation which requires daily watering for its trees.
Provide adequate parking facilities to serve the proposed retail uses.	No; the No Project Alternative would not result in the development of a retail center that would trigger the need for a parking facility. The existing orange grove operation would continue.
Provide improved public amenities and infrastructure.	No; the No Project Alternative would not result in improved public amenities or infrastructures since the project site would continue its orange grove operation.
Develop a retail center with amenities within proximity to nearby residential community in order to reduce vehicles miles traveled to like services.	No; the No Project Alternative would not result in the development of a retail center. The project site would continue its orange grove operation.

While this alternative would result in a reduction of environmental impacts, this alternative would not meet any of the project objectives. The existing orange grove operation is also not consistent with the current zoning and land use designations. Therefore, this alternative has been eliminated from further consideration and is determined to be not feasible.

Alternative 1 – Keep Natural Blueline Stream Feature

Keeping the Natural Blueline Stream Features Alternative would retain and enhance the existing unvegetated, ephemeral drainage located across the site. Retaining and enhancing the drainage will provide a natural aesthetic feature to the site design, making it more pedestrian and community friendly. Citrus trees could be planted along/near the drainage feature. It is assumed there would be a minimum building setback of 50 feet from the drainage feature. The Target and home improvement center will remain as the anchor tenants on site, along with six pads and the existing fruit stand. Courtyards will be provided at the westerly end of Target and the home improvement center for the employees. A pedestrian bridge will be constructed at the southwesterly portion of the drainage feature near the home improvement center so that both employees and visitors are able to access the entire shopping center. Citrus trees would still be used as a buffer. This alternative will reduce the number of pads on site and reduce the overall project footprint by approximately 118,000 square feet, making the total square footage of this Alternative to be 302,000 square feet, an approximately 30% reduction in building square footage from the Proposed Project.

Aesthetics

Keeping the Natural Blueline Stream Feature Alternative would involve a commercial development similar to the Proposed Project, but would only include the Target store and home improvement center along with six pads and the existing fruit stand. Majority of the orange groves would be removed with the construction of the commercial center. The blueline stream feature that traverse the northwest portion of the site would be retained and provide a natural aesthetic feature. This alternative would also not affect Van Buren Boulevard's designation as a scenic and special boulevard. This alternative would still include citrus trees as a buffer. Similar mitigation measures to buffer the development from adjacent residential development and reduce onsite lighting would be required. Glare would be similar to the Proposed Project though slightly reduced because of the reduction in building size under this alternative. The reduced building square footage would result in a reduction of reflective surfaces and vehicles parked at the site, which can result in glare. Therefore, aesthetic impacts of this alternative are considered environmentally superior by retaining the natural drainage and enhancing it within the development to provide an aesthetically pleasing view.

Agricultural Resources

Under the Natural Blueline Stream Features Alternative, the ephemeral drainage on site would be retained. However, the majority of the orange groves will still be removed with the development of a

commercial retail center thus eliminating the Unique Farmland and Farmland of Statewide Importance designation. Similar to the Proposed Project, some citrus trees would remain to serve as landscape buffer between the development and residential development. No forest land designation is on the project site and no other agricultural uses surround the project site. However, although the site is designated for commercial land use in the City's General Plan, because the Natural Blueline Stream Features Alternative would convert existing agricultural lands to non-agricultural lands, the conversion of the site from agricultural uses to non-agricultural uses is considered significant. Therefore, agricultural resource impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Air Quality

Alternative 1 would still result in air emissions that would be generated during construction and operation. Construction of this Alternative would still require grading, site preparation and removal of the citrus trees, all which generate air emissions. This Alternative would still be required to incorporate reduction measures such as complying with Rule 403 and using low VOC architectural coatings. For operational impacts, the commercial uses on site would generate vehicle trips which would be a source of air emissions and would have similar impacts as the Proposed Project. Even with the reduced square footage of the project, it is reasonable foreseeable that the vehicle trips would still cause an exceedance in air quality standards. However, because of the reduced project size, and therefore a subsequent reduction in air emissions, impacts to air quality would be considered environmentally superior to the Proposed Project under this alternative, even though impacts would remain significant and unavoidable.

Biological Resources

This alternative retains the natural drainage on site. Mitigation measures to conduct pre-clearing nesting bird surveys to ensure that any potential impacts to nesting birds would be reduced to less-than–significant would still be required. This alternative would protect and conserve the unvegetated ephemeral drainage on site. Federally protected wetlands as defined by Section 404 of the CWA would not be impacted since the ephemeral drainage is not considered waters or wetlands under the jurisdiction of the ACOE. No regulatory permits would be required. The project site is not located within an identified wildlife corridor or linkage area (i.e. not in the Criteria Area) within the MSHCP which means it is not an area that was envisioned to be preserved for biological resources. There are no general plan policies to protection of biological resources, nor is there a city tree preservation policy that would affect the project. This alternative would have to meet local goals and policies through compliance with the MSHCP. Therefore, because the natural drainage will be retained and not impacted, impacts to biological resources of this alternative are considered superior to the Proposed Project.

Cultural Resources

Under the Natural Blueline Stream Features Alternative, similar mitigation measures requiring measures to be taken in the unlikely event that unknown archaeological resources or unknown paleontological resources are uncovered during site disturbance would be required. Similar compliance with the Health and Safety Code Section 7050.5 would be required when human remains are inadvertently discovered during construction activities. No structures on the project site have been designated as historic under the City's Title 20, nor do any of the structures on the project site meet the criteria of a state or federal historic designation. Therefore, cultural resource impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Greenhouse Gas (GHG) Emissions

Under the Natural Blueline Stream Features Alternative, although the development footprint is reduced to 302,000 square feet (as opposed to 420,000 square feet for the Project), similar to that of the Proposed Project, this alternative would contribute to the overall production of GHG emissions during construction and operation. However, Alternative 1's contribution to global GHG emissions and the resultant effect on global climate should be evaluated on a cumulative basis. Although substantial GHG reductions that will be implemented by the Project, given that the proposed project would generate GHG emissions, and the current status of climate change science and regulations and the City's inability to address mobile source emissions, the project would have a cumulatively considerable contribution and hence a cumulatively significant impact in terms of climate change.

While this project may generate fewer emissions from the reduced square footage and as a result of fewer vehicle trips, vehicles traveling to and from the project site would be the primary source of project-generated GHG emissions under this alternative, as with the proposed project. As levels of GHG emissions in the atmosphere are generally at levels that create adverse impacts (i.e., climate change), the emissions of a particular project, even if not significant in terms of thresholds, may nonetheless contribute to an adverse, unavoidable impact because other projects do not meet such standards and because other actors (e.g., state and federal government actors) may not take action to reduce emissions from mobile sources.

As with the Proposed Project, the City has no jurisdiction to control the climate change impacts of projects outside its boundaries. Therefore, GHG impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Hazards and Hazardous Materials

Alternative 1 would not change the status of the site being listed on a known hazardous waste or substance site. Site remediation would still be required, as required for the Proposed Project. Under the Alternative 1, similar mitigation measures to store hazardous materials and substances from the public

would be required. No new use or procedures would be proposed under this Alternative that would create a risk from hazardous waste or substances. Additionally, the past use the project site would have the same effect on this Alternative as the Proposed Project. Therefore, hazardous impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Hydrology and Water Quality

Under the Alternative 1, the natural drainage is retained. Development of the site would still create sources of urban runoff that needs to meet water quality standards. Similar pollution control measures would be required pursuant to NPDES requirements like that of the Proposed Project which includes on-site grated inlets and curb-opening catch basins to catch runoff, which would then be directed to on-site treatment facilities (detention basins) to remove any pollutants of concern. Prior to entering the detention basins, proprietary treatment devices would pretreat runoff for sediment trash, and media filters located at the bottom of each detention basin would filter for bacteria. Site design and source control BMPs and SWPPP would also be incorporated to ensure that water quality on the project site would not be degraded as a result from construction and operation. Under this alternative, the natural drainage would remain on site and provide for the natural drainage pattern to be retained. WQMP requirements ensure that erosion and flooding are not increased. The natural drainage would remain allowing for recharge and percolation to continue. Fewer amounts of pavement would be used under this alternative, since it represents an approximately 30% reduction in building square footage. No groundwater resources would be utilized. Therefore, since the drainage will not be impacted and since there will be less impervious surfaces, this alternative is environmentally superior to the Proposed Project with respect to hydrology and water quality impacts.

Noise

Under the Alternative 1, similar construction and operational noise impacts would occur. Although this alternative represents a 30% reduction in building square footage, the project would still result in construction noise, but similar reduction measures such as limiting construction hours, placing mufflers on equipment engines, shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, orienting stationary sources to direct noise away from sensitive uses, maximizing the distance between construction of equipment staging areas and occupied residential areas, using electric air compressors and similar power tools, rather than diesel equipment where feasible, incorporating construction noise reduction methods, requiring a minimum setback of 400 feet from any existing homes during tree-chipping operation, requiring that stockpiling and vehicle staging areas be located away from noise sensitive receptors, and requiring all construction and operational activities to comply with the City's Municipal Code would still apply. Retail stores would comply with the hours of operation allowed for a commercial use and delivery trucks would only be allowed during specified hours as outlined in the City's Noise Code. Also, similar to the Proposed Project, this Alternative would construct masonry block wall along the west and south sides of the project site to

mitigate noise associated with the proposed docking and loading bays and for the auto-tire facility and install roof parapets on all infrastructures to screen outdoor mechanical equipment. Similar to the Proposed Project, this Alternative would be designed to be setback far enough from the adjacent residences and would generate a peak particle velocity of less than 0.1 inch/second at the adjacent homes, where Caltrans has indicated that continuous vibrations with a peak particle velocity of approximately 0.1 inch/second begin to annoy people. The additional traffic volume, including cumulative, plus ambient, plus project condition, along the adjacent roads would not substantially increase the existing noise level in the project vicinity. As such, noise impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Transportation/Traffic

Alternative 1 results in an approximately 30% reduction in building square footage, but would still be a shopping center having similar peak hour impacts as the proposed project. With the reduction in building square footage, there would be reduction in average daily trips, and a slight decrease in traffic impacts on the surrounding roadway system. There would still be construction-related traffic, but it would be less than the Proposed Project, given the smaller size of the development. Therefore, transportation and traffic impacts would be reduced with the implementation of this Alternative. However, because several of the potentially significant impact locations would have infeasible mitigation measures (see Section 4.10, Traffic, for explanation), some impacted locations would remain significant and unavoidably impacted. Because of the reduced size of this alternative, and the subsequent reduction in traffic trips, this Alternative is environmentally superior to the proposed project with respect to transportation and traffic.

Utilities and Service Systems

Alternative 1 would connect to the existing stormwater, potable water, and waste water systems located in city streets surrounding the site. Similar to the Proposed Project, the applicant would be required to obtain a will-serve letter from WMWD confirming their intent to serve the project with potable water and indicating that they have adequate supplies. The City's General Plan has considered and planned for additional wastewater with implementation of this alternative. Waste would be taken to Robert A. Nelson Transfer Station which has sufficient permitted capacity to accommodate the project's solid waste disposal needs. Any future tenant or use on the site would be required to comply with any federal, state, or local statutes or regulations related to solid waste generation and disposal. Therefore, utilities and service system impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Relationship to Project Objectives and Feasibility

Under the Keeping the Blueline Stream Feature Alternative, the existing unvegetated, ephemeral drainage on the project site would be retained. Building setback of 50 feet would probably be required from the drainage feature and citrus trees would be planted along the drainage area. Target and the home improvement center would remain as the anchor tenants on site, along with six pads and the

existing fruit stand. The overall building square footage would be reduced by approximately 30% as compared to the Proposed Project. Table 7.0-3 provides a list of the project objectives and whether or not the alternative meets each objective.

Table 7.0-3
Summary of Alternative 1 Success at Meeting Project Objectives

Project Objective	Alternative Meets Objective?
Provide a broad range of retail sales and service with updated, modern, and energy-efficient buildings within the nearby residential community.	Yes, Alternative 1 would develop a Target, home improvement center along with six pads and the existing fruit stand. Retail would be limited, rather than providing a broad range, under this alternative. Buildings would comply with Title 24 requirements.
Create a development consistent with the City's land use and general plan designation that will contribute to the maintenance of an economic base that provides high-quality jobs for those who choose to both live and work in Riverside.	Yes, Alternative 1 would be consistent with the City's commercial zoning and commercial land use designation. The commercial retail stores would provide high-quality jobs for Riverside residents.
Create short-term construction employment and long-term operational employment.	Yes, Alternative 1 would provide short-term construction employment and long-term operational employment from development of the retail stores.
Utilize an under-utilized site that is located within an urbanized area through the development of an economically productive retail project.	Yes, Alternative 1 would provide an economically productive retail project with the development of a Target Store, home improvement center along with six pads and the existing fruit stand.
Improve the local and regional economy through job generation and increased tax revenues from the proposed retail uses.	Yes, Alternative 1 would generate employment opportunities and boost retail sales from development of the Target Store, home improvement center, six pads, and the existing fruit stand.
Incorporate elements of sustainable development to promote the efficient use of energy and water.	Yes, Alternative 1 would incorporate sustainable design elements to promote efficient use of energy and water. Target anticipates incorporating the following sustainable features: Site/Building Design: • Report Target's carbon footprint annually to the Carbon Disclosure Project. • Use low–volatile organic compound (VOC) materials for all flooring, adhesives, sealants, paints and coatings, ceilings, and wall systems. • Plant a minimum of 145 shade trees as close as 15 feet to the west property line and 18 feet to the south property line. Energy Efficiency and Optimization: • Use high-efficiency rooftop heating and air conditioning equipment. • Use a highly reflective white roof membrane to

Table 7.0-3
Summary of Alternative 1 Success at Meeting Project Objectives

Project Objective	Alternative Meets Objective?
	reduce cooling load. • Install store-based integrated energy management system controls for lighting, refrigeration, heating and cooling equipment, and exhaust fans to ensure energy management over time. • Use two-lamp, T8 fluorescent lamps and electronic ballasts throughout the store, and motion-sensor lighting in stock rooms. • Use reevaluated temperature settings, lighting levels, and equipment run times to identify efficiency opportunities. • Verify energy efficiencies and identify potential improvements by instituting a “building commissioning” department. Waste Reduction: • Manage and recycle construction waste to divert 75% of all construction refuse. • Use construction materials with a minimum of 10% recycled content, including 50% minimum recycled content in structural steel framing, 20% in joists and joist girders, fly ash in concrete, crushed concrete sub-base in parking lots, and recycled bituminous paving in drive surfaces. • Utilize regional materials in construction to the extent possible. • Use wood from Forest Stewardship Council–certified sources for all blocking, framing, and sheathing. Water: • Regularly assess and maintain stormwater treatment systems. • Use low-flow fixtures, reducing water use by 30%. • Use customized irrigation settings to avoid over watering of landscaping. • Comply with the local water-efficient landscape requirements. Transportation/Vehicle Trips: • Reduce employee vehicle miles traveled (VMT) by following Target’s practice of hiring, on average, more than 85% of Target’s team members from the immediate area surrounding the store. • Reduce VMT by locating the project in proximity to the other uses in the shopping

Table 7.0-3
Summary of Alternative 1 Success at Meeting Project Objectives

Project Objective	Alternative Meets Objective?
	center. • The City would require the remainder of the tenants to incorporate similar features as applicable.
Provide adequate parking facilities to serve the proposed retail uses.	Yes, Alternative 1 would provide a parking lot to serve the retail uses.
Provide improved public amenities and infrastructure.	Yes, Alternative 1 would incorporate bike lanes, pedestrian walkway/sidewalk, courtyard, and new construction of retail buildings.
Develop a retail center with amenities within proximity to nearby residential community in order to reduce vehicles miles traveled to like services.	Yes, Alternative 1 would include development of a Target Store, home improvement center, six pads and the existing fruit stand to serve residents to the north, south, and west of the project site.

This alternative would not provide as many retail uses and short-term and long-term employment as that of the Proposed Project thereby reducing the local and regional economy with less tax revenues. In addition, the site would not be developed and utilized to the maximum extent to create an economically productive retail project. Therefore, Alternative 1 does not meet the project objectives to the extent as that of the Proposed Project.

Alternative 1 is environmentally superior to the Proposed Project as it relates to: aesthetics, biological resources, hydrology, and traffic/transportation. However, this Alternative would be considered to have the same impacts as the Proposed Project for all other impact areas discussed above. Specifically, this alternative would not reduce to less-than-significant the project's significant and unavoidable air and greenhouse gas impacts. Nonetheless, this alternative would be considered environmentally superior to the Proposed Project.

Alternative 2 – Mixed Use Development

The Mixed-Use Development Alternative proposes a horizontal type mixed-use development with commercial use along the frontage of Van Buren Boulevard and Barton Street and residential development toward the southerly and westerly portion of the site. A General Plan Amendment and Rezoning would be required for the mixed-use zoning as mixed uses are not allowed in the existing Commercial zone for the site. The residential development would consist of 2-story, multiple-family housing units (condominiums/apartments). Commercial uses would be placed on the north portion of the site, away from the residential development to the south and west property lines. This alternative will reduce the carbon footprint since residents will be able to walk to the commercial type businesses within the site. Target will serve as the anchor tenant along the northeast portion of the site. The

development will feature restaurants, a bank, the existing fruit stand and other light commercial type uses as permitted by the Commercial Zoning Code (Ch. 19.150). Landscaped buffers utilizing orange trees would be incorporated. Walking paths will link the residential and commercial type uses to provide connection within the mixed-use development.

Aesthetics

The Mixed Use Development Alternative 2 would remove the majority of the orange groves and associated structures and would include development of commercial uses along the frontage of Van Buren Boulevard and Barton Street, away from the residential development to the south and west of the project site. Multi-family residential developments would be constructed to the south and west of the project site. The adjacent existing residences to the south and west of the project site would be able to see the multi-family residences with a probable reduced landscape buffer as compared to the Proposed Project. This Alternative does not adversely affect the scenic and special designation of Van Buren Boulevard, per the City's General Plan. Similar mitigation measures to reduce onsite lighting would also be required for Alternative 2. However, since the surrounding residents would see multi-level residences and commercial uses, along with a reduced landscaped buffer, the aesthetic impacts from Alternative 2 would be increased and considered inferior to the Proposed Project.

Agricultural Resources

Under the Mixed Use Development Alternative, similar direct impacts to loss of Unique Farmland and Farmland of Statewide Importance would occur. The majority of the orange groves and associated structures would be removed for the construction of commercial buildings and multi-family residential developments. Similar to the Proposed Project, some citrus trees would remain to serve as landscape buffer between the development and residential development. Impacts related to the conversion of agricultural resources to a mixed use development would be similar to that of the Proposed Project since it would be converted to a non-agricultural use. No other agricultural uses surround the project site. No forest land designation is on the project site. Therefore, agricultural resource impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Air Quality

Alternative 2 would still result in air emissions that would be generated during construction and operation. Construction of this Alternative would still require grading, site preparation and removal of the citrus trees, all which generate air emissions. This Alternative would still be required to incorporate reduction measures such as complying with Rule 403 and using low VOC architectural coatings. For operational impacts, the residential and commercial uses on site would generate vehicle trips which would be a source of air emissions and would have similar, but likely increased impacts as the Proposed Project as residents may be entering and leaving the site throughout the day as compared to only retail stores which would be limited to vehicles during hours of operation. With the combination of the

residential and commercial uses, it is expected there would be an increase in the average daily trips, and associated air quality impacts. Therefore, impacts to air quality would be considered inferior to the Proposed Project.

Biological Resources

Alternative 2 would not result in more or different impacts to biological resources as the Proposed Project. Similar mitigation measures such as pre-clearing nesting bird surveys to ensure that any potential impacts to nesting birds would be reduced to less-than–significant would be still be required for Alternative 2. Also, similar to the Proposed Project, this alternative would be required to comply with the 1602 Streambed Alteration Agreement, submit a report of waste discharge to the RWQCB to obtain either a waste discharge requirement or a waiver for any impacts to water of the State in accordance with Porter-Cologne Act. Federally protected wetlands as defined by Section 404 of the CWA would not be impacted since the ephemeral drainage on site is not considered waters or wetlands under the jurisdiction of the ACOE and RWQCB. The project site is not located within an identified wildlife corridor or linkage area (i.e. not in the Criteria Area) within the MSHCP which means it is not an area that was envisioned to be preserved for biological resources. There are no general plan policies to protection of biological resources, nor is there a city tree preservation policy that would affect the project. This alternative would have to meet local goals and policies through compliance with the MSHCP. Therefore, biological resources of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Cultural Resources

Under the Mixed Use Development Alternative, similar mitigation measures requiring measures to be taken in the unlikely event that unknown archaeological resources or unknown paleontological resources are uncovered during site disturbance would be required. Similar compliance with the Health and Safety Code Section 7050.5 would be required when human remains are inadvertently discovered during construction activities. No structures on the project site have been designated as historic under the City's Title 20, nor do any of the structures on the project site meet the criteria of a state or federal historic designation. Therefore, cultural resource impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Greenhouse Gas (GHG) Emissions

Under the Mixed Use Development Alternative, this alternative would contribute to the overall production of GHG emissions during construction and operation. However, Alternative 2's contribution to global GHG emissions and the resultant effect on global climate should be evaluated on a cumulative basis. Although substantial GHG reductions that will be implemented by the Project, given that the proposed project would generate GHG emissions, and the current status of climate change science and regulations and the City's

inability to address mobile source emissions, the project would have a cumulatively considerable contribution and hence a cumulatively significant impact in terms of climate change.

As with the proposed project, under this alternative vehicles traveling to and from the project site would be the primary source of project-generated GHG emissions. With the combination of the residential and commercial uses, it is expected there would be an increase in the average daily trips, and therefore, an increase in GHG emissions. As levels of GHG emissions in the atmosphere are generally at levels that create adverse impacts (i.e., climate change), the emissions of a particular project, even if not significant in terms of thresholds, may nonetheless contribute to an adverse, unavoidable impact because other projects do not meet such standards and because other actors (e.g., state and federal government actors) may not take action to reduce emissions from mobile sources.

As with the Proposed Project, the City has no jurisdiction to control the climate change impacts of projects outside its boundaries. Therefore, GHG impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Hazards and Hazardous Materials

Alternative 2 would not change the status of the site being listed on a known hazardous waste or substance site. Site remediation would still be required, as required for the Proposed Project. Under the Mixed Use Development Alternative, similar mitigation measures to store hazardous materials and substances from the public would be required. Therefore, hazardous impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Hydrology and Water Quality

Under the Mixed Use Development Alternative, development of the site would still create sources of urban runoff that needs to meet water quality standards. Similar pollution control measures would be required pursuant to NPDES requirements like that of the Proposed Project which includes on-site grated inlets and curb-opening catch basins to catch runoff, which would then be directed to on-site treatment facilities (detention basins) to remove any pollutants of concern. Prior to entering the detention basins, proprietary treatment devices would pretreat runoff for sediment trash, and media filters located at the bottom of each detention basin would filter for bacteria. Site design and source control BMPs and SWPPP would also be incorporated to ensure that water quality on the project site would not be degraded as a result from construction and operation. No groundwater sources would be needed to serve this alternative. Less development coverage would mean slightly less impervious surfaces which would slightly improve the percolation on the site. Development of this alternative would remove the natural drainage and construct underground drainage facilities and underground stormwater system that would connect to the existing system that does not need to be upgraded to support the project. The drainage pattern would remain the same as the discharge would be the same. WQMP requirements would ensure that erosion and flooding are not increased. Also, sources of pollution are

treated on site via the requirements of the WQMP. Therefore, hydrology and water quality impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Noise

Under the Mixed Use Alternative, similar construction noise impacts would occur, however, since multi-family uses would be included in this Alternative, the operation noise impacts would be considered to be different and perhaps more intense than the proposed Project. Noise sources with the multi-family uses would include noise from residences such as music, talking, laughter, children playing. However, these noise sources would also be considered to be similar and compatible to those of the surrounding residential uses. Alternative 2 would still limit construction hours, place mufflers on equipment engines, shut off idling equipment, install temporary acoustic barriers around stationary construction noise sources, orient stationary sources to direct noise away from sensitive uses, maximize the distance between construction of equipment staging areas and occupied residential areas, use electric air compressors and similar power tools, rather than diesel equipment where feasible, incorporate construction noise reduction methods, require a minimum setback of 400 feet from any existing homes during tree-chipping operation, require that stockpiling and vehicle staging areas be located away from noise sensitive receptors, and require all construction and operational activities to comply with the City's Municipal Code. Retail stores would comply with the hours of operation allowed for a commercial use and delivery trucks would only be allowed during specified hours as outlined in the City's Noise Code. Additionally, the multi-family use development would comply with the City's Noise Code for Residences. Similar to the Proposed Project, this Alternative would construct a masonry block wall along the west and south sides of the project site to shield the adjacent residential uses from noise associated with the proposed on site activities and install roof parapets on all infrastructures to screen outdoor mechanical equipment. Similar to the Proposed Project, Alternative 2 would be designed to be setback far enough from the adjacent residences and would generate a peak particle velocity of less than 0.1 inch/second at the adjacent homes, where Caltrans has indicated that continuous vibrations with a peak particle velocity of approximately 0.1 inch/second begin to annoy people. The additional traffic volume, including cumulative, plus ambient, plus project condition, along the adjacent roads would not substantially increase the existing noise level in the project vicinity. As such, and because this alternative would place residential uses adjacent to residential uses, noise impacts of this alternative are considered equivalent or better and therefore superior to the Proposed Project.

Transportation/Traffic

Alternative 2 results in commercial and high-density residential uses, and would therefore have different peak hour impacts as the Proposed Project. With the combination of the residential and commercial uses, it is expected there would be an increase in the average daily trips, and slight increase in traffic impacts on the surrounding roadway system due to the additional traffic from this Alternative. There would still be construction-related traffic similar to that of the Proposed Project. Transportation and

traffic impacts would be increased with the implementation of this Alternative. Therefore, Alternative 2 is environmentally inferior to the proposed project with respect to transportation and traffic.

Utilities and Service Systems

Under the Mixed Use Development Alternative, the project would connect to the existing stormwater, potable water, and waste water system located in existing city streets surrounding the site. This alternative would require more demand in water than the Proposed Project since the site would need to serve both the commercial and residential uses. Residential water use includes, but is not limited to, bathing, flushing the toilets, cooking, drinking, watering plants, and cleaning. The applicant would be required to obtain a will-serve letter from WMWD confirming their intent to serve the project with potable water and indicating that they have adequate supplies. This alternative would require additional analysis to determine if the project site would have adequate capacity to serve the project's projected wastewater demand since the City's General Plan did not analyze the possibility of the project site as a Mixed Use Development. Waste would be taken to Robert A. Nelson Transfer Station. Any future tenant or use on the site would be required to comply with any federal, state, or local statutes or regulations related to solid waste generation and disposal. Utilities and service system impacts would be increased and considered inferior to the Proposed Project.

Relationship to Project Objectives and Feasibility

Under the Mixed Use Development Alternative, commercial uses would be developed along the frontage of Van Buren Boulevard and Barton Street while multi-family residences would be developed toward the southerly and westerly portion of the site. Table 7.0-4 provides a list of the project objectives and whether or not the alternative meets each objective. A General Plan Amendment and Rezoning would be required since this alternative would not be consistent with the current commercial zoning and land use designation. Carbon footprint would be reduced since residents would be able to walk to the Target Store, restaurants, bank, existing fruit stand and other light commercial type businesses on site. Walking paths would link the residential and commercial type uses to provide connection within the mixed-use development.

Table 7.0-4
Summary of Alternative 2 Success at Meeting Project Objectives

Project Objective	Alternative Meets Objective?
Provide a broad range of retail sales and service with updated, modern, and energy-efficient buildings within the nearby residential community.	Yes, Alternative 2 would include development of a Target Store along with the existing fruit stand and permitted light/limited commercial uses to serve residents who would live on site as well as residents adjacent to the site, though at a reduced capacity compared to the Proposed Project. Buildings would have to comply with Title 24 requirements.

Table 7.0-4
Summary of Alternative 2 Success at Meeting Project Objectives

Project Objective	Alternative Meets Objective?
Create a development consistent with the City's land use and general plan designation that will contribute to the maintenance of an economic base that provides high-quality jobs for those who choose to both live and work in Riverside.	No, Alternative 2 would not be consistent with the City's land use and general plan designation and would require a General Plan Amendment and Rezone.
Create short-term construction employment and long-term operational employment.	Yes, Alternative 2 would provide short-term construction employment and long-term operational employment, though at a reduced capacity compared to the Proposed Project, from development of the retail stores and short-term construction employment and maintenance work for the residential development.
Utilize an under-utilized site that is located within an urbanized area through the development of an economically productive retail project.	No, Alternative 2 would not construct retail uses on the entire site; rather, both commercial and residential development would be constructed.
Improve the local and regional economy through job generation and increased tax revenues from the proposed retail uses.	Yes, Alternative 2 would provide employment opportunities and allow on-site residents and nearby consumers to shop thereby boosting the local/regional economy, though at a reduced capacity compared to the Proposed Project.
Incorporate elements of sustainable development to promote the efficient use of energy and water.	Yes, Alternative 2 would incorporate sustainable design elements to promote efficient use of energy and water. Target anticipates incorporating the following sustainable features: Site/Building Design: • Report Target's carbon footprint annually to the Carbon Disclosure Project. • Use low–volatile organic compound (VOC) materials for all flooring, adhesives, sealants, paints and coatings, ceilings, and wall systems. • Plant a minimum of 145 shade trees as close as 15 feet to the west property line and 18 feet to the south property line. Energy Efficiency and Optimization: • Use high-efficiency rooftop heating and air conditioning equipment. • Use a highly reflective white roof membrane to reduce cooling load. • Install store-based integrated energy management system controls for lighting, refrigeration, heating and cooling equipment, and exhaust fans to ensure energy management over time. • Use two-lamp, T8 fluorescent lamps and electronic ballasts throughout the store, and motion-sensor lighting in stock rooms.

Table 7.0-4
Summary of Alternative 2 Success at Meeting Project Objectives

Project Objective	Alternative Meets Objective?
	• Use reevaluated temperature settings, lighting levels, and equipment run times to identify efficiency opportunities. • Verify energy efficiencies and identify potential improvements by instituting a "building commissioning" department. Waste Reduction: • Manage and recycle construction waste to divert 75% of all construction refuse. • Use construction materials with a minimum of 10% recycled content, including 50% minimum recycled content in structural steel framing, 20% in joists and joist girders, fly ash in concrete, crushed concrete sub-base in parking lots, and recycled bituminous paving in drive surfaces. • Utilize regional materials in construction to the extent possible. • Use wood from Forest Stewardship Council–certified sources for all blocking, framing, and sheathing. Water: • Regularly assess and maintain stormwater treatment systems. • Use low-flow fixtures, reducing water use by 30%. • Use customized irrigation settings to avoid over watering of landscaping. • Comply with the local water-efficient landscape requirements. Transportation/Vehicle Trips: • Reduce employee vehicle miles traveled (VMT) by following Target's practice of hiring, on average, more than 85% of Target's team members from the immediate area surrounding the store. • Reduce VMT by locating the project in proximity to the other uses in the shopping center. The City would require the remainder of the tenants to incorporate similar features as applicable.
Provide adequate parking facilities to serve the proposed retail uses.	Yes, Alternative 2 would provide a parking lot to serve the retail uses and a parking structure to accommodate residents and guest from the multi-family housing units.

Table 7.0-4
Summary of Alternative 2 Success at Meeting Project Objectives

Project Objective	Alternative Meets Objective?
Provide improved public amenities and infrastructure.	Yes, Alternative 2 would incorporate bike lanes, pedestrian walkway/sidewalk, courtyard, and new construction of retail buildings/housing. The multi-family housing development may be required to provide recreation on site such as a swimming pool or gym facility.
Develop a retail center with amenities within proximity to nearby residential community in order to reduce vehicles miles traveled to like services.	Yes, Alternative 2 would include development of a Target Store, the existing fruit stand and permitted light commercial uses to serve residents on-site, as well as to the north, south, and west of the project site.

This alternative would not meet all the project objectives. The mixed-use development would trigger a General Plan Amendment and a Rezone as the project would not be consistent with the current commercial zoning and land use designation. Therefore, Alternative 2 does not meet project objectives.

Alternative 2 results in worse impacts to the Proposed Project as it relates to: aesthetics, traffic/transportation and utilities and service systems. This alternative would develop multi-family housing closer to the adjacent residences to the south and west of the project which could reduce the landscape buffer within these areas of the site. The addition of residential uses will change the traffic impacts and create different peak hour impacts than what was proposed by the Project. Water demand would be increased due to the multi-family residential development. However, this Alternative would be considered to have the same impacts as the Proposed Project for all other impact areas discussed above. Specifically, this alternative would not reduce the project's significant and unavoidable air and greenhouse gas impacts. Therefore, Alternative 2 is not environmentally superior. This alternative has been eliminated from further consideration and is determined to not be feasible.

Alternative 3 – Scaled Down Commercial Center

The Scaled-Down Commercial Center Alternative would involve the development of a commercial retail center similar to that proposed; however, the size of the project would be less. Instead of developing a site with up to 420,000 square feet of retail commercial space with 15 tenants, an approximate total of 250,000 square feet would be constructed (an approximate 40% reduction in total building square footage). The site would be prepared, graded, and designed in the same manner as the proposed project, but would be pulled away from residences to the south and west, and pulled farther north. This project alternative would involve the development of a smaller retail development that would include only two large scale retail stores - Target and another midsize tenant (i.e., grocery store). These two main retail anchor tenants will be set back farther from the residential uses (closer to Van

Buren Boulevard) with the addition of more rows of citrus trees to serve as a landscape buffer along the southerly and westerly side of the site. The existing fruit stand will also remain on site.

Aesthetics

Under the Scaled Down Commercial Center Alternative, only two retail stores – Target and another mid-size tenant (i.e.: grocery store) would be constructed. The existing fruit stand would also remain on site. The retail stores would be pulled away from the existing residential development to the south and west and be located closer to Van Buren Boulevard. More landscape buffer between the retail stores and residential development (existing rows of citrus trees on the southerly and westerly portion of the site to remain) would be incorporated than the Proposed Project. The tallest building proposed would be approximately 30 feet which is the same as the tallest building from the Proposed Project. Given that the buildings would be situated along Van Buren Boulevard and there would be a larger swath of orange trees in the buffer between existing residential uses, the proposed buildings would not obstruct any existing views of scenic vistas in the area. There are no state scenic highways in the vicinity of the project site that would be impacted by this Alternative. Similar mitigation measures to buffer the development from adjacent residential development and reduce onsite lighting would be required. As such, this alternative is environmentally superior to the proposed project with respect to aesthetics.

Agricultural Resources

Under the Alternative 3, similar direct impacts to loss of Unique Farmland and Farmland of Statewide Importance would occur. The majority of the orange groves and associated structures would be removed for the construction of two retail stores – Target and another mid-size tenant (i.e.: grocery store). Similar to the Proposed Project, some citrus trees would remain to serve as landscape buffer between the development and residential development, however, the number would be increased under this Alternative. Conversion of agricultural resources to commercial use is considered less than significant due to the site's adopted commercial land use designation in the City's General Plan, the site's currently commercial zoning and results from the LESA analysis (refer to Section 4.2 of the DEIR for further discussion on the LESA analysis). No other agricultural uses surround the project site that would potentially convert to non-agricultural uses. No forest land designation is on the project site. Therefore, agricultural resource impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Air Quality

Alternative 3 would still result in air emissions that would be generated during construction and operation. Construction of this Alternative would still require grading, site preparation and removal of the citrus trees, all which generate air emissions. This Alternative would still be required to incorporate reduction measures such as complying with Rule 403 and using low VOC architectural coatings. For operational impacts, commercial uses on site would generate vehicle trips which would be a source of

air emissions and would have similar impacts as the Proposed Project. Even with the reduced square footage of the project, it is reasonable foreseeable that the vehicle trips would still cause an exceedance in air quality standards. However, because of the reduced project size, and therefore a subsequent reduction in air emissions, impacts to air quality would be considered environmentally superior to the Proposed Project under this alternative, even though impacts would remain significant and unavoidable.

Biological Resources

Alternative 3 would not result in more or different impacts to biological resources as the Proposed Project. Under the Scaled Down Commercial Center Alternative, similar mitigation measures to the pre-clearing nesting bird surveys to ensure that any potential impacts to nesting birds would be reduced to less-than–significant would be required. Also, similar to the Proposed Project, this alternative would be required to comply with the 1602 Streambed Alteration Agreement, submit a report of waste discharge to the RWQCB to obtain either a waste discharge requirement or a waiver for any impacts to water of the State in accordance with Porter-Cologne Act. Federally protected wetlands as defined by Section 404 of the CWA would not be impacted since the ephemeral drainage on site is not considered waters or wetlands under the jurisdiction of the ACOE and RWQCB. The project site is not located within an identified wildlife corridor or linkage area (i.e. not in the Criteria Area) within the MSHCP which means it is not an area that was envisioned to be preserved for biological resources. There are no general plan policies to protection of biological resources, nor is there a city tree preservation policy that would affect the project. This alternative would have to meet local goals and policies through compliance with the MSHCP. Therefore, biological resources of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Cultural Resources

Alternative 3 would not result in any more impacts to cultural resources than the proposed project. The existing fruit stand would remain, and be a part of the project design under this Alternative. Under the Scaled Down Commercial Center Alternative, similar mitigation measures requiring measures to be taken in the unlikely event that unknown archaeological resources or unknown paleontological resources are uncovered during site disturbance would be required. Similar compliance with the Health and Safety Code Section 7050.5 would be required when human remains are inadvertently discovered during construction activities. No structures on the project site have been designated as historic under the City's Title 20, nor do any of the structures on the project site meet the criteria of a state or federal historic designation. Therefore, cultural resource impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Greenhouse Gas (GHG) Emissions

Under Alternative 3, although the development footprint is reduced by 40% from the Proposed Project, similar to that of the Proposed Project, this alternative would contribute to the overall production of GHG emissions during construction and operation. Although substantial GHG reductions that will be implemented by the Project, given that the proposed project would generate GHG emissions, and the current status of climate change science and regulations and the City's inability to address mobile source emissions, the project would have a cumulatively considerable contribution and hence a cumulatively significant impact in terms of climate change.

While this project may generate fewer emissions from the reduced square footage and as a result of fewer vehicle trips, vehicles traveling to and from the project site would be the primary source of project-generated GHG emissions under this alternative, as with the proposed project. As levels of GHG emissions in the atmosphere are generally at levels that create adverse impacts (i.e., climate change), the emissions of a particular project, even if not significant in terms of thresholds, may nonetheless contribute to an adverse, unavoidable impact because other projects do not meet such standards and because other actors (e.g., state and federal government actors) may not take action to reduce emissions from mobile sources.

As with the Proposed Project, the City has no jurisdiction to control the climate change impacts of projects outside its boundaries. Therefore, GHG impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Hazards and Hazardous Materials

Alternative 3 would not change the status of the site being listed on a known hazardous waste or substance site. Site remediation would still be required, as required for the Proposed Project. Under the Scaled Down Commercial Center Alternative, similar mitigation measures to store hazardous materials and substances from the public would be required. There are no uses under Alternative 3 that would cause a risk related to hazardous waste or substances. Therefore, hazardous impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Hydrology and Water Quality

Under the Scaled Down Commercial Center Alternative, development of the site would still create sources of urban runoff that needs to meet water quality standards. Similar pollution control measures would be required pursuant to NPDES requirements like that of the Proposed Project which includes on-site grated inlets and curb-opening catch basins to catch runoff, which would then be directed to on-site treatment facilities (detention basins) to remove any pollutants of concern. Prior to entering the detention basins, proprietary treatment devices would pretreat runoff for sediment trash, and media filters located at the bottom of each detention basin would filter for bacteria. Site design and source

control BMPs and SWPPP would also be incorporated to ensure that water quality on the project site would not be degraded as a result from construction and operation. No groundwater sources would be needed to serve this alternative. Less development coverage (40% reduction from the Proposed Project) would mean less impervious surfaces which would improve the percolation on the site. Development of this alternative would remove the natural drainage and construct underground drainage facilities and underground stormwater system that would connect to the existing system that does not need to be upgraded to support the project. The drainage pattern would remain the same as the Proposed Project and the discharge would be the same. WQMP requirements would ensure that erosion and flooding are not increased from Alternative 3, same as with the Project. Also, sources of pollution are treated on site via the requirements of the WQMP. Since there would be less impervious surfaces under this Alternative, allowing for more natural percolation, hydrology and water quality impacts of this alternative are considered environmentally superior to the Proposed Project.

Noise

Under the Alternative 3, similar construction and operational noise impacts would occur. Although this alternative represents a 40% reduction in building square footage, the project would still result in construction noise, but similar reduction measures such as limiting construction hours, placing mufflers on equipment engines, shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, orienting stationary sources to direct noise away from sensitive uses, maximizing the distance between construction of equipment staging areas and occupied residential areas, using electric air compressors and similar power tools, rather than diesel equipment where feasible, incorporating construction noise reduction methods, requiring a minimum setback of 400 feet from any existing homes during tree-chipping operation, requiring that stockpiling and vehicle staging areas be located away from noise sensitive receptors, and requiring all construction and operational activities to comply with the City's Municipal Code. Retail stores would comply with the hours of operation allowed for a commercial use and delivery trucks would only be allowed during specified hours as outlined in the City's Noise Code. Also, similar to the Proposed Project, Alternative 3 would include a masonry block wall along the west and south sides of the project site to mitigate noise associated with the proposed docking and loading bays and install roof parapets on all infrastructures to screen outdoor mechanical equipment. The increased landscaped buffer under this Alternative would be an improvement to minimize noise impacts from operation uses to existing residential uses. As with the Project, the additional traffic volume from Alternative 3, including cumulative, plus ambient, plus project condition, along the adjacent roads, would not substantially increase the existing noise level in the project vicinity. Therefore, since there will be an increased buffer from the existing sensitive land uses, and since the scale of the project would be reduced by 40%, thereby reducing a similar proportion of traffic noise, noise impacts of this alternative are considered environmentally superior to the Proposed Project.

Transportation/Traffic

Alternative 3 results in an approximately 40% reduction in building square footage, but would still be a shopping center having similar peak hour impacts as the proposed project. With the reduction in building square footage, there would be reduction in average daily trips, and a decrease in traffic impacts on the surrounding roadway system. It would be expected that with the reduced square footage and less large tenants occupying the site that the traffic impacts would require less traffic improvements to the surrounding area. There would still be construction-related traffic, but it would be less than the Proposed Project, given the smaller size of the development. Therefore, transportation and traffic impacts would be reduced with the implementation of this Alternative. However, because several of the potentially significant impact locations would have infeasible mitigation measures (see Section 4.10, Traffic, for explanation), some impacted locations would remain significant and unavoidably impacted. Because of the reduced size of this alternative, and the subsequent reduction in traffic trips, this Alternative is environmentally superior to the proposed project with respect to transportation and traffic.

Utilities and Service Systems

Alternative 3 would require the same connections to the existing stormwater, potable water, and waste water system located in the surrounding streets. Given the 40% reduction in the building footprints, water demand would be less. The applicant would still be required to obtain a will-serve letter from WMWD confirming their intent to serve the project with potable water and indicating that they have adequate supplies. The City's General Plan has considered and planned for additional wastewater with implementation of this alternative. Waste would be taken to Robert A. Nelson Transfer Station which has sufficient permitted capacity to accommodate the project's solid waste disposal needs. Any future tenant or use on the site would be required to comply with any federal, state, or local statutes or regulations related to solid waste generation and disposal. However, since the size of the project is reduced by 40%, there is an overall reduction in the need for utilities and services to the project site. Therefore, impacts related to utilities and service systems are considered reduced and superior to the Proposed Project.

Relationship to Project Objectives and Feasibility

Under the Scaled-Down Commercial Center Alternative, the commercial development square footage would be reduced from 420,000 square feet to 250,000 square feet (an approximately 40% reduction). Only a Target Store and another midsize tenant (i.e. grocery store) would be proposed. The existing fruit stand would also remain. Commercial uses would be placed towards the street and away from the adjacent residences to the south and west and more rows of citrus trees would be planted. The existing fruit stand would stay and be incorporated into this Alternative. Table 7.0-5 provides a list of the project objectives and whether or not the alternative meets each objective.

Table 7.0-5
Summary of Alternative 3 Success at Meeting Project Objectives

Project Objective	Alternative Meets Objective?
Provide a broad range of retail sales and service with updated, modern, and energy-efficient buildings within the nearby residential community.	No, Alternative 3 would result in a 40% reduction in commercial building square footage with only two retail stores – Target and another mid-size tenant.
Create a development consistent with the City's land use and general plan designation that will contribute to the maintenance of an economic base that provides high-quality jobs for those who choose to both live and work in Riverside.	Yes, Alternative 3 would be consistent with the City's commercial zoning and commercial land use designation. The commercial retail stores would provide high-quality jobs for Riverside residents.
Create short-term construction employment and long-term operational employment.	Yes, Alternative 3 would provide short-term construction employment and long-term operational employment from development of the Target and mid-size tenant, though at a reduced capacity compared to the Proposed Project.
Utilize an under-utilized site that is located within an urbanized area through the development of an economically productive retail project.	No, Alternative 3 would not provide an economically productive retail project with just a development of a Target Store and mid-size tenant and retaining the existing fruit stand. More tenants are necessary to make the project economically productive.
Improve the local and regional economy through job generation and increased tax revenues from the proposed retail uses.	Yes, Alternative 3 would generate employment opportunities and boost retail sales from development of the Target Store and mid-size tenant, though at a reduced capacity compared to the Proposed Project.
Incorporate elements of sustainable development to promote the efficient use of energy and water.	Yes, Alternative 3 would incorporate sustainable design elements to promote efficient use of energy and water. Target anticipates incorporating the following sustainable features: Site/Building Design: • Report Target's carbon footprint annually to the Carbon Disclosure Project. • Use low–volatile organic compound (VOC) materials for all flooring, adhesives, sealants, paints and coatings, ceilings, and wall systems. • Plant a minimum of 145 shade trees as close as 15 feet to the west property line and 18 feet to the south property line. Energy Efficiency and Optimization: • Use high-efficiency rooftop heating and air conditioning equipment. • Use a highly reflective white roof membrane to reduce cooling load. • Install store-based integrated energy management system controls for lighting, refrigeration, heating and cooling equipment,

Table 7.0-5
Summary of Alternative 3 Success at Meeting Project Objectives

Project Objective	Alternative Meets Objective?
	and exhaust fans to ensure energy management over time. • Use two-lamp, T8 fluorescent lamps and electronic ballasts throughout the store, and motion-sensor lighting in stock rooms. • Use reevaluated temperature settings, lighting levels, and equipment run times to identify efficiency opportunities. • Verify energy efficiencies and identify potential improvements by instituting a "building commissioning" department. Waste Reduction: • Manage and recycle construction waste to divert 75% of all construction refuse. • Use construction materials with a minimum of 10% recycled content, including 50% minimum recycled content in structural steel framing, 20% in joists and joist girders, fly ash in concrete, crushed concrete sub-base in parking lots, and recycled bituminous paving in drive surfaces. • Utilize regional materials in construction to the extent possible. • Use wood from Forest Stewardship Council–certified sources for all blocking, framing, and sheathing. Water: • Regularly assess and maintain stormwater treatment systems. • Use low-flow fixtures, reducing water use by 30%. • Use customized irrigation settings to avoid over watering of landscaping. • Comply with the local water-efficient landscape requirements. Transportation/Vehicle Trips: • Reduce employee vehicle miles traveled (VMT) by following Target's practice of hiring, on average, more than 85% of Target's team members from the immediate area surrounding the store. • Reduce VMT by locating the project in proximity to the other uses in the shopping center. The City would require the remainder of the tenants to incorporate similar features as applicable.

Table 7.0-5
Summary of Alternative 3 Success at Meeting Project Objectives

Project Objective	Alternative Meets Objective?
Provide adequate parking facilities to serve the proposed retail uses.	Yes, Alternative 3 would provide a parking lot to serve the retail uses.
Provide improved public amenities and infrastructure.	Yes, Alternative 3 would incorporate bike lanes, pedestrian walkway/sidewalk, courtyard, and new construction of retail buildings.
Develop a retail center with amenities within proximity to nearby residential community in order to reduce vehicles miles traveled to like services.	Yes, Alternative 3 would include development of a Target Store and mid-size tenant to serve residents to the north, south, and west of the project site.

This alternative would reduce the commercial development by 40% thereby not providing as many retail uses and short-term and long-term employment as that of the Proposed Project. Also, development of only two retail tenants and retaining the existing fruit stand would reduce the local and regional economy with less tax revenues. In addition, the site would not be developed and utilized to the maximum extent to create an economically productive retail project. Therefore, Alternative 3 does not meet the project objectives.

Alternative 3 is environmentally superior to the Proposed Project as it relates to: aesthetics, air quality, hydrology, noise, traffic/transportation, and utilities and service systems. This Alternative would be considered to have the same impacts as the Proposed Project for all other impact areas discussed above. Specifically, this alternative would not reduce the project's significant and unavoidable air and greenhouse gas impacts. Therefore, this alternative would be considered environmentally superior over the Proposed Project.

Alternative 4 – Residential Development

The Residential Development Alternative would consist entirely of single-family residential development over the 40-acre site. A General Plan Amendment and Rezoning from commercial to residential designation would be required as part of the entitlement process since single family residential is not consistent with the General Plan. The proposed zoning would be R-1-7000, single-family residential to match the existing surrounding residential development pattern. The density would be approximately four dwelling units per acre, which would result in approximately 140 to 150 residential lots with associated roads, sidewalk, open space, and utility improvements. The citrus trees could be incorporated as backyard landscaping in the residential lots and within the open space areas, however it is assumed that most of the citrus trees would be removed under this Alternative. The overall architectural style of the residential development will be similar to the surrounding residences and avoid

large scale retail buildings and associated parking lot lights. The existing fruit stand would be removed under this Alternative.

Aesthetics

The Residential Development Alternative would consist of 140 to 150 single family residential homes with associated roads, sidewalk, open space, and utility improvements. The citrus trees could be incorporated in the residential lots and within the open space areas, however it is most likely that no citrus trees would remain on the site, except as a buffer, based on the residential developments in the area. Under this alternative, after a Rezone of the property, the maximum height of a home (35 feet) would be more than that of the Proposed Project (30 feet). However, the proposed homes would not obstruct any existing views of scenic vistas in the area. There are no state scenic highways in the vicinity of the project site. This alternative would not affect Van Buren Boulevard's designation as a scenic and special boulevard under the City's General Plan. Mitigation measures to reduce light and glare onto adjacent residential development would be incorporated. The overall aesthetics would be similar to the surrounding residences. The overall aesthetic impacts would be less than the Proposed Project, and since this Alternative would consist of the same type of development as the surrounding area, would be considered compatible. Therefore, aesthetic impacts of this alternative are considered environmentally superior to the Proposed Project.

Agricultural Resources

Under the Residential Development Alternative, similar direct impacts to loss of Unique Farmland and Farmland of Statewide Importance would occur. During the construction phases, the areas will be too disturbed to retain the Farmland designations. The majority of the orange groves and associated structures would be removed for the construction of single family residential development, including the existing fruit stand. It is expected that most of the citrus trees would be removed under this Alternative. Impacts related to the conversion of agricultural resources to a mixed use development would be similar to that of the Proposed Project since it would be converted to a non-agricultural use. No other agricultural uses surround the project site that would potentially convert to non-agricultural uses. No forest land designation is on the project site. Therefore, agricultural resource impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Air Quality

Alternative 4 would still result in air emissions that would be generated during construction and operation. Construction of this Alternative would still require grading, site preparation and removal of the citrus trees, all which generate air emissions. This Alternative would still be required to incorporate reduction measures such as complying with Rule 403 and using low VOC architectural coatings. For operational impacts, the residential uses on site would generate more daily trips compared to the Proposed Project, and would therefore result in an increase in air emissions at and around the project

site. It is reasonably foreseeable that the vehicle trips would therefore cause an exceedance in air quality standards for the residential vehicle trips. Therefore, impacts to air quality would be considered inferior to the Proposed Project.

Biological Resources

Alternative 4 would not result in more or different impacts to biological resources as the Proposed Project. Under the Residential Development Alternative, similar mitigation measures to the pre-clearing nesting bird surveys to ensure that any potential impacts to nesting birds would be reduced to less-than–significant would be required. Also, similar to the Proposed Project, this alternative would be required to comply with the 1602 Streambed Alteration Agreement, submit a report of waste discharge to the RWQCB to obtain either a waste discharge requirement or a waiver for any impacts to water of the State in accordance with Porter-Cologne Act. Federally protected wetlands as defined by Section 404 of the CWA would not be impacted since the ephemeral drainage on site is not considered waters or wetlands under the jurisdiction of the ACOE and RWQCB. The project site is not located within an identified wildlife corridor or linkage area (i.e. not in the Criteria Area) within the MSHCP which means it is not an area that was envisioned to be preserved for biological resources. There are no general plan policies to protection of biological resources, nor is there a city tree preservation policy that would affect the project. This alternative would have to meet local goals and policies through compliance with the MSHCP. Therefore, biological resources of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Cultural Resources

Alternative 4 would not result in any more impacts to cultural resources than the proposed project. The existing fruit stand would remain, and be a part of the project design under this Alternative. Under this Alternative, similar mitigation measures requiring measures to be taken in the unlikely event that unknown archaeological resources or unknown paleontological resources are uncovered during site disturbance would be required. Similar compliance with the Health and Safety Code Section 7050.5 would be required when human remains are inadvertently discovered during construction activities. No structures on the project site have been designated as historic under the City's Title 20, nor do any of the structures on the project site meet the criteria of a state or federal historic designation. Therefore, cultural resource impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Greenhouse Gas (GHG) Emissions

Under Alternative 4, although the development will change to an all-residential use, similar to that of the Proposed Project, this alternative would contribute to the overall production of GHG emissions during construction and operation. Although substantial GHG reductions that will be implemented by the

Project, given that the proposed project would generate GHG emissions, and the current status of climate change science and regulations and the City's inability to address mobile source emissions, the project would have a cumulatively considerable contribution and hence a cumulatively significant impact in terms of climate change.

As with the proposed project, under this alternative vehicles traveling to and from the project site would be the primary source of project-generated GHG emissions. With the residential use, it is expected there would be an increase in the average daily trips, and therefore an increase in GHG emissions. As levels of GHG emissions in the atmosphere are generally at levels that create adverse impacts (i.e., climate change), the emissions of a particular project, even if not significant in terms of thresholds, may nonetheless contribute to an adverse, unavoidable impact because other projects do not meet such standards and because other actors (e.g., state and federal government actors) may not take action to reduce emissions from mobile sources.

As with the Proposed Project, the City has no jurisdiction to control the climate change impacts of projects outside its boundaries. Therefore, GHG impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Hazards and Hazardous Materials

Alternative 4 would not change the status of the site being listed on a known hazardous waste or substance site. Site remediation would still be required, as required for the Proposed Project. Under Alternative 4, similar mitigation measures to store hazardous materials and substances from the public would be required. Residential uses would be expected to store and use items such as household cleaning products and landscaping products such as herbicides. Therefore, hazardous impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Hydrology and Water Quality

Under the Residential Development Alternative, development of the site would still create sources of urban runoff that needs to meet water quality standards, although pollution sources from residential can also introduce different pollutants than commercial uses (i.e. pathogens). Similar pollution control measures would be required pursuant to NPDES requirements like that of the Proposed Project which includes on-site grated inlets and curb-opening catch basins to catch runoff, which would then be directed to on-site treatment facilities (detention basins) to remove any pollutants of concern. Prior to entering the detention basins, proprietary treatment devices would pretreat runoff for sediment trash, and media filters located at the bottom of each detention basin would filter for bacteria. Site design and source control BMPs and SWPPP would also be incorporated to ensure that water quality on the project site would not be degraded as a result from construction and operation. No groundwater sources would be needed to serve this alternative. Under this alternative, each residential unit could provide for percolation and recharge on an individual lot basis. Development of this alternative would

still remove the natural drainage and construct underground drainage facilities and underground stormwater system that would connect to the existing system that does not need to be upgraded to support the project. The drainage pattern would remain unchanged, as the point of discharge would be the same as the Proposed Project. WQMP requirements would ensure that erosion and flooding are not increased. Also, sources of pollution are treated on site via the requirements of the WQMP. Therefore, even though natural percolation may be slightly better by not having as much impervious surfaces and individual residential lots providing some percolation in the yards, hydrology and water quality impacts of this alternative are considered equivalent and neither superior nor inferior to the Proposed Project.

Noise

Alternative 4 would still provide noise impacts. Under the Residential Development Alternative, similar construction and operational limitations would apply like that of the Proposed Project. The Alternative 4 would limit construction hours, place mufflers on equipment engines, shut off idling equipment, install temporary acoustic barriers around stationary construction noise sources, orient stationary sources to direct noise away from sensitive uses, maximize the distance between construction of equipment staging areas and occupied residential areas, use electric air compressors and similar power tools, rather than diesel equipment where feasible, incorporate construction noise reduction methods, require a minimum setback of 400 feet from any existing homes during tree-chipping operation, require that stockpiling and vehicle staging areas be located away from noise sensitive receptors, and require all construction and operational activities to comply with the City's Municipal Code.

The residential uses proposed under Alternative 4 would still be required to comply with the City's Noise Code. This alternative could be potentially worse than the Proposed Project depending on the layout of the residential development. Construction of new single family residential homes could be closer than 25 feet from the existing residential development in which the continuous vibrations could potentially exceed a peak particle velocity of approximately 0.1 inch/second which could result in annoyance. However, because the uses proposed under this alternative are the same as the adjacent uses, it can also be assumed that the potential annoyance would be more well-received than noise or vibration created by a different type of use. This Alternative would still generate traffic noise resulting from residential trips on surrounding roadways. Additionally, under Alternative 4 there would still be noise associated with music, children and residents using their outdoor spaces. As such, noise impacts of this alternative would be considered superior to the Proposed Project.

Transportation/Traffic

Alternative 4 would result in residential uses, and would therefore have different peak hour impacts as the Proposed Project. With the residential use, it is expected there would be an increase in the average daily trips, and slight increase in traffic impacts on the surrounding roadway system due to the additional

traffic from this Alternative. There would still be construction-related traffic similar to that of the Proposed Project. Transportation and traffic impacts would be increased with the implementation of this Alternative, and improvements to the existing roadway system would still be required to accommodate the additional traffic from the 40-acre residential site. Therefore, Alternative 4 is environmentally inferior to the proposed project with respect to transportation and traffic.

Utilities and Service Systems

Under the Residential Development Alternative, the existing facilities would need to be expanded in order to connect and accommodate all the proposed single family homes. This alternative would require more demand in water than the Proposed Project since the site would serve residential uses which require more water demand for bathing, flushing the toilets, cooking, drinking, cleaning, and landscaping than commercial uses. The applicant would still be required to obtain a will-serve letter from WMWD confirming their intent to serve the project with potable water and indicating that they have adequate supplies. This alternative would require additional analysis to determine if the project site would have adequate capacity to serve the project's projected wastewater demand since the City's General Plan did not analyze the possibility of the project site as a Residential Development. Waste would be taken to Robert A. Nelson Transfer Station. Future property owners would be required to comply with any federal, state, or local statutes or regulations related to solid waste generation and disposal. Utilities and service system impacts would be increased and considered inferior to the Proposed Project.

Relationship to Project Objectives and Feasibility

Under the Residential Development Alternative, no commercial development is proposed. Rather, approximately 140 to 150 residential lots with associated roads, sidewalk, open space, and utility improvements would be constructed to match that of the surrounding residential community. A General Plan Amendment and Rezoning from commercial to residential designation would be required as part of the entitlement process. Therefore since the project under this Alternative would not be consistent with the General Plan or existing Zoning, this Alternative would result in more impacts than would occur with the Proposed Project. Table 7.0-6 provides a list of the project objectives and whether or not the alternative meets each objective.

Table 7.0-6
Summary of Alternative 4 Success at Meeting Project Objectives

Project Objective	Alternative Meets Objective?
Provide a broad range of retail sales and service with updated, modern, and energy-efficient buildings within the nearby residential community.	No, Alternative 4 would not construct any commercial buildings.
Create a development consistent with the City's land use and general plan designation that will contribute to the maintenance of an economic	No, Alternative 4 would require a Rezone and a General Plan Amendment from commercial to residential designation.

Table 7.0-6
Summary of Alternative 4 Success at Meeting Project Objectives

Project Objective	Alternative Meets Objective?
base that provides high-quality jobs for those who choose to both live and work in Riverside.	
Create short-term construction employment and long-term operational employment.	No, Alternative 4 would only create short-term construction employment with the construction of residential homes.
Utilize an under-utilized site that is located within an urbanized area through the development of an economically productive retail project.	No, Alternative 4 would not construction a retail project.
Improve the local and regional economy through job generation and increased tax revenues from the proposed retail uses.	No, Alternative 4 would develop single family residential homes which would not create jobs on site or increase tax revenues from retail uses.
Incorporate elements of sustainable development to promote the efficient use of energy and water.	Yes, Alternative 4 would meet or exceed Title 24 requirements.
Provide adequate parking facilities to serve the proposed retail uses.	No, Alternative 4 would construct single family homes with garages and driveways.
Provide improved public amenities and infrastructure.	Yes, Alternative 4 would provide improved public amenities such as schools, parks, and other recreation through developer-paid taxes for the proposed single family residential development.
Develop a retail center with amenities within proximity to nearby residential community in order to reduce vehicles miles traveled to like services.	No, Alternative 4 would not construct a retail center.

Not all of the project objectives would be met. No commercial development would be developed. Therefore, only short-term construction employment would be provided. Development of single family homes would not boost local and regional economy. Therefore, Alternative 4 does not meeting project objectives.

Alternative 4 is environmentally superior to the Proposed Project as it relates to: aesthetics. However, this Alternative would be considered to have the worse impacts to air quality, traffic/transportation, and utilities and service systems. This Alternative would have the same impacts for all other impact areas. Specifically, this alternative would not reduce the project's significant and unavoidable air and greenhouse gas impacts. Therefore, this alternative has been eliminated from further consideration and is determined to not be feasible.

7.4 Environmentally Superior Alternative

Section 15126.6(e)(2) of the *State CEQA* Guidelines requires the identification of the environmentally superior alternative other than the No Project Alternative be identified in an EIR. Of the alternatives evaluated above, both Alternatives 1 and 3 were found to be environmentally superior over the Proposed Project (Table 7.0-1). Both alternatives were found to have improved, or better, impacts related to aesthetics, air quality, hydrology, and traffic. Alternative 1 was found to have better impacts to Biological resources, while Alternative 3 was the same as the Proposed Project. However, Alternative 3 was superior to the Proposed Project for noise and utilities and service systems. Therefore, of the two, Alternative 3 would be considered environmentally superior. However, Alternative 3 does not meet the following project objectives: providing a broad range of retail sales and utilizing an underutilized site with an economically productive retail project. Additionally, Alternative 3 will not be as economically competitive and not as economically viable for the applicant to develop. Alternative 2 will result in less revenue and thus less tax revenue and fewer jobs to the city. Further, it would not reduce the project's significant and unavoidable air and greenhouse gas impacts to less than significant levels. Therefore, this alternative has been rejected as being infeasible.

8.0 GROWTH INDUCING IMPACTS

Section 15126.2(d) of the State CEQA Guidelines requires a discussion of how the potential growth-inducing impacts of the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Induced growth is distinguished from the direct employment, population, or housing growth of a project. If a project has characteristics that "may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively," then these aspects of the project must be discussed as well. Induced growth is any growth that exceeds planned growth and results from new development that would not have taken place in the absence of the proposed project. State CEQA Guidelines also indicate that the topic of growth should not be assumed to be either beneficial or detrimental (Section 15126.2(d)). According to CEQA Guidelines (Section 15126.2 (d)), a project may foster economic or population growth, or additional housing, either indirectly or directly, in a geographical area if it meets any one of the following criteria:

- A project would remove obstacles to population growth;
- Increases in the population may tax existing community service facilities, causing significant environmental effects;
- A project would encourage and facilitate other activities that could significantly affect the environment.

The proposed project would involve the construction of a proposed commercial retail center on an approximately 40-acre site which is zoned and designated in the General Plan for commercial development and surrounded on three sides by existing residential development. The proposed project would not involve the development of additional housing. Instead, the project would provide commercial uses that would serve planned and approved residential development in the Orangecrest Specific Plan area within the City of Riverside as well as other existing, planned and approved residential communities elsewhere in the City. Further, impacts to governmental and public services will be mitigated through payment of applicable development impacts set by the City.

The site to the east of the project is owned by the March Joint Powers Authority (JPA) and is located within the County of Riverside. There are planned land uses for this area which include Business Park uses. The development of the project site into a commercial center will not affect the ability of the March JPA lands to develop.

Indirect growth can occur by a project installing infrastructure that can support further growth. The project site is served by existing public services and utilities and no new utilities are needed in order to serve the project. Specifically, the applicant has obtained a will serve letter from the Western Municipal Water District to serve the proposed project with potable water. Therefore, indirect growth inducement as a result of the extension of these facilities into a new area would not occur.

Traffic improvements will be made as part of the proposed project. Barton Street will either be widened or restriped to provide a 2nd northbound left-turn lane and an exclusive northbound right-turn lane. Van Buren Boulevard will be widened or restriped to provide a 3rd eastbound through lane, an exclusive eastbound right-turn lane and a 2nd westbound left-turn lane. Van Buren Boulevard will also be widened or restriped for three eastbound departure lanes. The existing traffic signals will be modified for eight-phase operation. Barton Street will be widened or restriped to provide a 2nd southbound through lane. In addition, the proposed project will include mitigation measures by making physical improvements or provide fair-share mitigation to allow for funding to make eventual improvements to the following intersections:

- Alessandro Boulevard at Arlington Avenue and Chicago Avenue;
- I-215 Southbound ramps at Van Buren Boulevard;
- I-215 Northbound ramps at Van Buren Boulevard;
- Barton Street at Van Buren Boulevard;
- Wood Road at Van Buren Boulevard;
- Trautwein Road and Cole Avenue at Van Buren Boulevard;
- Barton Street at Gless Ranch Road;

These traffic improvements are expected to offset the impact of future traffic and improve levels of service (LOS) to an acceptable range. Once all mitigation measures have been incorporated, only a few remaining intersections would exceed the LOS standards; but, the City's General Plan allows for that exceedance. The intersections impacted by the project outside the City limits will require improvements, but since there are no established mechanisms for which the city can pay mitigation to the County of Riverside, those intersections will result in significant and unavoidable impacts.

Nevertheless, improvements to the study roadways would not be considered to encourage development of agricultural or vacant land that might not otherwise be improved. The project site is surrounded by existing residential development on the north, south, and west and by land owned by the March Joint Powers Authority to the east. This land is currently vacant, but is zoned for Business Park development, and is not likely to be developed as a result of the Gless Ranch road improvements. There are no other large parcels available for development in the project area, and the site is surrounded by existing established neighborhoods. In conclusion, approval of the proposed project would not result in significant growth-inducing impacts.

9.0 ORGANIZATIONS AND PERSONS CONSULTED

Per Section 15129 of the *State CEQA Guidelines*, the environmental impact report (EIR) shall identify all federal, state, or local agencies, organizations, and private individuals consulted in preparing the draft EIR, and the persons, firm, or agency preparing the draft EIR.

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